

The Impact of The “Open Market Reform” on China's Economy

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CERTIFICATE OF DISSERTATION PREPARATION

I hereby declare that the present dissertation is a result of my own work, except where otherwise stated. Other sources are acknowledged in the text giving explicit references. The dissertation has not been submitted for any other qualification to any other University.

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Abstract

One major event in the 20th century is the obvious failure of the planned economy. Countries one by one, which previously adopted the planned economy, resolved to transform their economic pattern from central planning to market. Until then, a long academic debate between the planned economy and market economy had officially come to an end, with the victory of the side in favor of the market economy. Although the majority of these transforming countries were located in the Eastern Europe, China, a country located in Asia, was also in the process of the transformation from central planning to market economy. From December 1978, after 40 years, China has already emerged from a command economy to a relatively successful socialist market economy and achieved remarkable economic performance and growth. We witnessed the enormous positive impact of the “Open Market Reform ”on China’s economy. Out of the benefit of an open market, China, once an extremely poor country, is now regarded as one of the economic super powers. In the meantime, negative impact of the openness of the market can not be neglected in China’s economy, the remedies of which require further reform, structural change and the development of law , et cetera.

Consequently, in this thesis, i will analyze four major aspects concerning the impact of the “Open Market Reform”. To begin with, the economic necessity of the transformation from the command economy to market economy. The so-called “Chinese Economic Miracle” starts from here. Secondly, the analysis of the achievements that China has made due to the openness of the market. Inside this part, except from the analysis of China’s relatively excellent economic performance, i will also demonstrate the fact that China’s economic achievements are not a particular case and the impact of the “open market reform” on the China’s economy is in accordance with the economic principles and theories. In the third part, structural change inside the Chinese economy since the economic reform will be discussed. In the last part, market liberalization, a key part of the “open market reform” and a necessary process for any country wishing to establish a free market, will be analyzed.



Chapter 1

Introduction

1.1 Theoretical Background

The economic reform initiated in 1978 in the Chinese economy has been studied intensively both at home and abroad. In fact, the Chinese central government, from time to time, took advice from the foreign experts regarding the process of the economic reform in China.

long before the initiation of economic reform in China , in 1945, F. A. Hayek has demonstrated the importance of the efficient use of knowledge in society, stating that free market economic system is more efficient than the central planning.

Barry Naughton (1995) studied the Chinese economic reform, during the period 1978-1993, focusing on the process of the transmission of the Chinese economy from central planning to market-oriented. He summarized the history and characteristics of the Chinese economy during the central planning and analyzed minutely the policies, measures and processes that China took in the first stage of its economic transition. His study is limited at the first stage of the economic reform and consequently a detailed impact of the economic reform on China's economy could not be concluded.

Yingyi Qian is the most prestigious scholar in China who studies the Chinese economic reform and he serves in the State Council. in 1997, in cooperation with Yuanzheng Cao and Barry R. Weingast, he studied the Chinese style of privatization, focusing on the SOEs' privatization in China. In 2002, he concluded the way how reform worked in China, specializing in market liberalization and institutional reforms. He also studied the economic growth rate of China and the impact of the economic reform and where the center of the reform in the future should be. In his individual academic research, he studied plenty of aspects concerning the economic



reform in the Chinese economy, but the parallel analysis on the remarkable economic performance, structural reforms and market liberalization was not conducted.

As for the economic performance of China during the economic reform period, Wenying Zhang (2008) concluded the achievements that China has made in the 30 years since the economic reform and Xinli Zheng, Wei Xu, and Luming Qi (2017) concluded the achievements in the 40 years after the initiation of the economic reform. Their studies put too much attention on the macro economic performance and its relation to the policies. One important limitation of their studies is that they do not take a comparative view to analyze the economic achievement of China, neglecting the fact that what China has finished in the past is merely a catching-up process, and as a result, the conclusions they get are too subjective.

As for the structural change occurring along with the implementation of the economic reform, Vittorio Valli and Donatella Saccone (2009) analyzed the relationship between the structural change and economic development by comparing China and India, pointing out the correlation between the structural change and economic growth and the difference of this correlation in China and India. Shiyi Chen, Gary H. Jefferson and Jun Zhang (2011) investigated the impact of structural reform on the performance of Chinese industry using a stochastic frontier model and decomposition method to measure the changes in total factor productivity and its relation with structural change. Fei Wang, Baoming Dong, Xiaopeng Yin and Chi An used a new SDA model to study with detail China's structural change in each sector over the years. Say Ding and John Knight (2015) explains the role of structural change in China's economic growth.

As for market liberalization, Shang-Jin Wei (1996) concluded the sources and consequences of FDI in China; Chunlai Chen (1997) studied the correlation between FDI and China's trade performance; Shaukat Ali and Wei Guo (2005) studied the determinants of FDI in China. Shahid Yusuf and Kaoru Nabeshima (2006) analyzed the privatization of SOEs and how the switch of ownership occurred in the period of reform, in history and thoroughly. Penelope B. Prime (1992) used Jiangsu province as an example to study industry's response to market liberalization and



Seung Ho Park, Shaomin Li and David K Tse (2006) determined the relationship between the market liberalization and firm performance, proving the necessity of the market liberalization.

In this paper, a through analysis of the industrial structural reforms and market liberalization will be made, to demonstrate with detail the reason behind the economic achievements of China, how China has made these remarkable achievements and how the current economic condition propels China for further and deeper reform.

1.2 The Significant Choice

On 1 October 1949, the People's Republic of China was established after a series of wars lasting about half-century. After being wrecked by Japanese invasion during the World War II and decades of Civil War, China at that time was indeed greatly impoverished, with an overall broken economy. In 1949, the GDP per capital of China was about \$23 . The Chinese Communist Party inherited an extremely poor country with almost no industrial foundation. The priority of the new Chinese government was to recover its economy with a rather swift rate, to save its citizens from extreme poverty and starvation and to establish quickly brand-new industries. Given these desperate economic needs and political circumstances, the government chose to adopt the central planning (to adopt one type of the Planned economic system-the command economy) to re-organize and recover China's economy.

In retrospect, the planned economy constituted a favorable and reasonable choice. To begin with, the Chinese Communist Party took power and established a new government, rendering China a communist country. The Soviet Union, a superpower which adopted the planned economy, shared a very close and strategic relationship with China and acted as "Mentor" of China's economic re-construction. Secondly, after the Great Depression occurred in the United States from 1929-1933, the economic recovery and performance in the whole western world (countries which adopted the market economy) was unsatisfactory. On the contrary, the planned



economy seemed functioning very well during that specific period and outshined the market economy. In the meantime, the Soviet Union developed economic theories on the planned economy and accumulated plenty of experiences on the implementation of the central planning , which were very valuable to China. Even in the academic fields, a long-time debate on which economic system is better, planned or market started and a large number of prestigious scholars in the western world were in favor of the planned economy, regarding it a better and more efficient economic system. Apart from that, the advantages of the planned economy just met the need of the Chinese Communist Party. Inside the planned economic system, the Chinese government would have the central control of the economic activities. Specifically, the government could have the power to allocate the scarce resources to its economic objectives , the most important one of which at that time was being “industrialized”-to develop capital-intensive heavy industries, out of the goal of modernization and extreme concern of national security. The deterioration of the relationship between China and the Soviet Union at the end of the year 1958 made this objective even more urgent. Along with other factors, the new China made its first economic historical choice- the adoption of the command economy to organize its economic activities through central planning.

1.3 The Achievements of Central Planning

In the early days of the People’s Republic of China, a highly centralized planned management system played an important role and contributed a great deal to large-scale construction, recovery and development of the national economy, especially to the establishment of a relatively complete industrial system, by means of concentrating a large amount of financial, material and human resources. In the following 30 years since the founding of the New China, the state has poured over ¥700 billion into the economic construction, has built more than 3,000 large and medium-sized projects, has initiated the establishment of industrial sectors such as machinery, electricity, steel, petroleum , coal, chemical and light textile in China and has achieved constant improvement of the relating technologies. Besides, many new industrial



sectors, ranging from the automobile to the defense industry, were developed from scratch and their scale was extended intensively. By the late 1970s, a large number of new industrial bases had been established, with 350,000 industrial enterprises. The 1,000 largest state-owned enterprises produced 70% of China's industrial output and paid 80% of the taxes and revenues collected by the central government. (Joseph Fewsmith: 1997). The fixed assets of the state-owned enterprises reached about ¥320 billion, equivalent to 25 times of the accumulated industrial fixed assets of the past 100 years in China, laying a solid foundation for a modern industrial base. For example, from 1953, China began copying the Soviet model in an all-round way. By the year 1957, China has already made enormous progress in the economic construction. In accordance with constant price, it is calculated that in 1957, the National Total Industrial Output Value increased by 128.6%, the Total Agricultural Output Value increased by 25% , in comparison with 1952. The number of higher education institutions increased from 181 in 1952 to 229 (Zheng Xinli : 2017).

1.4 The Inherent Defects of the Planned Economy

The planned economy, from the perspective of theoretical analysis, seems to be a more advantageous economic pattern compared with market economy, because economy could be developed proportionally and with plan. People, however, from practice observed that no planned economy can function well and severe disasters can be resulted. This is reality. Even in developed countries like the United States and the United Kingdom, various problems occurred because of the implementation of some central planning measures in the 20th century (Qian Yingyi: 2017). The outcome of all these experiments did not meet the expectation of many scholars. In 1945, F.A Hayek published 《The Use of Knowledge In Society》 on 《The American Economic Review》 . This is one of the 20 economic papers which have been cited the most times in the last 100 years and one of the important papers that brought him the Nobel Prize. Inside this paper, Hayek explained why the planned economy is inefficient and destined to fail.



His central thought is as follows: The knowledge of the particular circumstances of time and space is very important in economy because every individual actually has some advantages over all others as he possess unique information might be useful. In the meantime, the economic problem of society is mainly rapid adaptation to changes in the particular circumstances of time and space. As a result, ultimate decisions must be left to individuals who are familiar with certain circumstances because they have direct information of the relative changes and resources available to them. Central planning, however, by its nature cannot take direct account of these circumstances of time as economic decisions are not made by every individual. In comparison, in market economy, individuals are free to make their own decisions and the knowledge of the relevant facts is dispersed among many people, prices can function to coordinate the separate actions of different people in the same way as subjective values help the individual coordinate the parts of his plan. Consequently, in market economy, where prices play a significant role, individuals can make efficient use of dispersed information through market. Therefore, economic freedom is a necessary condition for the effective use of resources and dispersed information. As for planned economy, it is its inherent defect that information cannot be fully used. So it is an inefficient economic system.

Apart from this major inherent flaw, there are also three important disadvantages of the planned economy

1. The inefficient resource distribution
2. Lack of incentives
3. The missing role of the function of market

The first disadvantage results directly from the planed economy's inherent flaw: its inability to make full use of dispersed information. Without the precise information about demand, supply and consumer preferences, the planner cannot achieve efficient coordination of production. The second disadvantage results from public ownership, government-led economy and soft budget constraint. Individuals, enterprises and government have no active intention to improve efficiency and the state still has to allocate capital and resources to these inefficient



state-owned enterprises. The third is the most obvious difference between the planned economy and the market economy.

All these above major defects lay foundation for the future failure.

1.5 The Necessity to Reform

After the implementation of central planning for 30 years, at the dawn of the economic reform, the aggregate economic output and average economic output of China were lagging behind and the development gap between China and other countries was growing bigger. With the implementation of the central planning, China developed a structurally distorted economy, which was caused by Push-Up industrialization strategy (the priority of the development of the heavy industry) and the relative negligence of the development of agriculture. Although the Chinese Communist Party realized this problem and tried various ways to fix it, the outcome was not satisfactory : the growth of agricultural production remained slow. For example, in 1953 and 1954, the growth rate of crop production was 1.6% and 2.3%, respectively. (Victor D. Lippit: 1997). The Great Leap Forward however, except from causing extreme waste of natural and human resources, worsen the imbalance between the industrial and agricultural sectors. The Great Chinese Famine following the Great Leap Forward (from 1959-1961), which caused the death of over 10 million people, stirred political and economic crisis. The most devastating movement during the central-planning period was the Cultural Revolution. This turmoil affected negatively the social, political and economic lives of the Chinese people and, from economic perspective, dragged China back and off-set the economic achievements which had been achieved in the previous years.

More specifically , in 1952, China's share of the World GDP is 5.2% and in 1978, the percentage goes to 5.0%. The GDP per capita, calculated according to the over-estimated official exchange rate, is only \$224.9. In 1948, GDP per capita of China ranked 40th in the world, and in 1978 it



was second to the last, only 2/3 of India's. From the prospective of people's standard of living, in 1976, each member of the rural areas received only ¥63.3 (= \$9.97 calculated with current exchange rate) as monthly income from the collective. In 1977, for 140 million people, food supply per person was lower than 150kg, at the level of Half-Hungry. In 1978, China had an absolutely poor population of 250 million. In the same year, the number of unemployed youth in city reached 20 million and the actual unemployment rate in city was around 19%, Engel Coefficient (Absolute share of income spent on food) in city was 56.66%, in rural area was 67.71%. According to the calculation of British economist Angus Maddison, from 1952-1978, China's real GDP growth rate was only 4.2%. The index of living standard and development ranked out of 170th in the world, putting China way below the Poverty Line delimited by the UN and the World Bank. Apart from poverty and high unemployment rate, the ratio of the three industries was also out of balance. in 1950, the ratio is : 29: 29: 42, in 1980 the ratio changed to : 21.6: 57.8: 20.6. (People's Daily: 1999)

In order to cope with all the above problems and reorganize the Chinese economy, the leader of the Chinese Communist Party realized the necessity to initiate economic reform, to abandon the central planning economic system and to adopt the market economy gradually. Now after exact 40 years of the decision to transform the Chinese economy from central planning to market, we can safely say that China is one of the most successful countries to achieve this transformation, although the transformation is still ongoing. The "Open Market Reform", as a result, is one of the most significant and profound decisions that the Chinese Communist Party has ever made.

1.6 Why China Can Succeed

There are several major factors that differentiate China from other countries with central planning and make China successful in its transformation.



Firstly, China was much poorer compared with the Soviet Union and other East European Socialist countries and China's economy was not planned to such a degree as Soviet Union. (Barry Naughton:1995) Because of political and economic reasons, the leaders of the Chinese Communist Party adopted decentralization inside its bureaucratic apparatus.

Secondly, China reformed its tax system. China adopted a negotiated system in which localities were given various incentives to increase their tax payments to the center. (Joseph Fewsmith: 1995) This tax system encouraged localities to develop industry in order to raise greater revenues. As a result, the industries in China verified.

Thirdly, China's effort to open to the outside world and China's interaction with Hong Kong. (Joseph Fewsmith:1995). China used its enormous labour force reserve to attract foreign manufacturers to invest and produce products in Special Economic Zones such as : Shenzhen, Zhuhai e.tc. As time went by, China developed labor-intensive export processing industry and in the meantime, gathered capital, management expertise and experience for further market liberalization.

Fourthly, reform of the agricultural economy. (Joseph Fewsmith: 1995). The dissolution of the communes and the adoption of household farming greatly increased the incentives of farmers to produce more agricultural products. According to the law, land belongs to the state but farmers have the right to use it and enjoy the profits from it. From 2006, farmers no longer need to pay tax for the usage of the land, a measure never adopted by any government for over 2000 years in China's history.

Fifthly, China's cultural characteristics and the dominating power of the central government. There have already been a lot of studies about the relation between the good economic performance and the Eastern cultural characteristics. As other Asian countries, China's culture contributed to its economy. besides, a continuous , powerful central government has the ability



to abide by the policies, to conduct reform without significant disruption and to correct mistakes in the implementation of the reform measures without the risk to lose in election.



Chapter 2

The Advantageous Impact of the Reform on China's Economy

2.1 Clarification

1. China's economic growth since Reform and Opening is unprecedented in its entire history and is also remarkable in the world.
2. China's economic growth is not special and can be explained by the economic theories. Many other Asian countries have achieved the same speed of growth in the past, the major difference between China and these other Asian countries is the volume of its economy.
3. When we talk about China's economy, we must keep in mind that China is still a developing country and we should not always compare China with developed countries which have a mature and advanced market economy
4. Rapid economic growth rate will not last forever, it will slow down eventually. This is economic principle. It is not optimal to pursue persistently rapid economic growth, especially under current circumstances, where the global economic recession is ongoing.

