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INDUSTRY AND OWNERSHIP STRUCTURE OF CHINESE OVERSEAS DIRECT INVESTMENT

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Industry and Ownership Structure of Chinese Overseas Direct Investment

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I. Introduction

Until recently, China was a labor abundant country. But it is "rich" in capital. Despite the fact that its foreign assets take the main form of foreign exchange reserves, which was $3,181 billion or 67.4 per cent of the total foreign assets at the end of 2011. Outward direct investment (ODI), still a relatively small part of the story, is growing rapidly in recent years. There is prediction that Chinese cumulative ODI would reach $5,149 billion in 2020, a net increase of $4,838 billion from 2010 or $484 billion annually in the current decade, assuming capital account convertibility (He et al. 2012). A more conservative report by the Asia Society in the US estimated cumulated ODI stock at between $1,000 and $2,000 in 2020.

While increasing ODI outflows should, in theory, benefit and be welcome by the rest of the world, two perceptions often cause mixed feelings toward Chinese ODI. The first is that Chinese ODI is dominated by the state-owned enterprises (SOEs) with possibly state influence and unfair competition. And the second is that Chinese investors buy up overseas resources and technologies, bring them back home and shut down those operations in the host countries. Are these perceptions right? The answer is probably yes and no. In this study we try to shed some light on the above issues by providing a picture of Chinese ODI, especially its industry and ownership structure and tries to explore the reasons behind.

We employ three datasets, which should complement one another. The first is the official report, "Statistical Bulletin of China's Outward Foreign Direct Investment", released annually by the Ministry of Commerce of the People's Republic of China (MOFCOM). It's the most authoritative source, but the problem is that MOFCOM data, aggregate data, only reports the first destination of ODI, which in many cases is a transit intermediary.

The second is a data set of the approved ODI projects from the National Development and Reform Commission (NDRC), collected by the authors. It includes 293 investment projects with total investment of US$99.43 billion, made by 216 firms between 2003 and the first half of 2011. Most of the projects are large in terms of investment and made by known Chinese firms.

The third dataset is provided by the Foreign Trade and Economic Cooperation Bureau of Zhejiang Province and covers all the registered ODI from Zhejiang Province between 2006 and 2008. They are representative of investment by China's private sector enterprises. There is a total of 1270 projects, totaling investment of US$1.75 billion or US$1.4 million per project on average. This is quite small compared with average investment of $339 million for the second data set or US$174 million for its manufacturing subset.

Data mining in this study unveils three key findings. First, SOEs are indeed major players of Chinese ODI, but their relative importance is falling. It may be worthwhile to distinguish locally-

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administered SOEs (LSOEs) and centrally-administered SOEs (CSOEs). The former face increasingly competition from both private sector and other LSOEs and also have to abide by the market discipline while the latter face relatively less competition and are mostly from monopolized or highly controlled industries. Besides, CSOEs have the largest investment scale, followed by LSOEs, and the private sector invests at the smallest scale. The gap is not small, 5 times between LSOEs and private sector, and 24 times between CSOEs and private sector. But the gap is shrinking in recent years. To be noted, this gap in investment scale not only relates to the investor ownership, but more importantly, reflects the sectors they concentrate. For instance, CSOEs is the dominant player in overseas resources, and it requires inherently large project costs in these sectors.

Second, mining, manufacturing, retail and wholesale, and business service, are the most significant players of Chinese ODI. They absorbed about 76 per cent of Chinese total overseas investments between 2003 and 2010. Among these sectors, business service is the largest, accounting for 44 per cent in 2010. But the firm-level information suggests that a large part of reported Chinese ODI in business services actually goes to mining and manufacturing.

Third, for Large Chinese ODI, mining and manufacturing are the most important two industries, jointly accounted for approximately 75 per cent of Chinese large overseas investments. But the investor ownership structure has shown some divergence between these two. Manufacturing was mostly invested by private sector as well as LSOEs, while mining was dominated by CSOEs.

And, fourth, for Chinese ODI by SMEs, manufacturers are the dominant player, in particular from Textile, clothing and shoes and from Electronic, machinery, and home appliances. But the former has a nearly 50 per cent larger investment scale than the latter.

We argue that such industry and ownership structure of Chinese ODI is firstly in-line with the country's own industrial features and secondly mirrored in the investment motives behind. It is found that large Chinese investors are mainly driven by natural resource seeking and strategic assets seeking, while the SMEs are keen to facilitate Chinese exports.

Nevertheless, we expect a different trend in future Chinese ODI as a result of both natural diversification process and the adaption to the transformation of Chinese economy. Key changes include but are not limited to: a much diversified ownership structure, targets and strategies; a decline of relative significance in resource investments; a more focus on consumption materials and needs; a larger weight in moving abroad industries China is losing comparative advantages; and more investments in lucrative services such as finance and insurance, healthcare and education, real estate and entertainment, construction and infrastructure building.

The rest of paper is organized as follows. The next two sections, using official aggregate data, summarize the overall investor and industry structure of Chinese ODI. Section IV and Section V looks at investment pattern by Chinese large investor and SMEs, respectively. Section VI discusses the prospect of Chinese future investment, before some final concluding remarks are drawn.

II. Who invest overseas?

SOEs are major players of Chinese ODI, but its relative importance is declining (Table 1). Wholly state-owned unincorporated enterprises are the most important investors, devouring 66 per cent of total investments in 2010. But the main form by registered type of business in the same year is Limited Liability Company, accounting for 57 per cent and including both SOEs and non-

SOEs. The share of wholly state-owned unincorporated enterprises is shrinking in terms of both number and investments amount, decreasing from 43 per cent in 2003 to only 10 per cent in 2010, and from 71 per cent in 2007 to 66 per cent in 2010. While some of these enterprises are transformed into Limited Liability Company or Stock Limited Corporation during the period, the ownership structure of Chinese overseas investors has become more diversified. For instance, the share of private enterprises and foreign investment enterprises in total Chinese ODI stock has increased marginally.

