

A Challenge to Different Path for Industrial Upgrading in China

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【Abstract】

The purpose of this paper is to investigate the prospects and possibilities of China's industrial upgrading through outbound foreign direct investment (OFDI). In a market economy, industrial upgrading is usually realized on the basis of market competition and price mechanism while in a transitional economy like China, such shift is not at all smooth and automatic. Promoting the upgrading of domestic industries has become one of the main objectives of the so-called "going-out for development strategy" launched by the Chinese government since 2000. The analysis in this paper is made through observing a certain number of subsidiaries of Chinese firms that were surveyed by the author in past several years. Although the analysis in this paper has reached an affirmative reply to the issue, yet the author insists on that the final and also the most effective way for China to reach the purpose of industrial upgrading is the formation of sustained innovation capability.

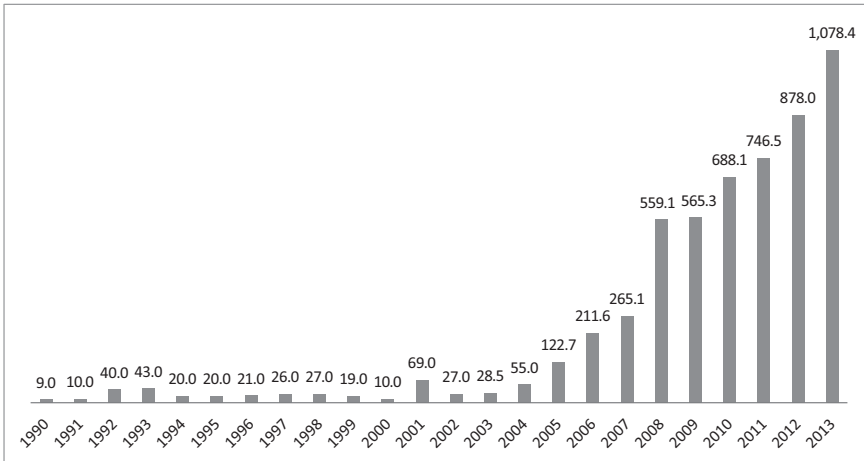
【Keyword】 Industrial upgrading, OFDI

Introduction

The purpose of this paper is to investigate the prospects and possibilities of China's industrial upgrading through outbound foreign direct investment (OFDI). The analysis will be made by observing a certain number of subsidiaries of Chinese firms that were surveyed by the author in past several years.

As an economic miracle in post-war world economic history, China's economy jumped to a top position in the world in terms of GDP size, surpassing Japan in 2010 and approaching to U.S.A. at a quick pace today. The surprisingly rapid economic growth over the past three decades in China has resulted from reliance upon extensive growth, which has been at the expense of the environment and resources. Today, one of the major concerns regarding China's economy is the "quality" of the growth. Within the indus-

Figure. 1 China's outbound FDI (by flow, 100 million US\$)



Source: MOC.

trial sectors in China, manufacturing is a typical case which is still at the low end of the international value chain since a majority of profits flow to foreign multinationals for their provision of technology, design and other services (Wang and Wang, 2011).

On the other hand, China's OFDI has increased substantially over the past 2 decades (see Figure. 1). Today, OFDI flow exceeded US\$100 billion, making China the world's third largest overseas investor, strongly evidencing that Chinese companies are changing their roles from global manufacturers to global investors. According to China's official announcement, China's OFDI overtook inbound foreign direct investment (IFDI) in 2014, by a narrow margin, making the country a net capital exporter for the first time in the history.

Furthermore, by the end of 2013, Chinese government proposed the "One Belt, One Road" strategy and demanded improvements in infrastructure access, the upgrading of manufacturing sectors and interconnection with China's neighboring countries. It is believed that the implementation of the "One Belt, One Road" strategy will help improving infrastructure access and interconnection with neighboring countries as well as with those along the routes. It is expected that this will bring in new development opportunities for OFDI in infrastructure, energy cooperation and manufacturing sectors. Recently the State Council released a guideline to suggest that the industrial sectors with overcapacities achieve industrial upgrading through "going out" strategy. The government's scenario seems to be very optimistic. However, many issues remain unclear. As broadly known, OFDI is conducted only by firms. Whether a firm is able to implement OFDI is based on its competitive advantages (Hymer. S, 1976). The basic concern of this paper focuses on the following point.

"Could OFDI be an effective path in improving China's growth quality or, more specifically, upgrading China's industries by moving them up the

value chain”?

