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王永中

wangyzcass@163.com

李国学

lgxlne@sina.com

王碧珺

wangbijun007@126.com

China: Economic Structure Change and Outward Direct Investment[1]

Abstract:

Based on a comprehensive investigation on the current circumstances, challenges and prospect of Chinese economy, Chapter 9 discusses over the necessities and approaches of China's upgrade in global value chains and the industrial structure through outward direct investment. Due to the rising costs of production factors, rapid aged tendency of population, lack of advanced technology and gloomy global economy, China's current growth mode featuring with overdependence on export and

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investment can't be sustainable. As a large nation with huge oversea assets and an important player in the global international investment scene, China can make use of ODI activities to effectively upgrade its industrial structure and improve the status in the international specifications and global value chains, through acquiring advanced technology, well-known brands, marketing networks and resources, and transferring domestic overcapacity industries. The initiative of "One Belt One Road" will provide large potential for Chinese enterprises to go globally. However, as a late comer in international investment field, Chinese enterprises have faced more obstacles and risks than those of their western counterparts, such as investment barriers and resistance, national security fears, investment risks, insufficient international business experience, and political intention suspicions. To enhance China's capacity to create and capture value-added in the global value chains, and build a multinational diamond model with China as the core by ODI, China should transfer its low-end marginal industries to other developing countries, and attempt to link the high-end advantageous industries in developed countries.

Keywords:
Chinese Economy; Growth Mode; Industrial Structure; Outward Direct Investment (ODI); Global Value Chains (GVCs);Oversea Assets; New Normal State.

1. Introduction

Over the past three decades, China's export-led growth mode has obtained tremendous success in economic growth and export promotion. Now, China's GDP ranks second just next to US in the world, and it is the largest exporter and foreign reserve accumulator and the second largest foreign trader. In accordance with the fame of "World Factory", China is also the largest manufactured goods producer, fixed capital investor, energy and raw materials consumer and CO2 emitter in the world, which has engendered prolonged worldwide impacts on manufactures supply, commodities demand and environmental conservation.

However, due to the rising costs of production factors, rapid aged tendency of population, lack of advanced technology and gloomy global economy, China's current growth mode featuring with overdependence on export and investment can't be sustainable. To escape the middle income trap and realize the target of the new normal state formulated by the Chinese new administration, the most emergent and challenging task for China is to restructure the economy, charactering with the transformations of the growth mode from export-led and investment-driven to consumption and innovation driven, and the replacement of resources intensive and heavy emission manufacturing industries by service and high technology industry.

Regarding the restructure and upgrade of industrial structure, a successful experience of China in the past decades is to open-up, and attract FDI inflow and foreign technology and management skills. Through the adoption of export promotion measures and the encouragement of FDI policies, China has successful shifted from an agriculture country to an industrial state in the past three decades. In the future economic restructure and upgrade, China certainly should continue the policy of FDI encouragement and welcome the FDI inflow with high quality or technology.

It is worthy of noting that outward direct investment (ODI) can play an important role in attracting foreign technology and upgrading the economic structure, through acquiring oversea natural resources and advanced technology, establish market distributional channels and transferring domestic overcapacity industries. In the past, a mistake that China had made is to neglect the role of ODI, and China started to encourage outward direct investment activities in 2001, and even so the stock of the ODI can't compare to that of the FDI, Chinese huge foreign assets are collectively held by its monetary authority—the PBOC, and current Chinese firms have only a modest international presence. In recent years, the pace of Chinese enterprises' outward direct investment has significantly accelerated due to domestic strong demand on strategic resources and technology, and reasonable asset prices in advanced countries attributed to the global financial crisis and European sovereign debt crisis. With the implementation of the initiative of "One Belt One Road" and the diversification of Chinese foreign reserve, it is expected that China's ODI will entered a stage of rapid growth, and there are more Chinese capital will be invested in infrastructure, high-end manufacturing industry, labor-and-resource intensive standardized technology industry and service sectors. Hence, China's ODI will play a more important role of stimulating the economic structure upgrade, through acquiring key technology and famous brands, transferring overcapacity sectors such as steels and cements, and making use of the idle labors of the host countries.

In this regard, this chapter will undertake a comprehensive and systematic investigation on China's economic structure change and outward direct investment. The framework of the following sections is arranged as follows: the section 2 will conduct a comprehensive analysis on the facts, challenges and prospect of Chinese economy; the section 3 will discuss over the current circumstances and challenges of China's outward direct investment, and put forward some policy suggestions; the final section will carry out an in-depth research in the issue of ODI, the extension of production chains and China's upgrade in the global value chains.

2. Chinese Economy: Facts, Challenges and Prospect

In this section, we undertake a comprehensive investigation on the current circumstances of Chinese economy in terms of economic growth, foreign trade, fixed capital investment, cross-border direct investment, foreign reserve accumulation, and outward investment return. The most comprehensive and complicate challenges of Chinese economy is middle income trap. The new normal state is a vitally important target for Chinese economic development in the coming decade.

2.1 China's Economic Growth, Trade and Investment

Since the reform and open-up in 1978, China has experienced continuous and dramatic high economic growth, and the GDP size rose substantially from 189bn USD in 1980 to 10330bn USD in 2014 in current term. Featuring with high savings, heavy investment and export stimulation, China's export-led growth mode has achieved great success over the past thirty-five years, with average annual growth of 9.8%, the highest economic growth rate in the world. In 2010, China's GDP reached 5930bn USD in current price, overtook Japan's GDP scale of 5474bn USD and became the second largest economy in the world. If China's strong growth momentum maintains, it will overtake USA as the largest economy in the near future.

According to a prediction of OECD, if calculated in constant PPP international dollar, China economy size has surpassed that of eurozone and will become the largest economy in 2016.

In the past three decades, China's export-led strategy has achieved unbelievable success and became the world factory. China sequentially overtook Japan as the third largest foreign trader in 2004, Germany as second largest trader in 2010 and USA as the largest exporter in 2011. The amount of China's import and export of goods in 2014 reached 1960bn USD and 2343bn USD respectively. China's trade surplus has increased sharply and become an excessive exporter since 2005. The share of China's trade surplus of GDP firstly rose dramatically from 1.66% in 2004 to 7.57% in 2008, and then steadily fell to 2.02% in 2014.

A typical feature of China's economic growth mode is heavy investment. The scale of Chinese fixed capital investment has experienced persistent and substantial growth in the past decades, rising sharply from 55bn USD in 1980 to 4370bn USD in 2013. China surpassed USA in 2009 and became the largest nation in fixed capital investment. Over the period of between 1990 and 2013, the average share of China's fixed capital investment in GDP attains 37.7%, and which is much higher than the world average level of 22.8%.This means that it is a tough task for China to adjust its economic structure by reducing overdependence on investment.