Table 1. Investor structure by registered type of business

	By number			By ODI Stock	
	2003	2007	2010	2007	2010
State-owned Enterprises(1)	43.0%	19.7%	10.2%	71.00%	66.20%
Limited Liability Company(2)	22.0%	43.3%	57.1%	20.30%	24%
Private Enterprises(3)	10.0%	11.0%	8.2%	1.20%	1.50%
Stock Limited Corporation	11.0%	10.2%	7.0%	5.10%	6.10%
Foreign Investment Enterprises	7.0%	4.4%	5.2%	—	0.8%

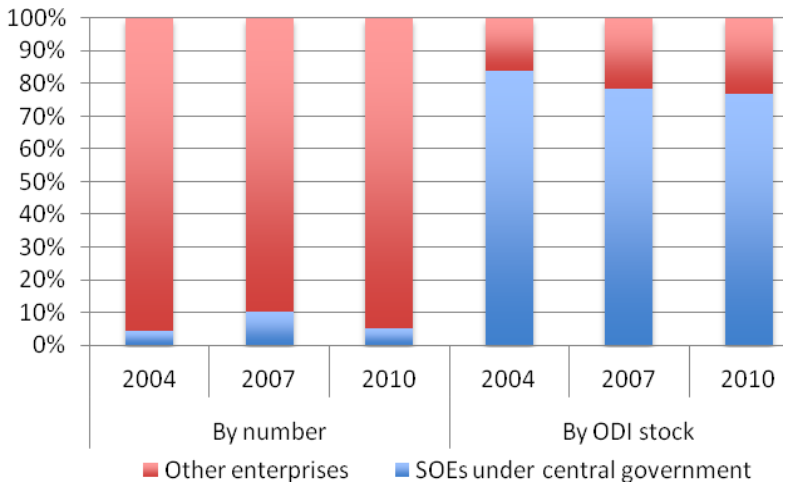
Source: Statistical Bulletin of China's Outward Foreign Direct Investment published by Ministry of Commerce, PR China, and the authors' calculation.
Notes: (1) Wholly state-owned, unincorporated enterprise; (2) Established by at least two and no more than fifty shareholders, including wholly state-owned companies and other limited liability company; (3) Held by individuals.

SOEs normally receive stronger support from the government but meanwhile are obliged to achieve the country's strategic goals (Dunning and Lundan 2006). They have greater access to funds but pay less attention to profitability.

However, There are differentiations, particularly, between locally-administered SOEs (LSOEs) and centrally-administered SOEs (CSOEs). The fiscal reform in 1994 has changed the incentives and behavior of local governments (LGs) greatly. On the one hand, the available resources and funds of LGs to support LSOEs are reduced. On the other, the use of "yardstick competition" by Chinese central government to reward or punish local officials has motivated local officials to maximize GDP growth, to pay greater attention to efficiency and profitability of LSOEs rather than simply scale expanding (Kung and Lin 2007; Qian and Xu, 1993). As a result, LSOEs face increasingly competition from both private sector and other LSOEs and also have to abide by market discipline.

By contrast, there are only totally 117 CSOEs in China. They face relatively less competition and are more likely from monopolized or highly-controlled industries, such as finance, power and utility, petrochemical and energy, aircraft and telecommunications, and etc. Besides, the strategic goal attached by Chinese central government to build its CSOEs larger, stronger, and globally influential and competitive, results in ample resources pouring into CSOEs supporting their expansion. As seen in Figure 1, CSOEs are the real influential investor of Chinese overseas investments. They are the minority in investor, accounting for merely 5 per cent, but contribute nearly 80 per cent of total investments. It can be implied that each project by CSOEs is very large.

Figure 1. Investor structure in non-financial ODI



Source: Statistical Bulletin of China's Outward Foreign Direct Investment published by Ministry of Commerce, PR China, and the authors' calculation.

Table 2. Investor structure by industry from and to

	Domestic enterprises		Overseas enterprises	
	2004	2010	2006	2010
Manufacturing	59.0%	35.8%	33.0%	28.6%
Retail and Wholesale	11.0%	33.1%	18.8%	23.4%
Construction	6.0%	3.6%	7.4%	6.5%
Leasing and business services	5.0%	4.3%	15.7%	12.8%
Agriculture, hunting, forestry and fishing	4.0%	3.6%	4.6%	4.8%
Mining	4.0%	3.2%	4.8%	6.2%
Transport, storage and post	3.0%	1.6%	-	3.8%
Scientific Research, Technical Service	0.0%	2.0%	-	3.9%
Information Transmission, Computer and Software	0.0%	1.5%	-	2.2%
Real Estate	0.0%	1.3%	-	1.2%
Households services and Other Services	0.0%	-	-	2.7%
Electricity, gas and water	0.0%	-	-	0.7%
Other	8.0%	10.0%	15.7%	3.2%

Source: Statistical Bulletin of China's Outward Foreign Direct Investment published by Ministry of Commerce, PR China, and the authors' calculation.

Nearly 70 per cent of Chinese investors are from manufacturing, and retail and wholesale. But the relative weight between these two sectors is changing. The share of investors from manufacturing was once 59 per cent in 2004, decreasing steadily to 36 per cent in 2010. By contrast, the share from retail and wholesale has increased sharply from 11 per cent to 33.1 per cent during the same period. Also can be seen is the increased variety of investors emerging from industries like Scientific Research and Technical Service, IT, Computer and Software, and Real Estate (Table 2).

From the comparison of investor structure by industry between domestic enterprises and overseas entities, it can be seen that a certain portion of investors does not invest in industries where it comes from (Table 2). For instance, in 2010, approximately 20 per cent of manufacturers and 29 per cent of retailers and wholesalers did not remain in their original sectors when pursuing overseas investments. Instead, the possible destinations are mainly Leasing and business services, Mining, Transport, storage and post, and Scientific Research, Technical Service. It is likely that Chinese manufacturers, retailers and wholesalers move upstream and downstream through overseas investments to upgrade their activities and climb up the value chain.

III. Where to invest?

It seems that comparing with other countries, Chinese ODI is particularly focused on primary sector and service sector, and under-represented in manufacturing (Table 3).

The primary sector accounted for 18.72 per cent of total Chinese ODI between 2006 and 2008. In comparison, those of developed countries and developing economies were only 7.84 per cent and 8.38 per cent, respectively. This stark contrast was partly due to the larger share of Agriculture, hunting, forestry and fishing in Chinese ODI relative to other countries, but was mainly contributed by investments in mining, quarrying and petroleum industry. The latter accounted for 97 per cent of Chinese ODI in the Primary sector, which reflected the country's strikingly quest for resources.

Service sector, albeit under-developed in China, swallowed around 76.57 per cent in total Chinese ODI between 2006 and 2008, including 31.28 per cent for business activities, 18.91 per cent for finance, and 13.98 per cent for trade. As a reference, the proportion of service was 60.01 per cent for developed countries and 69.75 per cent for developing economies. Manufacturing base is large and complete in china. But interestingly, it accounted for an extremely low share in Chinese ODI, only 4.72 per cent, while that for developed country was 24.12 per cent and developing economy was 15.02 per cent.

However, such pattern has not always been the case and the industry distribution has gone through some changes. When Chinese ODI took off in 2003, nearly 50 per cent targeted overseas resources, followed by 21 per cent in manufacturing, 13 per cent in retail and wholesale, and 10 per cent in Leasing and business services.

Pictures changed greatly between 2003 and 2010. The largest sector turns to Leasing and business services, the share increasing steadily from 10 per cent in 2003, to around 20 per cent in 2006 and 2007, further to nearly 40 per cent in 2008 and 2009, and reaching the historically high level of 44 per cent in 2010. The general trend for manufacturing is down ward, from the highest point of 21 per cent in 2003 to the lowest point of 3.16 per cent in 2008. But there is a pickup after 2008 with the manufacturing share adding up to nearly 7 per cent in 2010.