1. How the Issue of Industrial Upgrading Showed Up

Before discussing the point, we need to define the concept of “industrial upgrading”. In developing countries and economies in transition, industrial enterprises often lack innovative capabilities, managerial capabilities, product quality control know-hows and have insufficient knowledge of business processes as well as of operational and production cycles. Furthermore, their performance is often hindered by poor technologies utilized and limited motives to access international market partly because their home market is usually easier to access and obtain higher profit. But sooner or later, these conditions will disappear. Along with the economic growth, an economy has to be opened to outsiders including inbound FDI. Furthermore, an economy begins to experience the shift from high growth rate to relatively lower growth rate since its basic GDP size becomes a relatively large one and it is hard for the economy to keep the growth at a higher rate in the long run. As the result, the existing industries begin to be pushed at a corner. In order to tackle the new challenges, the existing industries need to rearrange the resources to keep the profit or obtain new market opportunities. Therefore, industrial upgrading becomes necessary.

Researches made from management view point usually either focus on the microeconomic factors from the perspective of business activities of firms or “value chain”. According to previous study, “industrial upgrading” can be divided into four types (Gereffi,1999).

- 1) Process upgrading, refers to improvement of production quality and increasing flexibility of producers by introducing more efficient production methods and better technology.

2) Product upgrading, refers to moving to the production of more technologically sophisticated and high-value added products or services.

3) Functional upgrading is achieved in terms of acquiring new functions with higher incomes or abandoning old functions generating lower incomes in the value chain. Inter-sector upgrading happens when a firm applies its acquired knowledge to move horizontally into new sectors.

4) Inter-sector upgrading, is achieved by applying knowledge acquired in the production chain in new areas.

Nowadays, the concept has been defined from the view of value chain as “the process by which economic actors—nations, firms and workers—move from low-value to relatively high-value activities in global production networks” (Gereffi, 2005). Sharing the basic comprehension with the above study, we define the concept of “industrial upgrading” in this paper as “a shift process of innovative progress, quality improvements and access capability to new market in the purpose of moving from low-value to relatively high-value activities in global production networks by FIRMS”. It is widely recognized that industrial upgrading is not automatic: some sectors in some countries successfully move up the ladder to more technologically sophisticated, higher value-added products, and others fail to do so.

In 2013, the proportion of value-added from the tertiary industry in China’s GDP exceeded the secondary industry for the first time in the history. The change indicates that China is making progress in maintaining steady growth while optimizing economic structure, promoting industrial transformation through innovation-driven development, and improving the quality of economic growth. It also shows that after 30 years of steady growth, China has entered a critical stage of economic restructuring.

However, the fact that for two consecutive years China’s annual economic growth was below 8 percent shows that China’s economy has slowed. Accord-

ing to economic rules and experience from other countries, after experiencing such a shift in economic growth, a developing economy will face the challenge of optimizing and upgrading its industrial structure.

Theoretically speaking, optimizing and upgrading the industrial structure indicate the process of production factors such as capital, labor, land and technology flow from the production sectors or links of industrial chains with low value-added, poor efficiency and high consumption, such as industries of overcapacity and high pollution, to those with high value-added, high efficiency and low consumption, such as advanced manufacturing industry and high-end producer services. In a market economy, the flow and reorganization of production factors among different sectors and links of production rely on market competition and price mechanism. Simply put production factors flow toward where higher and more sustained economic returns are generated. However, in a transitional economy like China, such shift is not at all smooth and automatic.

Overcapacity in some industries is a prominent issue undermining the growth of China's economy and for quite a long time to come. Structurally, extensive governmental economic intervention, in association with distorted factor markets, has led to serious structural problems, such as excessive investment, overcapacity, redundant construction and backward production capacity in segments of China's industrial sector. Steel, cement and other traditional industries with overcapacity problems, subsidized by their parent governments (including central and local governments) are still expanding. Some emerging industries such as wind-power equipment and polycrystalline silicon, encouraged by the government's industry development policy, also fell into the hole of excess investment and repeated construction. Some 15–25 percent of total capacity in 18 industries—iron, steel, coal, iron alloy, calcium carbide, copper smelting, lead smelting, zinc smelting, cement, glass, papermaking, alcohol, monosodium glutamate (MSG) production, citric

acid, hide processing, printing and dyeing, and chemical fiber manufacturing—is inefficient backward production capacity that is seriously detrimental to the environment.