2.2 China's Inward and Outward Foreign Direct Investment

China's regulatory system discriminates among different kind of cross-border capital movements. Encouraging foreign direct investment (FDI) is China's long-held policy. With features of relative stability and associated with benefits such as transfers of technological and managerial expertise, FDI has generally been the dominant form of China's capital inflows under the background of capital transactions restrictions.

With the establishment of China's status as "world factory" after entry into WTO and the revaluation pressure of the RMB gradually accumulated, China's FDI inflow has expanded steadily since 2001, with an average annual growth rate of 8.1%. The flow and stock of China's inflow FDI in 2014 was 119.6bn USD and 2677.9bn USD respectively. Recently, the growth speed of China's FDI inflow has substantially declined due to foreign investors' tight fiscal constraints originating from the global financial crisis, and China's enhancing requirements on the quality of foreign capitals, average annual growth rate falling from 13.1% over the period between 2001 and 2008 to 2.2% during the period from 2009 to 2014. However, China is still a main and popular destination for foreign direct investment capital.

With strong pressure of growing foreign exchange reserves, China has changed fundamentally the outward direct investment policy and began to implement the policy of encouraging Chinese companies to "Go Globally" in 2001. This policy shift intends to increase capital outflows to reduce external surplus, acquire oversea natural resources and advanced technology, establish market distributional channels for Chinese products, and enhance investment revenues of China's huge foreign assets. China's outward investment has accelerated substantially since 2003. The flow and stock of China's outward direct investment rose from 2.9bn USD and 33.2bn USD in 2003 to 116.0bn USD and 744.3bn USD in 2014 respectively.

2.3 China's FX Reserve Accumulation and Outward Investment Return

Since joined in WTO in 2001, China has experienced large and persistent trade surplus, FDI and speculative capital inflow, and hence China has accumulated huge foreign exchange reserve. The size of China's foreign exchange reserve skyrocketed at 3.84tn USD at the end of 2014. As a natural consequence of the accumulation of huge foreign exchange reserve, China has successfully shifted from a capital-scarce country to relatively capital-abundant one. As Table 1 shows, the size of China's foreign assets has experienced a rapid growth in the past decade, rising sharply from around 1.22tn USD in 2005 to 6.41tn USD in 2014. The value of China's net foreign asset has maintained positive since 2004, and this means that China has always been a net capital export or a debtor in the past decade.

China is an abnormal debtor. Although China has large amount of net foreign asset, its net outward investment reward has always recorded minus profits in the past decade. Over the period between 2010 and 2014, China's average net outward investment return equals to -62.6bn USD, and whose average net outbound investment yield is -3.50%. This phenomenon can be mainly attributed to China's insufficient capacity in outward investment. The predominant component of China's foreign asset is foreign exchange reserve, with a share of 60.0% in 2014, and which is mainly invested in high-credit-rated but low-yield public debt securities of advanced countries, particularly US government bonds and agency bonds, while the share of risky but high-yield ODI asset is just 11.6% in 2014. As Figure 1 displays, the average annual investment yield of China's foreign asset is 3.27% during the period between 2005 and 2014.

Table 1 The Position and Revenue of China's International Investment (in Billion USD)

	2005	2010	2011	2012	2013	2014
Foreign Asset	1223.3	4118.9	4734.5	5213.2	5986.1	6408.7
--ODI Asset	64.5	317.2	424.8	531.9	660.5	744.3
--FX Reserve	818.9	2847.3	3181.1	3311.6	3821.3	3843.0
Foreign Liability	815.6	2430.8	3046.1	3346.7	3990.1	4632.3
--FDI Liability	471.5	1569.6	1906.9	2068.0	2331.2	2677.9
Net Foreign Asset	407.7	1688.0	1688.4	1866.5	1996.0	1776.4
Net Investment Return	-17.6	-38.1	-85.3	-35.2	-94.5	-59.9
Net Investment Yield	-5.16%	-2.40%	-5.05%	-1.98%	-4.89%	-3.17%

Source: SAFE and Author's calculation.

Note: The net investment yield equals to the net investment return divided by the average value of China's net foreign asset, which is the mathematical mean of the outstanding of China's net foreign asset at the end of previous year and current year.

It is obvious that ODI activities are much more complicate, risky and profitable than purchases of government debt securities, and need more business knowledge. Opposite to the side of foreign asset, the predominant component of China's external liability is FDI, with an average share of 61.0% during the period between 2010 and 2014. According to estimations of some scholars, the average annual investment yield of foreign investors in China was around 20% due to China's large economic and market potentials (Yu, 2008). The average annual investment yield of China's foreign liability is 6.65% over the period between 2005 and 2014, and which is 3.38 percents higher than that of China's foreign asset. This reflects that the international investment capabilities of foreign enterprises are much stronger than those of Chinese enterprises.

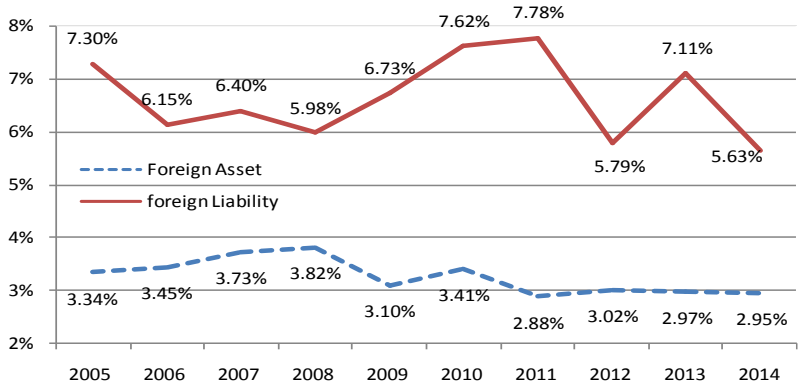

Figure 1. The Investment Yield of China's Foreign Asset and Foreign Liability

Source: SAFE and Author's Calculation

Note: The investment yield equals to the investment return divided by the average value of China's foreign asset or liability, which is the mathematical mean of the outstanding of China's foreign asset or liability at the end of previous year and current year.

2.4 The Challenges of Chinese Economy

Due to limitations in politics, society, endowment and environment, it is impossible that the development process of Chinese economy will be gone smoothly without a setback. China will encounter some serious challenges in the coming years. These challenges are as follows:

First, the most comprehensive and complicated challenge that China has faced is middle income trap. Owing to the rising costs of production factors, rapid aged tendency of population, lack of advanced technology and slow growth of global demand, China's high speed growth mode featuring with overdependence on export and investment can't be sustainable. The challenging task for China is to restructure its economy and replace the resources intensive and heavy emission manufacturing industries with service and high technology industry.

Second, China's current economic growth mode has faced increasingly serious constraints in labor, land, resources, energy and environment. China has faced the potential threats of social instability, such as, disparity in urban and rural areas, income gaps in different stratums, social emergent incidents, corruption, environment pollution, real estate bubble, and unjust in education, health care and endowment insurance.