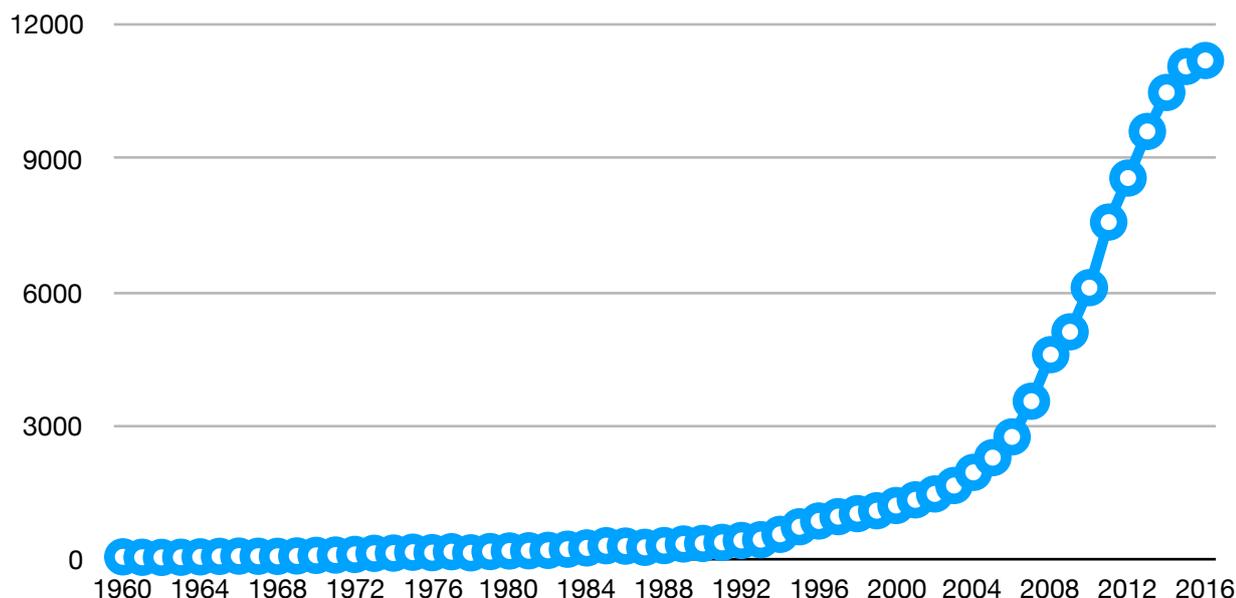
Bearing these clarifications in mind, we will now look at some major achievements that China has made since the "Open Market Reform", as a result of the gradual establishment of a free market economy and the openness of its market to the outside world.



2.2 China's GDP Performance

Figure 1

China's GDP (current US\$) billion



Source: World Bank Data 2018

From figure 1 , we can directly get the conclusion that the “Open Market Reform” in general contributes to the continuous increase of China’s GDP, although its impact varies from year to year. From \$59.716 billion in 1960 to \$11199 billion in 2016, a remarkable GDP increase was achieved by China in 56 years (40 years after the decision to establish a market-oriented economy). Analysis of this tremendous economic achievement will be made according to the degree of the implementation of the “Open Market Reform” through the years. The period from 1960 to 2016 can be divided into three phases. The first phase is from the year 1960-1978 (The central planning period), the second phase is from the year 1979-2001 (“Open Market Reform” period until WTO) and the third phase is from the year 2001-2016 (Post WTO period)

1960-1978



During this period, China was still in the command economy and the economy was organized by central planning. We can see that the GDP of China in 18 years was generally growing with a very slow rate. The value of the increase was \$89.825 billion and the average increase was \$5 billion in these years. It is worthwhile to notice that from 1960 to 1978, although the general trend of GDP is to increase, in several years however, China's GDP actually declined. There are two noticeable big declines. The first one is the year 1961, with GDP \$ 50.057 billion, \$9.659 billion fewer than the previous year. The second one is the year 1978, with GDP \$149.541 billion, \$29.397 billion fewer than the previous year. Two factors can explain this phenomenon. The first one is the defects of the planned economic system discussed above. Although at the beginning of the central planning, economic activities were organized pretty well and achieved certain growth, the efficiency problem became more obvious as the central planning went deeper. The second factor is the two famous economic and political movements. From 1959-1961, China experienced the Great Leap Forward and the Great Chinese Famine followed this movement. From the year 1966, the Cultural Revolution started.

1979-2001

At the end of 1978, China initiated the "Open Market Reform". During the period from 1979-2001, China's GDP in general was growing each year. However, at the early stage of the reform, China's GDP did not achieve swift growth for many years. There are some explanations to this phenomenon. To begin with, China needs to recover from the destruction of the Cultural Revolution. Secondly, inside the Chinese Communist Party people were divided into two groups: the conservative one and the reform one. As a result, the openness of the market was introduced with a rather slow rate and when the conservative side dominated inside the party, some Central planning measures would be brought in again. Thirdly, during the implementation of "Open Market Reform", high inflation together with other economic and social problems were triggered and they constituted obstacles of the openness of the market. Until 1994, the effect of the openness of market became obvious and China's GDP began to grow relatively quicker. From 1994-1997, on average annually the increase in GDP is \$129 billion and in 1998, China's

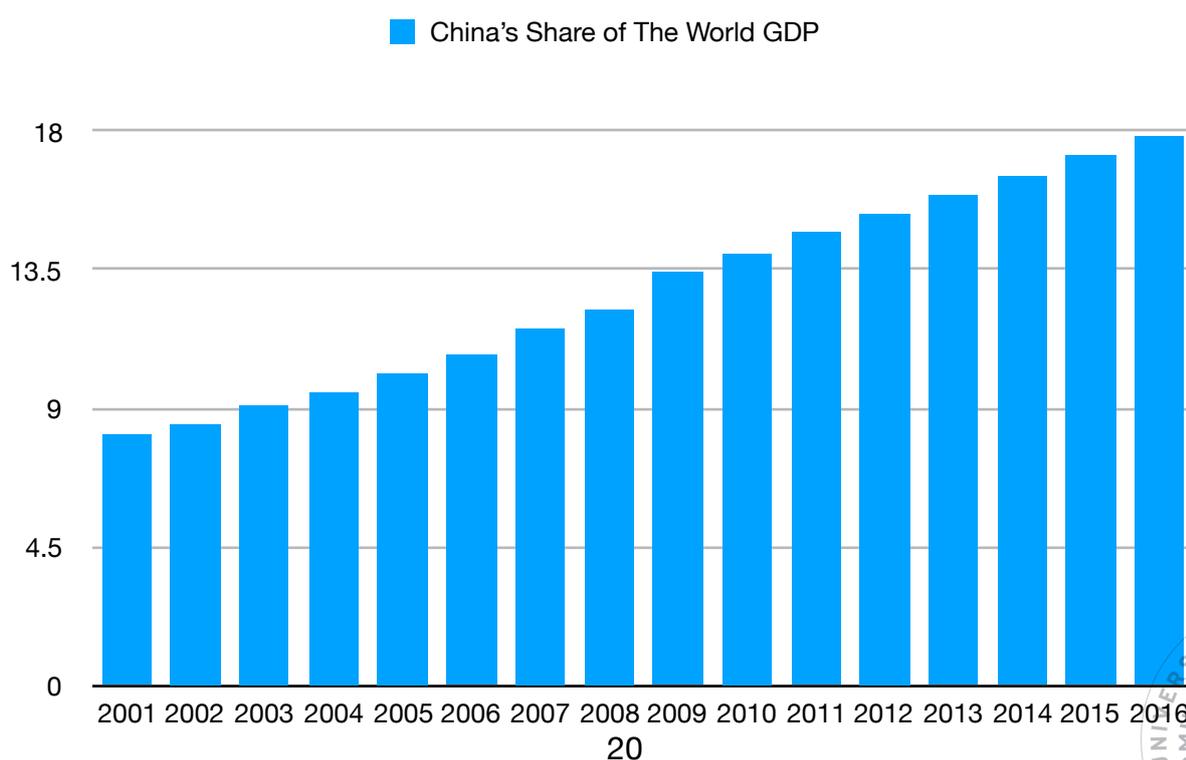


GDP, for the first time in history, reached a level over \$1000 billion (\$1029 billion). Before 2001, the year China became an official member of the World Trade Organization, the openness of the market was relatively small and the impact of “Open Market Reform ” was not so obvious on China’s GDP. After 2001, by joining the global market, China achieved remarkably high GDP.

2001-2016

China became an official member of the World Trade Organization on 11 December 2001. This event signifies China’s deeper integration into the global economy and its effort to have a more open market. From then on, the enormous advantageous impact of the open market became pretty obvious. In 2001, China’s GDP was \$1339 billion, at the end of year 2016, China’s GDP reached at \$11199 billion, about 8 times of the GDP of the year 2001 and 188 times of the GDP of the year 1960. From figure 1, we can see that after 2001, China’s GDP was growing more swiftly , much quicker than the period of the central planning period. From 2001 to 2016, the average GDP increase was \$657billion, During 1979-2001, the average GDP increase was \$53 billion and during 1960-1978, the average GDP increase was only \$5 billion.

Figure 2



Source: World Bank Data, 2018

In order to show more accurately the enormous impact of the “Open Market Reform” on China’s economy, i calculated China’s share of the World GDP from 2001 to 2016 (Post WTO period).

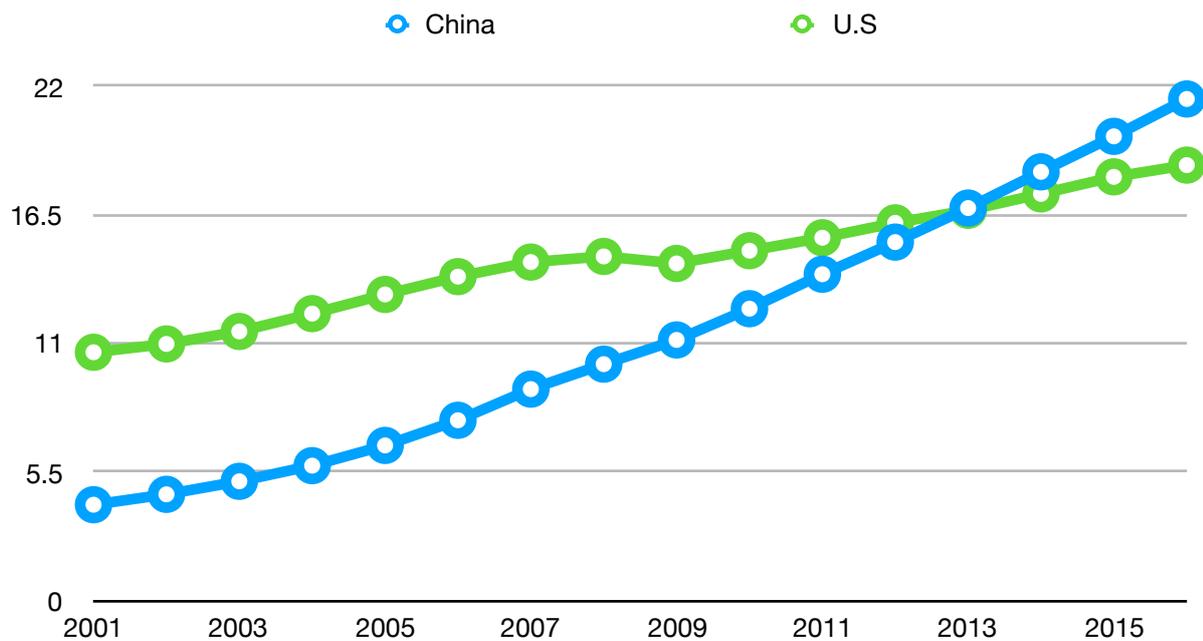
As we can see from figure 2 , China’s share of the World GDP is growing consistently each year from 2001 to 2016. In 2001, the share was less than 9%, but in 2016, the share has reached 18%, nearly 1/5 of the global GDP. This is a great achievement given that China achieved this in 15 years after joining the WTO and that just 38 years ago China was one of the most extremely poor countries in the world. As the GDP of a country takes more share of the global GDP, this country has more economic power and can actually change the rules of international trade, in the meantime, this means more responsibility. China now has great influence over the global economy and assumes more responsibilities. If we take into account the global financial crisis starting from 2008, this achievement is even much more remarkable. This figure shows directly one of the most significant positive impact the “Open Market Reform” has on the China’s economy- The bigger share of global GDP.

To demonstrate further the impact of the openness of the market, here I compare the GDP, PPP of China and the United States. One thing needs to point out is that this comparison just shows one part of China’s economy. In the meantime, the United States of America is still the country with the strongest and the most innovative economy.

Figure 3

GDP, PPP (Current international \$)





Source: World Bank Data, 2018

Three characteristics we should pay attention to:

1. Since China became an official member of the World Trade Organization (China's integration into a more open market-global market), China's GDP has been growing every year, with a higher growth rate than that of the United States of America.
2. In 2013, for the first time in history, China's GDP, PPP surpassed the GDP, PPP of the United States of America, making China the first in the world. Given the fact that China accomplished this in 35 years after the decision to establish a free market, 12 years after becoming an official member of the World Trade Organization, this achievement is remarkable in the history of human being. During the period of the central planning, China's leader made surpassing the United States of America a goal and the attempt to reach the goal caused huge disturbance in China's economy (Big-Push Industrialization) and enormous waste of resources. On the contrary,



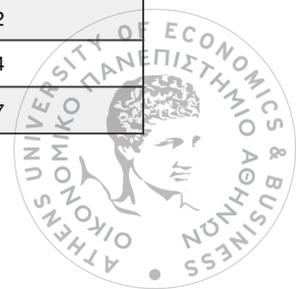
after the openness of the China's market and the integration into the global market, China achieved this goal with an impressively swift speed.

3. Owing the most powerful single market economy, the United States of America in the previous years has very impressive economic performance. We can notice that from 2008, because of Subprime Mortgage Crisis, GDP of the United States of America declined. But the decline only lasted one year and its GDP continued to grow from the year 2009. Compared with the performance of the EU, the United States of American is impressive.

The analysis above bases on the data of the World Bank. China's authorities however, do not publicly acknowledge the accuracy of the data. Consequently, i collected the same data from the National Bureau of Statistics of the People's Republic of China, which are GNI,GDP and GDP per capital in China's own currency from the year 1978 until 2016 (Published in 2018)

Table 1

| Year | Gross National Income (100 million Yuan) | Gross Domestic Product (100 million Yuan) | Per Capita GDP (Yuan) |
|------|--|---|-----------------------|
| 1978 | 3678.7 | 3678.7 | 385 |
| 1979 | 4100.5 | 4100.5 | 423 |
| 1980 | 4587.6 | 4587.6 | 468 |
| 1981 | 4933.7 | 4935.8 | 497 |
| 1982 | 5380.5 | 5373.4 | 533 |
| 1983 | 6043.8 | 6020.9 | 588 |
| 1984 | 7314.2 | 7278.5 | 702 |
| 1985 | 9123.6 | 9098.9 | 866 |
| 1986 | 10375.4 | 10376.2 | 973 |
| 1987 | 12166.6 | 12174.6 | 1123 |
| 1988 | 15174.4 | 15180.4 | 1378 |
| 1989 | 17188.4 | 17179.7 | 1536 |
| 1990 | 18923.3 | 18872.9 | 1663 |
| 1991 | 22050.3 | 22005.6 | 1912 |
| 1992 | 27208.2 | 27194.5 | 2334 |
| 1993 | 35599.2 | 35673.2 | 3027 |



| | | | |
|------|----------|----------|-------|
| 1994 | 48548.2 | 48637.5 | 4081 |
| 1995 | 60356.6 | 61339.9 | 5091 |
| 1996 | 70779.6 | 71813.6 | 5898 |
| 1997 | 78802.9 | 79715.0 | 6481 |
| 1998 | 83817.6 | 85195.5 | 6860 |
| 1999 | 89366.5 | 90564.4 | 7229 |
| 2000 | 99066.1 | 100280.1 | 7942 |
| 2001 | 109276.2 | 110863.1 | 8717 |
| 2002 | 120480.4 | 121717.4 | 9506 |
| 2003 | 136576.3 | 137422.0 | 10666 |
| 2004 | 161415.4 | 161840.2 | 12487 |
| 2005 | 185998.9 | 187318.9 | 14368 |
| 2006 | 219028.5 | 219438.5 | 16738 |
| 2007 | 270844.0 | 270232.3 | 20505 |
| 2008 | 321500.5 | 319515.5 | 24121 |
| 2009 | 348498.5 | 349081.4 | 26222 |
| 2010 | 411265.2 | 413030.3 | 30876 |
| 2011 | 484753.2 | 489300.6 | 36403 |
| 2012 | 539116.5 | 540367.4 | 40007 |
| 2013 | 590422.4 | 595244.4 | 43852 |
| 2014 | 644791.1 | 643974.0 | 47203 |
| 2015 | 686449.6 | 689052.1 | 50251 |
| 2016 | 741140.4 | 744127.2 | 53980 |

(National Bureau of Statistics of the People's Republic of China, calculated by current prices, 2018)

Although there are differences between the data collected by the Chinese authorities and the World Bank, from the data of the two institutions, we can safely conclude that after the openness of the Chinese market, China has achieved remarkable economic growth and gradually emerged as an important player in the global economy. In the future, it is highly likely that China will officially (with the acknowledgement of the Chinese government) replace the United States of American as the world's biggest economy with the highest GDP.



Except from GDP, another important economic index of the performance of a specific country is its annual GDP growth rate. So it is important to demonstrate the advantageous impact of the “Open Market Reform” on China’s annual GDP growth rate. As we have talked above, when we analyze the rapid economic growth of China, we need to keep it in mind that China is going through a catching-up process and its achievement is not something unique.

Figure 4



Source: World Bank Data, 2018

Generally, for 38 years, from 1978 to 2016, China’s average annual GDP growth rate was 9.9%. This annual GDP growth rate is not unprecedented, but in fact , it is rare, making it a very remarkable achievement. This rapid growth rate combined with an enormous economic volume makes China in recent years a growing economic superpower. During 1979-2007, the actual average annual GDP growth rate was 9.8%, much higher than the annual GDP growth rate during 1953-1978 (The period of the central planning), which was 6.1%. During the same period (From 1979-2007), the global average annual GDP growth rate was only 3.0%, 6.8% lower than that of China. Even compared with Japan and South Korea, China’s average annual GDP growth



rate also stands out. During Japan's economic take-off period, the average annual GDP growth rate is 9.2% and during South Korea's economic take-off period, the average annual GDP growth rate is 8.5%. Although many countries had the same growth rate pattern, China's growth rate is still in the leading place. This fact proves that China has grasped the rare opportunity and made advantage of the force of free market to impel its economy.

