

Sleeping giants or global competitors?

Assessing the possibilities of the largest Chinese firms to evolve from state-nurtured national champions into global competitors

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0. Introduction

A key factor in the sustainability of China's economic growth is the potential of Chinese firms to develop innovative capabilities autonomously and international management know-how thus enabling them to move up the technological ladder of the production process and to globalise their operations. If successful, some Chinese firms will eventually develop their own brands and open up subsidiaries abroad like their Japanese and South Korean counterparts a few decades ago. If this is not achieved, then China's future growth could remain overly dependent on overseas markets and foreign technology. Chinese firms could remain highly competitive in traditional labour-intensive exports (such as the textile, lighters and toys industries of the Zhejiang province) or in relatively simple electric products (such as household appliance) but would not possess the capacity to become innovators of high tech products. The Chinese firms could only operate internationally in highly competitive industries characterised by low barriers to entry and with moderate margins while firms from the most advanced economies could continue to extract rents in industries characterised by high tech and/or differentiated products thanks to their technological innovation capacities and management know-how. The purpose of this paper will be to assess the capacity of China's largest firms to transform themselves into global competitors possessing ownership-specific advantages or intangible assets like some of their East Asian counterparts and to determine to what extent could the Chinese state pursue a strategic industrial policy to help them do so.

The fact that a firm establishes a subsidiary abroad does not make it a global competitor, not even a Multinational Enterprise (MNE) or a Trans-National Corporation (TNC). According to United Nations' (UN) classification, to be considered as TNC or MNE, a firm must have subsidiaries in at least six different countries. Many Chinese firms satisfy these criteria and can be considered as MNEs. Nevertheless, there is a significant gap in terms of possession of intangible assets between being a multinational enterprise and a top global competitor. According to UN estimates, in 2004, there were 70,000 MNE which controlled 690,000 subsidiaries across the globe (El Mouhoub, 2006: 17). Obviously all of those firms cannot be considered as truly global competitors.

To delineate more clearly the prerequisites necessary for a firm to evolve into a global competitor, this section will refer to Dunning's eclectic paradigm and OLI configuration. For Dunning, in order for a firm to transform itself into a MNE, it must possess "ownership-specific advantages". That is, intangible assets which constitute substantial barriers to entry for other potential competitors. Dunning lists the following assets: "product innovations, product management, organizational and marketing systems, innovatory capacity, organization of work, non-codifiable knowledge (bank of human capital experience), ability to reduce the cost of intra and/or inter-firm transactions" (Dunning, 1993: 81). Dunning also includes absolute cost advantages coming from a privileged access to inputs, learning by doing, "knowledge of international markets and operations", "capacity to learn from societal difference in organisational and managerial processes and systems" (Dunning, 1993: 81).

In this paper, the term "global competitors" refers to incumbents of their industries which are protected by natural and strategic barriers to entry and which operate across the different regions of the world economy. These global competitors enjoy most and often all of the ownership-specific

advantages listed above. Many of them are the “*prime movers*” from America and Europe whose emergence in the late 19th century has been analysed by Chandler (Chandler, 1990). They were joined by the Japanese *keiretsu* in the 1960’s and the South Korean *chaebol* in the 1980’s. This paper will attempt to determine whether emerging Chinese champions are effectively acquiring sufficient ownership-specific advantages to have a hope of joining this group of global competitors.

The analysis of China’s greatest MNEs and outward FDI flows will show that both the type of ownership-specific advantages and the motivations of Chinese firms investing overseas differ radically from the global competitors of the developed economy. It will also show that, in that respect, Chinese firms are not following the internationalisation path of the Japanese *keiretsu* in the 1960’s or the South Korean *chaebol* in the 1980’s.

The first part of the paper will provide an analysis of Chinese outward FDI outflows in an attempt to determine the importance of Chinese MNEs and their performance compared to other developing economies. It will also highlight the limitations of working with such an aggregate when it comes to the official Chinese data of foreign direct investment.

The second part of this contribution will provide a qualitative analysis of the overseas projects made by Chinese MNEs. An attempt will be made to determine the technological level and the capital-intensity of their overseas operations. The extent of government protection and support extended to these largest firms and the sector in which they operate will be examined. It will be demonstrated that the largest Chinese firms are located in sectors which are heavily protected and aided by the Chinese central government. Finally, it will be made clear that that Chinese FDI outflows are predominantly motivated by the Chinese government's geopolitical objectives rather than by business profit maximisation.

The third part of the paper will provide a comparative analysis of the performance of China's largest firms’ with that of their global competitors. Aspects to be looked at include capital-intensity, profits and assets. This comparison has two purposes: to clearly delineate the existing gap between these two groups; and to compare the current relative situation of the largest Chinese firms with that of East Asian MNEs at the time of their overseas expansion. This will reveal that Chinese firms have a much lower degree of profitability and capital intensity than the largest Japanese and Korean firms had in the early stages of internationalising their business operations.

The three first parts of this paper will highlight the weaknesses of the largest Chinese firms and the gap with their global competitors in terms of profitability, capital and technology intensity. It will be demonstrated that they are unlikely to transform themselves into global competitors without being sheltered by a strong Chinese state industrial policy, as was the case also for their South Korean and Japanese counterparts at a similar stage of their expansion.

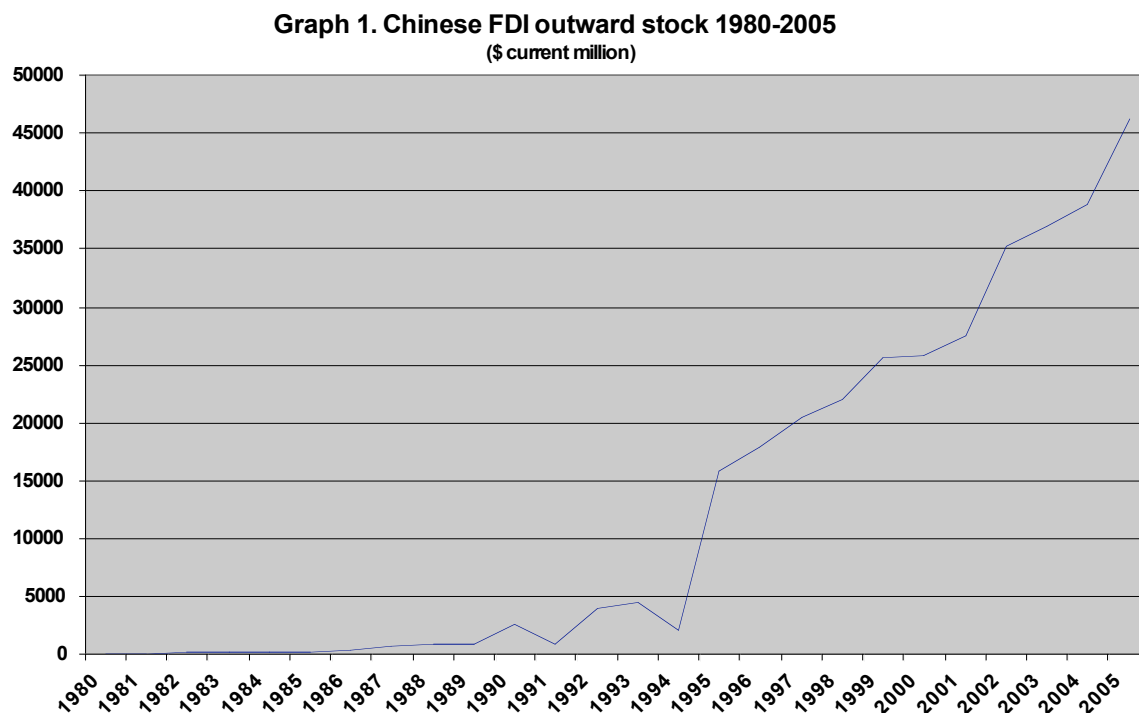
The fourth and fifth part of the paper will follow up on this by focusing on the capacity of the Chinese state to pursue a strategic trade and industrial policy necessary to transform its national champions into global competitors.