Third, The global financial crisis and European sovereign debt crisis and the

resultant gloomy world economy could dampen hopes for moderate world growth over the next several years, and which has caused the resurgence of trade and investment protectionism in the world so that some countries have set up many non-tariff barriers against Chinese firms, such as, anti-subsidy, anti-dumping and product standards. This has constituted a serious obstacle to the sustainability of China's export-led growth mode.

Fourth, Chinese enterprises have faced fierce competition and political obstacles in international market. This can be reflected in three aspects: (1) Due to low entrance barriers, standardized technology and low value-added ability, Chinese firms have undergone fierce competitions in the world and their temporary competitive advantages in international production chains can easily lose. (2) The reindustrialization plan of US will constitute a serious threat to the competitive capability of Chinese firms. Comparing to Chinese firms, US manufacturing enterprises have substantial advantages in capital financing cost, energy cost and technology. (3) The application of the principle of competitive neutrality will make Chinese firms particularly SOEs experience many obstacles in carrying out outward direct investments, such as, investment motives investigation, state security examine, market monopoly investigation, and industrial entrance barriers.

2.5 The New Normal State of Chinese Economy

Currently, the "new normal" is a popular term in China. The new normal state means that Chinese economy has entered a new phase that features more sustainable, mid-to-high-speed growth with higher efficiency and lower costs, and environmentally friendly. It has four key characteristics: the GDP growth will shift from high-speed growth of around 9 to 10 percent to now mid-to-high rate growth of about 7 percent (and even lower); the economic structure will undergo comprehensive and fundamental changes, the service industry will gradually play a dominant role in the Chinese economy; consumption will gradually replace investment as the dominant source of demand, the income disparity will be shrink, and people's income will account for a larger share of the economy; the engine of Chinese economy will gradually transform from the investment-driven model into an innovation-driven model.

To realize the target of the new normal, Chinese new government has adopted some concrete measures since it took office in late 2012 and early 2013, such as, reducing overdependence on investment, deepening the economic reform, substantially loosening regulation on economic activities, and accelerating open-up. These new attempts has produced some elementary achievements:1)quarterly GDP growth rate significantly falls from 7.9% in the fourth quarter of 2012 to 7.0% in the first quarter of 2015; 2)the share of service industry in Chinese economy amazingly rises from 45.5% in the fourth quarter of 2012 to 51.6% in the first quarter of 2015, while that of manufacturing industry significantly declines from 45.0% to 42.9%; 3) the growth rate of high technology industry and equipment manufacturing industry is obviously higher than that of manufacturing industry, meaning that Chinese economy is gradually more driven by innovation; 4)the service sectors have provided more new jobs than the manufacturing industries; 5)the income gap between rural and urban areas is gradually narrowed, and if the trend maintains, consumption will play a more important demand source of Chinese economy; 6) the environment protection law and relevant regulations have been revised, features with strengthening supervision on

enterprises' environment related activities.

However, in the transition to the new normal state, the Chinese economy has some uncertainties and challenges, such as, middle income trap, large fluctuation in economy, real estate bubbles, local government debt and financial uncertainties. The largest challenge for Chinese economy is middle income trap. Under the environment of the declining potential growth rate and increasing environmental pressure, if China can't improve growth quality and efficiency, restructure the economy and boost the economy by innovation, the sharp slowdown of Chinese economy will weaken investors' confidence in investment, real estate market and local government debt, and trigger a chain reaction and even economic crisis.

In sum, under the background of gloomy global demand, rapidly rising labor cost and serious environment pollutions, China's current growth mode can't be sustainable, with an overdependence on exports of low-and-middle-end manufacturing products and heavy investment. To realize the state of new normal, China should enhance its economic structure, encourage the development of the sectors of service, high-technology and middle-and-high-end manufacture, and restrict the expansion of industries of low value added, resource intensive and heavy CO2 emission. As a large nation with huge oversea assets, China can make use of ODI activities to effectively upgrade its industrial structure and improve the status in the international specifications and global value chains, through acquiring advanced technology, well-known brands, marketing networks and resources, and transferring domestic overcapacity industries. The initiative of "One Belt One Road" will provide large potential for Chinese enterprises to go globally. However, as a late comer in international investment field, Chinese enterprises have faced more obstacles and prejudices than those of their western counterparts, such as fewer investment opportunities, insufficient international business experience, and political intention suspicions. The following two sections will investigate the current circumstances and challenges of China's ODI, and how ODI can enhance China's status in the global value chains and upgrade the industrial structure.

3. Chinese ODI's Facts, Challenges and Policy Suggestions

China has become an important player in the global international investment scene. In flow terms, Chinese ODI realized 11-year sustained growth with the average rate of 39.8 percent between 2003 and 2013. From an international comparison, China has been ranked for the first time the world's third largest outward direct investment (ODI) source nation after the United States and Japan in 2012. Thereafter, Chinese ODI has maintained a strong growth pattern and reached a new high record in 2013 with the total investment of $107.8 billion, up 22.8 percent over the previous year.

The rapid expansion of Chinese ODI is a result of policy support and economic development. Before 2000, a key strategy for China is to attract foreign capital while overseas investment is strictly controlled. Since the release of "going out" policy in 2000, making overseas investments get encouraged and supported by Chinese government. And the accumulated huge amount of foreign exchange could be used for Chinese ODI. In addition to government support, the economic reality also requires overseas expansion. With rising domestic costs and heightened competitiveness, investing overseas becomes entrepreneur's natural choice.

Along with the phenomenal growth, risks and barriers against Chinese ODI have

also been strengthened. State owned enterprises (SOEs) as the dominant players of Chinese ODI are usually considered by host country the threat to fair market competition and even national security. Chinese investors are also often accused of bringing technology, resources, and jobs in host country back to China and thereby undermining sustainable development in local communities. Chinese enterprises' overseas journey is filled with twists and turns. Considering most Chinese enterprises being inexperienced in overseas operation, governmental guidance and service is vital for their subsistence and development.

3.1 Investor, Industry and Destination

By the end of 2013, the number of Chinese ODI investors had reached 15.3 thousand. Among these investors, a key feature is the significance of state-owned enterprises (SOEs), especially those centrally-administered SOEs (CSOEs). In 2013, among the non-financial ODI investors, CSOEs accounted for only 3.5 percent, while local enterprises from provinces, autonomous regions and municipalities took a lion's share of 96.5 percent. Nevertheless, China's non-financial ODI flows reached $56.3 billion in the same year, accounting for as many as 60.7 percent of China's total non-financial ODI flows.