Even though China has achieved such unusually rapid- average annual GDP growth rate, it is not possible for an economy to sustain a very swift growth rate forever. At a certain stage of the development, the growth rate will slow down and China is now stepping into this stage, as reflected in the last part of the graph. Plenty of analysis putting too much focus on the growth rate of China and how China could sustain its high economic growth rate, in ignorance of the stage of the the development of China's economy. For China itself, there is no need to pursue constantly the rapid economic growth rate at the present stage of economic development or in the future because of its high cost, even though it is against the wishes of other countries, which can gain great benefit from the rapid economic growth of China. Consequently, when we analyze the impact of the "Open Market Reform" on China's GDP growth rate, we need to take this point into account.

Except from the reason of the stage of development, another reason for the slow economic growth of China from 2018 is the global financial crisis. It affected China, although not so much as it affected the U.S. and the EU. With an unfavorable global environment, it is a reasonable assumption that almost all countries face a slowing-down economic growth and it is even more costly to sustain a rapid economic growth under such circumstances.

The form below shows data concerning the economic growth of the U.S., the EU and China from the beginning of Subprime Mortgage Crisis (2008) until 2017.

Table 2



| | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
|----------------------|--------|--------|--------|-------|--------|-------|-------|-------|-------|------|
| China | 9.654 | 9.4 | 10.636 | 9.536 | 7.856 | 7.758 | 7.298 | 6.9 | 6.689 | 6.9 |
| EU | 0.481 | -4.36 | 2.123 | 1.694 | -0.429 | 0.259 | 1.739 | 2.313 | 1.94 | 2.5 |
| United States | -0.292 | -2.776 | 2.532 | 1.601 | 2.224 | 1.677 | 2.37 | 2.862 | 1.485 | 2.3 |

Source: World Bank (For China and EU, data for 2017 are from XINHUA NET, data of the United States are calculation of the average of GDP growth rate of four quarters, U.S. Bureau of Economic Analysis)

As we can see, on global level, in major economies, the GDP growth slowed down after economic crisis from the year 2008. The GDP growth of the EU was most severely negatively affected by the crisis and it took a longer time to stabilize its economy. From 2014 its GDP growth became relatively steady. For the United States of America, its economy recovered in two years and from 2010 and continued to grow. As for China, it achieved continuous growth, although economic crisis pulled down its growth rate. In general, its economic condition is stable.

As for the reason why China is not so enormously affected by America's Subprime MortgageCrisis can briefly concluded into the following two. Firstly China's state-owned commercial banks are pretty careful with investments and when the crisis occurred , they did not have a lot of junk bonds of the U.S. Secondly, China's financial market is not so well-developed and open to the outside world (Qian yingyi: 2017).This means that further market liberalization can be pursued in China.

From the analysis above, we can safely conclude that since the openness of its market, China has made a lot of remarkable achievements in its economy and gained a lot of economic power. We come to all these conclusions using aggregate data. If we look at the data per capita, a different picture will emerge. As the ex-Premier of China said: any number will be extremely small if divided by 13 billion (population of China) and any number will be extremely big if multiplied by 13 billion. On average, from perspective of almost every index, China lags behind compared with many other countries in the world, including its economy.

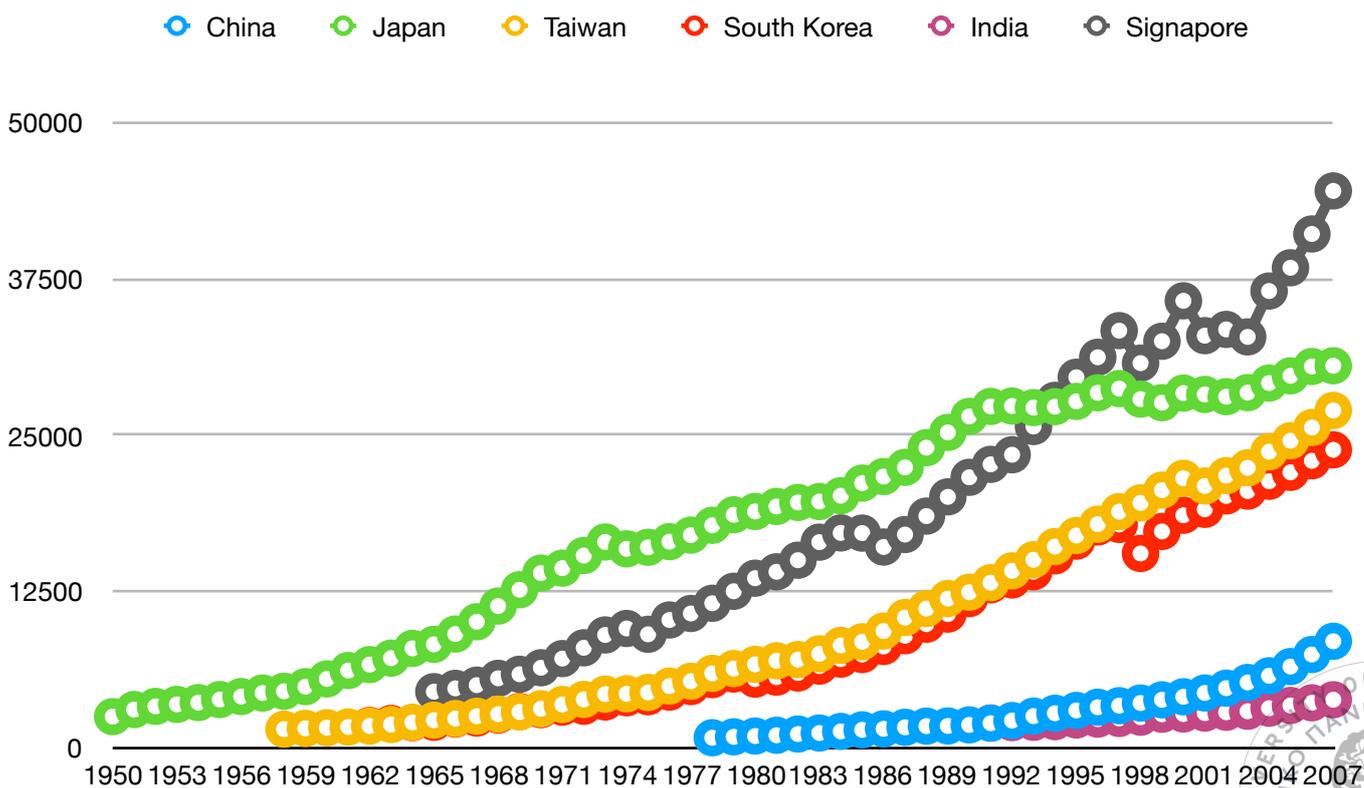


2.3 A Catching-up Process

When we analyze China's GDP, we need an international perspective (Qian yingyi : 2008). Apart from China, other countries in Asia have also gained rapid economic growth in the past or are expected to achieve rapid economic growth in the near future. What China has done in recent years is actually a catching-up process and its economic achievement is not something unprecedented. The volume of the economy may constitute a major difference between China and other countries and explain the reason why China attracts so much attention.

As a result, in order to avoid exaggeration of China's achievement on GDP and to show the impact of the "Open Market Reform" on China's economy more objectively, i collected data of Japan, South Korea, Taiwan , Singapore and India. These countries are all located in Asia, they all had economic reform and achieved swift economic growth. A comparison of China's GDP with the GDP of these countries can tell us a more reliable story about the impact of the "Open Market Reform " on China's economy.

Figure 5



Real GDP per capita (Constant Prices: Laspeyres)

Source: Penn World Table 6.3 , derived from growth rates of c, g, i.

I choose the year 1950 as the starting point of Japan, 1958 as the starting point of Taiwan, 1962 as the starting point of South Korea, 1965 as the starting point of Singapore, 1978 as the starting point of China and 1991 as the starting point of India.

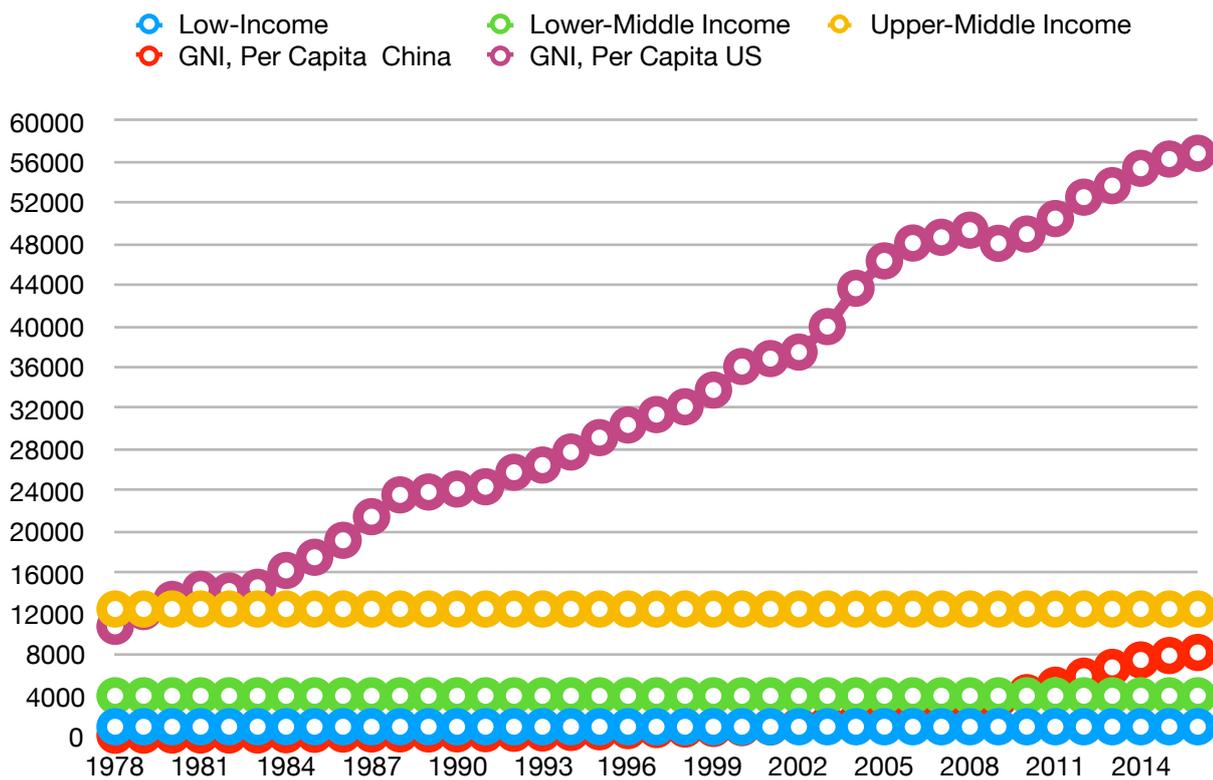
It is clearly shown in figure 5 that each country had a similar GDP growth pattern : a rapid economic growth for a long period of time. Countries such as Japan (in its fifties and sixties), South Korea (in its sixties and seventies) and Singapore during some periods of its economic development, all have achieved a sustained rapid GDP growth (9%-10% for twenty to thirty years). Consequently, China's sustained rapid GDP growth is not unprecedented and we should not exaggerate it. The "Open Market Reform " impelled China's economy to grow with a sustained and swift speed. This impact is remarkable, but it can be explained by economic principles and theories. Many other countries in Asian had the same achievement before or will have the same achievement in the future (Such as India, the GDP growth of India surpassed that of China from 2014).

Below shows the process of China to rise itself from "Extreme poverty" to a "Lower middle income" country, using GNI per capita.

Figure 6

GNI Per Capita, Atlas Method (Current US\$)





Source: World Bank data, 2018

In order to simplify the process of the construction of the figure, I used the standard, adopted by the World Bank, for the classification of the income level of the year 2018 for all the years from 1978 to 2016.

Because the values of GNI per capita of China from 1962-1978 were very small and varied slightly among themselves, which make them cannot be shown clearly in figure 6. Below in Table 3, I listed GNI, per capita of China from 1962 to 1978 (Period of the central planning).

Table 3
GNI Per Capita, Atlas Method (Current US\$)

| Year | 1962 | 1963 | 1964 | 1965 | 1966 | 1967 | 1968 |
|------|------|------|------|------|------|------|------|
| GNI | 70 | 80 | 90 | 100 | 110 | 100 | 90 |



| | | | | | | |
|-------------|------|------|------|------|------|------|
| | | | | | | |
| Year | 1969 | 1970 | 1971 | 1972 | 1973 | 1974 |
| GNI | 110 | 120 | 130 | 130 | 160 | 180 |

| | | | | |
|-------------|------|------|------|------|
| | | | | |
| Year | 1975 | 1976 | 1977 | 1978 |
| GNI | 200 | 190 | 190 | 200 |

If we compare the GNI per capita of China during the period of central planning and GNI per capita of China during the period after the the “Open Market Reform”, we can notice a significant difference, GNI per capita grew very slowly during the central planning period, a bit more quickly during the starting years from 1978 and acquired rapid growth after China became an official member of the World Trade Organization, which is consistent with the analysis above, showing the force of the openness of market.

From figure 6 and table 3, we can see that even after 30 years of the “Open Market Reform”, China is still below the Upper-Middle Income line. If we admit that it is a remarkable achievement that China has risen from extreme poverty to Lower-Middle Income country after the openness of its market, we should realize that it is a long way to go to increase its GNI per capita to the level of developed countries, such as the United States of America. Approximately, China’s population is 4 times the population of the United States of America, if we divide the 15-year (From 2001-2016) average GNI per capita of the United States of America with 4, we can get \$12,873. The 15-year average GNI per capita of China however, is just \$ 4259. Assuming that the economic growth of the United States of America is 0 and the economic growth of China is 4% (the average difference between the economic growth of the U.S. and China), it still takes 27 years for China to reach the income level of the United States of America.



As a result, due to the “Open Market Reform”, China’s GDP performance from every perspective have been improved greatly. However, compared with advanced and developed market economies, China stills lags behind and should learn from them, cooperate with them and catch up with them.



Chapter 3

Structural Change through the “Open Market Reform” Period

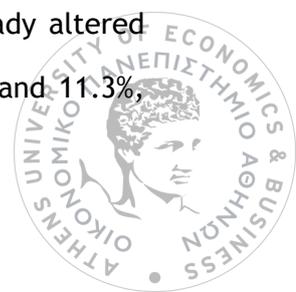
3.1 Major Structural Change

Simon Kuznets stated in 1979 : “it is impossible to attain high rates of growth of per capita or per worker product without commensurate substantial shifts in the shares of various sectors.” After him, intensive researches on the effect of structural change on economic growth have been conducted and now structural change is an important part of the analysis of economic growth.

Over 40 years of “Open Market Reform”, except from the remarkable achievement that China has made in GDP, the structural change inside China’s economy is also noticeable and played significant role in the development in the past and have profound impact on the future of China’s economy.

For thousands of years, China in history always existed as an enormous agricultural country. Even at the establishment of the New China, industrial sector was still in primary stage. During the central planning period, leaders of the Chinese Communist Party placed the development of the heavy industry at the center of their policies. Because of the implementation of this heavy-industry orientated policy, China’s economy was distorted. After 1978, the general direction of the structural change is to rebalance the economy and to make it efficient under current circumstances.

In 1978, 70.5% of labor force was in agriculture, forestry and fishing, creating 28.2% of the GDP. In 2007, however, after 29 years of structural change, the situation has already altered greatly. The shares of primary industry in employment and value added are 40.8% and 11.3%,



while the shares of secondary industry are 26.8% and 48.6%, and the shares of tertiary industry are 32.4% and 40.1%. (Vittorio Valli and Donatella Saccone , 2009).