1. Assessment of the magnitude of Chinese FDI outward flows

1.1. A growth miracle?

The absolute growth of Chinese outward FDI over the last decade might appear as an impressive performance by Chinese investors (see graph 1). Nevertheless, one must not forget that the Chinese FDI outward flows started from an extremely low base. From the Korean War and the Sino-soviet split in the late 1950’s until the late 1970’s, because of geopolitical constraints, the Chinese economy had been plunged into a situation of quasi-autarchy. By the late 70’s, Chinese outward investment was almost inexistent and much lower than other large economies with similar development level. In the

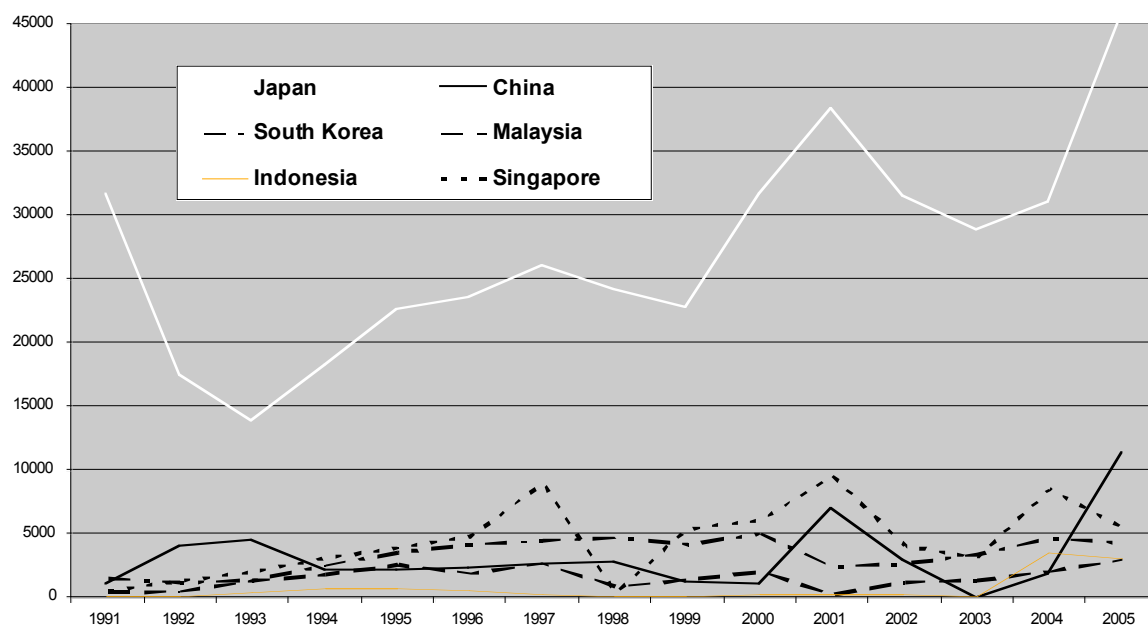
late 1970's, the reforms that opened the Chinese economy to the rest of the world economy enabled some state-owned companies to invest in trading and financial companies. By the 1990s, Chinese outward FDI flows were in line with those of large economies with comparable level of economic development (see graph 2).



Source: UNCTAD, World Investment Reports

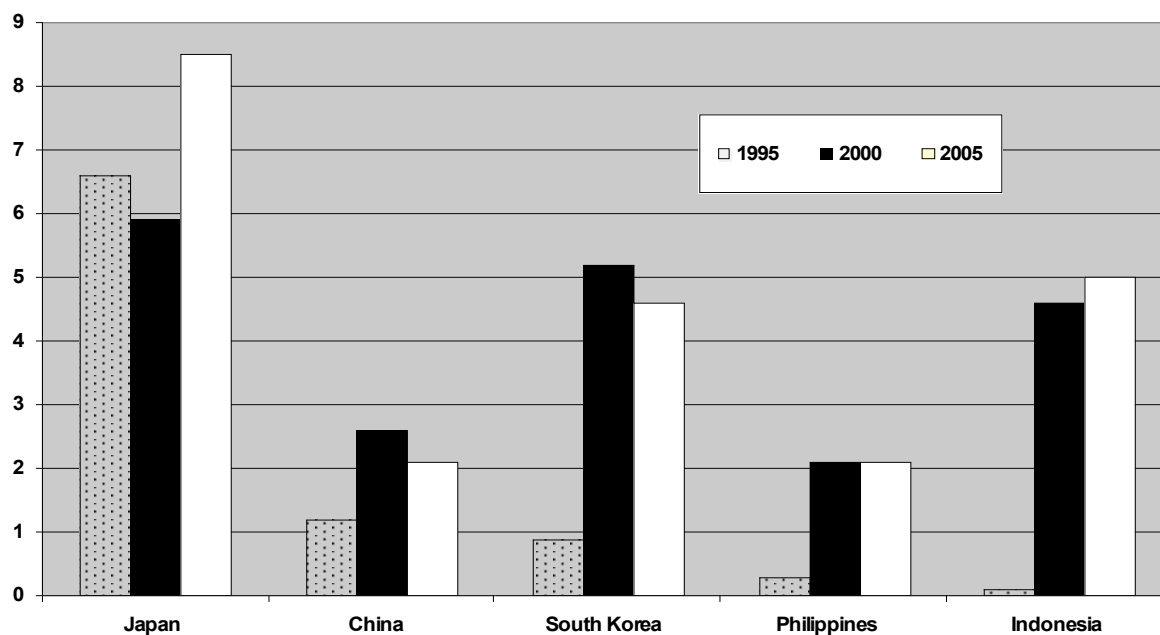
In 2004, 2000 Chinese mainland firms had subsidiaries abroad (Hua, 2005). According to the MOFCOM, by 2003 these Chinese MNEs were controlling 7470 subsidiaries overseas in 168 different countries (Wu, 2005: 1). In the summer of 2006, a survey made by the National Statistics Bureau estimated that 6,426 Chinese mainland companies had invested in more than 160 countries (Xinhua, 05/09/2007). These data highlight the massive wave of Chinese FDI outflows and the emergence of a large group of Chinese firms engaged in international operations.