CSOEs are a special enterprise group in China. They are few in number with one hundred and twelve in total under the state-owned assets supervision and administration commission of the state council. But they are more powerful compared with private enterprises and local-administered SOEs in the sense that CSOEs enjoy more financial and administration resources. Besides, China's CSOEs face less competition since they are more likely to be in monopolized or highly-controlled industry, such as finance, power and utility, petrochemical and energy, and aircraft and telecommunications. China's CSOEs are keen in making overseas investment under the ambition to be larger, stronger, and globally influential and competitive. But they are often criticized to threaten fair competition because of their special status, as well as have strategic intention which might pose threats to host country's national economic security.

East China is the engine of local Chinese ODI. In 2013, China's local non-financial ODI reached $36.4 billion, with a year-on-year increase of 6.5 percent. Among these overseas investments, $29.2 billion, or 80.2 percent, was from East China, with a year-on-year increase of 14.8 percent; $3.5 billion and $3.7 billion was respectively from Central China and West China with the year-on-year growth rate of 9.6 percent and -33.9 percent for each. Guangdong, Shandong, Beijing, Jiangsu, Shanghai, Zhejiang, Liaoning, Tianjin, Fujian and Hebei were top 10 provinces (municipalities) in terms of local Chinese ODI (see Table 2). They accounted for 73.8 percent of China's total local ODI flows in 2013.

Table 2. Top 10 Provinces (Municipalities) in Terms of Local Chinese ODI, 2013

No.	Province (Municipality)	Flows ($ Billion)
1	Guangdong	5.9
2	Shandong	4.3
3	Beijing	4.1
4	Jiangsu	3.0

5	Shanghai	2.7
6	Zhejiang	2.6
7	Liaoning	1.3
8	Tianjin	1.1
9	Fujian	1.0
10	Hebei	0.9

Source: 2013 Statistical Bulletin of China's Outward Foreign Direct Investment

In the aspect of industrial distribution, Leasing and business service attracts the largest amount of Chinese ODI. there were $27.1 billion Chinese overseas investments to this sector in 2013, basically the same as last year, accounting for 25.1 percent in total (see table 3). After Leasing and business service, mining, finance, wholesale and retail trade were another three industries that respectively attracted Chinese ODI of $24.8 billion, $15.1 billion and $14.7 billion in 2013. These four industries were over 75 percent of total Chinese ODI, which further increased by 3.6 percentage points compared with last year.

Table 3. Industrial Distribution of China's ODI Flows

	2013 $ Billions	2012-13 Change %	Share in 2013 %
Leasing and business service	27.1	1.2	25.1
Mining	24.8	83.2	23.0
Finance	15.1	50.0	14.0
Wholesale and retail trade	14.7	12.3	13.6
Manufacturing	7.2	-17.0	6.7
Construction	4.4	34.2	4.0
Real estate	4.0	95.5	3.7
Transport, storage and post	3.3	10.7	3.1
Agriculture, forestry, husbandry fishing	1.8	24.0	1.7
Scientific research and technical service	1.8	21.0	1.7
Information transmission, computer services and software	1.4	13.0	1.3
Residents service, repair and other services	1.1	27.0	1.1
Production and supply of electricity gas and water	0.7	-65.0	0.6
Culture, sports and entertainment	0.3	55.0	0.3
Hospitality and Catering	0.1	-42.9	0.1

Source: 2012 and 2013 Statistical Bulletin of China's Outward Foreign Direct Investment

Although China is called "world factory", the scale of Chinese manufacturing

ODI is relatively small, and Chinese manufacturing firms do not move their factories abroad on a large scale. This is likely due to the diversity and imbalance of the economic development among different areas of China. In face of rising domestic production cost, Chinese enterprises are able to relocate their factories inward to the country's less prosperous central and western regions from the more developed eastern coastal areas rather than setting up new facilities in foreign countries which could entail more uncertainties. However, the amount of Chinese manufacturing ODI is likely under-reported, and disguised as Leasing and business service.

It can be implied from the distribution of top 10 countries (regions) of Chinese ODI destinations that offshore financial center, developed economies and resource-rich countires are attractive places for Chinese enterprises (see table 4). Among these, Hong Kong is the most important transit and destination of Chinese ODI. It received $62.8 billion in 2013, accounting for 58.3 percent of the total. A large share of Chinese overseas merger and acquisition is conducted through re-investments from Hong Kong, such as the acquisition of the Canadian oil company Nexen by China National Offshore Oil Corporation (CNOOC) and etc.

Table 4. Top 10 Countries (Regions) as Destinations for China's ODI Flows

No.	Countries (Regions)	2013	2012-13 Change	Share in 2013
		$ Billions	%	%
1	Hong Kong (China)	62.8	22.6	58.3
2	Cayman Islands	9.3	1018.9	8.6
3	United States	3.9	-4.3	3.6
4	Australia	3.5	59.1	3.2
5	British Virgin Islands	3.2	43.9	3
6	Singapore	2.0	33.8	1.9
7	Indonesia	1.6	14.8	1.5
8	United Kingdom	1.4	-48.8	1.3
9	Luxembourg	1.3	12.5	1.2
10	Russia	1.0	30.2	0.9

Source: 2012 and 2013 Statistical Bulletin of China's Outward Foreign Direct Investment

3.2. Challenges and Risks

Along with the increasingly significant presence of Chinese enterprises in overseas investments, their journey is filled with twists and turns. Several major investments have run into obstacles, blocked or subject to long delays. Even for those finally completed projects, in many cases, they go through hardship and some come to a bad end.

The first challenge is investment barriers and resistance. A typical case is a series of difficulties that Chinese telecoms giant Huawei has experienced in some developed countries, especially in the United States and Australia. National security is one pretext that host country's regulatory body use to justify their concerns over Chinese ODI. A key reason is that China adopts the nonalignment policy, the independent diplomatic policy that does not form an alliance with any superpowers, and does not form any military ally of countries like the United States. Another reason

is that the major players of Chinese ODI are SOEs. They are considered to be agents of the Chinese government, and their ODI is usually seen as having some hidden agenda.

But things are more complicated underneath the national security fears. Some Chinese ODI are being adversely affected by the tensions of international relations. The failure of Huawei's proposed acquisition in 2010 of a US internet software provider 2Wire came at a time in the US mid-term elections when members of Congress were especially sensitive because they were concerned about their prospect of re-election and scandals over cyber-attacks and data theft sparked fears over internet security. It seems that Chinese ODI tend to fall victim to the domestic politics of host countries. Opposition parties favor to utilize Chinese investments as an easy target to attack the ruling party. The investment by Chinese private enterprise Zhongkun Group in an undeveloped land in Iceland for tourism in 2011 is a case in point. In addition to political considerations, sometimes commercial interests hide behind claimed national security concerns. The series of frustrations that Huawei has met in the United States at least partly bears on opposition from existing US telecommunications firms.