On the other hand, promoting the upgrading of domestic industries is one of the main objectives of the “going-out for development strategy” launched by the Chinese government since 2000. As broadly known OFDI could channel international knowledge diffusion, not only from investing firms to host countries but also vice versa in certain circumstances. Therefore, China’s institutional framework for OFDI especially seeks to encourage OFDI that can be expected to contribute most to the country’s national economic development. It does this by selectively supporting particular industries and activities in their internationalization through OFDI. For the national economy, broadening the scope and geography of investment means more options for economic restructuring and resource allocation optimization. OFDI thus provides more resources and opportunities for economic growth. In addition, OFDI provides access to tangible and intangible resources directly relevant to China’s development effort, beginning with raw materials but also including technology, brand names and others. This development objective is reflected in the fact, as mentioned above, that the government encourages OFDI through various instruments, in particular in industries and activities of special importance for the development effort.

China’s OFDI spree started in the mid-2000s. From an annual average of below US\$3 billion before 2005, OFDI flows grew to \$20 billion in 2006, and more than US\$50 billion by 2008. In 2010, China’s annual OFDI reached US\$60 billion amid declining levels of global FDI, making China one of the world’s top 10 exporters of direct investment in the post-crisis years. By the end of 2011, China’s total global OFDI stock stood at US\$365 billion. However, this early investment boom was almost entirely concentrated on developing countries and a handful of resource-rich developed economies, such

as Australia and Canada. Investments in most advanced economies were few and far between. That trend began to change in 2008 when investment flows to Europe and North America grew strongly. However, some changes took place recently. 1) M&A covered a wide range of areas with a single transaction boasting the largest value in history. 2) OFDI made by local enterprises saw a steady growth, and non-financial investment stock made by local enterprises hit 30% for the first time in 2013. 3) The outflow of private enterprises took up a larger percentage while that of state-owned enterprises decreased. (MOFCOM, <http://english.mofcom.gov.cn/>).

2. Achieving Industrial Upgrading through OFDI: A Brief Theoretical Review and A Different Viewpoint

So far, a limited number of studies regarding industrial upgrading through OFDI exist and these studies are divided into two categories (Zhao & Jing, 2011).

The first category touches upon the topic only indirectly rather than focuses on it. Most studies in this category focused their concerns on the experiences of developed countries'. Through the case study on the United States' OFDI flows and outward industrial transfer, the fact was verified, that outsourcing labor intensive manufacturing to developing countries in return catalyzed the readjustment of home countries' industrial structures towards a more technology and capital intensive pattern (J. Dunning, 1958; R. Vernon, 1966). Another study also gets similar perspectives with the framework of development economics (Lewis Arthur, 1984). Well-known "Flying Geese" Paradigm, aiming to explain the trend of industrial transfer in East Asian region but by looking Japan as the leading goose, the paradigm implied that the OFDI process is inextricably linked to the industrial upgrad-

ing in the home country (K. Akamatsu, 1936).

Hence a similar hypothesis of “marginal industry expansion” implies that OFDI and outward industrial transfer can help industrial upgrading in home country (K. Kojima, 1978). Marginal industry expansion theory suggests that OFDI could facilitate industrial upgrading in the home country. In this context, a marginal industry is one consisting of home manufacturers that are losing comparative advantage because of rising labor costs, appreciating local currencies and increasing environmental pressures. When OFDI starts from marginal industries, resources are freed up for better usage. Some non-sector-specific resources (for example, finance) are transferable to the expanding sectors and contribute to their development. Other sector-specific resources can be transferred to, and utilized in, other countries with favorable factor conditions, which would otherwise be wasted at home (T. Ozawa 1979). Marginal industry expansion theory mainly explains the industrial upgrading effect of efficiency-seeking OFDI, which is usually located in developing host countries and secures access to cheaper input factors, especially labor. In addition to the desire for lower production costs in less developed countries, other incentives for pursuing OFDI could positively affect industrial upgrading in a country, although the channel and magnitude can vary. Market-seeking OFDI is often pursued to defensively maintain a market position or offensively strengthen market share. Theoretically speaking, if an investing firm’s financial performance is elevated, they will have more resources to undertake research and development (R&D) and upgrade their production processes and products. Natural-resource-seeking OFDI removes the resource bottleneck faced by enterprises in growth and development. Detrimentially, however, there is also less pressure to develop resource-conserving and environmentally friendly technologies, which in turn undermines any industrial upgrading in the home country. In the case of strategic assets-seeking OFDI, the acquisition of technology or brand names is

conducive to enhancing the firm's competitive edge by introducing more efficient production, transitioning the firm towards the production of higher value-added goods or services, and undertaking new functions with higher income. All of these are important aspects of industrial upgrading. In addition to technology and brand names, another crucial component of strategic assets-seeking OFDI is improved access to distribution channels. The investing firms benefit from higher sales and, consequently, increased profits. On this front, as with market-seeking OFDI, firms have greater financial resources to upgrade their production capacity and products¹.