Graph 2. East Asia FDI outflows 1991-2005



Source: UNCTAD, World Investment Reports

Graph 3. outward FDI stock as % of GDP



Source: UNCTAD, World Investment Reports

The acceleration of Chinese outward FDI flows occurred in the mid 1990s. Even when taking into account the population and the GDP of the Chinese economy, the growth of these flows per capita or as a percentage of GDP remains remarkable when compared to other developing economies. However, when compared to developed economies and even some emerging economies from East Asia, China's performance in terms of outward FDI remains weak (see graph 3). The performance of China is just

above the Philippines and does not reach Indonesia. FDI from Hong-Kong and Macau have not been taken into account in these graphs for reasons explained below

1.2. The limits of Chinese FDI statistics

Any conclusion drawn from the aggregate statistics above should be considered with extreme caution due to the fact that many reasons cast a doubt on the reliability of official data regarding Chinese FDI outward flows

Firstly, Chinese official statistics from the MOFCOM (formerly MOFTEC) are far from complete. They include the outward FDI flows that require the authorisation of the MOFTEC. This means that FDI from Chinese subsidiaries overseas (even reinvestment) are excluded from the MOFCOM database. Furthermore, the outward FDI authorised by the MOFCOM a particular year is not necessarily made by the Chinese MNEs that same year and the project might not be realised at all (Cheng, 2007: 6). Overall it seems that the MOFCOM database might underestimate the total outward investment flows as shown in a deep analysis of the emergence of the first Chinese MNEs (Zhang, 2003: 103). In 2006, analysts at Mc Kinsey estimated that outward foreign investment is two to three times higher than the official figures (Hirt, 2006). As Cheng and Stough argue, the item “error & omissions” in China’s official balance of payments data reached more than \$27 billions in 2004, a significant figure compared to the \$1.8 billions of outward FDI flows (Cheng, 2007).

Secondly, and most important, is the particularity of the “one country, two systems” policy with Hong-Kong and the “roundtrip FDI” phenomenon. Hong-Kong is by far the largest source of FDI inflows to mainland China (42% of the cumulated flows from 1985 to 2005) (Naughton, 2007: 413). It is also the main destination of the mainland’s outward FDI accounting for three quarters of its flows in 2005 (UNCTAD, 2006: 115). This tie is explained by various factors.

Many MNEs use Hong-Kong as first foothold to develop in mainland China. This means that Hong-Kong’s outward investment flows to the mainland are made not only by local firms but by non-Chinese MNEs (Naughton, 2007: 413). China’s mainland investors sometimes use Hong-Kong as a first step towards the internationalisation of their business. Finally, there are some important firms in Hong Kong which located there before the 1950’s and became Chinese State owned Enterprises (SOEs) in 1950 (such as the China Merchants Steam Navigation Company, China Travel Ltd and the Bank of China Hong Kong branch) (Zhang 2003, 85). These SOEs account for a significant part of the FDI flows between the peninsula and the mainland (Naughton, 2007: 416). As Hong-Kong and mainland China are integrating further economically and politically, reciprocal direct investments flows are likely to continue rising due to the different resource endowments of the two economies.

Mainland investors are also using Hong Kong an intermediary to bypass some of their national legislation. Hong Kong is widely used for organising capital flight. The different preferential regimes favouring foreign investors in mainland China have encouraged some mainland Chinese investors to create affiliates in Hong-Kong in order to move capital out of the mainland towards off-shore financial centres. In 2004, 49% of Hong Kong outward FDI stock was located in the British Virgin Islands and Bermuda (UNCTAD, 2006: 112). In these off-shore centres, these capital flows are transformed through fictitious enterprises into FDI flows reinvested in mainland China. This phenomenon is referred to as “roundtrip FDI”.

Through this process, mainland investors hope to gain the same advantages conferred to the foreign investors in mainland China. The differences of treatment by the Chinese authorities between the foreign investors and the Chinese investors have been gradually reduced this last decade. Property rights of domestic investors have been officially recognized by the Chinese government. In 2004, the Chinese Constitution was amended to stipulate that the Chinese State will not only recognize, but that the “State encourages the development of the non-public economy” (FT, 31/12/2004). These developments have reduced the incentive for Chinese investors to seek a better protection of their

property rights by transforming themselves into foreign investors thanks to roundtrip FDI. Similarly, since China joined the WTO in 2001, the tax breaks offered to foreign investors have been progressively reduced. Nevertheless, the fiscal privileges enjoyed by foreign investors are still substantial. They have continued to enjoy a “special exemption period” of five years and afterward the taxation rate is capped at a lower level than those of domestic firms (Faure-Bouteiller, 2003). While China’s statutory enterprise income tax rate is 33%, firms located in special economic zones continue to enjoy a rate of 15% (Naughton, 2007: 411). Foreign investors also benefit from the opportunities offered in the export-processing zones such as benefiting from the discretionary right to trade with overseas clients, subcontracting international or domestic processing trade, relaxed labour regulation having access to foreign exchange bank account without limitation, zero tariffs on imported inputs and imported related value added tax, exemption of custom duties on exports, quota or license (Faure-Bouteiller, 2003). Finally foreign investors can opt for the best strategy to maximize their profits without having to bear in mind the political and social consequences of their management. The status of foreign investor gives more room for manoeuvre to enterprises in their dealings with local authorities as well as with regards to social legislation.

Apart from going round to benefit from the privileged treatment of foreign firms, roundtrip FDI can also occur as a means used by state-owned firms’ managers to embezzle public assets. Since the transition policies adopted in the 1980’s, Chinese SOEs have gained an increased level of control of their profits and their investments while continuing to have access inputs at a lower price than the market (raw materials, energy and capital). It is possible for managers of SOEs to resell some of these inputs at a higher price and to misappropriate the margin. One study suggest that by the late 1980’s this state assets stripping or « guandao » (meaning literally “trade-off by officials”) had reached up to RMB 350 billions or 25% of China’s GDP (Lin, 1994:206). This phenomenon is continuing thanks to the leniency of the state owned banks and of the state authorities (whose kin seem to be the main beneficiaries) (Zhang, 2003: 110). In 2000, an official audit revealed that at least two third of the SOEs were “*cooking their books*” despite many official attempts to reform the accountancy system (The Economist, 03/03/01: 72). This “informal privatisation through internationalisation” accounts for a substantial part of roundtrip FDI (Zhang, 2003: 110).

The lack of transparency does not allow for precise estimates of roundtrip FDI flows. The outward FDI flows from Hong-Kong to financial offshore centres (mainly the British Virgin Islands, Bermuda and the Caiman Islands) and from these centres back to China reveal the magnitude of this phenomenon. In 2004, 27% of Hong Kong’s outward FDI stock had been invested in non-operating companies located in off-shore financial centres (UNCTAD, 2006: 13). In the 1990’s roundtrip FDI accounted for between 7% and 25% of the incoming FDI flows (Huang, 2003: 38). Recent studies covering the beginning of this decade suggest that this phenomenon is getting more important with estimates ranging from 25 to 50% (UNCTAD, 2003: 45 & Xiao, 2004).

Finally, it is possible that in the near future a substantial part of these FDI outflows originating from China and Hong-Kong will not be direct investment but rather portfolio investment. The Chinese trade surplus and the accumulation of foreign reserves have grown so fast this last decade that the Chinese government is likely to encourage firms to invest abroad and to set up overseas investment companies (following the path of their Japanese counterparts in the 1980’s) (UNCTAD, 2006 & Woo, 2006: 2). The rise of portfolio investments does not *per se* constitute the sign that Chinese firms have gained ownership-specific advantages (except for the advantage constituted by an easier access to international capital markets) such as innovatory capacity and international production management know-how.

Therefore, a large part of China and Hong-Kong outward FDI flows is either transshipping or roundtrip FDI. This means that the available statistics on FDI outward flows from China and Hong-Kong do not always correspond to real FDI, that is, an investment overseas implying a direct control on the production of goods or services. A substantial part of these flows cannot be interpreted as a sign that Chinese firms have gained ownership-specific advantage and are transforming themselves into global

competitors. In the case of China, it is not possible to infer from the simple observation of outward FDI that Chinese MNEs are actually getting more competitive globally.