The second challenge is investment risks in politically vulnerable countries and regions. China has large amounts of investments in Afghanistan, Sudan, Iran, Iraq, Libya, Venezuela, North Korea and other unstable regions. Chinese ODI in these regions accounted for 11.4 percent in total stock in 2011. The political changes in Middle East, North Africa, and South America have triggered turbulence and instability in these regions. Besides, the fact that commodities bull market has run its course brings huge pressure to those emerging markets that rely heavily on strong prices of major commodities. Chinese investment is easy to become a target and suffer heavy losses wherever there is political turmoil, terrorist attacks, civil wars or sudden regime changes. In fact, Chinese companies have suffered huge losses in the Libyan and Iraq unrest.

Although other foreign investors share the same concern and need to guard against such investment risk, Chinese enterprises are more likely to suffer losses. A key reason is that most Chinese companies, big or small, SOEs or private, are newcomers in the international investment arena. . A survey in 2010 shows that more than 80% of Chinese ODI firms began investing abroad after 2000, while only 4 percent of them had outward investments before 1990[2]. It is easy for them to ignore the potential risks in overseas markets. Moreover, some Chinese investors are accustomed to building close connections with juntas, local strongmen, and powerbrokers, but do not know how to communicate with the local community and its people. Is there any political turmoil or sudden regime changes, they have trouble winning support from local community and its people.

The third challenge is the international recognition of its unique identity. China has overtaken Japan to become the world's second largest economy. But it is still a developing country and a middle income country. So it needs some space to maneuver when negotiating with developed countries. What's more, China is a socialism country with its own characteristics and does not follow the orthodox 'Washington Consensus', a set of policy proposals made by the International Monetary Fund (IMF) and the World Bank to reduce government interventions, and promote trade and

[2] China Goes Global 2011: Survey of Outward direct investment Intentions of Chinese Companies, prepared by China Council for the Promotion of International Trade, the United Nations Conferences on Trade and Development and the Asia Pacific Foundation of Canada.

financial liberalization. To the Western eye, China's growth and rising influence remains a mystery. In fact, China itself does not have a clear idea of what the 'China Model' is, and has been 'crossing the river by feeling the stones'[3]. But what is certain is that Chinese government has played an important role in the country's economy. And the state ownership is the pillars of Chinese economy.

Such domestic situation has exercised an inevitable influence upon its overseas investment. The former US Secretary of State Hilary Clinton during her visit to Zambia in 2011 criticized China's "reckless misuse" of the continent's resources as a "new colonialism". Hilary's criticism as well as other label of Chinese ODI as pursuing 'state capitalism' is not fair. The issue of state ownership has been overestimated.

3.3. Policy Suggestions

The large scale of Chinese ODI is still a recent phenomenon. Most Chinese enterprises are inexperienced in overseas operation, and their investment risk awareness is very weak. Therefore, governmental guidance and service is vital for their subsistence and development. As the third largest ODI nation in the world, China should based on its own characteristics to systematize and institutionalize its policies for promoting, supporting and reducing risks of overseas investments.

Chinese ODI policy system should be on the one hand in line with global conventions, and on the other in the service of the nation's overall economic development. The first principle is to guide but not control, service but not intervene. Making overseas investments is the spontaneous behavior and commercial activity for the micro-enterprises. The governmental ODI policy system should guide but not control the enterprises' overseas investment. It's a service-oriented system, and should refrain from involvement in microeconomic decisions.

We think there are several key policies that should be high on agenda.

The first is to develop and strengthen the function of overseas chamber of commerce in risk elimination, disputes settlement and promotion of the communications between Chinese investors and host country's each side. Overseas chamber of commerce is familiar with local laws and regulations, market structures and conditions as well as social customs. It could maximize the synergy between domestic and foreign cultural differences, bring together solitary enterprises, and therefore greatly enhance viability and the ability to resist risks. Besides, it is needed to establish information consulting service system and support the development of local intermediaries to provide high-quality investing, financial, legal, accounting and other ODI services.

The second is to alleviate the financing problem at various levels. The problem of financing is one impediment of Chinese ODI. This is largely blamed on the underdevelopment of Chinese domestic financial market as well as low degree of internationalization of Chinese domestic financial institutions. To alleviate this problem, it requires to make better use of both domestic and international financial markets and resources.

This includes: (1) built up a promotion platform for enterprises to be listed in China and overseas. (2) increase the share direct financing, in particular, encourage large enterprises to issue corporate bonds and small and middle-sized enterprises

[3] "Crossing the river by toughing the stones" means there is no fixed mode to follow, but groping in the forward step by step.

(SMEs) to issue set bond. (3) increase the government support to SMEs finance. For instance, establish a SMEs ODI fund with the focus on supporting those overseas investments that facilitate the restructure of Chinese economy or move abroad domestic excess capacity. (4) sign strategic cooperation agreement with foreign banks so as to encourage them providing financial support for Chinese ODI in host countries. (4) enrich and expand overseas business by Chinese local commercial banks to support overseas investments by Chinese enterprises. (5) integrate "bring in" and "going global". for example, when Chinese enterprises make overseas merger and acquisition, the target foreign enterprises are also allowed to have the stake of investing Chinese enterprises in the form of stock-for-stock deal. This strategy is likely to reduce financial burden of Chinese enterprises as well as lower investment resistance in the host country.

The third is to accelerate negotiation of Bilateral Investment Treaties (BITs) with the United States and Europe. Although China has concluded BITs with 131 countries, these BITs have not played an enough role in protecting Chinese ODI. A key reason is that most of existing BITs were concluded in the 1980s and 1990s, and thus don't not reflect Chinese interests as the major source of foreign capital. China should push ahead with bilateral BIT negotiations with the US as well as Europe. China-US BITs negotiations started in 2008 while China- Europe BITs negotiations began last year.

There are several points of disagreement in both negotiations, include the degree of market access and investor protection; fair competition issue that what standards should be set as a treatment of SOEs, labor practices and the environment; and dispute settlement issue that to which extent arbitration is governed by the Convention on Settlement of Investment Disputes between States and Nationals of Other States. Through exceptional arrangements and other legislative techniques, coming to an agreement does not mean the resolution of all these differences. But each side should make its part of concessions. China has taken the lead in making a major concession. During the fifth Sino-US strategic and economic dialogue in July 2013 in Washington, China for the first time promised pre-establishment national treatment for investments. The next breakthrough depends on whether China could give a satisfactory negative list in 2015 that balance a greater openness and domestic economic interests.

4. Outward FDI, The Extension of Production Chains and Upgrading of China's GVCs

In the global production networks, the international division of labor is beyond industry and into intra-product. Even in the labor intensive industry, there are capital and technology intensive segments, and in capital and technology intensive industry, there are still labor intensive segments. So, upgrading of industrial structure is mainly embodied by upgrading of GVCs.