Table 3. Industry Distribution of ODI Flows, 2006-2008

Sector/industry	Developed country	Developing economy	World	China
Primary	7.84%	8.38%	7.95%	18.72%
Agriculture, hunting, forestry and fishing	0.04%	0.29%	0.07%	0.62%
Mining, quarrying and petroleum	7.80%	8.09%	7.89%	18.10%
Manufacturing	24.12%	15.02%	23.21%	4.72%
Services	60.01%	69.25%	60.93%	76.57%
Electricity, gas and water	0.51%	0.93%	0.55%	1.55%
Construction	0.42%	1.36%	0.53%	1.08%
Trade	5.61%	8.17%	5.88%	13.98%
Hotels and restaurants	0.20%	0.15%	0.19%	0.04%
Transport, storage and communications	3.23%	3.77%	3.29%	7.95%
Finance	24.38%	18.10%	23.74%	18.91%
Business activities	23.46%	33.37%	24.42%	31.28%
Public administration and defense	0.06%	0.00%	0.05%	0.00%
Education	0.03%	0.00%	0.02%	0.01%
Health and social services	0.01%	0.00%	0.01%	0.00%
Community, social and personal service activities	0.33%	0.16%	0.31%	0.15%
Other services	0.87%	0.54%	0.84%	1.60%
Unspecified tertiary	0.92%	2.67%	1.09%	-
Private buying and selling of property	0.17%	0.00%	0.16%	-
Unspecified	7.85%	7.35%	7.80%	-

Source: United Nations Conference on Trade and Development (UNCTAD), Statistical Bulletin of China's Outward Foreign Direct Investment published by Ministry of Commerce, PR China, and the authors' calculation.

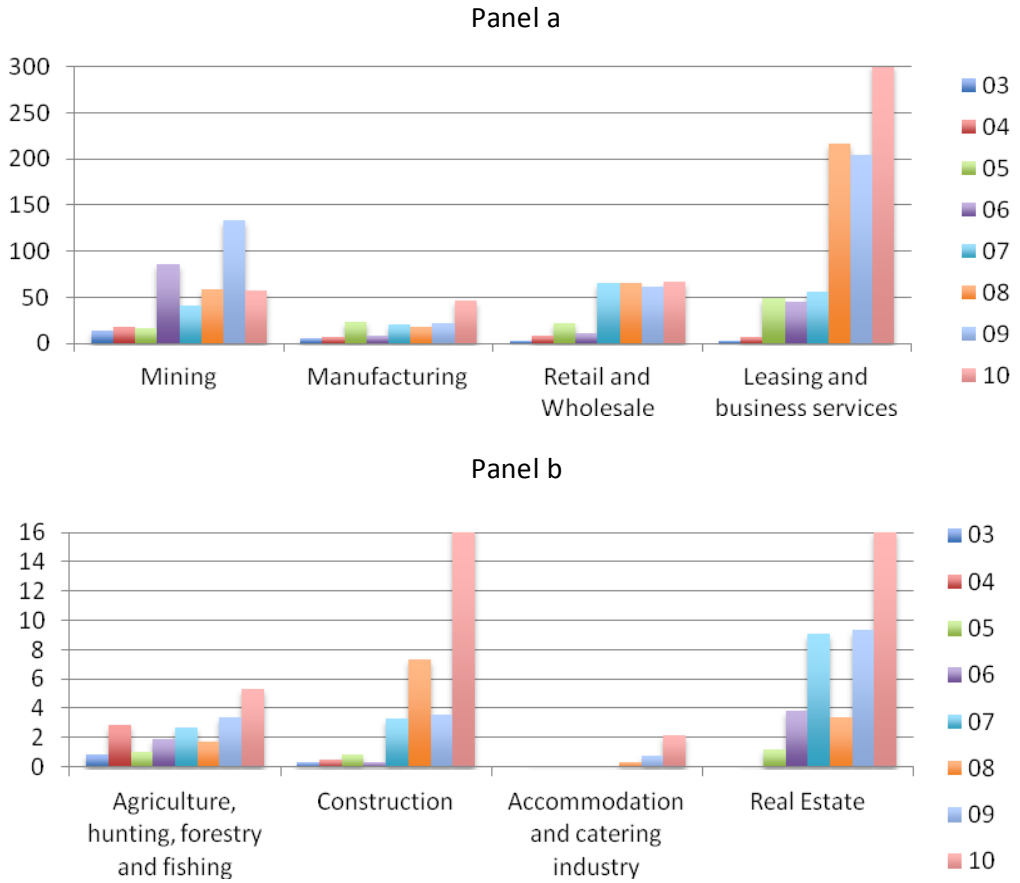
Figure 2 depicts Chinese ODI flow in absolute term for selected sectors.

Industries in Panel a are the significant sectors absorbing about 76 per cent of Chinese ODI on average between 2003 and 2010. As seen, the investments in mining sector are particular fluctuated and are more likely to be affected by cyclical factors. Experiencing a four-folds growth, the overseas investment in mining sector reached $8.5 billion in 2006 from $1.7 billion in 2005. Then there is a half cut to $4.1 billion in 2007 and $5.8 billion in 2008. Year 2009 saw the highest level of overseas mining investment, amounting to $13.3 billion. But a plunge occurred in 2010 with the investment being $5.7 billion. As for manufacturing, during the period of 2005-2009, annual investments have not increased very much, around $2 billion each year. But a jump occurred in 2010, the investment doubled to $4.7 billion. Leasing and business services is the sector seeing the sharpest growth, 100-fold increase from $0.3 billion in 2003 to $30.3 billion in 2010.

Industries in Panel b are the marginal players, jointly accounting for average 4.1 per cent of Chinese ODI flow between 2003 and 2010. But they are gaining more importance in recent years. Before 2009, the annual flow to Agriculture, hunting, forestry and fishing was under (or around) $0.2 billion. But the investment was more than doubled and amounted to $0.5 billion in 2010. Chinese ODI in Construction can be almost ignorable before 2007. But then, a jump took place, investment reaching $0.3 billion in 2007, then increased to $0.7 billion in 2008 and reached the record highest level of $1.6 billion in 2010. Similar pattern can be found in Real Estate sector. As for Accommodation and catering industry, it is still small in Chinese overseas investments, but has increased rapidly since 2008 and the investment reached $0.2 billion in

2010.

Figure 2. ODI Flows for Selected Industries, 100 million $US, 2003-2010



Source: Statistical Bulletin of China's Outward Foreign Direct Investment published by Ministry of Commerce, PR China, and the authors' calculation.