2. A qualitative assessment of the performance of Chinese MNEs

To establish if some Chinese firms are acquiring innovatory capacity, international management and know-how on the globalization of production processes, one must analyze the global performance of Chinese MNEs and the motivation behind their internationalisation. This analysis will concentrate on the largest firms of the Chinese MNEs and their subsidiaries. To determine through case studies to what extent Chinese MNEs are gaining many ownership-specific advantages, this section will use the Behrman taxonomy as described by Dunning in his eclectic paradigm (see the end of annex 1).

2.1. The role of the state in the emergence of Chinese MNEs

The pattern of Chinese outward FDI flows over the last three decades differs from the experience of the United States, Japan or South Korea. In China, the enterprises in capital-intensive and technology-intensive industries, in financial services and utilities were all state-owned enterprises (SOE) whose objectives were set by the central planning system since the 1950's. The motivations of Chinese firms investing overseas cannot be fully grasped without considering the specific role of the Chinese state and its "going global" strategy.

Apart from a few shipping and trading companies (located in Hong-Kong or in the mainland) controlled by the Chinese central government since the 1950's, the internationalisation of the first mainland Chinese companies came after 1979. During the first decade of reform, vague and sometimes inconsistent regulations on Chinese outward investment were set by the central government under the supervision of the State Council and the Chinese Ministry of Foreign Economic Relations and Trade (MOFERT). Most of the first Chinese FDI outward flows were resource-seeking: raw materials and food (fisheries, forestry and mining) in North America, New-Zealand and Africa (Zhang, 2003: 58).

By the late 1980's, the Chinese authorities had come to consider outward FDI and the emergence of Chinese MNEs as a normal step in the China's economic development. Incentives were created to encourage overseas investment such as preferential loans, temporary and permanent tax exemptions (on profits made by subsidiaries and on exports), preferential tariffs for products exported to China by Chinese overseas subsidiaries (Zhang, 2003: 60). Nevertheless, at such an early stage of reform, MNEs were seen as tool to develop what remained largely a state controlled economy. Approval of outward FDI from China was subject to strict government control. The emerging Chinese MNE could only invest overseas under conditions that reflected the macroeconomic and industrial policy objectives of the central government. The conditions for investing overseas were the following: it had to facilitate the import of advanced technology and equipment, difficult to import through other channels (technology acquiring FDI); it had to help to provide a long-term reliable supply of raw materials needed for China's domestic economic development; it had to help to generate foreign currency income for China; it must be conducive to exporting China's machinery and materials and to the expansion of China's engineering and labour service overseas (market expanding FDI); it had to help serve the Chinese domestic market and generate foreign currency earnings (Cheng, 2007).

Inspired by the success of Japan's *keiretsu* and Korea's *chaebol*, the Chinese central authorities have been adopting an active industrial policy to promote the emergence of national champions since the 1980's through the support of "very large enterprises" (Nolan, 2002 : 57 & OECD, 2002 : 39). When after fifteen years of negotiations, China was clearly in the final stage of accession to the WTO, the Chinese government decided to rationalize the strategic industries. In 1997, at the 15th CPC Congress, the Chinese authorities defined this industrial policy as "grasping the big and letting go of the small" which explicitly implied a tight government control on the largest SOEs picked out as national

champions (Huang, 2003 : 131). The State-owned Assets Supervision and Administration Commission (SASAC) was given full authority over 196 very large SOEs constituting 55% of the State assets worth 833.6 billion US dollars in order to merge them into 80 national champions (People Daily 22/05/2003, Le Monde 08/08/2003 & USCC, 2007). Among these 80, between 30 to 50 are to be transformed into global MNEs (Beijing Review 07/01/2007).

In the first half of the 1990's, the Chinese government selected a group of 120 enterprises in strategic sectors (automotive, electronics, energy, metallurgy, mining, machinery, chemicals, construction, transport, aerospace, and pharmaceuticals) that would be encouraged to internationalize their operations in order to transform themselves eventually into global competitors (Wu, 2005).

Chinese leaders made explicit references to the priority of fostering the creation of Chinese MNEs. In 1997, at the 15th Chinese Communist Party Congress, Jiang Zemin stated that China will establish highly competitive large enterprise-groups with (...) transnational operations." Nevertheless Jiang Zemin also added that "the state-owned sector must be in a dominant position in major industries". In 2000, the Chinese authorities formally adopted a "going global strategy" which was to "promote the international operations of capable Chinese firms with a view to improving resource allocation and enhancing their international competitiveness" (UNCTAD, 2006 : 210). Again, the Chinese state held a monitoring role, in that it would determine those Chinese firms "capable" of going global. At the ASEAN summit in 2003, Chinese Vice-Premier Wu Yi declared that "we will actively foster our own multinational companies...We will create all kinds of (...) conditions to help our multinational companies further explore overseas markets and engage more strongly in global economic competition and cooperation"(China Daily 07/11/2003).

The Chinese state also opened up access to capital for Chinese firms investing abroad through its Export-Import Bank of China (EIBC). In the fall of 2004, the National Development and Reform Commission (NDRC) and the EIBC could offer preferential loans and investment insurance to promote "resource exploration projects to mitigate the domestic shortages of resources; projects that promote the export of domestic technologies, products, equipment and labour; overseas R&D centres to utilize internationally advanced technologies, managerial skills and professional and M&A that could enhance the international competitiveness of Chinese enterprises and accelerate their entry into foreign markets" (UNCTAD, 2006: 210).

Following the steps of the Japanese MITI and JETRO in their "window guidance" policies and their strategic use of aid programmes, the Chinese government also relied on aid programmes to developing countries in Africa, Southeast Asia and the Middle-East to sponsor Chinese market-seeking FDI, to diffuse Chinese technological standards and to provide Chinese human capital with a better knowledge of international markets. For example in December 2006, Hu Jintao pledged \$5bn to African countries in soft loans and credits through the EIBC, mentioning that this amount would be doubled by 2009. At the same Sino-African summit, Chinese MNEs promised to invest \$1.9bn in the fields of infrastructure, raw materials and finance (Financial Times, 12/12/2006). To some extent, this Chinese move is similar to the vast Japanese aid and FDI flows that poured into Thailand in 1987 except for two main differences. Firstly, these aid programs are more linked with resource-seeking FDI projects than efficiency-seeking investment projects as in the Japanese program. Secondly, Chinese aid-cum-FDI programs are mainly focused on African countries. Nevertheless, Chinese state aid programs are certainly offering decisive guarantees to Chinese MNEs investing in troubled economies like Sudan.

The Chinese national champions that have been selected to join the club of global competitors have remained under tight government supervision during the last twenty years. State monitoring and interventionism have been manifest in some international mergers & acquisitions (M&A). One obvious example was the attempt by the Chinese conglomerate Blue Star to take over the South Korean automotive firm Ssangyong in late 2003 which was barred by the Chinese authorities. The Chinese State Council blocked the deal and favoured Shanghai Automotive Industrial Corp (SAIC)

which eventually took over 49% of the fourth largest South Korean carmaker share's (Financial Times, 19/12/2003 & Hirt, 2006).