The second category touches upon the topic directly although conclusions drawn out vary one from another significantly. Among those who conclude that OFDI brings positive effect on optimizing industrial upgrading in home countries (M. Hiley, 1999; R. Lipsey, 2002; J. Markusen, 2009). By observing Japanese enterprises' investment flows into ASEAN countries, some certain beliefs were found that Japanese OFDI had helped transferring the declining textile industry out of the borders, and accelerated the transfer of production factors to new industries at the same time domestically. By using the data of 22 industries from different countries between 1970 and 1995, a study reaches the conclusion that there is a positive correlation between industrial structure changes that happened during industrialization and OFDI changes in developed countries (M. Dowling, 2000)².

However, the existing studies regarding industrial upgrading through OFDI mainly focused their concerns on industrialized economies rather than developing countries. As a matter of fact, more and more firms in developing economies are committing to OFDI nowadays and it is necessary to explain such phenomenon. The author suggests a hypothesis differing from

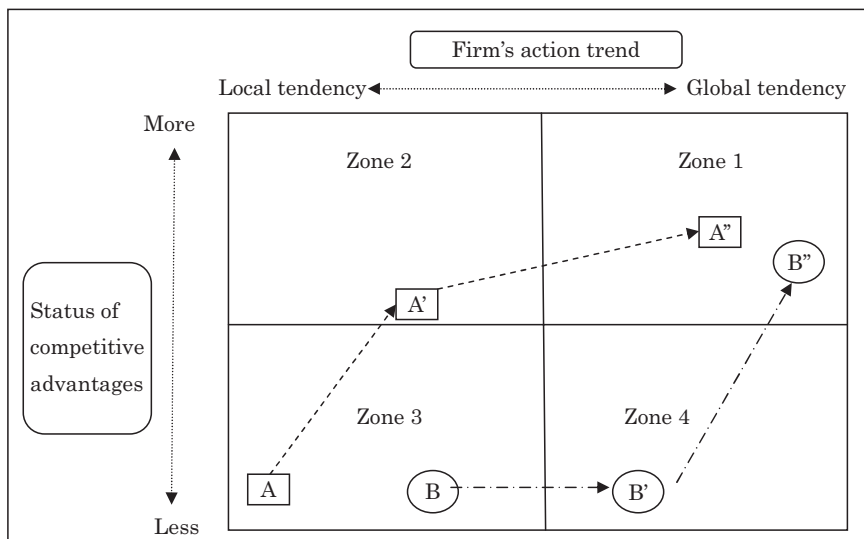
¹⁾ Citation from Wang, B. and Wang, H., 2011, pp. 153–154.

²⁾ The review of existing studies here are subject to Zhao & Jing, 2011, pp 4–5.

the pattern of the firms in industrialized economies (Yuan, 2014).

Generally speaking, the traditional developed economies' firms have been implementing their global businesses by following a roadmap of “firm establishment & development→ obtaining competitive advantages→ global extension”. In another word, a firm implements OFDI in the purpose of further development by making full use of its own competitive advantages. However, the situation and conditions for firms to implement global business began to change substantially since 1990s. Within these, the developing economies' firms without possessing enough competitive advantages also commit to OFDI but their purpose for it is nothing but acquiring competitive advantages themselves. One particular attention should be paid there is the path of their global business extension as “firm establishment & development→ global extension→ obtaining competitive advantages”. The change of the

Figure. 2 Two Road Maps for OFDI



Source: By the author.

order in the path is particularly important. The theoretical point here is “why are the firms without enough competitive advantages able to undertake OFDI?” The author suggests a hypothesis as follows (see Figure. 2).

We introduced two elements in the figure. The vertical axis stands for competitive advantages that are necessary for a firm’s growth while the horizontal axis refers to the tendency of a firm’s market preference. Under the condition of market mechanism, a firm shows up and starts its business mainly in the local market with relatively less competitive advantages (Zone 3). Later on, the firm gradually grows up through market competition and obtains more and more competitive advantages but it still prefers to the local market (Zone 2). Finally the firm will cross the border and start its business abroad, becoming a global player. The reasons for it may come from defensive purpose (keeping its market position ahead other domestic competitors) or from offensive ones like defeating its rivals by taking certain foreign market share (from Zone 2 to Zone 1). Obviously this is a typical pattern for a firm in developed economies. This path (A-A'-A'') is also a regular road map for many firms in developing economies hereinafter.