However, the interpreting of aggregate, balance of payment data on ODI has to be cautions. The flows often do not enter the countries they are supposed to, or if they do go to the declared destinations, do not remain long. They often represent bookkeeping entries in corporate account, but no economic activity such as the employment of labor, the production of goods and services, or the installation of capital assets (Lipsey and Sjöholm 2011). According to the official report released annually by the Ministry of Commerce of the People's Republic of China (MOFCOM), from 2003 to 2009, 78.26 per cent of the country's ODI flow went to Hong Kong, the Cayman Islands and the British Virgin Islands. MOFCOM's data only reports the first destination, which in many cases is a transit intermediary. For instance, some of the reported Chinese ODI in Hong Kong returns to the mainland, or uses Hong Kong as a platform making further investments in other countries like Australia or Europe. Leasing and business services is the largest category of Chinese overseas investment. Its exact content is rather obscure. Our guess is that a large portion of reported investments in Leasing and business services is actually investment vehicles for manufacturers or miners.

The second issue is underreporting. To invest abroad, Chinese firms must first get approval from

the National Development and Reform Commission (NDRC), the Ministry of Commerce (MOFCOM), and the State Administration of Foreign Exchange (SAFE) at various levels. This process is clearly deleterious, and may result in many missed opportunities (Wang and Wang 2011). It is possible that some firms do not report their overseas investments and side-step these approval procedures. Another problem, resulting in undercounting, is that many Chinese enterprises do not report foreign earnings that are reinvested abroad as required by international standards (Rosen and Hanemann 2009).

Considering the data issue discussed above, this research in next two sections would incorporates firm-level data to digest a more complete picture of industry and ownership structure of Chinese overseas investments.

IV. Characteristics of big projects

The authors construct the first firm-level dataset investigated in this section. We first collect the basic approved ODI project information from NDRC website. Then, scrutinize is made according to the following rules:

We retain the data where: (i) the investment amount is reported; (ii) the investment content is reported; and (iii) Chinese investors control more than 10% of the total share in the project. And discard the data if: (i) Both the buyer and seller are Chinese firms; (ii) Round-Tripping ODI — the final destination of ODI is the home country — the parent; (iii) the investment is to set up a trade center, industrial, scientific, or technological parks, or an economic zone.

After these scrutinize, we obtain 293 investment projects with a total of US$99.43 billion made by 216 Chinese firms between 2003 and the first half of 2011. This datasets has covered the majority of Chinese new overseas investments. And it mainly reflects the part of Chinese ODI that is large in investment scale and undertaken by big players.

1. Ownership structure for large overseas investments

In this dataset, SOEs are still the dominant player of Chinese overseas investments. Among the 293 investment projects, although 121 (or 41 per cent) were made by the private sector, their total investments was 11.13 billion US$, accounting for a disproportional small share of 11 per cent. In the sample, LSOEs invested 102 projects while CSOEs conducted 70 investments. But CSOEs are more significant in the sense that they contributed nearly 60 per cent of the 99.43 billion US$ investments during the period.

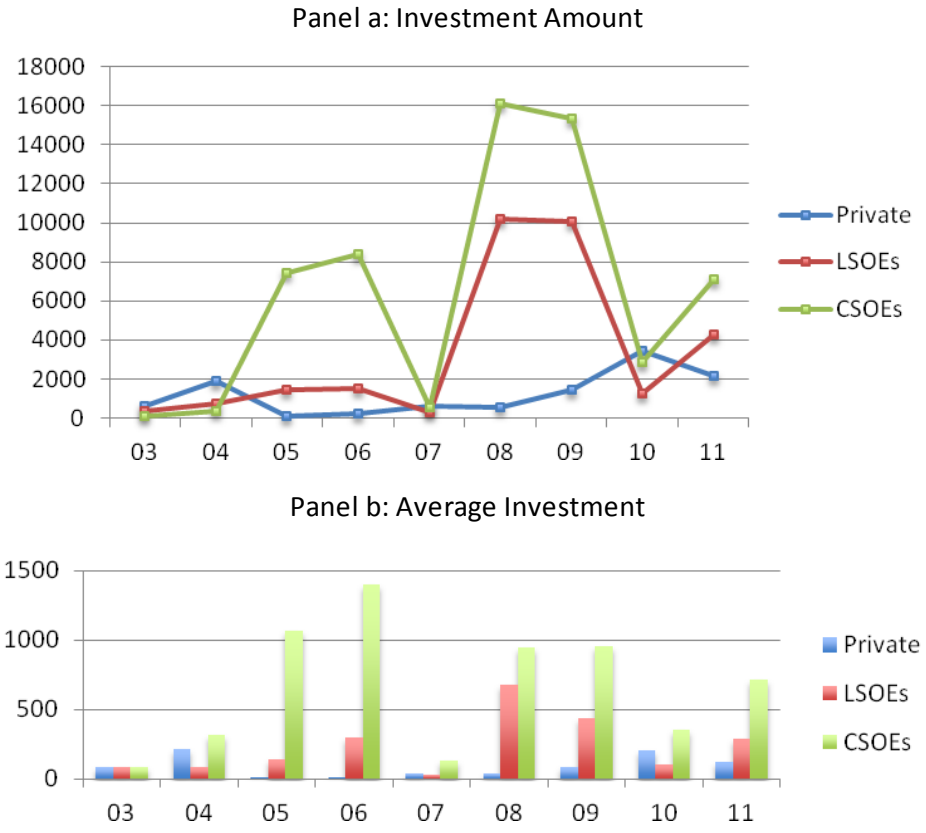
Figure 3 demonstrates the time trend of ownership structure for large Chinese ODI projects.

As seen in Panel a, when Chinese ODI took off in 2003, private investors invested more than their SOEs counterparts. In 2003 and 2004, total investments by private sector amounted to 628 million US$ and 1920 million US$, respectively. In contrast, those by SOEs were only 430 million US$ and 1054 million US$ each year. But since 2005, ODI by SOEs has outpaced that of the private sector. Nevertheless, private sector has been investing abroad more stable than their SOEs counterpart, its investment increasing steadily from 14 million US$ in 2005 to 121 million US$ in 2011. The record highest level was seen in 2010, mainly attributed to the Geely's acquisition of Volve with 1.8 billion US$.

The investments by SOEs are more fluctuated. In the booming years of new overseas investments, 2008 and 2009, LSOEs and CSOEs invested over 10 billion US$ and 15 billion US$, respectively. But a sharp plunge occurred in 2010, when the investment by LSOEs was only 1.3

billion US$ decreasing by nearly 7 folds, and that by CSOEs was only 2.8 billion US$ dropping by 4 folds. The jump was mainly due to the strikingly reduced investments in overseas resources given the dismal economic climate as well as the difficulties, and sometimes, resistance, Chinese enterprises met.

Figure 3. Ownership Structure for Large Chinese ODI, million $US, 2003-2011(first half)



Source: Authors' calculation based on the constructed datasets.

Panel b depicts the average investment for each project by ownership structure. It is obviously that CSOEs has the largest investment scale, followed by LSOEs, and the private sector invests at the smallest scale in most of the years observed. Averagely between 2003 and the first half of 2011, the gap is 5 times between LSOEs and private sector, and 24 times between CSOEs and private sector. But the gap is shrinking in recent years since the private sector becomes more active while the state sector seems to be more cautious.