Table 4

Percentage of Total Employment in China by Sectors (% of total)

| Sectors | 1978 | 1989 | 1997 | 2005 | 2007 | 2010 | 2013 | 2016 |
|---|------|------|------|------|------|------|-------|------|
| Agriculture, Forestry, Animal Husbandry, Fishing | 70.5 | 60.1 | 49.9 | 44.8 | 40.8 | 36.7 | 31.4 | 27.7 |
| Industry, Mining, Quarrying, Construction | 17.3 | 21.6 | 23.7 | 23.8 | 26.8 | 28.7 | 30.09 | 28.8 |
| Services | 12.2 | 18.3 | 26.4 | 31.4 | 32.4 | 34.6 | 38.5 | 43.1 |
| Total Economy | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |

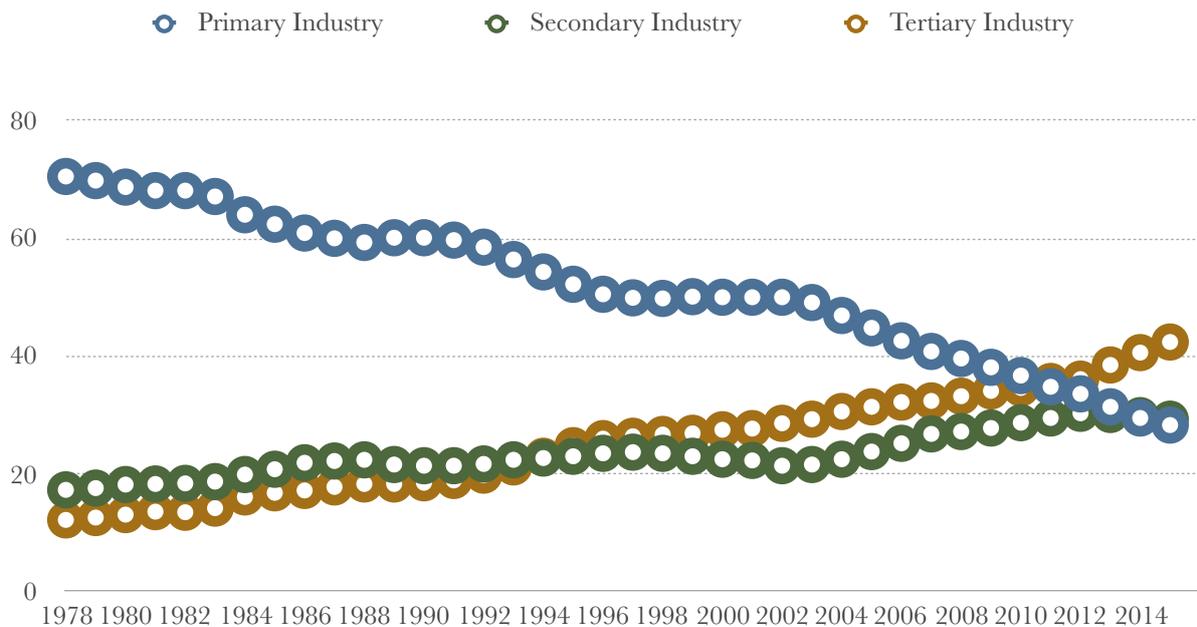
Source: National Bureau of Statistics of the People's Republic of China

Figure 7

Number of Employed Persons at Year-end by Three Strata of Industry

Composition in percentage

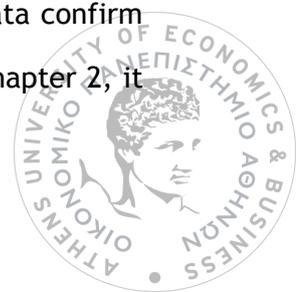




Source: National Bureau of Statistics of the People’s Republic of China

From Table 4 and Figure 7, we can see that the labor force employed in Agriculture, Forestry, Animal Husbandry and Fishing (Primary Industry) is decreasing, in Industry, Winning, Quarrying and Construction (Secondary Industry) and Service (Tertiary Industry) is increasing over the years, manifesting the general picture of the structural change inside China’s economy :

1. The flow of labor force to more productive sectors : Industry, construction and services have much higher labor productivity than agriculture. (Maddison: 2007) China has been a labor surplus par excellence : labor was underemployed in the farms (Knight and Song, 2005) and the flow of labor force (transfer of unemployed or underemployed employees) from agriculture to more productive sectors contributed a great deal into the economic growth of China and has shaped the change of the structure of China’s economy. And the data confirm the “Petty-Clark’s law” if we look Table 1 and Graph GDP per capita of China in Chapter 2, it



clears shows that the employment switches from agriculture to manufacturing and then to service industry when income per capita rises.

2. The general switch from agriculture to manufacturing in the previous years and to services in the recent years. From 1978-1993, from the perspective of labor force employed in different sectors, we can perceive an intensive flow primarily from agriculture to manufacturing, with a decrease of 14.1% in Primary Industry and an increase of 5.1% in Secondary Industry. In the year 1992, China decided to formally establish a market economy and one year after, from 1993, the employment percentage in Tertiary Industry surpassed the Secondary Industry and shows the tendency to continue its share in the total employment composition. In the meantime, the share of Primary Industry continually decreases.

The percentage of employment in different sectors can show us the general picture of structural change in China's economy over the 40 years. However, the importance of the structural change, namely, the contribution of the transfer of labor force in different sectors to the economic growth of China can not be concluded from it. Consequently, below we analyze contribution of different sectors to China's GDP below.

3.2 The Changing Role of The Three Industries

Table 5

GDP in the Main Branches of China's Economy (% of total GDP)



| Sectors | 1978 | 1989 | 1997 | 2005 | 2007 | 2010 | 2013 | 2015 |
|--|------|------|------|------|------|------|------|------|
| Agriculture, Forestry, Animal Husbandry, Fishing | 28.2 | 25.1 | 18.3 | 12.2 | 11.3 | 9.5 | 9.3 | 8.8 |
| Industry, Winning, Quarrying, Construction | 47.9 | 42.8 | 47.5 | 47.7 | 48.6 | 46.4 | 44 | 40.9 |
| Service | 23.9 | 32.1 | 34.2 | 40.1 | 40.1 | 44.1 | 46.7 | 50.2 |
| Total Economy | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |

Source: National Bureau of Statistics of the People's Republic of China

Figure 8

Share of the Contributions of the Three Strata of industry to the Increase of GDP

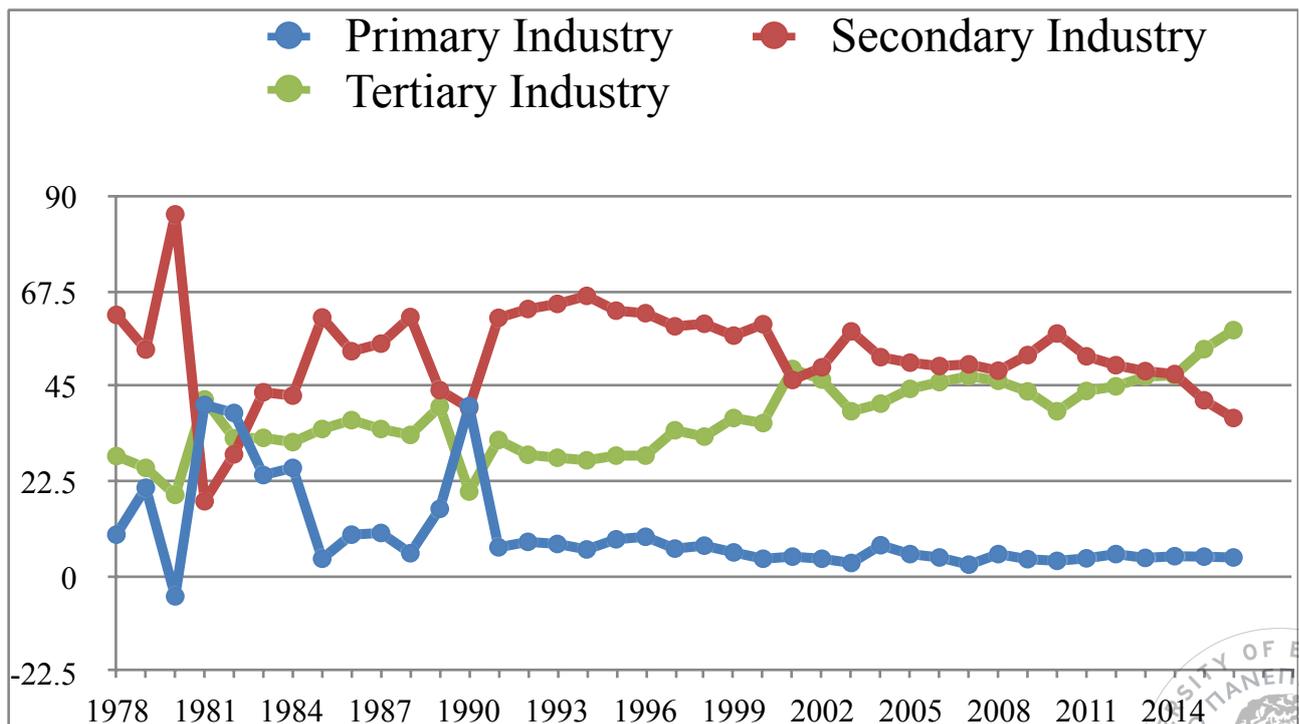
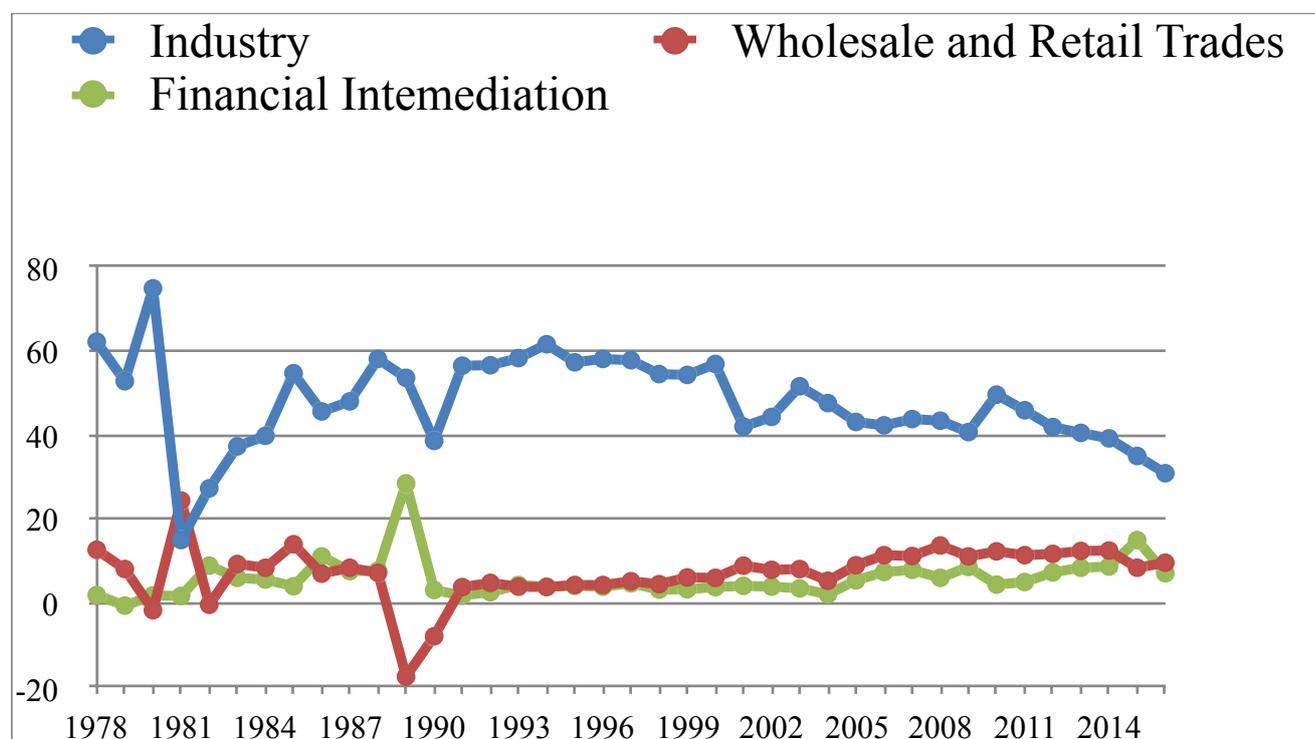


Figure 9

Share of the Contributions of the Main Sectors to the Increase of GDP



Source: National Bureau of Statistics of the People’s Republic of China

Data are calculated at constant prices

As we can see from Table 5 and Figure 8, from the start of the “Open Market Reform” until today, secondary industry from the beginning has been contributing the greatest to the increase of China’s GDP. On average, for 40 years, the share of secondary industry to the increase of China’s GDP is 54.09%. During recent years, the share of secondary industry is relatively stable and has the trend to decrease. The share of tertiary industry generally has been growing over the years and from the year 2015 tertiary industry has surpassed secondary industry and has the potential to boost its share to the increase of China’s GDP, substituting secondary industry as the driving force of the development of China’s economy. On average, during the 40 years, the share of secondary industry to the increase of China’s GDP is 38.49%. As expected, primary industry has the least share to the increase of China’s GDP, on average about 10.37%. From 1978-1991, there



were dramatic changes of the share of primary industry, with peak of 40.5% and bottom of -4.8%. From 1991, the share of primary industry was relatively stable the range of which was from 2.7%-9.3%. So we can safely conclude that from the start the “Open Market Reform”, the secondary industry has been the single most significant force of the economic growth of China for about 37 years. In the meantime, the role of tertiary industry has been being reinforced over the years and it finally replaced secondary industry to contribute the most to the growth of China’s economy, a sign that China’s economy is going into a more advanced pattern.

From figure 9, it is manifest that industry has unshakable position in the contribution to China’s economic growth. For 40 years of the openness of China’s market, except the year 1981, the share of industry was always the biggest compared with wholesale and retail trades and financial intermediation, usually having the dominant position, with average contribution of 47.42%. For 40 years, only in 1981 did wholesale and retail trades surpass industry to take the most share to the increase of China’s GDP, because of the devastating outcome of the Great Leap Forward and the Cultural Revolution. For wholesale and retail trades, on average, cover 7.47% of the share to the increase of China’s GDP and for financial intermediation, on average, cover 5.41% of the share to the increase of China’s GDP. The changes of the share of industry, wholesale and retail trades and financial intermediation are as follows: the importance of industry is declining over the years, wholesale and retail trades and financial intermediation are increasing slowly with a stable pace. As a result, one significant structural change is the decreasing importance of industry and increasing importance of wholesale and finance in the future for China’s economic growth.

3.3 Structural Reforms through History

After examining the most general and obvious structural change in China’s economy, i will separate the 40-year period from 1978-2018 in three phases, namely from 1978 to 1992, from 1992 to 2005 and from 2005 to 2050.



3.3.1 Structural Reforms from 1978-1991

The economic reform of the Chinese economy was described by Deng Xiaoping as “ Crossing the river by groping for the stepping stones ”, which concludes the nature of this economic reform as unprecedented. Along with exploratory measures, several major structural changes happened during this period. The first significant reform happened in rural areas, which lasted for about six years. The commune system was abandoned and incentives were introduced into farming. Farmers were given the right to use the land and enjoy the harvest for 70 years (selling in the open market). This reform turned out to be very successful and the productivity of agricultural sector was improved immensely and a rapid rural production rise was observed during the rural reform. Apart from that, rural non-farm enterprises were developed gradually and produced mainly light manufactures. With the more efficient agricultural production, surplus labor could go to this more productive sector, contributing more into the economic growth. After the successful rural reform, industrial reforms in urban areas were initiated in 1984. The core of the reform lied in the SOEs. SOEs were gradually given more managerial autonomy and incentives, through contract responsibility system in large and medium-sized enterprises (LMEs) and leasing system in small ones. Government also took measures to solve the soft-budget problems, changing the fund resources of SOEs from finance to credit (Bogaidai).

3.3.2 Structural Reforms from 1992-2005

Table 6



Industry Structure : 1992-1997-2002-2005

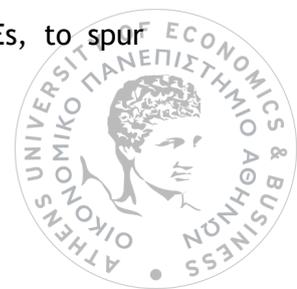
| | | 1992 | 1997 | 2002 | 2005 |
|--|--|------|------|------|------|
| Agriculture | Agriculture | 13.6 | 11.8 | 8.9 | 6.6 |
| Energy and Water Resources | Coal mining and processing | 1.2 | 1.3 | 1.2 | 1.1 |
| | Petroleum and natural gas products | 2.6 | 1.3 | 1.1 | 0.9 |
| | Electricity, steam and hot water | 1.8 | 2.3 | 2.4 | 3.1 |
| | Gas production and supply | 0.1 | 0.1 | 0.1 | 0.1 |
| | Water production and supply | 0.1 | 0.3 | 0.2 | 0.2 |
| | Subtotal | 5.8 | 5.3 | 5 | 5.4 |
| Raw materials Mining and Processing Industry | Metal ore mining | 0.3 | 0.5 | 0.5 | 0.6 |
| | Non-metal minerals and other mining | 0.6 | 0.7 | 0.5 | 0.4 |
| | Nonmetal mineral products | 2.3 | 2.4 | 1.9 | 3.1 |
| | Metals smelting and pressing | 3.1 | 4.5 | 5.2 | 5.2 |
| | Metal products | 1.3 | 2.4 | 2 | 1.9 |
| | Subtotal | 7.6 | 10.5 | 10.1 | 11.2 |
| Light Industry | Food products and tobacco processing | 7.3 | 5.3 | 4.6 | 4.8 |
| | Textile goods | 6.7 | 4 | 3 | 3.1 |
| | Garment, leather, and related products | 2.8 | 1.7 | 2.2 | 2.5 |
| | Timber processing and furniture | 0.6 | 1.1 | 1.3 | 1.2 |
| | Paper, printing and stationery | 1.4 | 2.2 | 2.4 | 2.4 |
| | Subtotal | 18.8 | 14.3 | 13.5 | 14 |
| Petrochemical Industry | Petroleum refining and processing | 2.3 | 1.7 | 2.1 | 1.8 |
| | Chemicals | 5.9 | 7.4 | 7.1 | 6.6 |
| | Subtotal | 8.2 | 9.1 | 9.2 | 8.4 |
| Mechanical and Electrical Industry | General, special equipment | 3.1 | 4 | 4.2 | 4.8 |
| | Transport equipment | 1.7 | 2.7 | 3.2 | 3.9 |
| | Electrical mechanical equipment | 1.4 | 2.7 | 2.3 | 3.3 |
| | Communication, computer and other electronic equipment | 0.8 | 2.4 | 4.2 | 5.9 |
| | Instruments, meters and office equipment | 0.3 | 0.5 | 0.6 | 0.8 |
| | Subtotal | 7.3 | 12.3 | 14.5 | 18.7 |
| Other Industries | Other manufacturing products | 1.4 | 0.7 | 0.6 | 0.7 |
| | Scrap and waste | 0 | 0.3 | 0.3 | 0.2 |
| | Subtotal | 1.4 | 1 | 0.9 | 0.9 |
| Construction Service | Construction | 7.9 | 8.2 | 9.1 | 7.8 |
| | Transport and warehousing | 4.3 | 3.8 | 4.4 | 4.7 |
| | Post | 0.1 | 0.1 | 0.2 | 0.1 |
| | Wholesale and retail trade | 6.6 | 6.2 | 5.4 | 4.6 |
| | Accommodation and catering service | 1.6 | 2 | 2.2 | 1.9 |
| | Finance and insurance | 3.9 | 3 | 2.4 | 2 |
| | Real estate | 2.7 | 2.3 | 2.3 | 1.7 |
| | Other services | 10.2 | 10.2 | 12.1 | 12.1 |
| | Subtotal | 29.4 | 27.6 | 29 | 27.1 |

Source: Fei Wang, Baomin Dong, Xiaopeng Yin and Chi An



The structural reforms occurring in this period can be regarded as the core of the Chinese economic reform, which were initiated by Deng Xiaoping's "Southern Tour". With absolute resolve, in this historical tour Deng Xiaoping reenforced the national commitment to economic reform and re-established the direction of it. During this period, the privatization thrived. Not only private enterprises were allowed to be operated but the government also enacted relative policies to stimulate the development of private sectors. In the meantime, huge reforms happened in SOEs, mainly about the elimination of inefficiency and the reform in the ownership structure change. More specifically, Three major reforms have taken place:

1. The separation of enterprises and government. Before this period, enterprises could be described as a department of the government, constrained by political power and answering to the order of the government. In order to cope with the increasing conflict between the will of the government and the nature of the enterprises, it has been decided that the government will not hold the control of the enterprises and let enterprises become an independent entity, with its own decision-making power and production and management rights. What's more, it has been decided that the government will stop combine its interest with the interest of the enterprises. The enterprises from now on own their interest and are no longer obligated to pursue only the interest of the government.
2. promotion of joint-stock system and corporate system, along with the establishment of modern property rights system, aiming at the improvement of efficiency , profit and better management. The establishment of property rights system was regarded as one of the core reforms during this period. In SOEs, because of the state-owned nature, the property rights relationship was never clear, which directly resulted in the inefficient management of the state-owned assets. With the establishment of the property rights system, it is made clear that the state owns the ownership of the assets of the SOEs, which facilitates the flow and re-organization of the state-owned assets, and puts the state-owned assets into the market.
3. support for the development of the large state-owned enterprises and more active participation of these large state-owned enterprises in the global competition, to extend their business oversea. In the meantime, a "Let-Go" of middle and small SOEs, to spur economic vitality.