On the other hand, a totally different path B-B'-B'' in the figure has showed up since 1990s. The path is as follows. A firm shows up and starts its business in the local market at the very beginning with less competitive advantages (Zone 3) but it begins to carry out its global strategy without waiting for accumulating sufficient competitive advantages. The backgrounds for such global extension action contain the orthodox reasons as the firms in developed economies had experienced in the past (profit-seeking, market-seeking, efficiency-seeking, offensive measures, natural resource-seeking, etc.). But some new backgrounds may be responsible for this new path. These reasons may come from 1) participating in international division or value chain, 2) one of the measures for regional economic integration, 3) acquiring strategic assets abroad, 4) acquiring certain technologies abroad, 5) utilizing

the finance abroad, and 6) following the government's policy, etc. The most important point here is that the firm gradually acquires competitive advantages through OFDI. The following reasons may be responsible for that. 1) the firm acquired strategic assets abroad and made efficient full use of these assets; 2) the firms acquired the latest technologies from merged firms abroad; 3) the firm may successfully have utilized its favorite technique that are applicable to the host countries; 4) the firm may also successfully have made full use of its alliance tie with foreign partner in the host market.

It is highly possible that the above paradigm may be effective in explain-

Table. 1 Targeted Chinese Firms

	Business line	Entry mode	OFDI motives	Overcapacity issue	business volume abroad
Huawei, India	IT service & solution	Wholly owned	market, R&D seeking	No	huge
TCL, Thailand	Home appliance	JV	market-seeking	Yes	small
TCL, Vietnam	Home appliance	JV	market-seeking	Yes	small
Haier, Thailand	Home appliance	JV	market, R&D, strategic asset seeking	Yes	relatively large
Haier, India	Home appliance	JV	market, R&D, strategic asset seeking	Yes	relatively large
Haier, Japan	Home appliance	JV	market, R&D, strategic asset seeking	Yes	small
Haier, USA.	Home appliance	Wholly owned	market & strategic asset seeking	Yes	relatively large
Hisense, S.Africa	Home appliance	Wholly owned	market-seeking	Yes	relatively large
Lenovo, USA	IT products	Wholly owned	market, R&D seeking	Yes	relatively large
Geely, Sweden	Auto vehicle	Wholly owned	market, R&D, strategic asset seeking	Yes	huge
BYD, Japan	Auto die and mold	Wholly owned	R&D, strategic asset seeking	No	small
SAIC, U.K.	Auto vehicle	Wholly owned	R&D, strategic asset seeking	Yes	small
Foton, Indonesia	Auto vehicle	OEM	market-seeking	Yes	small
Lifan, Vietnam	Auto vehicle	JV	market-seeking	Yes	small
Jialing, Indonesia	Auto vehicle	JV	market-seeking	Yes	small
SAIC, Thailand	Auto vehicle	JV	market-seeking	Yes	relatively large

Source: Local survey and relevant website.

ing the industrial upgrading through OFDI in China. The data used in this paper mainly come from the author's surveys in the past several years and 16 subsidiaries of Chinese companies are selected as observing targets (see Table. 1). Owing to the author's personal academic concern, the past surveys were mainly focused on automobile and electronics industries. However the findings in this paper can partially reveal the possibilities of China's industrial upgrading through OFDI.

In order to observe the effects of industrial upgrading through OFDI, we selected seven elements that reflect the effects regarding industrial upgrading through OFDI. These elements are as follows.

- (1) R&D implementation. It is a basic parameter to verify if a company's global business undergoes successfully or not meanwhile it is observable for us to understand the relationship between the home and host country.
- (2) Quality improvement. It is obvious that a firm's business will be considered to be successful if its product and service qualities at home get improved through its global business. The typical reason for it may come from the tangible or intangible know-how acquired abroad and being transferred to the parent company.
- (3) Technology transfer to parent company. If a subsidiary of a company becomes the origin of getting new technologies, such global action is no doubt a complete success.
- (4) Acquired new brands. The explanation for this is similar with the above and it usually takes place when a firm in developing economy conquers a firm located in an advanced economy.
- (5) Overcapacity transfer. The point to verify this effect is to observe if the hardware resources (equipments, intermediate goods, etc) or human resource at subsidiaries come from the parent company.