2. Industry distribution of large overseas investments

Mining and Manufacturing are the two industries receiving most of large Chinese overseas investments (Table 3). They jointly accounted for approximately 75 per cent, in which 52 per cent targeted mining and 23 per cent aimed manufacturing. In terms of number of projects, the most went to manufacturing (42 per cent), and the second was mining (32 per cent). However, investor ownership structure has shown some divergence between these two industries. Manufacturing was mostly invested by private sector and SOEs under local governments, while the investment in mining was dominated by SOEs under central government. For instance, private sector conducted 55 per cent of projects in manufacturing and LSOEs conducted 35 per

cent, they jointly accounting for 75 per cent in dollar terms. For mining investments, CSOEs invested 41 per cent in number terms and 80 per cent in dollar terms.

Electricity, gas and water, and Information Transmission, Computer and Software are the two industries also received large Chinese ODI, They jointly accounted for approximately 10 per cent of overseas investments, in which 8 per cent went to Electricity, gas and water and 2 per cent located in Information Transmission, Computer and Software. The main investors in these two industries were still CSOEs, although the private sector, in particular in Information Transmission, Computer and Software, was also playing an important role. The two giants, China Mobile and China Netcom (merged to China Unicom in 2009), made very large investments, which made the investment by private enterprises looks bleak.

Table 3. Industry Distribution by Ownership Structure for Large Chinese ODI

	Total				Private share		LSOEs share		CSOEs share	
	Number of Projects		Investment Amount (million $US)		Number	Amount	Number	Amount	Number	Amount
Agriculture, hunting, forestry and fishing	12	4.10%	374	0.38%	66.67%	61.95%	25.00%	34.15%	8.33%	3.90%
Mining	94	32.08%	52100	52.40%	21.28%	2.18%	37.23%	17.84%	41.49%	79.98%
Manufacturing	124	42.32%	23066	23.20%	54.84%	36.76%	34.68%	38.71%	10.48%	24.53%
Electricity, gas and water	13	4.44%	8178	8.22%	30.77%	3.53%	7.69%	0.47%	61.54%	96.00%
Transport, storage and post	5	1.71%	849	0.85%	20.00%	10.80%	20.00%	4.35%	60.00%	84.85%
Information Transmission, Computer and Software	10	3.41%	2280	2.29%	60.00%	9.40%	0.00%	0.00%	40.00%	90.60%
Retail and Wholesale	6	2.05%	135	0.14%	66.67%	94.47%	33.33%	5.53%	0.00%	0.00%
Real Estate	8	2.73%	1907	1.92%	62.50%	21.98%	37.50%	78.02%	0.00%	0.00%
Leasing and business services	6	2.05%	289	0.29%	66.67%	40.82%	33.33%	59.18%	0.00%	0.00%
Other	15	5.12%	10249	10.31%	-	-	-	-	-	-

Source: Authors' calculation based on the constructed datasets.

Table 4. Sector Distribution within Industry for Large Chinese ODI

	Number of Projects		Investment Amount (billion $US)	
Industry	231	78.84%	83.34	83.82%
Mining	94	32.08%	52.10	52.40%
Manufacturing	124	42.32%	23.07	23.20%
Automobile industry	16	9.37%	4.78	17.94%
General-purpose equipment manufacturing	15	8.78%	0.26	0.97%
Special-purpose equipment manufacturing	15	8.78%	2.65	9.96%
Electrical machinery manufacturing	11	6.44%	0.45	1.68%
Nonferrous metal smelting and processing	9	5.27%	1.11	4.17%
Communication equipment, computer, other electronic equipment	9	5.27%	3.10	11.64%
Chemicals manufacturing	8	4.68%	5.96	22.37%
Ferrous metal smelting and processing (steel and iron)	7	4.10%	1.47	5.53%
Electricity, gas and water	13	4.44%	8.18	8.22%

Source: Authors' calculation based on the constructed datasets.

Also seen in Table 3, Retail and Wholesale was the domain of private investors. Besides, the main participants of Real Estate and Leasing and business services were also private sector but the LSOEs invested more in amount.

It's worth noting that Leasing and business services is no longer the largest investment targets as seen in Figure 2. Instead, it accounted for only a small portion of 0.3 per cent in large Chinese ODI, in contrast with over 30 per cent using official aggregate data. As we discussed in Section III of the data quality concern using aggregate balance of payment data, the firm-level information confirms that a large part of reported Chinese ODI in Leasing and business services actually goes to mining and manufacturing.

Around 80 per cent of Chinese ODI was focused on industry, including mining, manufacturing, electricity, gas and water.[1] Within the industrial sector, mining was the largest recipient of Chinese ODI in dollar terms while manufacturing was the largest recipient in number terms (table 4).

Of the ninety-four investments in the mining sector, seven were coal projects; eighteen targeted oil and natural gas; twenty-nine were in ferrous metals; and thirty-nine were for non-ferrous metals. The majority of sectors that attract Chinese manufacturing ODI were quite capital intensive. Automobile, general-purpose and special purpose equipment, electrical machinery, nonferrous metals and ferrous metal smelting and processing, communication equipment and chemical manufacturing accounted for 86 per cent of Chinese ODI in manufacturing.

3. Why is the pattern?

The pattern of large Chinese ODI is firstly in-line with the country's own industrial features (Wang 2012).

There has been an exceptionally large secondary industry in China. Its share in the country's GDP averaged at 46.5 per cent between 2000 and 2010. This large secondary industry underpins China as the world's biggest manufacturer and largest exporter of global consumption goods. In addition to a large secondary industry, there has been an obvious heavy industrialization process occurring in China since the middle to late 1990s. The share of heavy industries in above-scale total industrial output value rose sharply from 57 per cent in 1998 to 71 per cent in 2010.

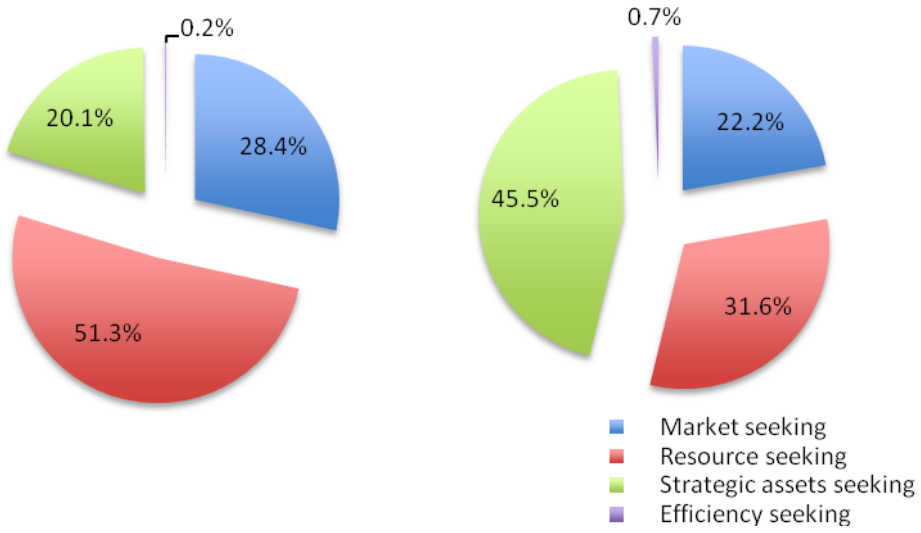
The heavy industrialization process requires substantial resources and energy input. For the last decade, China has been relying on imports to meet its increased demands for commodities. But the commodities boom since 2003 has increased the prices beyond Chinese producers can make certain profit margins. In combination with the country's stockpiles of foreign exchange reserves and an appreciating currency, Chinese enterprises looked outwards, taking major stakes in overseas mining projects and acting as both shareholders and customers. Meanwhile, rapid development of the heavy industries at home also pushed those capital-intensive enterprises abroad.