In Table 6, detailed structure changes in the Chinese economic sectors during this decisive reform period are shown. As we can see, the proportion of Agriculture declined continuously, about 2% each 5-year, although productivity of the agricultural sector has been improved immensely over the years. Data in Table 6 are consistent with the general picture of structural change in the early years of the economic reform-transformation: from agricultural to industry. Energy and water resources have been roughly constant for the span of 13 years, with two significant change inside this sector: a continuous decline of the proportion of petroleum and natural gas products and a continuous increase of the proportion of electricity, steam and hot water. One example of this structural change is the State Grid took the place of China National Petroleum Corporation in recent years and was listed second in the Fortune Global 500. Raw material and mining has been increasing, from 0.3% in 1992 to 0.6% in 2005. Processing industry, in a whole have been increasing, with obvious increase in nonmetal mineral products and metals smelting and pressing. Light industry as a whole has observed severe decline, especially in the early years, indicating its importance for the Chinese economy has been declining. Inside this sector, textile goods experienced the biggest decline, its proportion in 2005 was 3.6% lower than that in 1992. Petrochemical industry has experienced ups and downs during this reform-period. The proportion of Chemicals was increasing rapidly from 1992-1997, but declined ever since, until to 6.6% in 2005, 0.7% higher than that in 1992. Production technological development can explain this change. Mechanical and electrical industry, has seen continuous increase over this specific period, showing the outcome of the above structural reforms happening in SOEs and private sectors, and contributed the biggest share of China's economic growth. Out of the benefit of production technological development, fixed asset formation and overseas demand, at the end of 2005, as a whole this sector's proportion has increased 22.8%, an enormously huge surge in industry structure. Particularly, communication, computer and other electronic equipment has been developed immensely, benefiting the most from the reforms of SOEs and private enterprises in this period and in itself changed the structural organization of the Chinese economy. This industry increased continuously in 13 years, and its share surged to 5.9 in 2005 from 0.8 in 1992. The development of this industry actually shaped the future of the Chinese economy. Nowadays, this specific industry has taken a great share in the global market and is



regarded as one of the centers of the strategic development of the Chinese economy. During this period, service sector has not seen obvious increase, as the structural reforms mainly took place in industry and the huge benefit from industries, especially after China became the official member of WTO, making the Chinese central government put the development of industries at the center of the government's economic plan, which slows down the development of service sector.

3.3.3 Structural Reforms from 2005-2050

When China's economy went to this phase, the major economic structural reforms has already been made, the attention and efforts have been put on the improvement and remediation of the economic structure.

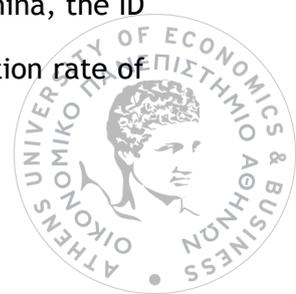
Due to the industrial reform in 1980s and 1990s, China's economy has undergone substantial structural change and has achieved rapid growth of productivity and output. However, the cost cannot be ignored : wasteful investment, high energy consumption, heavy pollution and imbalance among different regions and the ever-gaping inequity. Especially after 2005, the reforms in the productivity of China's central state-owned enterprises became very slow. The major industries such as steel, coal, cement, glass, petroleum, petrochemicals, iron ore, and non-ferrous metals accounted for 80% of the losses. The industry's profit fell the most and overcapacity was very serious. At the beginning of December 2015, the production price index (PPI) of several major industries was negative for more than 40 consecutive months. These major industries accounted for 70%-80% of the decline in PPI for the entire industry. In the meantime, China's supply-demand relationship was facing structural imbalances that cannot be ignored. "Dislocation between supply and demand" has become the biggest obstacle to China's sustained economic growth. On the one hand, excess capacity has become a major burden on China's economic restructuring. On the other hand, China's supply system and the demand side were seriously incompatible. Overall, there was a surplus of low-end products and an insufficiency of



high-end products. In addition, China's supply side was insufficient and cannot provide the desired demand. Along with other structural problems, it was a great challenge for China to continue its economic growth. As a result, it was high time to find a new way to continue the industrialization and pursue a sustainable development strategy. In 2008, the share of LMEs to gross output fell to 62.9%, from 67.5% in 2003. China's industry enjoyed an increasing ratio of profit from negative or almost zero in the late of 1990s to 7% and 25% for SOEs and NSEs in 2008. Under these historical circumstances, on the Economic Work Conference taken place inside the Chinese Communist Party, the leader of China, Xi Jinping, made an important speech, the point of which is : Implementation of the "Thirteen Five-Year Plan" proposal, promotion of the structural reforms and promotion of a sustained and healthy economic development". Since then, structural change has been one of the major objectives of the economic activities of China. Generally there are six major structural problems in China's economy and these six structural problems point the direction of the future structural reform of China's economy.

1. Industrial structure issues. The problem of industrial structure is highlighted by the high proportion of low-value-added, high-consumption, high-pollution and high-emission industries and low proportion of high-value-added industries, green and low-carbon industries, and internationally competitive industries. Therefore it is necessary to accelerate the reform of the science and technology system and promote the development of high-tech and high-value-added industries; it is necessary to speed up the reform of the ecological civilization system and provide the impetus for the development of green and low-carbon industries; it is necessary to pass financial system reforms, social security system reforms, etc. Eliminating outdated production capacity and "Three High" industries (high investment, high consumption and high pollution industries)

2. Regional structural issues. The problem of regional structure is highlighted by the unreasonable distribution of the population in the region. At present, the urbanization rate of China, especially the rate of population with urban Hukou (a registration system in China, the ID card and social welfare of a Chinese citizen is determined by it) is low. The urbanization rate of



population with Hukou is much lower than the urbanization rate of population as permanent residents. Therefore, it is necessary to promote the reform of Hukou, the reform of the social welfare and the reform of land system etc.

Another problem with the regional structural problem is the fact that regional development is uneven, uncoordinated and unfair. Some regions enjoy many “privileged” policies, while other regions lag very behind in terms of economic development. As a result, it is necessary to promote the reform of the administrative management system, the reform of the fiscal and taxation system, the reform of the division of zone system and so on, to solve the problem of uneven development in different regions, to allow the free flow of population and various production factors in different regions and optimize the allocation.

3. Structural issues of the input of factors. For a long time, China’s economic development has over-relied on labor, land, resources and other general production factors, while the proportion of high-level factors such as talented personnels, technology, knowledge and information has been low. This has led to high levels of low-end industries and excessive consumption of resources and energy. Consequently, it is necessary to speed up the reform of the science and technology system, the education system etc., to optimize the input structure of factors and accomplish innovation-orientation.

4. Structural issues of discharge. The discharge proportion of waste water, waste gas, waste residue and carbon dioxide in China’s emission structure is high. This kind of unreasonable emission structure leads to a relatively large pressure on resources and the environment. As a result, it is necessary to speed up the reform of the ecological civilization system, in particular the promotion of the natural resource property rights system, the control system for the use of natural resources, the system of paid usage of resources, the ecological compensation system and the initial use of energy, water, emission and carbon emission rights.



5. Structural issues of economic growth power. For a long time, China's economic growth has become too dependent on the "troika" to impel, especially on investment. Actually, the "troika" is only the three major components of GDP. It is the short-term driving force that responds to the demand for macroeconomic fluctuations. It is only the result of economic growth rather than the cause. Institutional change, structural optimization and factor upgrading (in correspondence to reform, transformation and innovation). The "three major engines" are the fundamental driving force for economic development. China must rely more on reform, transformation and innovation to increase the growth rate of total factors, to cultivate new growth points and to create new growth driving force.

6. Structural issues of income distribution. At present, China's urban-rural income gap, sector income gap, and the income gap between the rich and the poor are all relatively large. Wealth is concentrated in a few areas, a few sectors and a few people. Therefore, it is necessary to speed up the reform of the income distribution system, the reform of the social welfare system, the reform of the property rights system and the reform of the fiscal and taxation system, so as to promote the relative fairness of income distribution and narrow the gap between the rich and the poor.

Following the spirit of the speech of the Chairman of China, taken into account of the above six major structural problems, Chinese Premier Li Keqiang and his cabinet issued a strategic plan "Made in China 2025", inspired by the German Industry 4.0, which concerns mainly the structural change in Chinese industry. This plan is actually described as an "initiative to comprehensively upgrade Chinese industry" (Center for Strategic and International Studies). The unfolding trade war between China and the United States of America (starting from March, 2018) has a lot to do with this strategic plan, along with "The Belt and Road Initiative".

The general structure of "Made in China 2025" is summarized as "One Two Three Four Five Five Ten"



“One” is the goal of transforming from a manufacturing huge country to a manufacturing super power and finally achieving the revival of China through manufacture.

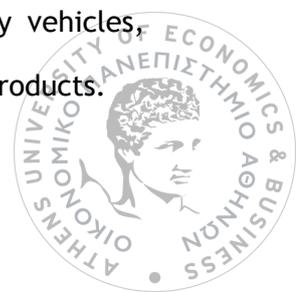
“Two” means that this goal is achieved through the development of two integrated technologies. The 18th CPC National Congress proposed using the deep integration of Informatization and industrialization to lead and drive the development of the entire manufacturing industry. This is also a commanding point that China’s manufacturing must occupy.

“Three” means to adopt a “three-step” strategy. In principle, each step will take ten years or so to realize the goal of transforming China from a manufacturing country to a manufacturing super power

“Four” is the determination of four principles. The first principle is market-led and government-guided. The second principle is based on the current and long-term perspective. The third principle is comprehensive advancement and breakthroughs in key areas. The fourth principle is self-development and win-win cooperation.

“Five Five” means that there are two “Five”. The first “Five” is that there are five principles, namely, innovation driven, quality first, green development, structural optimization and talent-based. The second “Five” is the implementation of the five major projects, including the construction of a manufacturing innovation center, the strengthening of basic engineering, smart manufacturing engineering, green manufacturing engineering and high-tech equipment innovation.

“Ten” means ten areas which cover a new generation of information technology industry, high-end CNC machine tools and robots, aerospace equipment, marine engineering equipment, high-tech ships, advanced rail transportation equipment, energy-saving and new energy vehicles, power equipment, agricultural machinery equipment, new materials and biomedical products.



About how to implement this plan, Chinese Premier stated : “ The next step into the deep implementation of “Made in China 2025” is to deepen supply-side structural reforms, to be market-oriented, to use enterprises as the main body, to strengthen innovation-driven and policy incentives, and to focus on the development of intelligent manufacturing as the main direction, in combination with the “Internet +” and mass entrepreneurship and innovation. We need to promote the intelligent, green and service-oriented upgrading of the entire manufacturing industry and accelerate the construction of a manufacturing super power. (Li Keqiang 2017 at State Council).



Chapter 4

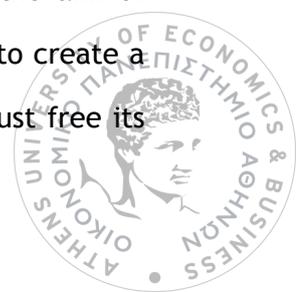
Market Liberalization

With the implementation of the “Open Market Reform”, the inevitable historical event is the liberalization of the Market. This is the core objective of the economic reform and until this day, the full liberalization of the Chinese market has not been accomplished. In the following years, China will gradually open its financial sector, telecommunication, energy e.tc to further liberate its market. In retrospect, for 40 years, due to the partial liberalization of the Chinese market, both China and the rest of the world have benefitted a lot from this huge market.(China has a population three times more than other transition economies combined). In this section, the process and main characteristics of the liberalization of the Chinese market will be discussed:

1. Price Liberalization
2. Attraction of FDI and foreign firms + China’s trade performance
3. Privatization of SOEs
4. Breaking monopoly

4.1 Price Liberalization

The first step, or the preparation for the liberalization of the Chinese market is the liberalization of price control. As we have discussed in the first section, before 1978, China was in the central planning economic system. Inside this economic system, the Chinese central government decided the price, not according to the function of the market, with the aim of maximization of the profit, but according to political and social objectives. In order to create a market and to liberate this created market in the future, the central government must free its



price control. Under such circumstances, a controversial, but effective, with Chinese characteristic system was introduced into the Chinese economic activities- the dual -track approach.

Before China adopted this innovative price liberalization approach, the former Soviet Union countries has already practiced two approaches, which both proved failure with severe economic and social consequences. The first approach is that government sets prices administratively, according to market supply and demand. The truth is that the prices were set to serve political purposes and bureaucrats' interests, far from in accordance with the free market. As a result, efficiency was not improved and chaos was created in the market. The second approach, which adopted by Russia and many other Eastern European countries, is: Prices are freed all at once and solely determined by the free market. The problem of this approach is that the society which used to price control could not function when prices are freed in one stroke and again the market was in chaos.(Yingyi Qian, 2002)

China, however, adopted the dual-track approach, which successfully served the purpose of price liberalization. Under dual-track approach, economic agents have one obligation and one free choice. Economic agents are obliged to produce fixed quantities of goods at fixed prices set by the state (under the plan track). In the meantime, if they have met the required quantities set by the state, they can produce and sell their goods in the market at free market prices to pursue more profits (under the market track). The implications of the dual-track approach are political and economical (Yingyi Qian, 2002). From political perspective, the dual-track approach protects the interests of different groups by compensating their potential loss from the market liberalization under the plan track to maintain status quo. The logic is very clear, with this outcome: price liberalization without losers, interest groups will not strongly oppose the price liberalization and political obstacles could be removed. More importantly, although at the beginning, the planned price held the dominant place, as the implementation of price liberalization, the market price mechanisms developed, enhanced gradually and replaced the planned track's dominant place. Eventually the market track became the only price mechanisms in the market and the state achieved the goal of price liberalization. From economical



perspective, the dual-track approach improves efficiency. After fulfilling the obligations under the plan, the rest economic activities are conducted under free market mechanism, which is efficient, both in trade and allocation. Consequently, the market track functions undo the inefficient of the plan track and improve the overall efficiency. As the explanation of the political outcome, when an efficient and an inefficient system co-exist, eventually inefficient system will be abandoned and price liberalization will be achieved.

The dual-track approach for price liberalization implemented for 14 years, from 1978-1993. In 1978, in the total retail sales of goods, the planned price accounted for 97% and the market price accounted for only 3%. By 1990, the plan price accounted for 25%, the national guided price accounted for 25% and the market price accounted for 45%, which has obviously change the excessive concentration of the price control system and has expanded the market's role in price formation.

Following the dual-track approach for price liberalization, is the agricultural market liberalization and the industrial market liberalization, with the same approach. Following the same logic, in agricultural sector, the commune and later the households were obliged to sell a pre-determined quantity of set agricultural products to the central government at a pre-set plan prices and to pay a fixed tax to the government. Once their obligations were fulfilled, they were given the right to produce whatever they regarded profitable and to sell this output in the free market and to maintain the profits. Following this strategy, this agricultural market was liberalized and the domestic grain production increased. As for the industrial sector, the same happened. Table 7 and table 8 show the agricultural and industrial market liberalization under dual track, respectively.