One could argue that some firms which have not been nurtured or directly controlled by the central Chinese authorities still have internationalized their operations. The white goods producer Haier controls production facilities in the United States and its international expansion was achieved without strong backing from the central government but through "market practice" (FT, 30/08/2005). Another firm in the same vein is Huawei, the Chinese leader in the telecom equipment, which has 3000 employees overseas (The Economist, 06/01/2005). These two Chinese MNEs did not belong to the list of national champions targeted by the central government's industrial policies of the 1980's and 1990's (Huang, 2003: 331). Nevertheless they constitute the exception rather than the rule. As late as 2003, the Chinese SOEs controlled by the SASAC were responsible for 73.6% of the total Chinese FDI outward flows (Hua, 2005).

The official data for 2006 suggest that the role of limited-liability companies in the FDI outward flows of 2006 has become greater than that of state-owned enterprises. According to Xinhua, limited-liability companies now represent 32% against 29% for SOEs under the direct control of the government (Xinhua, 05/09/2007). Again, these Chinese official statistics should be viewed with extreme caution. Firstly, because international mergers and acquisitions launched by Chinese firms have generated some worries in the targeted economies. The European Commissioner Mandelson has mentioned the possibility of creating tools such as "European Golden Shares" to prevent the take-over of strategic European firms by state-controlled firms, such as most notably Chinese and Russian SOEs (FT, 23/07/2007). Similar worries have been raised by Dick D'Amato, the chairman of the US-China Economic and Security Review Commission (FT, 23/05/2005). The absence of disaggregated figures and clear definitions cast some doubts on the reliability of these recent statistics which contradict other recent estimates. Nevertheless, even if these statistics are correct, Xinhua also claims that 81% of last year's FDI outward flows were directed to tax havens (Cayman Islands, Hong Kong) (Xinhua 05/09/2007). If we consider that SOEs under government control are less likely to enter into massive roundtrip FDI schemes, then SOEs are still the main source of non-roundtrip FDI outward flows, even using the 2006 official data.

Despite some discrepancies in the available data, these elements reveal that the control of the Chinese state in the internationalisation of Chinese enterprises has been more important than was the case in the Japanese or Korean experiences. A closer look at the main Chinese overseas investment projects using Behrman taxonomy (see below box. 1) will confirm this.

2.2. Resource-seeking FDI by Chinese MNEs

Securing sources of strategic physical resources is the one of the most important motives behind Chinese outward FDI flows. If we take the 24 Chinese firms belonging to the 500 largest firms in terms of revenues in 2006, seven are dependent on mining raw materials or oil (Sinopec, China National Petroleum, China National Offshore Oil, Baosteel, China Minmetals). Surveys in the first half of this decade have shown that the securing of resources accounts for 20% of FDI flows (Wu, 2005: 2). In 2002, UNCTAD estimates that M&A in raw materials (oil, gas, iron & timber) amounted to \$ 1.71 billions (UNCTAD, 2003) which constituted 60% of the total Chinese FDI outward flows for that year. All of the Chinese companies involved in these M&A are all but one, on the list of national champions under the close supervision of the SASAC.

Securing access to overseas natural resources for the energy and steel industries has become a priority of the Chinese government which is well aware of the rising dependency of China upon imported energy inputs (Noel, 2005: 54). The Chinese MNEs of these sectors are therefore highly monitored and fully backed by the Chinese state and their entry in a specific country often follows the success of the Chinese official diplomacy. Most of these firms are not engaged in greenfield investment. Rather than to prospect and build new mining or dwelling facilities, they prefer to acquire the majority of the shares of an existing company (CNUCED, 2003). The targeted companies are usually from countries

characterized by internal instability or by cold relations with the US (such as Myanmar, Sudan or Yemen) which explains the limited presence of the global competitors of these energy industries.

This type of FDI still does not reflect the possession of numerous ownership-specific advantages apart from a privileged access to credit provided by the Chinese government as well as the weight of the Chinese diplomacy and aid programmes.

2.3. Market-seeking FDI

From the different case studies, market-seeking investment projects by Chinese firms seem to be less important quantitatively than resource-seeking investment projects. Market-seeking investment projects by Chinese firms are rarely greenfield FDI.

The lightest type of market-seeking FDI project is the establishment of a commercial presence. The Chinese firm opens a subsidiary abroad in order to build contacts with local retailers. This is the case of firms like telecom equipment maker Huawei, microwave producer Galanz, plasma-TV producer SVA or air conditioner producer Yuetu Electric Group.

Huawei has a commercial presence in more than 70 countries employing 3,000 overseas nationals and is selling more than 20% of its output overseas. This achievement does not imply that Huawei benefits from the same ownership-specific advantages enjoyed by the global competitors. Indeed, most of its market-seeking investments are made in emerging markets characterized by the opacity of procurement procedures and limited competition. In a more open economy like France, Huawei's local subsidiary employs only 70 persons which is a far smaller figure than those of other present competitors from industrialised countries. Furthermore, Huawei focuses on a few simple specific products such as routers and switches and has stolen some technology from Cisco which highlights its weak innovation capabilities (The Economist, 06/01/2005).

Box 1. The Behrman taxonomy and ownership-specific advantages

An analysis of the motives underlying Chinese outward FDI can highlight to what extent the Chinese MNE possess O-specific advantages. The Behrman taxonomy in Dunning's eclectic paradigm distinguishes four types of motives behind MNE activity (Dunning 1993: 56). Resource-seeking FDI aims at acquiring specific resources at a lower cost than on its domestic market. These consist of physical resources, labour force and intangible assets such as technological capabilities, marketing and management know-how. Market-seeking investments are made to penetrate a foreign market, often when the traditional means of export has been barred by trade barriers or high transaction costs. Efficiency-seeking FDI aims at rationalizing the production process and "gain from the common governance of geographically dispersed activities" (Dunning 1993: 59). This efficiency gain is obtained through economies of scale, economies of scope and the internationalisation of the MNE's production process. Efficiency seeking FDI aims at benefiting from the various location-specific advantages of different countries (comparative advantages, resource endowments, fiscal systems, social regulations, FDI hosting policies, clusters or Marshallian districts providing external economies of scale). The last category of underlying motives for MNE investments is the search for strategic assets which could enable firms to improve their long-term competitiveness or familiarity with a foreign market. The different underlying motives for the FDI flows of a particular MNE can reveal indirectly the degree to which it possesses intangible assets.

In some instances, resource-seeking FDI might require little intangible assets apart from financial resources. For example, such a case could be when an MNE is integrating its production upstream vertically, while selling its final product on a domestic market protected from global competition.

Again strategic assets-seekers are not necessarily MNE that possess strong ownership-specific advantages. On the contrary, strategic assets-seeking often reveals various weaknesses such as inability to develop autonomously technological innovations, a gap in marketing know-how, an impediment to setting up international distribution networks or the absence of a globally recognized brand. The strategic assets-seekers set up overseas mergers in attempts to acquire the missing intangible assets.

Overseas market-seeking investment by a MNE will often reflect the possession of strong ownership-specific advantages that enable it to challenge the local firms on their domestic market. Nevertheless, the strength of the intangible assets required for successful market-seeking FDI varies considerably according to the level of openness and economic development of the particular overseas market targeted. At the top of the spectrum, market-seeking FDI made in countries open to global competitors reveals that the firm is part of the incumbents of its industry. At the bottom of the spectrum, the opening of a subsidiary in a closed and less developed economy whose business and institutional environments are opaque serves only to reflect the possession of ownership-specific advantages vis-à-vis local firms and not the fact that the MNE has become a global competitor. The difficulty and the limited development prospects of such closed economies often means that they do not constitute a primary target for global competitors who will not put up a fierce fight to keep their positions on such markets.