And secondly, the pattern of large Chinese ODI is also mirrored in the investment motives behind (Figure 4).

[1] As defined using the National Bureau of Statistics of China (NBS) definitions.

Figure 4. Primary Motivations of Chinese Large ODI

Panel a: Overall Panel b: Manufacturing



Source: Wang and Huang (2012).

Overall, the largest attraction is natural resources (51.3 per cent), and market seeking comes the second (28.4 per cent) while strategic assets seeking is the third (20.1 per cent). Focusing only on manufacturing firms, the key driver turns to strategic assets seeking, which absorbed 45.5 per cent of total investments. But still, natural resource seeking, or securing the supply of raw materials, is an important objective for Chinese manufacturers going abroad. This is especially true for Chinese steel companies.

This suggests that Chinese producers, who have been struggling in low-cost, low-value-added activities, are trying to seek strategic asset -advanced technology, established brands, and well-accessed channels-to increase their profit margins and climb up value chain.

V. What are small- and medium-sized private enterprises doing?

The second firm-level dataset is provided by the Foreign Trade and Economic Cooperation Bureau of Zhejiang Province. It covers all the registered ODI from Zhejiang Province between 2006 and 2008.

ODI from Zhejiang Province is widely representative of China's local investing firms' behavior. From 2003 to 2009, 82.57 per cent of Chinese non-financial ODI flow was made by CSOEs, but 92.24 per cent of Chinese ODI firms were from local. Among those local firms, Zhejiang Province, Jiangsu Province, Shandong Province, Guangdong Province, Shanghai and Heilongjiang Province contributed 66.5 per cent between 2005 and 2009 on average. And the largest group was from Zhejiang Province, which accounted for 22.44 per cent in total during the same period. ODI from Zhejiang Province is also widely representative of China's private investing firms' behavior. Approximately 70 per cent of Chinese private ODI firms are from Zhejiang Province and Fujian Province.

From 2006 to 2008, a total of 1270 ODI investment projects are conducted with official record by

investors from Zhejiang Province, the sum of investment reaching US$1.75 billion. The average investment for each project is only US$1.4 million. That compares the average investment in the sample of large investment in the above section, which reaches US$ 339 million for the whole and US$174 million for the manufacturing. The dramatically differences in investment scale between large investors and SMEs, among others, indicate the possible diverse of their ODI targets.

Table 5. Investor Structure by Industry for ODI from Zhejiang Province, 2006-2008

	Number of Projects		Investment Amount (10 thousand US$)	
Primary	63	4.96%	22326	12.77%
Agriculture, hunting, forestry and fishing	34	2.68%	8330	4.77%
Mining	29	2.28%	13996	8.01%
Manufacturing	977	76.93%	112634	64.44%
Electronic, machinery, and home appliances	423	33.31%	42835	24.51%
Textile, clothing, shoes and leather	373	29.37%	55624	31.82%
Chemical & medicine	52	4.09%	6077	3.48%
Other light industry	129	10.16%	8098	4.63%
Service	163	12.83%	28436	16.27%
Construction and real estate	39	3.07%	11723	6.71%
Trade and business service	111	8.74%	11786	6.74%
Other service	13	1.02%	4928	2.82%
Other	67	5.28%	11384	6.51%

Table 6. Organization Type of ODI from Zhejiang Province, 2006-2008

	Number of Projects		Investment Amount (10 thousand US$)	
Trade	982	77.32%	55710	31.87%
Production (Manufacturing & Processing)	159	12.52%	69630	39.84%
Construction and real estate	36	2.83%	11542	6.60%
Explore resource	32	2.52%	15876	9.08%
R&D (Research & Development)	25	1.97%	6253	3.58%
Industrial park	7	0.55%	4453	2.55%
Other	29	2.28%	11316	6.47%

Manufacturers are the dominant plays of Chinese ODI by the country's SMEs, at least by those in Zhejiang Province (Table 5). About 77 per cent of investors were from manufacturing sector between 2006 and 2008 in Zhejiang Province. They contributed 64 per cent of total investments.

Within manufacturing, investors from Electronic, machinery, and home appliances, and from Textile, clothing, shoes and leather were most active and important. They accounted for around 87 per cent of total investments by manufactures, in which 49 per cent was attributed to more labor-intensive sector, Textile, clothing, shoes and leather, although more investors were from the other sector, Electronic, machinery, and home appliances. In fact, the investment scale, or

the average investment, by Textile, clothing, shoes and leather, was nearly 50 per cent larger than that by Electronic, machinery, and home appliances.

Table 6 reports the distribution by organization type of ODI from Zhejiang Province.

The majority investors (about 77 per cent) going overseas are to facilitate Chinese exports to the foreign markets through setting up trading or trading-related affiliates. We label this type of investment "*Trade*". "*Trade*" organization type of ODI aims at securing or defending the market position. It is an early form of overseas investments since the production activities are still retained in China, and the foreign markets are still served through exports. The role of ODI here is to facilitate such exports.

The second most investors (about 13 per cent), labeled as "*Production*", involve production activities in the form of manufacturing or processing trade. Chinese investors in this type move their production facilities abroad or set up new ones. The purpose is either to better serve their existing customers or try to establish new consumer base, or lower the production cost by moving to less-developed economies, or combined.

Except for "*Trade*" and "*Production*", other types of organization such as resource exploration and R&D, do not have a big share. Thus, unlike a resource seeking or strategic assets seeking ODI motivating Chinese large investors going abroad, market-seeking and efficiency-seeking reflect the country's SMEs' appeal.

There are mainly two factors driving such a pattern of overseas investments by SMEs in general and by investors from Zhejiang Province in particular.

Firstly, despite the increasing pressure from rising domestic production cost, the vastness of the country's less prosperous inland areas induces a large part of cost-sensitive enterprises moving their factories inward rather than looking outward to foreign countries.