- (6) Acquired Hi-tech staff. The global extension of a firm in developing economies often aims at obtaining capable and professional human resource abroad.
- (7) Moved to higher value market. It is supposed to be an important evidence of industrial upgrading if a firm successfully moved from lower value market towards higher positions through its global business extension.

3. The Findings through the Observation on Targeted Firms

3.1 The general findings

The surveyed firms' general data showed in Table.1 reflects some important facts. First, most of the Chinese companies appeared in the table have the problem of overcapacity at home market and it becomes one of the major motivations for the surveyed firms to "go out" and find the chance to shoot up the issue by global business. On the other hand, the business volume of about half of the surveyed firms is still limited. The short history of Chinese firms' OFDI might be responsible for it. For most the Chinese firms just started their global business since 2000 and the current volume just reflects their initial situation. Generally the electronics-related firms' business volumes are relatively larger than automobile-related ones and it does reflect the current competitive advantages of the two sectors. As broadly known, the latter still largely lag behind their foreign competitors.

As for the motivations of global business, "market-seeking" is found in most the cases reflecting indirectly the eagerness of Chinese firms to handle the issue of production overcapacity at home. The most interesting point here is that half of the surveyed firms showed strong tendency of searching

for R&D capability abroad. It strongly implies the author's hypothesis above-mentioned. That is to say, through OFDI, a firm acquires competitive advantages and becomes an international player in a prompt way. Furthermore, around half of the surveyed firms extended their business abroad in the purpose of "strategic asset seeking". Obviously the motivation shows the similar tendency of the above.

3.2 R&D implementation at subsidiaries

Half of the surveyed Chinese firms are conducting R&D activities at their subsidiaries abroad. It strongly supports the author's hypothesis (see Table. 2). Largely differing from their western competitors, Chinese firms show extremely strong eagerness to acquire foreign R&D capabilities through OFDI, in particular M&A. Two Chinese firms investing in Japan (Haier and BYD) are typical cases. As a new player of automobile manufacturer in China, BYD suffers a lot from its shortcomings in some aspects connecting

Table. 2 The Effect of Industrial Upgrading through OFDI

	R&D implementation	Quality improvement	Technology transfer to home	Acquired new brand	Overcapacity transfer	Acquired Hi-tech staff	Moved to higher value market	Number of "Yes"
Huawei, India	Yes	No	No	No	Yes	Yes	No	3
TCL, Thailand	No	No	No	No	Yes	No	No	1
TCL, Vietnam	No	No	No	No	Yes	No	No	1
Haier, Thailand	Yes	No	No	No	Yes	Yes	No	3
Haier, India	Yes	No	No	No	Yes	No	No	2
Haier, Japan	Yes	Yes	Yes	Yes	No	Yes	Yes	6
Haier, USA.	No	No	No	No	Yes	No	No	1
Hisense, S.Africa	No	No	No	No	Yes	No	No	1
Lenovo, USA	Yes	Yes	Yes	Yes	No	Yes	No	5
Geely, Sweden	Yes	Yes	Yes	Yes	No	Yes	Yes	6
BYD, Japan	Yes	Yes	Yes	No	No	Yes	Yes	5
SAIC, U.K.	Yes	Yes	Yes	Yes	No	Yes	Yes	6
Foton, Indonesia	No	No	No	No	Yes	No	No	1
Lifan, Vietnam	No	No	No	No	Yes	No	No	1
Jialing, Indonesia	No	No	No	No	Yes	No	No	1
SAIC, Thailand	No	No	No	No	Yes	No	No	1

Source: Local survey and relevant website.

passenger vehicle manufacturing and the technology of die and mold is one of them. As broadly known, Japanese automobile die and mold manufacturing capabilities enjoy high reputation in the world. However, the market of automobile die and mold in Japan is decreasing year by year due to both low birth rate and aging issues. In 2010, a world-wide known automobile die manufacturer, Ogihara, had to get rid of a part of its manufacturing capability in Japan and then BYD became the new owner of Tatebayashi plant, the major plant of Ogihara. In fact, BYD had aimed at acquiring the R&D in Japan for long. Currently BYD has placed its Japanese subsidiary as its major R&D base for developing die and mold for its market in the world³. Then Haier Japan took over R&D capability of Sanyo, a former electronic home appliance items manufacturer and merged by Panasonic later. As a part of restructuring of the merger, Panasonic sold Sanyo's former electronic home appliance business to Haier including its R&D function.