Efficiency-seeking FDI requires from the firm an ability to manage an internationalised production process. This last type of FDI emerged only in the 1960s thanks to major advancements in telecoms and transport accompanied by a strong reduction in trade barriers generated by the successive negotiations rounds of the GATT (Dunning 1993). With the debt crisis of the 1980s, the intensification of international competition and the shift away from mass standardized Fordist production toward highly differentiated production with flexible specialisation characterized by higher fixed costs in R&D, marketing and robotics, many emerging economies shifted away from import-substitution industrialisation policies. By the end of the 1990's, many of these emerging economies in Latin America and Asia had adopted proactive FDI hosting policies and had relaxed considerably their FDI regulations. This enabled MNE to globalise, or in most cases, to regionalise their production process through massive efficiency-seeking FDI flows (El Mouhoub 2006, Oman 1994, Oman 1999). The rising complexity of internationalisation of the production process requires ever stronger international management know-how. Efficiency-seeking FDI made by a specific MNE can certainly be considered as evidence that it possesses some of the essential ownership-specific advantage to transform itself into a global competitor.

SVA has only a small presence in the US market. It has chosen to rely on large local retailers to serve the US consumers such as Ingram Micro, D&H Distributing (Gao, 2003).

Wenzhou Yuetu Electric Group from the Zhejiang province has been the Chinese pioneer in household air conditioning since its creation in 1981. It started with assets worth less than \$10,000 to become one of the Chinese dominant players and gained a significant market share of the European market. It started to export to Spain in 1992. 80% of its exports were directed to the EU, mainly to the Mediterranean countries where it captured between 7 to 15% of the markets. The technological content of its main products are quite basic (Interview 1, 2003: 1). One of the reasons for foreign expansion is intense competition on the domestic market by other Chinese producers and the fact that European companies such as Philips are phasing out their operations in this specific line of product. The Chinese company could acquire relatively easily the technology from firms exiting the market. In the early 00s, Yuetu opened a single subsidiary in Spain and another in the Netherlands. These subsidiaries each employ one employee in charge of inventories and technical guidance for local technicians and retailers. Yuetu has also opened up a bonded warehouse in Italy with again a single employee. European labour costs constitute the main barrier for this firm. Yuetu sells 25% of its export under its own brand and 75% through OEM. The main reason for this choice is the cost of advertising and the difficulty to access credit from Chinese banks (Interview, 2004 : 1). Yuetu is not a SOE on the list of national Champions and does not receive privileged access to credit from the Chinese authorities. The use of local intermediaries in wholesaling and retailing is the easiest and least risky way of gaining some knowledge of overseas markets. It is also often seen as a pilot phase prior to setting up progressively an own distribution network.

One step further, reached by some of the largest Chinese MNEs, is the attempt to penetrate foreign markets through the acquisition of a foreign firm which possesses its own distribution network and a locally-known brand. The Chinese TV producer TCL bought France's Thomson TV production units and the German bankrupted firm Schneider Electronics in 2002 in order to jump European tariffs as well as to gain both the trademark rights and the distribution networks (chain stores, hypermarkets, mail order) of these companies (UNCTAD, 2003 & Gao, 2003). This was also the reason behind the attempt by the Chinese white good producer Haier to acquire the US producer Maytag. After the failure due to Haier's limited financial resource, the Chinese firm has been considering acquiring General Electric's appliance business in 2008. TCL also bought GoVideo, an Arizona's producer of DVD players to access the US market (Gao, 2003). In terms of the degree of the transnationality of the firm, TCL can be considered as a global firm which now employs more people (72.3% of the total) and holds more assets overseas (also 72.3% of total assets) than in mainland China (UNCTAD 2006 : Annex A.I.12).

Haier is one of the rare cases where a Chinese firm has progressed further than two the first stages of market-seeking FDI described above by doing *greenfield* investment. Haier has become the second refrigerator manufacturer in the world (Deng, 2003: 118). It has built 13 factories in Iran, Indonesia, Malaysia, the Philippines and the US (UNCTAD, 2006 : 171). Its South Carolina plant aims at serving the USD market more efficiently by avoiding trade barriers (as well as possible anti dumping suits) (Deng, 2003: 117) and by being able to respond more swiftly to the change of the US domestic demand (Gao, 2003). In 2003, Haier was already producing about one third of its total output overseas (Deng, 2003: 119). However, when compared to other MNEs from the developed economies operating in the white goods industry, Haier possesses much fewer assets (\$328 millions in 2002) and employees overseas, both in relative and absolute terms (UNCTAD, 2003 & Deng, 2003: 119). Furthermore, Haier continues to experience serious difficulties in the international management of its overseas operations. As Yu Mingyang of Jiaotong University commented as late as 2005: "Haier has only opened a window in the international market (...) it is lagging way behind in integrating global resources compared to Samsung and the like" (FT, 30/08/2005).

Such cases highlights the level of development of Chinese MNEs engaged in market-seeking FDI compared to global competitors. Firstly, greenfield investment in production facilities located in the developed economies is still exceptional. In the case of Haier, the Chinese MNEs seems to have

reached a similar level of development as the Korean *chaebol* when they started going global in the mid 1980s. Except for the fact that when Hyundai opened its plant in North America in the late 1980s, it was producing cars which was an industry where the US had many global competitors. Samsung developed its microwaves plant in Britain in 1987, VCR in Spain and TV in Hungary in 1990 (Hobday, 1995: 60). Haier is producing low-tech refrigerators two decades later at a time when the largest American and European producers are progressively exiting the industry. GE appliance business that Haier might take over is one of the least profitable division of the US multinational (Financial Times, 10/06/2008). Again, in the case of TCL, Thomson TV production units were also making losses and the French firm kept its control of the most advanced technologically segments of the value chain.

Secondly, acquiring a foreign firm to penetrate its domestic market is a sign of weakness. It shows that Chinese MNEs still have a limited knowledge of international markets; that they lack access to credit and know-how to launch their own marketing strategies; that they enjoy limited bargaining power vis-à-vis retailers and that they have yet to build a global brand. The leadership of Haier for example is quite conscious that this task is far from being achieved (China Daily, 01/05/2008) and relies on international consultants like Hill & Knowlton for advice on its international branding strategy (Hill & Knowlton, 16/06/2008).

Viewed optimistically, Chinese MNEs have reached only the first stage of their globalisation process. South Korea's Samsung has not remained focused on household appliances, but has progressively moved up the technological ladder by moving into electronics, specialising in the making of DRAM. In this sector, Samsung attained the technological level of its US and Japanese competitors by the mid 1990's (Hobday, 1995 : 83). Today, it enjoys a globally known brand for electronics products. Are Haier or TCL capable of following Samsung's path?