Chinese enterprises have been undergoing hard times in recent years due to the rapidly going up of domestic production cost such as rising wage levels, appreciating currency, increasing environmental and resource constraint, and etc. But unlike their Japanese counterparts in the postwar period, Chinese manufacturers do not move factories abroad on a large scale. The key reason lies in the diversity and imbalance of the economic development among different provinces within China. Factories in the more developed eastern coastal areas can find the room to relocated to the central and western regions where the production costs are lower.

Indeed, some adjacent Asian developing economies, such as Vietnam and Cambodia, do enjoy an advantage of cheaper labor even compared with the poorest regions in China, such as Guizhou Province. In fact, they do receive more Chinese investments in recent years. But there are other challenges, like the lack of supporting infrastructures, the possible hyperinflation concern, the territorial disputes with China, as well as difficulty of and unfamiliarity with operating in foreign countries, which make Chinese investors more cautions.

And secondly, Chinese manufacturers indeed enjoy some advantages, particular in low-cost, low-skill areas, combined with the strong domestic support, so that they could exploit in seeking overseas opportunities.

Compared with the primary and service sectors, the manufacturing sector indeed has a revealed comparative advantage in terms of performance in export markets and development in domestic economy (Huang and Wang 2011). There is a mature and complete manufacturing base in China after sixty-year development. The technologies are standard, albeit may not up-to date, but are

well matched to the needs of other less developed economies.

Besides, the huge domestic market is the leverage that Chinese manufacturers could bring to bear. If firms lose profits in overseas expanding, they could be compensated by the domestic sales. This condition is conducive to lengthen their investment horizon and adopt longer-term, strategically tactics.

Meanwhile, Chinese private enterprises are particularly possessed with the edge of their own. They are small and flexible with simple management structure, good adaptability and entrepreneurship, and concentrate in highly competitive, labor-intensive industries. They also more easily accepted compared with SOEs by host countries, particularly when investing in strategic resources and high- technology sectors (Wang and Wang 2011).

VI. Looking Forward

Some large deals in natural resources or high-profile manufacturing have masked the trend of more diversification process in Chinese ODI. More and more companies from different sectors and ownership structure are looking outward.

More importantly, the firm-level investment decisions, especially in a country with much state influence like China, are in line with the national environment and strategy. China has entered a period of adjusting the economic structure and improving the quality of economic growth. As embodied in its 12th five-year plan, covering 2011-15, to transform its mode of economic growth, it requires: establish a long-term mechanism for expanding domestic demands; elevate core competitiveness of manufacturing; and develop strategic emerging industries and tertiary sector. It also requires a reduction of resource intensity, a lighter industrialization, and a modernized agriculture.

Such a transition of growth trajectory has profound implications for Chinese ODI.

In the first place, Chinese ODI in natural resources will continue to be a very important component since China is still a manufacturing super power and its urbanization is far from completion. But its significance is likely to decline in relative terms and the types of attractive resource will be a much wider variety with more focus on consumption materials.

There was 57 per cent plunge of Chinese overseas investments in mining sector overall and 30 per cent drop in Australia in 2010. The reasons behind are multi-facet. A direct linkage is the global financial crisis, which triggers commodity bust after five years' boom. Price cut prolongs the time required to recover investment, while an uncertainty of global economy discourages end-users' investments impulse.

Investment in overseas mining will rebound when global economy recovers. But its dominant position will be somewhat beaten by more investments in agribusiness, farmland, and clean energy. For instance, between July 2011 and June 2012, there were twenty ODI projects in power sector, in which thirteen or 65 per cent were clean energy (solar/wind) (Table 7). Also, during the same period, there were thirteen overseas investments in agriculture, including three in Australia and New Zealand. China, the largest greenhouse emitter, is in great need of cleaner energy source. China also wants to develop clean energy as one of its strategic emerging industries, where no other country has an absolute advantage and China could leverage its massive domestic market and policy support to become a global leader. As for agribusiness, food security is now a public concern in China. Demands for safe and healthy food are huge as the

country gets more affluent. However, like other resources, investments in overseas farmland are also likely to raise the public unease over sovereign security since no country is willing to see land owned by foreigners. But investments in other agribusiness not directly involving land ownership will not attract much attention considering agriculture sector is well export-oriented, at least in the US.

Australia was the biggest recipient of Chinese ODI in 2009 and 2010. Its major attraction is resources. And nearly half of Chinese investments in Australian mining sector targeted iron ore. Iron ore is also of particular interest to Chinese investors in other countries. However, much-diversified minerals are needed to feed the more sophisticated manufacturing sector as transformation required. Besides, more demands also go to fuels, such as oil and natural gas, to satisfy Chinese growing middle-class for their transportation and other needs. As a result, Chinese ODI on natural resources will bear a much wider variety with increasing focus on consumption materials.

Table 7. Recent Chinese ODI Projects, July 2011-June 2012

By Country	
United States (24)	6 in Power sector (solar and wind); 13 in Manufacturing (pharmaceutical, automobile, IT, new materials)
Australia (16)	7 in Mining; 4 in agriculture; 3 in Real estate and construction
Hong Kong (15)	4 in Wholesale and Retail; 6 in Business services
Russia (12)	7 in Manufacturing (lumber items, automobile)
Canada (8)	4 in Mining; 2 in Manufacturing (biochemistry)
Brazil (7)	3 in Power sector; 2 in Agriculture products
Taiwan (7)	4 in Manufacturing (electronics); 3 in Business services (marketing)
Germany (6)	2 in Power sector (solar); 3 in Manufacturing (automobile, machinery)
Singapore (6)	2 in Wholesale and Retail (Trading); 4 in Business services
Indonesia (6)	4 in Manufacturing (cement, ores, automobile)
By Industry	
Manufacturing (77)	13 in United States; 7 in Russia; 14 in ASEAN
Mining (32)	8 in Australia; 4 in Canada; 9 in Africa (Congo, Zimbabwe, Tanzania, Zambia, South Africa)； 5 in Asia (Kyrgyzstan, Mongolia, Myanmar）
Business services (20)	6 in Hong Kong; 3 in Taiwan; 4 in Singapore
Power sector (20)	9 is solar power; 4 is wind power
Agriculture (13)	3 in Australia and New Zealand; 2 in Zimbabwe; 2 in South America; 2 in North America
Wholesale and Retail (10)	4 in Hong Kong; 2 in Singapore
Real estate (9)	
Total (199)	

Source: Authors' calculation based on the collected data from NDRC.