3.3 Quality improvement at home market

Unfortunately only a minority of the surveyed firms reached the goal. There is an obvious phenomenon implying two different results. One is that subsidiaries of Chinese firms in developing economies failed to transfer better and higher levels of quality improvement techniques to their parent companies. On the contrary, such technique transfer from subsidiaries to home country mainly happens at those subsidiaries in developed economies. Geely's experience applies to this point. Geely, a private owned automobile manufacturer and a late comer in the line, has been struggling with its shortcomings like low quality and minority brand. However, Geely accessed global market successfully since it purchased Volvo in 2010. It is believed

³⁾ The relevant information about the deal is subject to Nihon Keizai Shimbun, March 27, 2010.

that the quality control technique and the relevant knowhow keep flowing into its parent plants at home from Volvo.

3.4 Technology transfer to home

This element shows the same result with the above “Quality improvement at home market” and relatively limited number of firms identified such transfer. However, significant evidence has been found within the surveyed firms. Shanghai Automotive Industry Corporation (SAIC) experienced such transfer and successfully applied the transferred technology to its global business extension. SAIC took over Rover, a former UK small passenger vehicle manufacturer, through merging Nanjing Automobile by the end of 2010, which had owned Rover. Since then Rover relevant vehicle models, designing techniques have been continuously transferred to SAIC and helped SAIC with developing new domestic models and new models for global market. The recent evidence is that SAIC built its first manufacturing base in Thailand with Overseas Chinese capital and introduced Rover models to Thai market.

3.5 Acquired new brand from subsidiaries abroad

Though limited cases are identified, yet some successful experiences within surveyed firms imply that it is highly possible for the firms in developing economies to catch up the frontrunners through taking over the existing brands. The above mentioned Haier Japan is a successful case. Haier acquired Sanyo brand when it became the successor of former Sanyo and was authorized to use “Sanyo” brand in ASEAN market. Compared with Haier brand, Sanyo brand name enjoys a higher commercial reputation in South East Asian market so that Haier enlarged its market share by using Sanyo brand name. Another well-known success comes from Lenovo’s merging personal computer business of IBM in 2005. Lenovo, a typical venture capital and

originated from China Science Academy, used to be a minor manufacturer of personal computer. Nobody knew its existence at global market until it purchased personal computer business of IBM. After the deal, Lenovo was promised to utilize “IBM” brand to sell its personal computer items at a five-year-based authorization. Although Lenovo cannot use the brand any more today, its own brand “Lenovo” has grown up to a major one in world market. However managing an acquired brand come with a lot of uncertainty and that is why such industrial upgrading only limits to a small number of Chinese firms. The point will be further discussed later in this paper.

3.6 Overcapacity transfer

As stated earlier, most of the Chinese firms are suffering from the issue of production overcapacity so that overseas market seeking has become the top motivation for most of the Chinese firms to implement OFDI. Our survey identifies the point. 11 out of the total firms evidenced that their global business had direct relation with the issue and global extension had helped the parent company with solving the problem. This finding is extremely significant and it implies that Chinese government’s call for domestic firms engaging to OFDI has reasonable backgrounds.

3.7 Acquired Hi-tech staff abroad

Compared with the firms of developed economies, one of the Chinese firms’ purpose of OFDI is acquiring hi-tech and regular technological staff abroad. In particular, those professional technicians, engineers and experienced managers usually become the targets. In our surveyed firms, less than half of the firms achieved the goal while the rest of the firms are still searching for the targets. Huawei India is supposed to be a successful one. The original purpose for Huawei to build their subsidiary in India was purely acquisition of high level Indian IT-related technicians and engineers. That

is way Huawei put its initial subsidiary location at Bangalore which is well known for IT industries in India. Today Huawei India has successfully acquired over 500 professional hi-tech staff in India.

3.8 Moved to higher value market

Though quite limited number of Chinese firms (4 out of 16) succeeded in shifting their major business from lower value chain to higher position through OFDI, some of the previous cases inspired the coming global extension. We would like to take the case of Geely again. As stated earlier, Geely used to manufacture low-price, poor-quality and small-sized passenger vehicles which placed Geely at a low-value position only at home market. Geely represented low income consumers' brand. Since taking over Volvo, Geely has gradually changed its market value image in international market and fixed its items at middle and high level position.