4. 1 the Connotation of Upgrading of GVCs

In global production networks, production is no longer limited to traditional manufacturing and processing, and consists of a series of value-added activities. The global production chains can be broadly divided into three elementary phases: the first is about technical aspects including research and development, creative design, technical improvement, technical training and so on; the second is concerned with traditional production aspects such as logistics and procurement, module production,

production systems, terminal processing, quality control, packaging and inventory management; the third is related to marketing aspects covering wholesale and retail, advertising and after-sales service.

The distribution of revenue along GVCs is represented visually using a U-shaped graphic which is so called “smile curve”. In general, R&D is often the core of the whole GVCs in producer-driven global production networks, while marketing and brands are usually crucial to the whole GVCs in buyer-driven global production networks. So value captured by the technical phase and the marketing phase are relatively high, and that for traditional production phase is correspondingly low in global production networks.

Depending on the capability to control and manipulate the GVCs, firms involved in global production networks can be classified as global flagships, “higher-tier” suppliers, and “lower-tier” suppliers. Global flagships usually possess strategic assets such as core technologies, marketing channels or famous brands, “higher-tier” suppliers also possess other valuable proprietary assets except for hard-core R&D and strategic marketing, “lower-tier” suppliers normally lack proprietary assets. In global production networks, global flagships dominate the whole value chains, “higher-tier” suppliers are inferior to global flagships but superior to “lower-tier” suppliers, and “lower-tier” suppliers are typically used as “price breakers” and “capacity buffers” which are highly vulnerable to abrupt changes in market and technology (Ernst 2003).

Based on the above attributes of global production networks, the connotation of upgrading of GVCs can be defined in terms of promotion of a firms’ position and improvement of capability to create and capture value in global production networks. In existing literature, the upgrading of GVCs covers process upgrading, product upgrading, functional upgrading and inter-sector upgrading in terms of production, or inter-industry upgrading, inter-factorial upgrading, upgrading of demand, upgrading along functional activities and upgrading of forward and backward linkages from the perspectives of industrial system. Although upgrading of GVCs is characterized by its variety, the final destination is to create and capture more value than ever. In global production networks, the upgrading of GVCs is broadly embodied by the shift from manufacturing and processing stages to R&D and marketing stages, and the transition from “lower-tier” suppliers to “higher-tier” suppliers and further to global flagships, the gradient industrial transfer around the world is correspondingly characterized by the gradient transition of all the phases along GVCs in turn.

4.2 China’s “World Factory” Position in a Dilemma

In global production networks, most Chinese firms are locked in "low end" due to lack of key technology and well-known brands. With the "demographic dividend" is gradually disappearing, China's is faced with serious challenges.

4.2.1 Low-End Locking in Global Production Networks

China has been integrated into global production networks as the "Manufacturing Factory of the Globe". From the 1990s to the early 2000s, especially after Deng Xiaoping's southern tour speech, China tried to promote technological progress and upgrading of the value chains by technology spillover of FDI. Under the guidance of thoughts behind FDI policies, local governments competed to attract FDI by a series of preferential policies such as tax exemption, land and resource price concessions,

and even provide "super-national treatment" for foreign firms in some areas. Driven by such preferential policies, labor-intensive industries, and labor-intensive processing stages in technology-intensive and capital-intensive industries are transferred from Japan and “four tigers” in Asia to China, and therefore China has been integrated into global production networks.

China is becoming more innovative, but it is not yet an innovation powerhouse. Although China has developed a more conducive ecosystem for entrepreneurship and innovation than ever, there is still much room to improve. Various limiting measures, barriers to entry, and relative fragility of the banking system impede further improvement of productivity and global competitiveness.[4] What’s more, China's domestic market is large but domestic demand is relatively inadequate, especially human capital and technological readiness can’t fully meet the demand of high value-added stages. Compared with the percentage of more than 50% in many developed countries, about one quarter of China's economic growth is attributed to productivity improvement in terms of TFP, and the rest is broadly ascribed to input of factors of production.

Under the circumstances, apart from a few global contract manufacturers such as Huawei and Lenovo, the majority of Chinese firms pursue projects which are small, low-budget and effective quickly in short term, and therefore they play the role of “lower-tier” suppliers, and are locked in "low end" in global production networks. Jason Dedrick et al. (2011) analyze the distribution of value along the global supply chains of iPad and iPhone, and find that China's economy captures a tiny fraction of total value. The main financial benefit to China takes the form of wages paid for the assembly of the product or for manufacturing of some of the inputs, while the price for an IPhone is about 200$ or so, only $10 or less in direct labor wages is paid to China workers (Kraemer, et al. 2011).

4.2.2 Severe Challenge Faced with “World Factory”

The reserve of coal, oil, natural gas, and mineral resources cannot meet the tremendous demand of a world factory. As is well known, China acts as the Manufacturing Factory of the Globe in global production networks and therefore consumes a large amount of energy and mineral resources while supplying large numbers of inexpensive products to the world. Although China is a large developing country, but the reserve of coal, oil, natural gas, and mineral resources and so on is inadequate, and natural resource per head is much lower relative to most countries in the world, and China’s natural resources cannot meet the tremendous demand of a world factory at all, which means China’s current economic development mode is unsustainable. In order to drive China’s sustainable development, China has to transfer from a manufacturing-driven economy to an innovation-driven economy.

Rising labor costs and aging undermine China’s competitiveness of manufacturing and processing sectors. On the one hand, Chinese government has driven up minimum wages, aggressively enforced labor and environmental regulations. According to China’s Employment Promotion Plan, the minimum wage in each jurisdiction must be increased at least once every two years, and the twelfth five- Year Plan stipulates an average increase of 13 percent per year. On the other hand, different from developed countries, China has already entered an aging society

[4] World Economic Forum(2014) The Global Competitiveness Report 2014-2015. http://www.weforum.org/reports/global-competitiveness-report-2014-2015

with lower GDP per capita. In 2014, the number of seniors over 65 has reached about 138.55 million, and the share in the population is 10.1%. However, the China's GDP per capita is just $7589, ranks 80th in the world. In order to drive China's sustainable development, China has to transfer from a manufacturing-driven economy to an innovation-driven economy.

4.3. The Extension of Production Chains: A Solution to the Dilemma

In order to enhance China's capacity to create and capture value-added, China should develop a Multinational Diamond Model with China as the core by the extension of production chains driven by outward FDI.