One problem is that most market-seeking Chinese MNEs do not benefit from a strong domestic base as some South Korean *chaebol* did. The domestic market remains an important market for some *chaebol* despite their internationalisation (Dicken, 2007: 304). According to various surveys, a substantial part of the Chinese MNEs is investing overseas because of cutthroat competition and falling prices on domestic markets due to excess production capacities. In 2003, Roland Berger, Strategy consultants, surveyed 50 of the largest trading houses and manufacturers that were expanding overseas. It was found that 50% of them had market-seeking objectives. FDI was generated by push factors on the Chinese domestic market such as overcapacity, falling profit margins and the strengthening presence of foreign firms on the Chinese market (Wu, 2005). Cheng and Stough also consider overcapacity and falling price as the first push factor that motivates market-seeking FDI outflows by Chinese MNEs quoting Woetsel's estimates: excess production capacity of 30% in washing machines, 40% in refrigerators, 45% in microwaves, 87% in television (Cheng, 2007: 15). Lardy stresses the excess capacity in the steel and ferroalloy industries (Lardy, 2006: 4). A 2006 Survey by the UNCTAD found that 40% of Chinese MNEs were expanding overseas to utilize their domestic production facilities constrained by the narrowness of the Chinese market (UNCTAD, 2006 : 156). These elements point out to the weakness of the domestic base of Chinese firms, a situation radically different from the Korean and the Japanese experience (Hobday, 1995: 53, Dicken, 2003: 172 & Jones, 1997 : 72 & Nakamura, 1995). *Keiretsu* and *chaebol* could rely on the rent provided by their dominant positions on a highly protected market and their own group bank to finance their overseas expansion.

Some SOEs when making market-seeking FDI may benefit preferential loans from the Chinese State to finance their overseas projects but such practice is not so clear for private firms. The failure CNOOC's \$19.6 billions bid for the US oil company Unocal was due to US government intervention and not from a lack of financial support from the Chinese official institutions (Financial Times, 23/06/2005). On the contrary, Haier was not stopped in its bid for the US household appliance producer Maytag by US government interference. Its \$1.28 billions bid was not sufficient and Haier had to move out of the deal because of a lack of additional financial resources (Financial Times

20/07/2005) and the uncertainty over the approval of the deal by the NDRC (Financial Times 23/07/2005).

2.4. Efficiency-seeking investment

As it has been mentioned earlier, efficiency-seeking investment requires the possession of many ownership-specific advantages (see Box 1. on Behrman taxonomy). Chinese MNEs have not yet completed a fully integrated internationalisation of their production process. Surveys have revealed the problems of communication and international management experienced by the Chinese MNEs and their subsidiaries overseas (Hua, 2005). Only a few examples of basic efficiency-seeking FDI can be found in the textile industry. Some Chinese firms like Guanda Import and Export Co.Ltd have relocated some of their operations to Cambodia to access the US and European markets while avoiding the threat of quotas. In 1997, Shanghai Huayuan Group Corp., a Chinese firm, bought a French textile producer in Nigeria to serve the local market and invested \$6 millions in this subsidiary (UNCTAD, 2003 : 8) but it served to send exports to Europe while benefiting from the system of generalised preference set by the EU. Some of the Chinese MNEs are therefore engaged in efficiency-seeking FDI but these small developments are not comparable to the complexity of the internationalisation of the production process of Samsung or Hyundai and the vast amount of efficiency-seeking investment by the global competitors.

2.5. Strategic asset seeking investment

This last type of FDI constitutes a significant part of the Chinese FDI outward flows. Chinese firms aspire to improving their innovation capabilities, creating a known brand and developing their international management know-how by acquiring an ailing firm in the developed countries or some production facilities of global competitors.

A high profile case of this type of strategic asset-seeking FDI was the take over of the IBM's PC division by Lenovo. The deal amounted to \$1.75 billions and three times the assets of the Chinese company. Lenovo, formerly Legend, has been struggling to create a global brand for years (The Economist, 06/01/2005).

This deal was perceived by some as a sign that a Chinese firm was now in the playing field of the global competitors, with Lenovo becoming the third PC producer after HP and Dell (Financial Times, 30/09/2005).

Nevertheless, one must take into account various elements that point to the existing weaknesses of the company. Firstly, one must not forget that IBM was happy to let go an ailing part of its operations.

Secondly, most analysts remain sceptical that Lenovo possesses sufficient knowledge and international markets and management know-how (Financial Times, 30/09/2005). Its profits are growing at a very low rate and has been losing market share in its domestic market to its two main rivals (The Economist, 06/01/2005)

Thirdly, the Chinese company has been struggling hard for years to create a global brand by changing its name from Legend and to Lenovo (The Economist, 06/01/2005). The deal with IBM stipulates that Lenovo can use the IBM logo on its products for a period of five years. This means that Lenovo has a limited time period to build its own brand before losing one of the main assets gained through the acquisition of IBM's PC division. Regarding the amount that Samsung had to spend on building its global brand -\$ 1 billion in 1990 only – (Gao, 2003), the full integration and rationalisation of Lenovo's and IBM's PC production facilities will have to lower costs considerably in order to be profitable and to impose the brand of this Chinese firm. Conversely, Lenovo could experience a similar evolution to that of Taiwan's ACER. ACER acquired an American company in order to improve its innovative capacities with mixed results because of the different management styles, the lack of motivation of American staff and or because the best US researchers moved to other US

companies (Gee, 1992: 37). Based on this acquisition, ACER then tried to develop its brand worldwide. In 1988, as much as 60% of ACER's output was sold under its own brand but this strategy generated heavy losses. By the mid 1990's, ACER had to scale down its operations and reduce the share of "own-brand" sales (Hobday, 1995: 116). ACER is still an astounding success for a firm from a developing country but it is not comparable to the giants of the electronics and computer industry such as Dell or HP.

Lastly, Lenovo could well transform itself into a non-Chinese MNE. The Chinese Academy of Sciences became the main shareholder of Lenovo (originally named Lianxiang, then Legend) and gave it good government connections (The Economist, 06/01/2005). The Chinese academy of Science still controls 41% of Lenovo through its control on Legend holding (Le Monde, 12/08/08). Nevertheless, Lenovo remained quite independent from the Chinese government (Huang, 2003). When it acquired IBM PC division in 2005, it decided to set up its corporate headquarters in the USA, to integrate its operation worldwide and to put a non-Chinese executive in top position. Lenovo's chairman for Europe considers that it has become "a global firms with Chinese roots" (Le Monde, 12/08/08). This raises the question of to what extent could the Chinese government prevent Lenovo from progressively losing its ties with its original home economy?

Shanghai Automotive Industrial Corp acquisition of the Korean carmaker Ssangyong in 2004 aimed at capturing vehicles models and patents from an experienced carmaker. Nevertheless, it is doubtful that the most qualified personnel have remained in a company that has been making loss since the 1997 crisis. Analysts claim that the SAIC acquisition was a defensive move to prevent further competition on the domestic market by deterring the Chinese conglomerate Blue Star from entering this segment of the car market dominated by the SAIC models. SAIC remains technologically dependent from joint-venture partner Volkswagen according to Mc Kinsey China (The Economist, 06/01/2005).

Another example of a strategic assets-seeker is Dalian Machine Tool System that has been trying to gain the managerial know-how of Ingersoll Production Systems, a 65-employee US company that built systems for building automotive power trains. In this acquisition, a key motivation for the Chinese was the acquisition of the knowledge of the firm manager (Financial Times, 23/06/2005).

Some Chinese firms are also creating R&D centres in developed economies in order to capture high tech human capital and to benefit from economies of scale of Marshallian districts. The Chinese telecom equipment firm Huawei has invested in a R&D facility in Sweden, Konka in Silicon Valley and Haier in Germany (UNCTAD, 2003). Some firms have also invested in design centres in industrialised economies order to improve to improve the quality of their products and their knowledge of European, American and Japanese consumers' taste. Nevertheless, all these research units remain modest by international standards (UNCTAD, 2003 & UNCTAD, 2006). Furthermore, these R&D centres cannot be considered as fully integrated in an internationalised process of production given the existing difficult communication problems between the home firm and their subsidiaries (Hirt, 2006 & Hua, 2005).