4. Concluding remarks

We would like to come to the basic concern appeared at the beginning of this paper “could OFDI be an effective path in improving China’s growth quality or, more specifically, upgrading China’s industries by moving them up the value chain?”. Through the above observation, a certain number of points regarding the question have been clarified. Simply speaking, the answer is “yes”. Let us sum up the major points hereinafter.

First of all, it is apparent that strategic assets-seeking OFDI has become the most important driver of Chinese overseas manufacturing investments. Chinese firms are heavily dependent on foreign technological resources and lack global brand names as well. Acquiring strategic assets through OFDI helps elevating the competitiveness of Chinese firms by promoting their

movement up the value chain and in turn upgrading the Chinese economy itself eventually. However, such a favorable outcome is by no means preordained. There are, however, necessary preconditions that must be met before strategic assets-seeking OFDI confers benefits. Investing firms should be capable of managing and assimilating the additional strategic assets. Otherwise, the enormous upfront expenses required to purchase the assets will not be justified by the eventual return. At least two conditions have to be satisfied. The first condition is that investing firms should possess a certain degree of capability (namely, an absorptive ability, the technology transfer skills to manage the acquired strategic assets, absorbing spillovers and also transferring them back to the parent country). The second one is that investing firms should be patient enough or tolerant commercially to bear short-term losses while the advantages of the strategic assets come to fruition. As earlier study revealed, Chinese investing firms with the motivation of strategic assets-seeking have partially met the above requirements. Their technological capabilities have facilitated their assimilation of acquired strategic assets. What is more important is that, the higher the investing firm's technology-intensive capability or capital-intensive capability, the more likely it will be to conduct strategic assets-seeking OFDI (Wang, B. and Wang, H., 2011). Actually the author agrees to the point and reached the same conclusion.

Secondly, one of the points that influences the effect of Chinese industrial upgrading through OFDI is the investment destination. Generally speaking, firms investing in a host country with a relatively high level of technology are more likely to receive technology spillovers and enjoy productivity gains. In another word, those Chinese firms investing in developed economies are more plausible to get higher level technological assets that can help their parent companies with shifting the strategic location to a higher position. The analysis in this paper also strongly supports this finding. Again let us

recall Table. 2. Those surveyed firms with more answer of “Yes” to the 7 elements regarding industrial upgrading concentrated in developed countries while those firms with less answer of “Yes” showed a tendency of investing in developing economies.

Thirdly, the investment motivation more or less influences the effect of industrial upgrading at home. For example, firms undertaking international knowledge-sourcing OFDI are found to enjoy substantially, and significantly, higher productivity growth while those investing firms with single purpose of market-seeking or purely transferring its overcapacity to a certain foreign market usually receive less or weaker effect of industrial upgrading.

Fourthly, the capabilities of the investing firm decide the effect of industrial upgrading at home, too. The realization of reverse knowledge transfer from subsidiary abroad to parent company depends on the investing firm’s productivity, absorptive capacity and technology transfer skills. Only when these factors function properly, investing firms are capable enough to absorb and transfer spillovers, allowing the entire company, rather than just foreign subsidiaries, to benefit from the external knowledge resources.

In this paper, we tried to investigate the prospect and possibility of China’s industrial upgrading through OFDI and our conclusion is very optimistic to the issue. However, in a long-run, the key to solve the problem is the sustained innovation capability. Technological innovation is an enduring force and source for optimizing and upgrading the industrial structure. According to Michael Porter’s theory on the competitiveness of nations, a country has to experience the transition from being production factor-driven to investment-driven, finally to innovation-driven and wealth-driven during its economic growth and formation of competitiveness (M. Porter, 1990). Currently, China’s economy is undergoing the transformation from investment-driven to innovation-driven, in which high-level factors of production, such as knowledge, technology and human resources are a key driving force

in industrial growth and competitiveness maintenance. According to OECD research findings, intangible assets such as R&D, employee skills, software, design and marketing, are the new sources of economic growth. It also shows that OECD countries are increasing their investment in intangible assets. In particular, as a new round of technological and industrial revolution speeds up, primary factors like land and labor are less important, while knowledge, technology, and human resources are increasingly important (OECD, 2011). To optimize and upgrade the industrial structure, China needs to formulate and implement a new factors-driven strategy, promote the transformation from primary factor-based traditional edge to a new competitive edge based on new high-level factors. Therefore, to achieve the goal of industrial upgrading through OFDI, in particular through merging strategic assets abroad should be regarded as a temporary countermeasure to solve the problem. The final and also the most effective way for China to shoot up the issue is nothing but the formation of sustained innovation capability.

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