Table 7

Dual Track Agricultural Market Liberalization



| Grain (million tons) | | |
|-----------------------------------|-------|-------|
| Year | 1978 | 1988 |
| State procurement at plan price | 47.8 | 50.5 |
| State procurement at market price | 0 | 43.8 |
| Total domestic production | 304.8 | 394.1 |

Source: Lau, Qian and Roland (2000)

Table 8

Dual Track Industrial Market Liberalization (Steel as example)

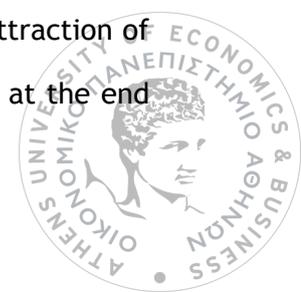
| Steel (million tons) | | |
|----------------------|-------|-------|
| Year | 1981 | 1990 |
| Plan quota | 13.91 | 15.58 |
| Domestic production | 26.70 | 51.53 |
| Plan/ production | 0.52 | 0.30 |

Source: Lau, Qian and Roland (2000)

As a result, after the implementation of dual-track approach, China successfully “Grew out of plan”, freed price control gradually and paved the path for the future market liberalization.

4.2 Attraction of FDI and China’s Trade

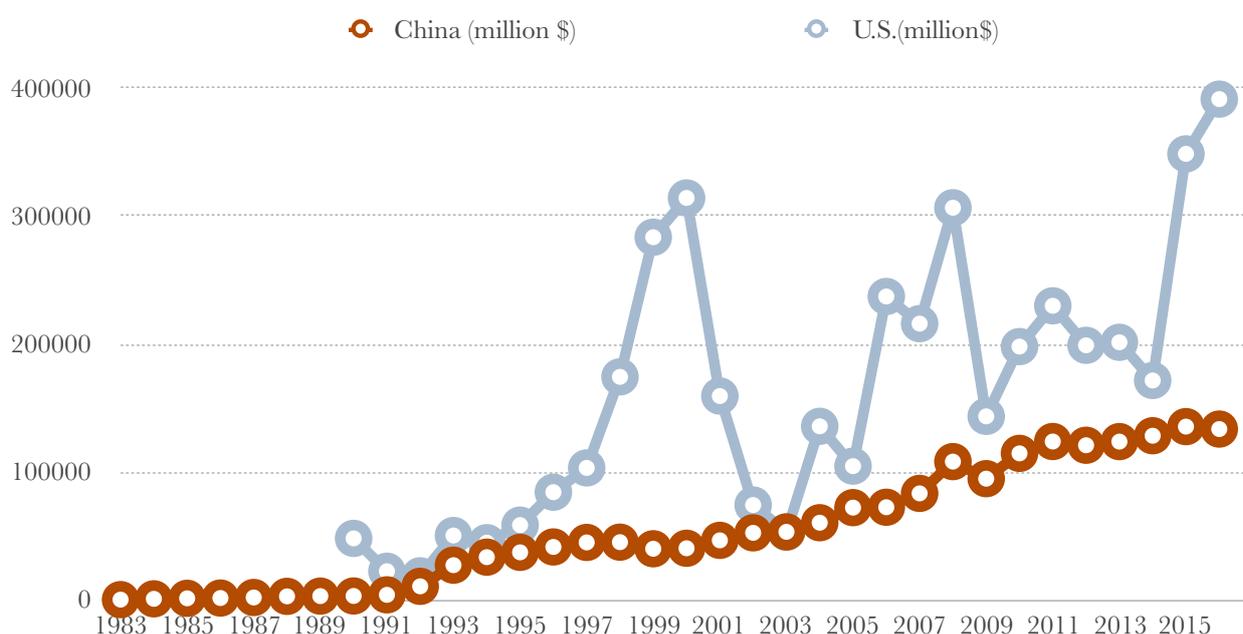
After the decision to free price control and establish a free market in China, next step for the market liberalization is the attraction of FDI. China has been very successful in the attraction of FDI .From 2000-2010, China has absorbed 20% of FDI to all the developing countries, at the end



of 2008, the FDI inflow of China surpassed \$100 billion. The share of FDI to China's GDP from 2005-2010, on average, was 2.5%. FDI has always been playing a vital role in the liberalization of the Chinese market, the development of the Chinese economy and its export. According to the calculation of the Ministry of Commerce of the People's Republic of China, enterprises with foreign investments contributed half of China's export, 30% of China's industrial output and 22% of industrial profit, with only 10% of total employment of labour force. From a comprehensive perspective, these contributions helped China achieve high economic growth and encourage the Chinese central government to further liberalize the Chinese market.

Figure 10

Inflow of FDI



Source : National Bureau of Economic Research(1983-1989) , UNCTAD/ World Investment Report (1990-2016)



In figure 10, FDI inflow of China from 1983 to 2016 and FDI inflow of the United States of America are shown. Generally, the United States of America is the largest foreign capital recipient country in the world, but in 2003 China surpassed it as the largest foreign capital recipient and from then on, China usually is the second largest foreign recipient in the world and the largest among developing countries. As we can see from 1983, the general trend of FDI inflow of China is increasing. From 1983-1991, there was a steady growth of FDI inflow. From 1994, the inflow of FDI saw an adjustment period, but the contracted amount of FDI still climbed steadily. From 2001, there has been a global contracted trend (Shaukat Ali and Wei Guo, 2005) but China still sees its inflow of FDI growing, which makes it the only country that has seen its FDI increase continuously. All these achievements indicate China's effort for the liberalization of its market and multinationals' huge enthusiasm to be in the Chinese market and to take a share of it.

However, China has a very unbalanced origin of FDI, as the majority of it come from Hong Kong, Macao, Taiwan (Chinese territory) and other Asian countries. With the exception of Japan and the United States of America, other industrialized countries played a minor role. Consequently, in the future China can focus to attract more FDI from other industrialized countries(As shown in Table 9).

Table 9

FDI by Source

| Year | 1992 | 1998 | 2005 | 2010 | 2016 |
|----------------------|---------------|--------|-------|--------|--------|
| Hong Kong | 68.20% | 40.70% | 40.9% | 57.28% | 64.65% |
| United States | 4.60% | 8.60% | 8.05% | 2.85% | 1.89% |
| Taiwan | 9.50% | 6.40% | 6.58% | 2.34% | 1.56% |
| Japan | 6.40% | 7.50% | 8.41% | 3.87% | 2.47% |
| Europe | Not available | 9.48% | 9.35% | 5.60% | 7.49% |



Source: National Bureau of Statistics of the People's Republic of China

In a previous study conducted by Ali and Guo in 2005, they concluded 5 straightforward determinants of foreign investment in China:

1. Market size and growth. This is the most single important factor that determines the decision of multinational businesses. It has a mean score of 3.73
2. Government incentive policies, with a mean score of 3.55
3. Part of company's globalization strategy, with a mean score of 3.45
4. Cheap labor cost, with a mean score of 3.32
5. High investment return, with a mean score of 3.14

(5= most important, 4=very important, 3=important, 2=not important, 1=not important at all)

Apart from the part of foreign multinational businesses, the Chinese central government, in order to attract as many as FDI possible to facilitate the market liberalization of China, has also done a lot of work. The first one, and also the most significant and renowned one, is the establishment of Special Economic Zones. These Special Economic Zones, actually have been the first regions that the Chinese central government gave permission to absorb FDI, to liberalize their regional market and to participate in the global economic activities. The performance of these Special Economic Zones would determine the Chinese central government's decision on whether or not and how to liberalize the overall Chinese market.

In 1979, Deng Xiaoping first introduced the notion of Special Economic Zones and in 1980, Shenzhen was listed as the first Special Economic Zone of China and market liberalization started from there. After Shenzhen, three other major Special Economic Zones were installed: Zhuhai, Shantou and Xiamen. The experiment of Special Economic Zones was extended in 1984, when the central government decided to create three Open Economic Zones, namely: Pearl River Delta, Southern Fujian Delta and Yangze River Delta, which include 14 cities. The essence of



them is the same as of the Special Economic Zones. At first , the central government restricted FDI to four Special Economic Zones and then expanded to the 14 cities.

Table 10
List of Special Economic Zones in China

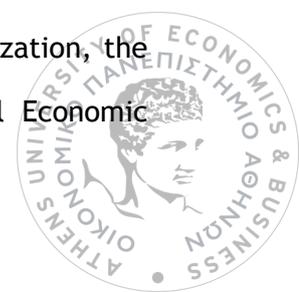
| Establishment Time | Province | Name |
|--------------------|-----------|----------------------------------|
| 26/08/1980 | Guangdong | Shenzhen Special Economic Zones |
| 26/08/1980 | Guangdong | Zhuhai Special Economic Zones |
| 07/10/1980 | Fujian | Xiamen Special Economic Zones |
| 16/10/1981 | Guangdong | Shantou Special Economic Zones |
| 13/04/1988 | Hainan | Hainan Special Economic Zones |
| 05/2010 | Xinjiang | Kashi Special Economic Zones |
| 05/2010 | Xinjiang | Huoguoosi Special Economic Zones |

Source: State Council of the People's Republic of China

The specific purpose of these Special Economic Zones are (Ota, 2003)

1. Transfer of high-technology industries
2. Acquisition of modern technology and management expertise
3. Creation of employment
4. Earning of foreign exchange through promotion of exports
5. Promotion of economic development and regional development
6. Creation of economic links with developed countries
7. Experiment of new economic reform with market forces
8. Setting-up of a link between the economic hinterland and overseas

In order to achieve these specific goals and eventually the goal of market liberalization, the Chinese central government actually applied different policies inside the Special Economic



Zones. The government invested in the infrastructure, allowed independent legislation of the Special Economic Zones (Free trade, tax deduction and special beneficial treatment for foreign invested enterprises : EJV, CJV and WFOEs. As a result, many foreign firms chose to invest in China. Table 11 shows the number of foreign funded enterprises from 1997-2010 and figure 11 shows the performance of China’s foreign trade.

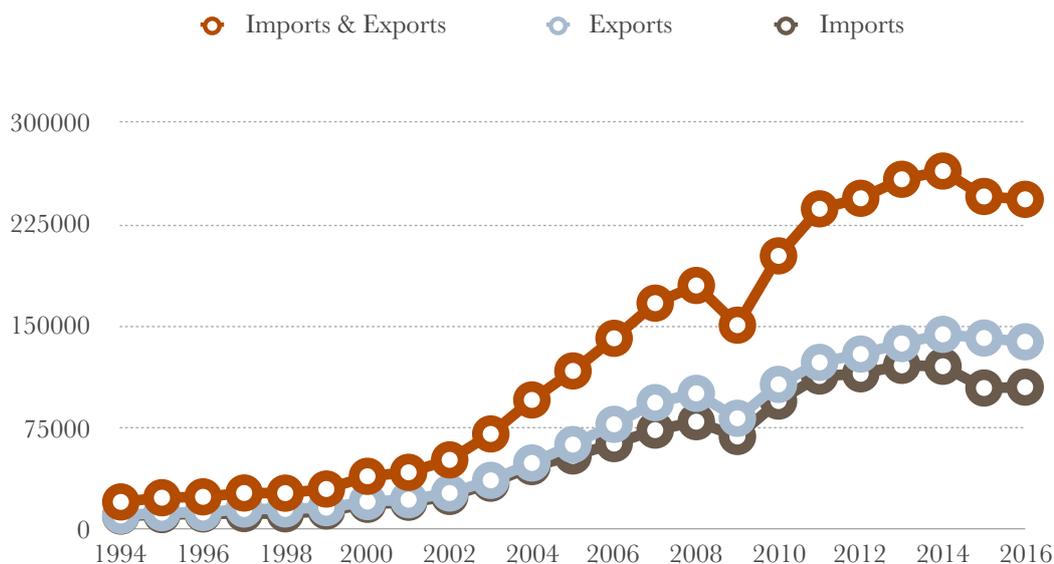
Table 11
Statistics about Foreign Enterprises in China

| Year | Number of Enterprises | Registered Capital (100 million USD, Foreign Investor) |
|-------------|------------------------------|---|
| 1997 | 235681 | 302987 |
| 1998 | 227807 | 313712 |
| 1999 | 212436 | 316682 |
| 2000 | 203208 | 337199 |
| 2001 | 202306 | 359683 |
| 2002 | 208056 | 402000 |
| 2003 | 226373 | 465779 |
| 2004 | 242284 | 558000 |
| 2005 | 260000 | 631900 |
| 2006 | 274863 | 740600 |
| 2007 | 286232 | 921100 |
| 2008 | 434937 | 1038900 |
| 2009 | 434248 | 1136900 |
| 2010 | 445244 | 1259000 |

Source: National Bureau of Statistics of the People’s Republic of China

Figure 11
China’s Trade Performance





100 million RMB

Source: National Bureau of Statistics of the People’s Republic of China

Both Table 11 and Figure 11 show the process of market liberalization of China. The number of foreign enterprises registered in China in 2010 has grown from 235681 in 1997 to 445244 while the registered capital (Foreign Investor) has been growing for 13 years, from 30298700 million USD to 125900000 million USD in 2010, over four times. In the meantime, as the gradual liberalization of the Chinese market, Chinese foreign trade also showed impressive performance, as indicated in figure 11. Over the span of 22 years, China’s total foreign trade, imports and exports have been growing, with the amount of total foreign trade expanding 12 times, the amount of imports expanding 10.5 times and the amount of exports expanding 13.3 times. China has especially impressive performance in the area of exports and has been given the name of “Factory of the world”. As a result, China has greatly integrated itself into the world economy.

As we can observe from Table 11, after 2002, both the number of enterprises and foreign capital have been growing for a fairly long time. The same change can be observed in Figure 11, where from 2002 the growth rate of total foreign trade, exports and imports are soaring, compared to previous years. These changes can be attributed to a further move of the Chinese central government, regarding market liberalization- to join the World Trade Organization, to



participate in the global trade and open its door to the whole world, which happened on 11 December, 2001. China did not fully open its market to the outside world, but it made commitment to open various sectors gradually in the following years (energy, telecommunication, electricity e.tc.). China has benefitted a lot from the liberalization of its market and foreign investors have also gained plenty of interests from the Chinese market.

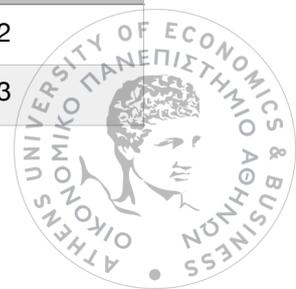
The main forms of FDI in China

The main forms of FDI in China have been changing over the years, mainly due to the consideration of MNCs and the policy changes of the Chinese central government. At the beginning of the economic reform, joint ventures was the only way foreign investments could get into China, which made Contractual Joint Ventures and Equity Joint Ventures the main form. Initially, Contractual Joint Ventures were the most significant form of FDI, however, after 1980 its popularity was replaced by Equity Joint Ventures as Equity Joint Ventures, from the perspective of the Chinese central government, could bring into foreign capital, technology ,management experiences; in the meantime, foreign investors hoped the help of local partners in the domestic markets (Zhang, 2002). Another significant reason is foreign investors' concern about the safety of their investment because of a lack of legislation on property rights in China, making cooperation with Chinese partners the best choice. Later, the central government loosened its restriction on the FDI and the regulations and relative laws were developed gradually, making investment environment favorable for foreign investors. After many-year cooperation with Chinese partners, multinationals want to have better control of their companies, avoid clash with the Chinese partner, improve efficiency and achieve better co-ordination and as a result, Wholly Foreign Owned Enterprises become popular in recent years.

Table 12

Different Forms of FDI in China (Projects)

| Year | Equity Joint Venture | Contractural Joint Venture | Wholly Foreign-owned Enterprise |
|------|----------------------|----------------------------|---------------------------------|
| 1997 | 9001 | 2373 | 9602 |
| 1998 | 8107 | 2003 | 9673 |



| Year | Equity Joint Venture | Contractural Joint Venture | Wholly Foreign-owned Enterprise |
|-------------|-----------------------------|-----------------------------------|--|
| 1999 | 7050 | 1656 | 8201 |
| 2000 | 8378 | 1757 | 12196 |
| 2001 | 8893 | 1589 | 15643 |
| 2002 | 10380 | 1595 | 22173 |
| 2003 | 12521 | 1547 | 26943 |
| 2004 | 11570 | 1343 | 30708 |
| 2005 | 10480 | 1166 | 32308 |
| 2006 | 10223 | 1036 | 30164 |
| 2007 | 7649 | 641 | 29543 |
| 2008 | 4612 | 468 | 22396 |
| 2009 | 4283 | 390 | 18741 |
| 2010 | 4970 | 300 | 22085 |
| 2011 | 5005 | 284 | 22388 |
| 2012 | 4355 | 166 | 20352 |
| 2013 | 4476 | 142 | 18125 |
| 2014 | 4824 | 104 | 18809 |
| 2015 | 5989 | 110 | 20398 |
| 2016 | 6662 | 126 | 21024 |

As we can see from table 12, Contractural Joint Venture has the tendency to disappear in the Chinese economy, with only 126 projects finished through this way in 2016. The importance of EJV is also decreasing over the years, giving its dominant position to Wholly Foreign-owned Enterprise, which can be seen as the main form of FDI in China in the near future.



4.3 Privatization of SOEs

In market liberalization of China, privatization of SOEs constitutes a central issue. Many emerging and low-income countries commonly use market liberalization as a strategy to promote economic development (Zahra et al., 2000). China and Former Soviet Union countries began to liberalize markets by replacing the central planning and state ownership systems with free market and private ownership systems. Like the price liberalization, the Eastern European countries experienced failure in the ownership reform of firms but China succeeded. The transformation pattern of the Eastern European countries is the following (Yingyi Qian, 2002):

Prior to 1990: a lack of development of non-state enterprises and a lack of privatization of state-owned enterprises.

After 1990: a political mandate for mass privatization of state enterprises as the cornerstone of the reform

This pattern has proven to be a failure. China however, took a different path toward the privatization of SOEs : The development of the ownership of Township-Village Enterprises (TVEs) before the mass privatization of SOEs.