4.3.1 The Diamond Model of National Competitive Advantage

Michael Porter, a Harvard University professor, has developed national competitive advantage (NCA) which is represented visually using a diamond-shaped graphic. The Diamond Model of NCA outlines the framework of four interrelated attributes which determine a firm's innovative capability (Porter 2011). The four interrelated determinants are factor conditions, demand conditions, related and supporting industries, and firm strategy, structure, and rivalry. In addition, the government and chance are just viewed as two exogenous parameters which influence the four determinants of the diamond model. Factors can be further divided into basic factors such as raw-material resources and advance factors such as specialized human capital, and the latter are more important than the former. Demand conditions involve customer needs and wants, a company's capacity and growth rate and so on, especially sophisticated buyers prod companies to innovate faster. Internationally competitive related and supporting industries not only deliver the most cost-effective inputs in an efficient, rapid, and sometimes preferential way, but also provide new ideas and technical interchange which speed up the rate of innovation and upgrading. In addition, the modes choice of establishment, organization and management are usually influenced by national circumstances and context, and especially domestic rivalry often spurs innovation of products and processes as well as improvement of quality and service (see Figure 2).

4.3.2 The Expanded Diamond Model of NCA

However, multinational activities have not been taken into account in Porter's Diamond Model. With trade and investment liberalization and facilitation, the barriers to cross-border movement of factors and goods have been reduced or canceled, the process of regional economic integration has greatly accelerated. Therefore, one country's national competitive advantage are also influenced by the four determinants of other countries. Based on the facts, the expanded diamond models have been developed whereby international flows of factors and goods are formally incorporated into the model. For example, Dunning (1993) views multinational activities as a third exogenous variable except for the government and chance; Rugrnan and D'Cruz (1991) propose the Double Diamond Model and North American Diamond based on the Canada-U.S. Free Trade Agreement; Moon, Rugman and

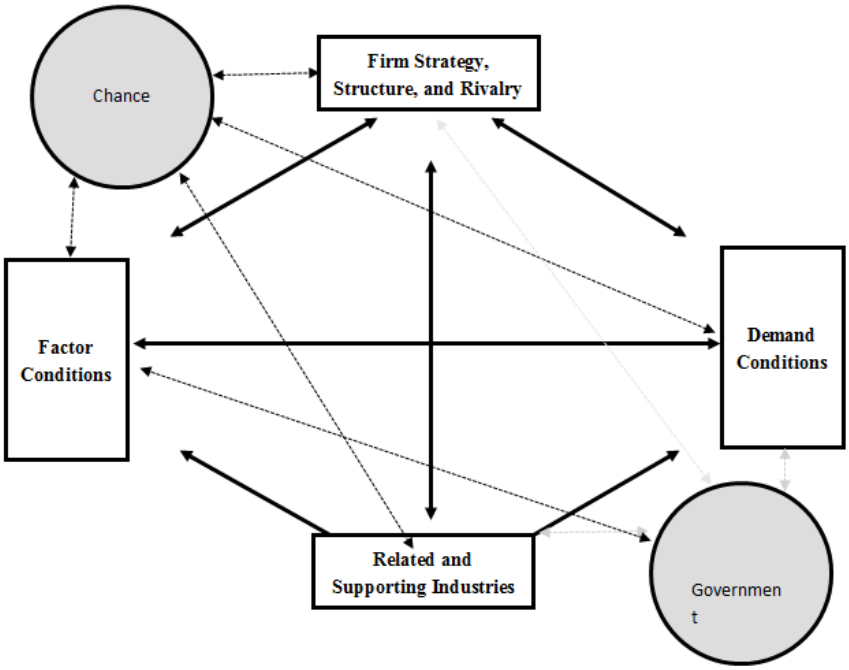

Figure 2. Diamond Model of National Competitive Advantage

Source: Porter (2011)

Verbeke(1998) develop the Generalized Double Diamond with both domestic and global factors taken into account to assess the global competitiveness of Korea and Singapore.

4.3.3 Multinational Diamond Model with China at Its Core

Expanded Diamonds give China clues on how to gain competitive advantage at high value-added stages. As we all know, Porter's Diamond Model is based on the patterns of competitive success in ten leading nations such as the U.S., Japan, and Germany which possess abundant advance factors and relatively sound national innovation systems. However, China is a developing country, and the four determinants of NCA at value-added stages are far from those of ten leading nations. What's more, China's economic environments can't change overnight due to path dependence. In view of above facts, China can enhance its own competitive advantage at high value-added stages by means of economic environments of other countries. An alternative way is to pool together complementary factor conditions, demand conditions, related and supporting industries of China and other countries, and to develop a Multinational Diamond Model with China at its core. In the Multinational Diamond Model, China can enhance competitive advantage at high value-added stages based on innovative capability gained in developed countries and resources obtained in developing countries (see Figure 3).

The extension of production chains driven by OFDI contributes to development of the Multinational Diamond Model with China at its core. In global production networks, countries are different in economic environments which result in distinct stage-specific competitive advantages. In order to gain competitive advantage at high value-added stages, enterprises from China can make cross-border matching between various production stages and respective corresponding economic environments via outward FDI on a global scale (Li 2015). On the one hand, through OFDI in

developed countries such as the U.S. and Germany, Chinese companies are embedded in production networks of host countries, thereby getting access to globally competitive related and supporting industries, obtaining specialized factors such as talented personnel, patents and well-known brands, and making full use of local innovation systems to meet sophisticated demands; on the other hand, through OFDI in developing countries which are abundant in natural resources and labor, Chinese companies can not only lower the costs of manufacturing and processing stage, but also make room for the development of R & D and marketing stages. In the end, the Multinational Diamond Model with China at its core comes into being through which China is moving upward along the"smile curve".

4.4. The Ways to Develop Multinational Diamond Model

The development of Multinational Diamond Model with China as the core is essentially the extension of China's production chains with the intention to gain competitive advantage at high value-added stages. To this end, Chinese firms should transfer marginal industry or marginal segments of production chains to other developing countries, meanwhile, make asset-specific investment on marketing and R&D in developed countries. At the government level, China together with other countries should promote facilitation of investment and trade along "one belt, one road".

4.4.1 Expand Manufacturing and Processing Segments in Other Developing Countries

The expansion of marginal industry or marginal segments of production chains optimizes allocation of resources and improves social welfare. Generally speaking, there are gaps in factor cost, managerial skill, and technical knowledge between China and countries at lower stages of economic development, and therefore a particular industry which is losing competitiveness as a result of rapid changes in factor endowments in China may be a potentially comparatively-advantaged industry in the countries at lower stage. In global production networks, the international division of labor is beyond industry and into intra-product. Under the circumstances, even in the sunrise industry, there are still segments which are losing competitiveness, and therefore expansion driven by OFDI not only involves traditional marginal industries, but also includes marginal segments of production chains. The successful expansion of marginal industry or marginal segments of production chains through OFDI will exploit cheap natural resources and labor of host countries, transfer China's overcapacity, make room for the development of sunrise industry or higher value-added stages transferred from developed countries.