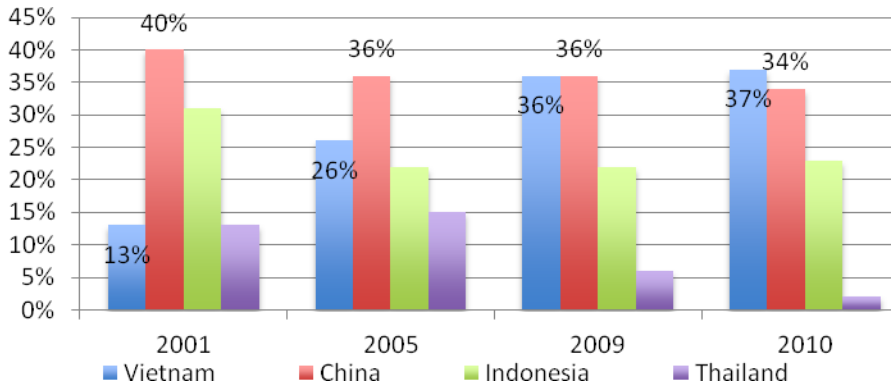
Secondly, manufacturing will remain to be the sector with most Chinese investors, but their investments are likely to be driven beyond seeking for strategic assets. The need to relocate abroad labor-intensive, low-cost, low-skill factories, China is losing comparative advantages, will also come to the considerations if domestic cost continues to rise.

Chinese enterprises have been fully aware of the importance of possessing core technology, owning prestigious brand names, and grasping the distribution and marketing channels. And they are already trying to achieve these purposes through overseas investment, as Figure 4

indicated. This is mainly because over 80 per cent of the value chain are eaten by the manufactures' upstream providers in such as research and development, product design, branding and quality control, and their downstream clients in areas like distributing, marketing and customer relations. And Chinese processors are determined to get some back. But the new trend is that Chinese domestic market rather than overseas market will become a more important engine in this process, especially for those consumer goods and luxuries. The recent investment by Shandon Heavy Industries Co., Ltd purchasing Italian luxury yacht manufacture Ferretti is the case in point.

The challenge is that some Chinese enterprises going overseas, paying the price, but do not get the core and valuable assets. Many companies, especially in the US, believe that Chinese firms do not respect intellectual property rights. So they are unwilling to share technologies, or include tight safeguard provisions in agreements with their Chinese partners (Economist Intelligence Unit 2010). In this regards, Europeans are more open and less uptight. Besides, it is widely believed in China that Europe has more attractive assets to Chinese investors than the US. However, dealing properly with the labor union and related communities are the key for investments in these welfare states. There is concern that Chinese investors may take away assets and technologies, close down the factories in the host economy, move production back to China with cheaper costs, and large workers will lose jobs. To ease these concern, Chinese investors now usually include provisions in agreements promising not layoff workers within a specified period of time or provide a specified amount of more funds to the invested firms for expanding production or R&D.

Figure 5. Overseas Production Distribution of Nike Sneaker



Source: Authors' calculation based on http://www.nike.com.

Currently, going overseas and seeking the places with lower production costs is not the main purpose for Chinese manufacturers, even not for those SMEs. But it will increasingly be the concern just like the predecessors, Japan in 1960s and 1970s, and four tigers in 1980s and 1990s. For instance in 1960s, especially since the 1963, the rising wage levels made the labor-intensive industries lose competitive advantages in Japan. So Japanese firms moved these industries to Singapore, Taiwan, South Korea and other Asian countries with lower labor costs.

As a matter of fact, the adjacent Asian neighbors are eating China's share in some of the products. Nike provides a perfect story. Its early factories were located in Japan. Then, with the rising labor cost and appreciating yen, Nike's production moved to Korea and Taiwan, followed by the relocation to Philippine, Thailand, Malaysia and Hong Kong. In 1981, Nike started to

produce sneaker in China. In the following thirty years, China has been the largest producer for Nike Sneaker until it was overtaken by Vietnam in 2010 (Figure 5). Chinese other cost-sensitive enterprises are facing the similar situations as Nike. And it is safe to predict that they may follow Nike's steps later.

And thirdly, Chinese ODI in services will go beyond trade.

Trade-related affiliates are natural candidates for future overseas production base and research center. Currently, a large portion of Chinese ODI in service sector, particularly in business services, retails and wholesales are trade-related. They are functioned to facilitate Chinese exports through establishing and maintaining consumer relations, marketing and providing after-sale services, or being trade intermediary for Chinese domestic firms. These entities know the market very well and also have ample consumer base. Hence, if domestic production needs to move abroad, or R&D center needs to be closer to the final consumers, these trade-related affiliates are the first choice.

Meanwhile, more overseas investment will go to the lucrative services in finance and insurance, healthcare and education, real estate and entertainment. One sector deserves special mention is construction and infrastructure building. They are already well developed in China, but simply replicating that success with foreign economies will not work. Chinese builders have to adopt and comply with internationally accepted social, environmental and production standards for overseas large infrastructure development. Four developers blacklisted in the World Bank is a warning.

VII. Conclusions

China's being the shining star on the scene of global ODI is a relatively recent phenomenon. In fact, before 2004, the size of Chinese ODI was rather trivial. Now it is already prominent globally, due to its rapidly growing size, high-profile projects, and also the social and political concern over the state-owned enterprises (SOEs). But it is still early years for Chinese overseas investments. Despite hurdles, more ODI originates from China or involves Chinese parties are expected. The diversities of investors, targets and strategies will also grow.

In the past thirty years, China's success in economic growth has largely relied on ramping up the scale of production by ever-greater investments and exports surrounding less-sophisticated, low-end manufacturing sector.

The role played by ODI in this successful growth experience is quite limited. One of the key reasons is the relatively strict capital control in China. "Going out strategy" was not encouraged until the new century. Even encouraged, it still requires approval from the National Development and Reform Commission (NDRC), the Ministry of Commerce (MOFCOM), and the State Administration of Foreign Exchange (SAFE) at various levels. In the old growth mode, the two limited roles played by overseas investments are: establish the infrastructure needed to integrate China into the global trading system through setting up Trade-related overseas affiliates; and secondly, secure the commodity and resource inputs needed for growth (Rosen and Hanemann 2009).

In the future, the sustainability and further success of Chinese economy hinges on whether the country could successfully achieve structural adjustments moving from the old growth trajectory to a new one.

This transition has profound implications for Chinese ODI: (i) Overseas natural resources will continue to be a very important component, but the relative weight will decline and the types of resources will be much wider with more focus on consumption materials; (ii) most investors will remain come from manufacturing sectors, but their investment motives will be beyond trade-facilitating, instead, investing in strategic assets and relocating the industries China is losing comparative advantages will become more significant; and (iii) more overseas investment will go to the lucrative services in finance and insurance, healthcare and education, real estate and entertainment, as well as construction and infrastructure building.

In turn, Chinese ODI can play a larger role in the new growth mode and facilitate such economic transformation. The two key components are high-end manufacturing and domestic consumption. The acquired strategic assets-such as technology, brand names and distribution channel-if managed well, help to upgrade the country's manufacturing and provide higher value added. Moving abroad the industries China is losing comparative advantages will free up the resources-labor, facilities-for better usage and promote the development of service sector. Chinese ODI in clean energy, new materials is conducive to develop the country's strategic emerging industries as well as mitigate the environmental pressures. Overseas investments in agribusiness, education, and healthcare provide the backbone of the domestic consumption, while those in finance and real estate help Chinese people better manage their wealth, which is the source of the country's domestic consumption.

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