Prior to 1978, China's market was a restricted one filled with inefficient SOEs with rather bad economic performance and these SOEs gradually became the burden of the Chinese central government. In order to cope with this problem and to liberalize its market, new entry of firms were allowed. From 1979 to 1993, the majority of new entry firms in China were neither private firms nor state firms, but local government firms, which TVEs constituted the most significant part. TVEs were actually existed in the Chinese economy even before the "Open Market Reform", once named "Commune and brigade run enterprises", which enjoyed further development as the household contract responsibility system was established. In 1984, these enterprises were officially renamed as Township-Village Enterprises. In 1984, the number of TVEs were 6.1 million, all of which were not subject to central planing and enjoyed autonomy regarding production, sales, supplies, personnel and finance. However, as a part of local



government firms, TVEs maintained a very intimate relationship with local government, a fact which ensured their future success and contribution to the market liberalization of China.

One major institutional feature in China and in many other developing countries is the absence of rule of law to protect private property rights (Yingyi Qian, 2002). This problem was even more severe in China because in the past out of political reasons, the state used private enterprises as target several times. Under such circumstances, the property rights of TVEs, which owns to the local governments, were much more secure than those of private enterprises because the private enterprises had no protection of the local governments. As a result, the form of TVEs became very popular among China's rural areas. Another feature of TVEs is that they and the local governments share the same interests. Chinese political system through is a highly centralized one, which means that the central government has the absolute power and authority over the local governments, making the function of local governments is to carry out the policies of of the central government and to support the central government by every means. They are responsible for the local governance, infrastructure construction and economic activities. One significant way for them to improve the living standard of their regions and in return to support the central government is to develop local business, which encourages them to establish TVEs. TVEs, which provide public goods and participate in the local economic activities and serve the interest of the central government, are more useful than private enterprises to the central governments and consequently TVEs can get support from local governments. As TVEs' leaders are usually appointed by local governments, who in turn designate the managers of TVEs, local governments actually possess all the key components of property rights. (Charles Harvie, 1999). Together with the fact that the local governments could receive unobservable revenue as the owner of property rights and are very likely to keep the profits of the TVEs at local level, there is a strong incentive for TVEs and local governments to improve efficiency and maximize profits. The guidance of the central government is that the TVE after-tax profits should be used for two purposes: reinvestment and provision of local public goods (State Council). In 1985 about 46% of the after-tax profits of TVEs were reinvested at local level and 49% were used for local public expenditure. in 1992, the respective percentage were 59% and 40% (A Statistical Survey of China, 1992;1993). All these factors contributed to the further development of TVEs. TVEs



accomplished a good record in terms of output growth, employment creation, profit rate and growth of total factor productivity, in comparison with SOEs.

As a result, TVEs injected competition inside the Chinese market, mitigated the monopoly of SOEs and forced SOEs to improve their efficiency and took the dominant place of SOEs in the many industrial sectors, paving the path for future massive privatization of SOEs. (From the mid-1990s onward, TVEs have been completely privatized through the creation of joint stock companies where the local governments are shareholders)

Table 13
Statistics about TVEs

| Year | Number of Enterprises (Million) | Workers Employed(Million) | Gross Output Value(Billion Yuan) |
|------|---------------------------------|---------------------------|----------------------------------|
| 1978 | 1.52 | 28.27 | 49.3 |
| 1980 | 1.43 | 30.00 | 65.7 |
| 1984 | 6.07 | 52.08 | 171.0 |
| 1985 | 12.23 | 69.79 | 272.8 |
| 1986 | 15.15 | 79.37 | 345.1 |
| 1987 | 17.50 | 88.05 | 476.4 |
| 1988 | 18.88 | 95.45 | 649.6 |
| 1989 | 18.68 | 93.66 | 742.8 |
| 1990 | 18.50 | 92.65 | 846.2 |
| 1991 | 19.09 | 96.09 | 1162.2 |
| 1992 | 20.79 | 105.81 | 1797.5 |
| 1993 | 24.53 | 123.45 | 3154.1 |
| 1994 | 24.95 | 120.18 | 4258.9 |
| 1995 | 22.03 | 128.6 | 6891.5 |

Source: National Bureau of Statistics of the People's Republic of China



Table 14

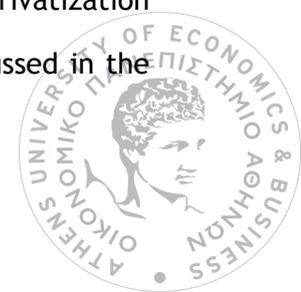
Industrial Output Share

| | 1978 | 1990 | 1992 | 1994 |
|--------------------------------------|------|-------|-------|-------|
| SOEs | 78% | 54.6% | 48.1% | 34.1% |
| Non-State Firms | 22% | 45.4% | 51.9% | 65.9% |
| TVEs | 22% | 20.2% | 24.2% | 30.5% |
| Private and Other types firms | 0% | 25.2% | 27.7% | 35.4% |

(Other types firms=Urban collectives+FFE+other)

Source: National Bureau of Statistics of the People's Republic of China

Following the boom of TVEs, in 1997, the Chinese central government decided to initiate privatization of SOEs, known as “grasp the large and let go of the small”. The central government retained direct control only over some of the large SOEs in strategic industries. The central government privatized plenty of smaller SOEs in non-strategic industries through a variety of means, such as: mergers, equity sales, auctions e.tc.. In addition, thousands of SOEs that could not be sold were permitted to go bankrupt (Chen Shiyim Gary Jefferson, Zhuang Jun, 2010). The number of SOEs declined remarkably through the years. For example, its share to the total number of enterprises has declined from 39.2% in 1998 to 27.3% in 2001 (Finance Yearbook of China). It is calculated that more than 70% of small SOEs have been privatized or restructured in three years (Fan, 2002). For larger SOEs, the central government took the method of corporate governance. Three forms stand out: Sales to a private domestic or foreign investor or firm; corporatization into a limited liability or joint stock company and “Stock cooperatives” (Cao Yuanzheng, Qian Yingyi, Barry. Weingast, 1997). Stock cooperatives accounted for 35% of all privatization, sales to private investors for 11% and corporatization for 8%. Nowadays, the number of SOEs accounts for only 0.6% of all the enterprises in China. Up to 2012, SOEs' share of China's GDP has declined to 32% from 80% (20 years ago). The privatization of SOEs has not been finished and the direction of the future reform has been discussed in the



“Structural reform” part. One process occurring now is the merger of SOEs which share a similar business. For example, in 2015, two large SOEs, China Shipping (Group) Company and China Ocean Shipping (Group) Company merged into China Cosco Shipping Group. In 2017, Shenhua Group (a large SOE for energy) and China Guodian Corporation(a large SOE for electricity and energy) has merged into China Energy Investment Corporation. It is believed that in the following years, 98 SOEs will be merged (Ji Xiaonan, 2018).

4.4 Breaking Monopoly

Prior to the “Open Market Reform”, SOEs were responsible for the production and sales of all products and in each sector of the economy, there was monopoly. Although monopoly can benefit the firms and harm the society as a whole, in China however, SOEs undertook not only economic responsibility, but also social and political responsibility. SOEs, in lack of competition in monopoly and under huge economic, social and political burden, at the beginning of the economic reform, were generally functioning pretty bad and no profits were made. After 1978, as the deeper implementation of the different measures for the market liberalization, such as price liberalization, attraction of FDI and new entry of domestic private and foreign enterprises, together with the privatization of SOEs, the breaking of monopoly inside the Chinese market is inevitable.

The breaking of monopoly in China is a rather complicated story. To begin with, not all sectors allowed new entry of domestic private and foreign firms. Nowadays, there are still 8 sectors which are still monopolized, including : petroleum, petrochemical, tobacco, telecommunication, electricity, weapon, railway, aviation and banking. Secondly, there exist disparity among provinces in China. Provinces which are located at the eastern coastal regions attract more firms and investment, the breaking of monopoly started earlier and went deeper. Provinces in western inland China are more isolated and the inflow of FDI and new entry of private firms just started a few years ago, and the breaking of monopoly in these provinces started recently. Thirdly, in



some sectors, the monopoly has been broken completely and regardless of the ownership of the firms, each one competes for its market share, while in other sectors, absolute or partial monopoly still exists and the breaking of these two kinds of monopoly is on-going.

Even though the breaking of monopoly in the Chinese market varies in terms of time and degree, monopoly has been being broken for the purpose of market liberalization from the “Open Market Reform”.

Figure 12

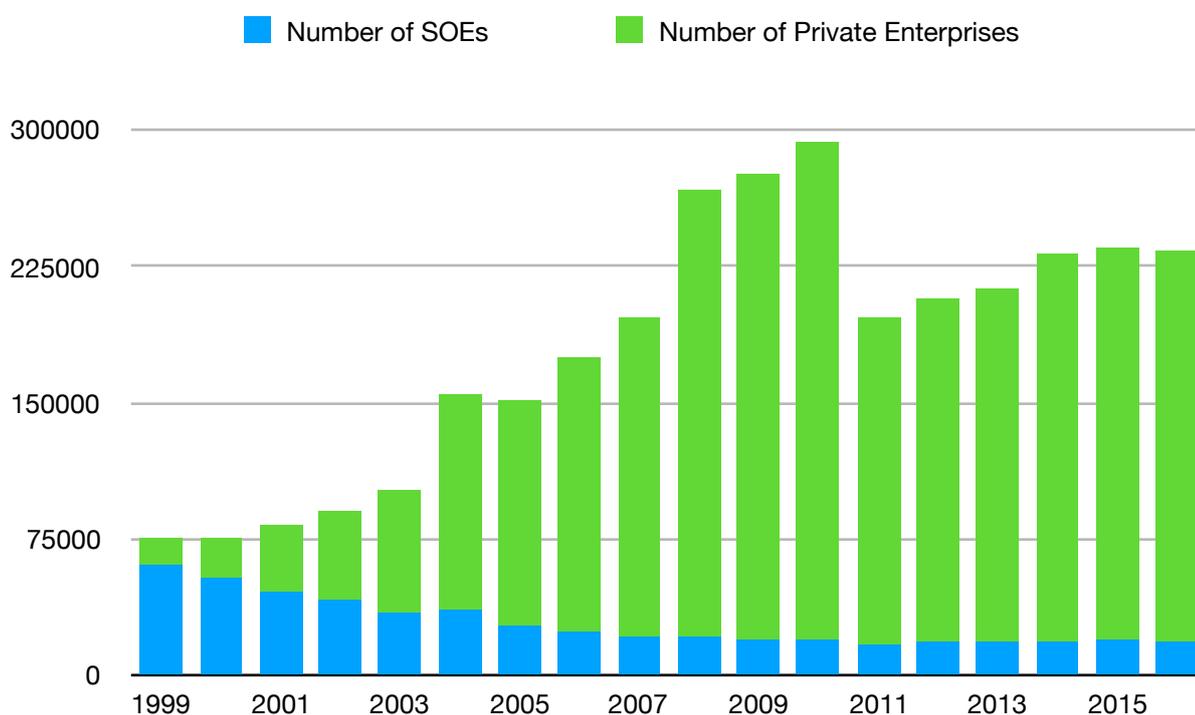
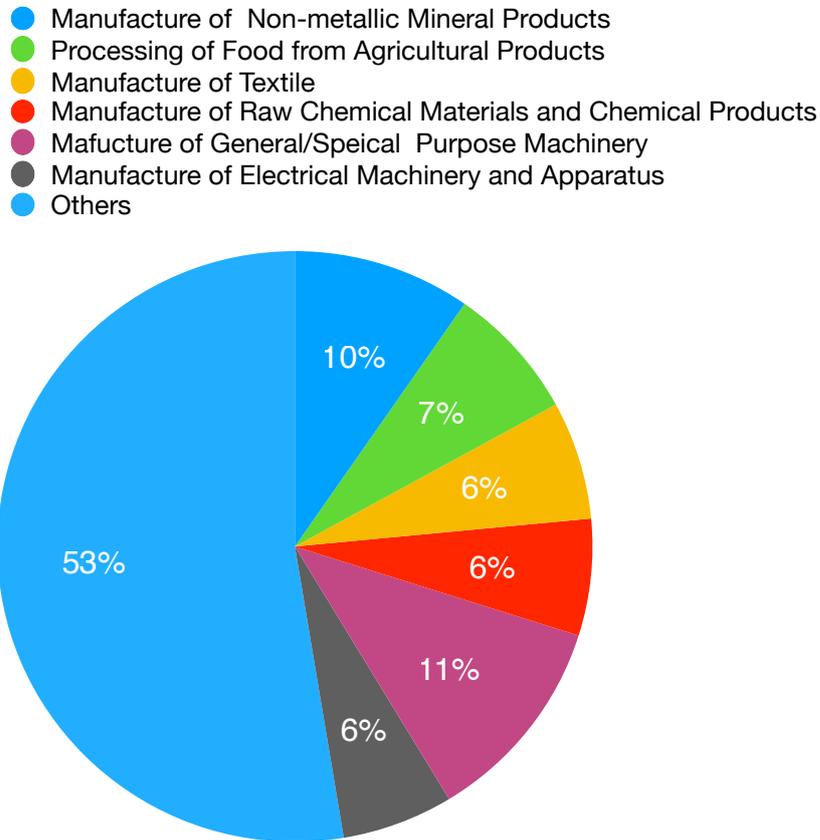


Figure 13



Source: National Bureau of Statistics of China

Figure 12 shows the total number of SOEs and private enterprises in all sectors in the Chinese economy, from 1999 to 2016. The number of private enterprises has multiplied, from 14601 in 1999 to 273259 (peak) in 2010, 18.7 times achieved in 11 years. In the following years, the average number of private enterprises is 201575. On the contrary, the number of SOEs, has decreased from its peak 61301 in 1999 to 17052 in 2011, shrieked 4 times. In the following years, the average number of SOEs is 18630. Figure 13 shows the distribution of private enterprises in terms of industrial sectors (41 in total) inside the Chinese economy. The majority of the private enterprises are in the five top five sectors, as shown in figure 13, and their share are 10%, 7%, 6% ,6%, 11% and 6%, respectively. Consequently, in general, the monopoly in the Chinese market

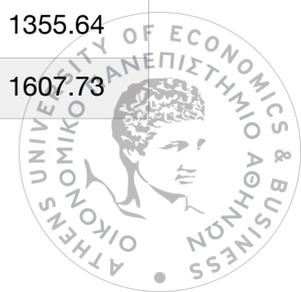


has been broken or is being broken, as more private enterprises engage in more industrial sectors. The breaking of monopoly with the most intensive degree is in the following sectors: manufacture of non-metallic mineral products, processing of food from agricultural products, manufacturing of textile, manufacture of raw chemical materials and chemical products, manufacture of general/special purpose machinery and manufacture of electrical machinery and apparatus.

Processing of Food from Agricultural Products will be used as an example for the breaking of monopoly in the industries where the government generally permitted the new entry of private enterprises.

Table 15
Statistics about Processing of Food from Agricultural Products

| Year | Number of SOEs | Total Assets of SOEs (100 million Yuan) | Total Profits of SOEs(100 million Yuan) | Number of Private Enterprises | Total Assets of Private Enterprises(100 million Yuan) | Total profits of Private Enterprises(100 million Yuan) |
|------|----------------|---|---|-------------------------------|--|---|
| 1999 | 6217 | 1790.90 | -40.70 | 1076 | 708.79 | 12.84 |
| 2000 | 5082 | 1564.53 | 0.87 | 1154 | 711.12 | 13.28 |
| 2001 | 4016 | 1385.23 | 13.73 | 1244 | 732.66 | 19.75 |
| 2002 | 3149 | 1228.03 | 8.34 | 1394 | 839.48 | 27.03 |
| 2003 | 2346 | 1080.78 | 17.89 | 1589 | 1161.70 | 46.61 |
| 2004 | 2039 | 1076.46 | 30.64 | 1776 | 1362.74 | 54.47 |
| 2005 | 1393 | 861.66 | 29.48 | 7615 | 1516.11 | 138.14 |
| 2006 | 1137 | 807.92 | 41.46 | 9256 | 2038.03 | 214.48 |
| 2007 | 857 | 887.07 | 58.33 | 10783 | 2720.74 | 349.42 |
| 2008 | 805 | 946.27 | 34.01 | 14774 | 3864.95 | 577.02 |
| 2009 | 817 | 1089.31 | 52.18 | 16169 | 4893.29 | 718.07 |
| 2010 | 803 | 1506.52 | 96.46 | 17114 | 6074.22 | 1102.83 |
| 2011 | 614 | 1664.41 | 113.87 | 13130 | 6826.48 | 1355.64 |
| 2012 | 630 | 1975.41 | 98.75 | 13717 | 8469.70 | 1607.73 |

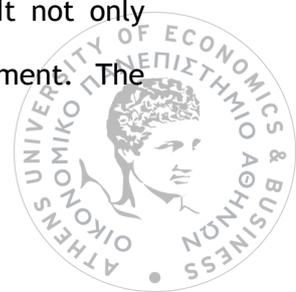


| Year | Number of SOEs | Total Assets of SOEs (100 million Yuan) | Total Profits of SOEs(100 million Yuan) | Number of Private Enterprises | Total Assets of Private Enterprises(100 million Yuan) | Total profits of Private Enterprises(100 million Yuan) |
|------|----------------|---|---|-------------------------------|---|--|
| 2013 | 638 | 2166.59 | 71.26 | 14255 | 9990.76 | 1662.96 |
| 2014 | 654 | 2528 | 83.47 | 15486 | 12907.88 | 1781.66 |
| 2015 | 690 | 2448.24 | 91.31 | 15931 | 13841.49 | 1827.82 |
| 2016 | 681 | 2575.35 | 96.91 | 16165 | 14250.28 | 1874.81 |

Like the other industrial sector, the government allowed the free entry of private firms aiming at breaking monopoly. The massive entry of private firms occurred after 1992 when Deng Xiaoping started his famous tour, after which the private firms were legitimized inside the Chinese economy. As shown in Table 14, the number of SOEs and their total assets have been declining over the years while the number of private firms and their assets have been soaring and have taken the dominant place in this sector. When the monopoly was broken, the remained SOEs in this sector had to compete with private firms for profits. Inside the competition of the market, the majority of SOEs in this sector have disappeared, only 681 left in 2016, with 5536 units of SOEs out of the sector. The competence of the remained SOEs, however, is not satisfying, the profits of which, in recent years, on average are only 1/20 of the profits of the private firms. The same trend happened in all the other similar sectors.