In fact, many developed countries and newly industrialized countries promote upgrading of industrial structure or GVCs by

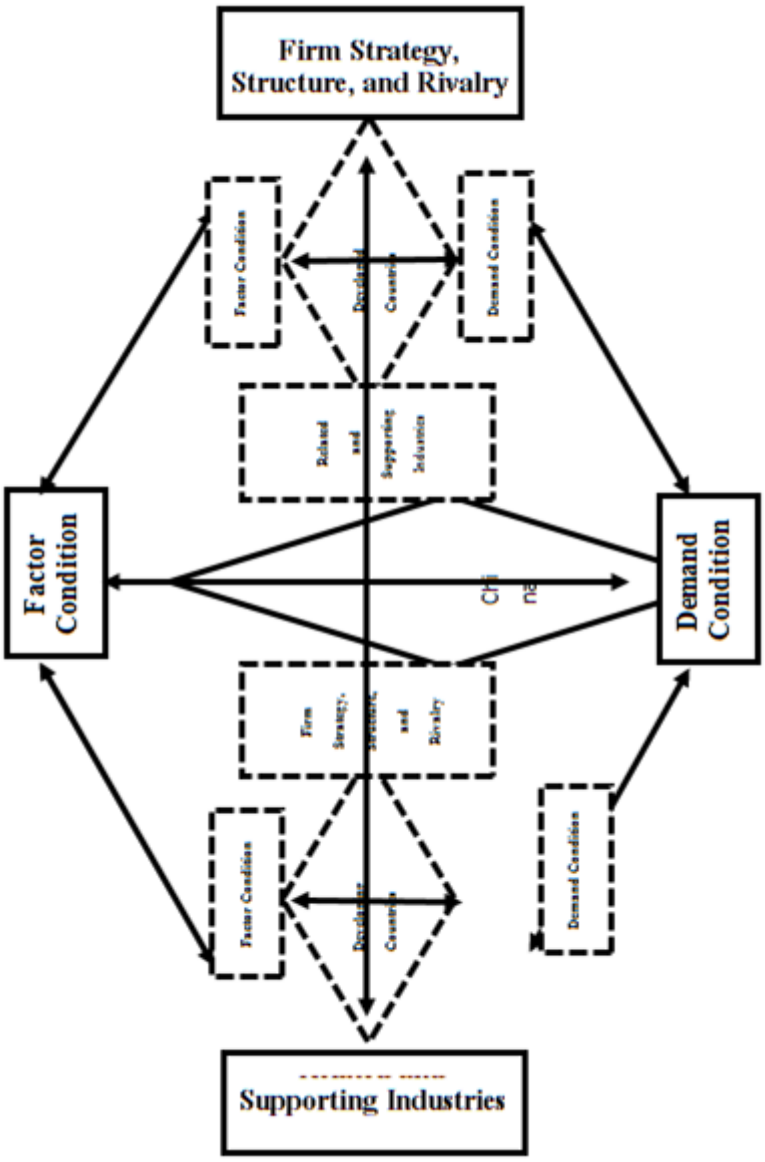

Figure 3. Multinational Diamond Model with China at Its Core
Source: The figure is originated by author

this way. In the 1950s, the United States transferred iron and steel, textile and other industries which were losing comparative advantages to Westdeutschl and Japan which were inferior to the U.S. in economy, and focused on emerging industries such as semiconductors, communications equipment and computer. From the 1960s to 1980s, Westdeutschl and Japan expanded such labor and natural resources intensive industries to Newly Industrial Economics, and specialized in technology intensive industries such as integrated circuit, precision machinery, automobile, household appliances, and fine chemicals. Since the 1990s, the United States, Germany Japan and other developed countries as well as Newly Industrial Economics have transferred labor intensive industry or low-value added production stages of capital and technology intensive industries to China, India and other developing countries, and they are mainly engaged in R&D, marketing, Brands and so on.

4.4.2 Make Asset-Specific Investment on R&D and Marketing in Developed Countries

It is vital for Chinese firms to get tacit knowledge from “higher-tier” suppliers or global flagships in order to upgrade CVCs. According to difference in knowledge needed, tasks along global production chains can be further classified into those that require explicit knowledge and those that require tacit knowledge (Polanyi 2012). Explicit knowledge can be expressed in a linguistic, mathematical, or visual symbol, and is often embodied in a standardized—or even outdated—technology or usual routine; while tacit knowledge is deeply rooted in the human body and only can be expressed through action, commitment, and involvement in a specific context and locality, and often provides the fertile intellectual ground for all knowledge management and for the effective performance of an economy (Ernst 2002) by which Chinese firms can create and capture more value added.

It is necessary for Chinese firms to be integrated into global production networks of developed countries in order to acquire tacit knowledge. The process of knowledge diffusion and capability formation in the GPNs involves four steps such as socialization (tacit-to-tacit conversion), externalization (tacit-to-explicit conversion), combination (explicit-to-explicit conversion) and internalization (explicit-to-tacit conversion). Chinese firms can achieve combination and internalization of explicit knowledge by the transactions of intellectual property and procurement of equipment, but often suffer export restrictions to high technology. Only by integration into production networks of developed countries, can Chinese firms achieve the socialization and externalization of tacit knowledge.

It is a prerequisite of integration into global production networks of developed countries that Chinese firms have made asset-specific investments. Asset-specific investments on R&D and marketing not only improve the capability of Chinese firms to assimilate tacit and explicit knowledge, but also make Chinese firms functionally and territorially embedded into aspects of the social and spatial arrangements of “higher-tier” suppliers and global flagships. Based on asset-specific investments on R&D and marketing, there is a symbiosis among Chinese firms, “higher-tier” suppliers and global flagships by which relation contracts come into being. In line with the changing requirements of markets, “higher-tier” suppliers and global flagships will actively provide technical literature and technical assistance and share related marketing experience to help Chinese firms meet their requirements.

4.4.3 Promote Facilitation of Investment among Countries along “One Belt, One Road”

"One belt, one road" is the longest economic corridor with the greatest potential in the world. It involves 65 countries and more than 4 billion people. The development and construction of "one belt, one road" creates a large market. Many countries along "one belt, one road" are abundant in natural resources, but insufficient in capital, human resources and infrastructure. There is great potential for countries along it to cooperate in transportation, finance, energy, telecommunications, agriculture and tourism. Especially, it is reported that many countries in Asia and Europe have indicated their support for China's construction of "one belt, one road”.

China's pivotal role helps develop the Multinational Diamond Model with China at the Core. "One belt, one road" runs through the whole Eurasia, borders on the Asia-

Pacific Economic Circle on the East, and enters the developed European Economic Circle on the West. The Belt and Road initiative covers five areas-policy communication, road connectivity, unimpeded trade, money circulation and understanding between peoples. In order to fully utilize factor conditions, demand conditions, related and supporting industries of Eurasia, China together with other countries along it should further refine the Belt and Road initiative, and formulate specific measures on trade and investment facilitation, infrastructure development, industrial and sub-regional economic cooperation, and financial cooperation.

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