In some other sectors, the entry of new private firms was not massively allowed, but the breaking of monopoly is still happening : from absolute monopoly to partial monopoly. An example to represent these sectors is electricity. The breaking of the absolute monopoly can be divided into six phases (The Introduction of the Reform of the Chinese Electricity Market)

From 1949-1985, electricity in China was absolute state monopoly. At this stage, the government was the manager of the electricity industry and had dual functions. It not only formulated policies and regulations, but also participated in industry management. The



government was the only producer and operator of the electricity industry in the country and held full ownership rights. SOEs in this sector, represented the government to generate, transmit and distribute the electricity, under the supervision of the Ministry of Electric Power Industry. Consequently, the electricity industry was actually part of the government branches, with hierarchic and political characteristics. All factors combined, a state absolute monopoly was formed.

From 1985-1997, the market of electricity was opened and new investment was allowed into generators sector(local government and foreign investors). Before 1986, the capital investment's only source was the central government. However, as the implementation of economic reform, China's industry has developed tremendously and achieved double-digit economic growth, resulting in a continuous growing demand for electricity. In the year 1993 alone, the industrial value added lost due to electricity shortage was about 7% of GDP of that year (Li and Dorian, 1995). The phenomenon was much more severe in the east coastal provinces. In Guangdong for example, because of lack of electricity, a lot of factories could not engage in their daily production and had to be closed from time to time. In order to meet the urgent need for electricity, the central government decided to allow different sources of investment flowing into the sector.

Specifically, local government enterprises and foreign companies could invest in electricity infrastructure, namely, build plants and own generation facilities. What's more, in order to attract investment, projects of \$ 30 million or less could be realized with only the approval of provincial governments. By the end of the 1990s, the different agents' share of national total installed capacity has changed a lot. The Ministry of Electric Power accounted 46% of generation, and almost 100% of transmission and distribution of electricity. New investment accounted for 54% of generation of electricity and almost none of transmission and distribution of electricity, as these two parts of the sector were not opened for the entry of new investment.

In terms of FDI in power sector, one of the significant new sources of investment, the Chinese central government took several major measures. Firstly, electricity tariffs were raised in August 1993, aiming to guarantee 12-15% rate of return. Secondly, the Law on Electric Power was made, with the aim of a better regulated electricity industry. Thirdly, reform of foreign



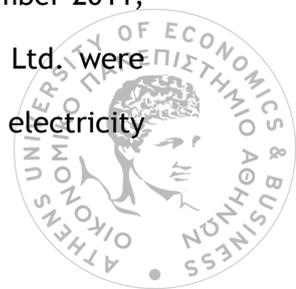
exchange was initiated. Together with other actions, by 1995 there were 400-500 FDI projects in negotiation (Dorian, 1995).

The purpose of this openness was to develop the electricity market. The government still held absolute power in the market as Ministry of Electric Power Industry was in charge of everything concerning electricity.

From 1998-2000, Ministry of Electric Power Industry was dissolved and the State Power Corporation was established. The latter took over the entire assets and business of the former. The political functions of the MEPI were hand over to the Electric Power Department of the State Economic and Trade Commission. During this period, some provinces (Shandong, Zhejiang, Jilin, Heilongjiang, Liaoning, Shanghai) attempted the competition of electricity price and the separation of power grid and generation. In fact, the SPC took the government's role as monopolist in this industry as it controlled half of China's generation assets and all the transmission and distribution of electricity.

From 2000-2002, the business of SPC was divided into two parts: grid and generation, and SPC was restructured. At the end of 2002, in terms of grid, State Grid Corporation of China (State-owned) and China Southern Power Grid (Jointly owned by the central government and Guangdong province) were established; in terms of generation, China Huadian Corporation, China Datang Corporation, China Guodian Corporation, China Huaneng Corporation and State Power Investment (all State-owned) were established. The monopoly in transmission, distribution and marketing still remained. The five state-owned generation companies operate and compete against each other in the electricity generation market and other former local government and foreign enterprises compete with the five state-owned generation companies and among themselves. As a result, the monopolistic position of SOEs in electricity industry has been broken further.

From 2003-2011, the auxiliary assets of 2 grid corporations were removed. In September 2011, Power Construction Corporation of China and China Energy Engineering Group Co., Ltd. were established. Efforts were made to reduce monopolistic position of grid corporations in electricity



sector. In March 2003, the State Electric Power Regulatory Commission was established. with the function to make rules to govern the electricity market, to supervise and guide the electricity industry (National Energy Administration, after 2013).

From 2012 until now, partial monopoly. The government opened further the market of power generation and the competition between the Big Five state-owned power generation corporations and the local power generation corporations has been intensified, successfully breaking the absolute monopoly in the electricity sector. The current situation of the electricity is the obvious dominance of the 5+2 state-owned enterprises, rendering the Chinese electricity industry a partial monopoly.

Table 16
Statistics about the “5+2”

(100 million RMB)

| Name | Total Assets | Total Profits | Return on Assets | ROE |
|----------------------------------|--------------|---------------|------------------|-------|
| State Grid | 12140.66 | 269.18 | 2.22% | 3.83% |
| China Southern Power Grid | 2969.05 | 136.97 | 4.61% | 8.24% |
| China Huaneng | 2855.72 | 95.51 | 3.34% | 6.60% |
| China Datang | 2266.16 | 54.70 | 2.41% | 3.62% |
| China Huadian | 1961.00 | 30.50 | 1.56% | 3.30% |
| China Guodian | 1879.72 | 39.51 | 2.10% | 4.15% |
| State Power Investment | 1811.65 | 38.99 | 2.15% | 4.82% |

From the data in Table 16, it is clear that “5+2” own huge assets and have great profits, especially the two grid companies. In 2017, State Grid was listed second in Global 500 for consecutive three years, with revenue \$315 billion and profit \$9 billion and China Southern Power Grid was listed 100th

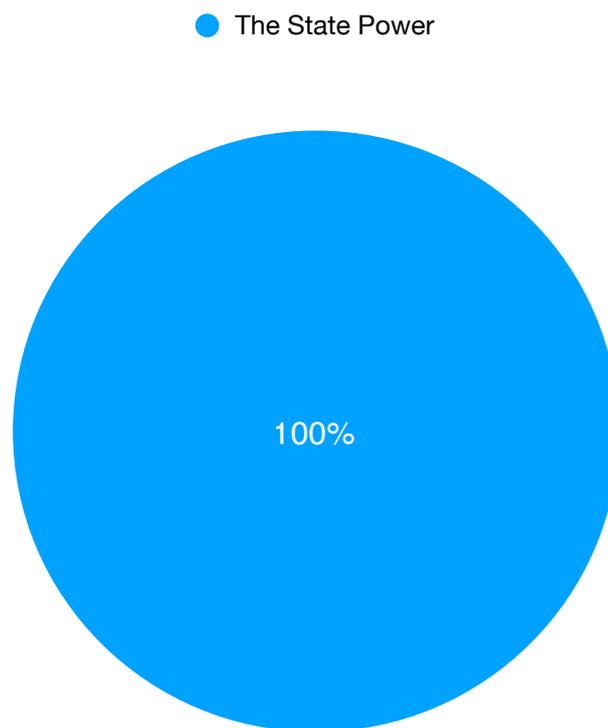


in the list, with revenue \$71 billion and profit 2 billion. However, it is still clear that the “5+2” have low profitability, reflecting the shortcoming of monopolistic status: not enough incentives, soft budget constraints e.tc.

Figure 14

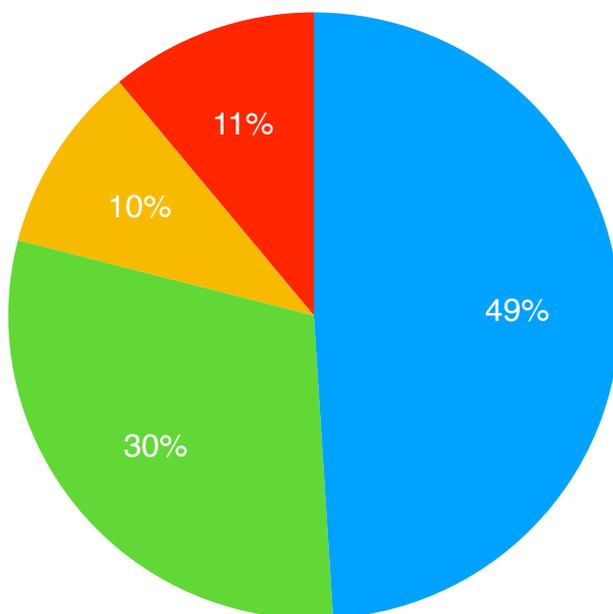
The Share of Different Corporations to the Power Generation

From 1949-1985



At the end of 2011

- The Five State-owned Power Generation Corporations
- Local Small and medium State-owned and private Power Generation Corporations
- Local Big State-owned Power Generation Corporations
- Other Central State-owned Power Generation Corporations



Source: (State Electricity Regulatory Commission) National Energy Administration

Figure 14 shows how the absolute monopoly in electricity was broken and transformed into partial monopoly. As we can see, private firms in this industrial sector play a very tiny role. Unlike sectors including Processing of Food from Agricultural Products, these sectors including electricity, SOEs still hold monopolistic position (partial monopoly), though they have to compete among themselves, and the participation of private firms is very limited.

Table 17

Statistics about Production and Distribution of Electric Power and Heat Power



| Year | Number of SOEs | Total Assets of SOEs (100 Million Yuan) | Total Profits of SOEs (100 Million Yuan) | Number of Foreign Private Firms | Total Assets of Foreign Private Firms(100 Million Yuan) | Total Profits of Foreign Private Firms (100 Million Yuan) |
|-------------|-----------------------|--|---|--|--|--|
| 1999 | 4300 | 14010.38 | 263.19 | 253 | 1928.76 | 84.81 |
| 2000 | 4128 | 16588.56 | 378.69 | 276 | 2182.70 | 120.32 |
| 2001 | 4116 | 18536.45 | 465.05 | 286 | 2529.80 | 132.57 |
| 2002 | 4058 | 19746.21 | 426.46 | 299 | 2596.10 | 182.87 |
| 2003 | 3933 | 22828.34 | 531.64 | 309 | 2892.22 | 263.30 |
| 2004 | 3755 | 23719.80 | 513.70 | 328 | 3082.31 | 257.34 |
| 2005 | 3829 | 34362.42 | 985.68 | 396 | 4328.90 | 287.31 |
| 2006 | 3858 | 41177.96 | 1467.86 | 405 | 4228.39 | 275.77 |
| 2007 | 3481 | 47578.94 | 1739.85 | 443 | 5267.21 | 316.34 |
| 2008 | 3672 | 55742.58 | 424.63 | 489 | 5375.51 | 115.36 |
| 2009 | 3621 | 61387.19 | 1016.66 | 481 | 6020.19 | 326.87 |
| 2010 | 3714 | 68024.78 | 1717.32 | 496 | 6330.85 | 277.98 |
| 2011 | 3509 | 75985.32 | 1742.05 | 461 | 6325.27 | 223.34 |
| 2012 | 3701 | 83147.25 | 2457.00 | 462 | 6538.23 | 336.11 |
| 2013 | 3790 | 90207.14 | 3076.41 | 478 | 6632.97 | 534.02 |
| 2014 | 4147 | 100872.16 | 3717.81 | 521 | 6889.83 | 634.90 |
| 2015 | 4397 | 111412.74 | 4333.33 | 526 | 7084.53 | 715.93 |
| 2016 | 4255 | 118654.85 | 3493.08 | 566 | 7329.10 | 537.38 |

From table 17, we can see that over the years, foreign investors are allowed to enter the electricity industry (mainly in the production of electricity) but the number of foreign firms and their total asset and profits have been growing rather slowly, reflecting the dominance of SOEs in this sector and the fact of partial monopoly. The same conclusion can be drawn from the number of SOEs, their enormous total assets and huge total profits over the years.



However, over the years, especially in recent years, because of the environment pollution by burning coal to generate electricity, the shortage of fossil fuels and China's commitment to the Paris Agreement, thermal generating capacity will be decreased and hydroelectric capacity, wind power capacity and nuclear power capacity will be increased. This structural change in the generation sector provides new opportunity for the breaking of monopoly for private firms are allowed to operate in the renewable, clean energy for the generation of electricity.

Table 18
Electricity Balance Sheet (100 million kwh)

| Year | 1990 | 1995 | 2000 | 2005 | 2010 | 2015 |
|----------------------|--------|--------|---------|---------|---------|---------|
| Hydropower | 1267.2 | 1905.8 | 2224.1 | 3970.2 | 7221.7 | 11302.7 |
| Thermal Power | 4944.8 | 8043.2 | 11141.9 | 20473.4 | 33319.3 | 42841.9 |
| Nuclear Power | 0 | 128.3 | 167.4 | 530.9 | 738.8 | 1707.9 |
| Wind Power | 0 | 0 | 0 | 0 | 446.2 | 1857.7 |

Although the total amount of electricity generated by hydropower has been increasing from 1990 to 2015, The share of hydropower however, was actually decreasing from 20% in 1990 to 16% in 2005. In 2010 its share increased to 17% and in 2015 reached its original level : 20%. At the end of 2012, China was the country which produced the most amount of electricity by hydropower. Until the end of 2011, there are 46,758 Hydropower Stations in China, none of which were private.

As for nuclear power, it has experienced great development over the years. In 2015, it accounted for 3% of the electricity generated. Nowadays, there are 18 nuclear power plants in operation and 2 in the plan to be constructed. None of them is private.

The only sector which has the participation of private firms are wind power. This is a very new field and from table 18 we can see that from 2010 there is a limited amount of electricity generated by wind power. In 2010 it accounted for only 1% but in 2015, its share has already increased to 3% and according to the plan of the state, in the future it will constitute the major source of the generation of electricity. It has been estimated that by the year 2030, wind power derived electricity can meet all the electricity demand in China. At the end of 2008, there were at least 15 Chinese companies



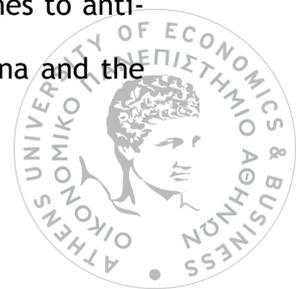
producing wind turbines for commercial purposes and dozens of Chinese companies producing components, which have a variety of ownership, from state-owned, local government-owned , domestic and foreign private. Inside this industry, the leading companies are: Xinjiang Goldwind Science and Technology Co., Ltd., ranked fourth in the world, Dongfang Electric (SOE), Mingling Wind Power (Domestic private, the biggest domestic private firm in this industry and fifth in China) , Sinovel (largest in China and second largest in the world) and the major foreign firms which produce wind turbines. Inside the industry, there all 211 firms, institutes which are related to wind power and compared with thermal power, wind power sector has no monopoly, various enterprises compete in the market. This is a trend for the possible breaking of partial monopoly in the electricity sector in the future.



Conclusion

The “Open Market Reform” since 1978 has great impact on the Chinese economy. China finished its catching-up process quickly and continued a remarkable double-digit economic growth rate for many years. From macro perspective, China’s economic performance has been improved tremendously over the 40 years. Aggregate GDP of China is estimated to surpass the United States of America in the near future, making China the first in terms of GDP. In the meantime, almost each index per capita of China is very low, usually below the world average level, although China has increased its indexes per capita greatly in the previous years. The development bottleneck of China is the Middle Income Trap but necessary measures have been taken to help China pass this trap and develop its economy further and continue to improve the living standards of its citizens. From micro perspective, due to the “Open Market Reform”, China liberalized its market and integrated it into the global market. Market liberalization and structural change occurring during the economic reform fundamentally shaped the Chinese market and its future. Both the processes are time consuming and require political, administrative and legislative reforms in the same time, which has been proven to be a big challenge, especially under current circumstances, when global economic condition is not stable. In terms of market liberalization, China has been on the path to the creation of a free-market. Domestically, the role of the central government and SOEs has been diminishing over the years and the plan is to privatize as many as SOEs as possible, to separate government administration from the market and to reduce its influence in the market. Internationally, China has opened various sectors of its market to the outside world and promised to open other sectors, which are currently state-monopolistic, gradually in the future, as a condition to be a member of WTO.

As for the further implementation of the “Open Market Reform” , it is a certainty. But the time and degree remain a question. As the attitude of the United States of America switches to anti-globalization and trade protection, especially the ongoing “Trade War” between China and the



U.S. the global economic condition is unstable and certainly the economic reform of China has been affected. In 2015, China started “The Belt and Road Initiative”, to enhance economic cooperation among nations in the world, to create a favorable environment for the further development of the Chinese economy and the deeper implementation of the “Open Market Reform”.

In the past 40 years, China has benefited a lot from the “Open Market Reform” but how much this economic reform could benefit China in the future is unclear, but it is without doubt that this reform has and will contribute to the rejuvenation of the Chinese nation.



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