Again, the optimistic view will consider that strategic asset seeking is only a first stage in the transformation of Chinese MNEs into global competitors. The problem is that the evidence of the possibility to upgrade technological and innovation capabilities through overseas acquisitions is not conclusive. Earlier findings about South Korean and Taiwanese MNEs have shown that the objectives that they set were not reached, mainly because of the cultural and communication problems with the targeted overseas firm and the fact that the most qualified labour force usually left the company (Gee, 1992 & Hobday, 1995). More recent findings by Sachwald on the acquisition of intangible assets by Korean firms through overseas acquisition shed a more optimistic light on the Chinese attempts (Sachwald, 2001). However, the last section of this article will show that Chinese MNEs are clearly not in a similar situation as the Korean *chaebol* were when they were engaged in strategic assets seeking in the late 1980s and 1990's.

Despite the limited reliable information available, these examples reveal the situation of Chinese MNEs in terms of the acquisition of ownership-specific advantages. Chinese resource-seeking investments are monitored and sponsored by the Chinese government. The only clear ownership-specific advantage is credit access. The Chinese market-seeking investments in developed economies show the barriers to entry that the Chinese firms cannot get over. Efficiency-seeking investment remains an exception and by no means comparable to the complexity of the internationalisation of the production process in which the MNEs of the developed countries engaged themselves two decades ago. Finally, the modesty of strategic assets-seeking FDI reveals the fact that Chinese MNEs often lack ownership-specific advantages such as innovatory capabilities, management know-how, global branding, design know-how and international market knowledge.

3. A comparative analysis of the performance of China's largest firms with their global competitors.

Having made above a qualitative analysis of Chinese outward flows, this section will develop a comparative analysis of China's largest firms and other current global competitors. This comparative analysis will be based on the data coming from the ranking Fortune Global 500 and the UNCTAD TNCs database.

The number of Chinese firms within Fortune's global top 500 has been steadily rising since their entry in 1995. The first three Chinese firms were the Bank of China, Sinochem and Cofco. In 2006, 24 Chinese firms joined the top 500 in terms of revenue. This growth is impressive if compared to the other Asian economies as China overtakes South Korea with its 14 firms, albeit still far from Japan's record of 67 Japanese firms. A first look at these 24 Chinese firms show that, apart from the two firms from Hong-Kong (Jardine Matheson and Hutchinson Whampoa), these firms are SOEs strongly monitored, protected and subsidized by the Chinese government.

A first group is the Chinese banks (Bank of China, Industrial and Commercial Bank of China, China Construction Bank and Agricultural bank of China). These state-owned banks are also known as the "big four" which hold a dominant position on the Chinese market due to government regulations (Gipouloux 2006: 150). If we compare them the global competitors of their industry, they perform poorly in terms of capital intensity (see graph 1. in annex). These firms are engaged in very few operations overseas. In the modern banking sector, the relative abundance of labour in China's resources endowments cannot *per se* explain the low degree of capital intensity. Except the Industrial and Commercial Bank of China, Chinese banks are not catching up with their global competitors in terms of assets. In terms of profitability and return on assets, the Chinese banks' achievements are more impressive since 2004, except the Agricultural Bank of China whose performance was more than mediocre (see graph 2. & 3. in annex). Nevertheless, one should be cautious with the official figures of these Chinese banks. According to the international criteria set by the Bank of International Settlements, these big four should have been considered bankrupt in 2001 because of their limited profitability and the amount of their non-performing loans (OECD, 2002: 46). The government had to refund these banks this last decade: with \$ 32.5 billions in 1998, again with \$ 45 billions to the Bank of China and the China Construction Bank in 2004 and with \$100 to the Industrial and Commercial Bank of China in 2005 (Aglietta, 2007: 82 & Le Monde, 08/08/2003). The sudden improvement of their performance after 2003 is partly due to the last financial bailing out of the Chinese government (apart from the Agricultural Bank of China). It remains to be seen if these companies can sustain this improvement in the medium term. To this group, one could add China Life Insurance which is also in a highly protected sector due to state regulations but which will also have open up to more intense

competition if China is to fulfil its WTO commitments. China Insurance profits are dwarfed by those of global competitors, even the medium-sized South Korean Samsung Life (see graph 4. in annex). The level of capital intensity of China Life Insurance is five to twelve times smaller than that of Assicurazioni Generali and Samsung Life (see graph 5. in annex). The Chinese banking and insurance groups have not proven their ability to compete on international markets. Their main ownership-specific advantage is that they possess access to government credit.

A second group is composed of the companies centred on the utilities and construction. They are composed of State Grid, China Southern Power Grid, China Telecommunications, China Mobile, China Railway Construction Corp and China Railway Engineering and China State Construction. As national champions targeted by the Chinese authorities, many of these firms are the results of mergers. All of these firms benefit from large procurements by the Chinese authorities which remain highly protected. China has not been keen on developing WTO+ bilateral agreements with OECD economies including the Singapore Issues such as procurement transparency. These companies have managed to benefit from learning-by-doing due to the size of their domestic market. They have developed solutions adapted to the needs of developing countries. Some of them have gained markets overseas for the construction of telecoms networks in Indonesia and the reconstruction of the Alger airport. The China Railway Engineering Corp (CREC), one of the two Chinese national champions in the construction of railways and the manufacturing of railways equipment, has managed to gain railways construction markets in developing countries in Africa, the Middle-East and Southeast Asia. These small and opaque markets are not the ones for which the largest MNEs compete. Furthermore, these utilities firms seem to have a broader range of different activities than global competitors. For example, the CREC's operations are not only focused in the railways construction industry as it also builds water supply networks, highways, telecommunication networks and large scale buildings (CREC, 2007). The Chinese Railways Construction Corp, the other champion, is similar to the CREC in having a variety of activities. When compared to the global competitors of their industry, the Chinese firms in construction and engineering are also performing poorly in terms of profits (between 5 of 20% of the profit made by two largest global competitors). Their level of capital intensity is more than six times smaller than those of Bouygues and Vinci. Despite possessing far fewer assets, the level of profit per assets of these Chinese firms is also much lower than their global competitors (see graphs 6. 7 & 8. in annex).

A third group is composed of the trading and shipping companies. Sinochem is a conglomerate which controls its own insurance, hotels, real estate investing companies but its main traditional activities are the trading of oil, plastics and chemicals products (mainly fertilisers). Again, Sinochem was nurtured by the Chinese State. It was the main trading firm with the Soviet Union in the 1950s and the first exporter of crude oil to Japan in the 1970s (Zhang, 2003 : 167). But most of all, Sinochem benefited from the Chinese trade monopoly in oil and chemical products. Sinochem continues to exert a dominant or oligopolistic position on the import and export of some of the 84 strategic products where international trade has not been liberalised (mainly oil and fertilisers) (Faure-Bouteiller, 2003). Sinochem engaged itself in some ambitious overseas activities (e.g. the take over of the US-based Pacific Oil Refinery in 1988) but failed because of its lack of expertise in international and manufacturing management (Zhang, 2003: 179). Throughout the 1990's, Sinochem was encouraged by the state to merge with other firms from different sectors to create a conglomerate following the Korean model of the *chaebol* but its financial situations worsened considerably. Cofco is another conglomerate whose main business is the import of oil and the import and processing of agricultural products. Like Sinochem, Cofco benefits from the high level of protection and subsidies in these sectors. These two giant trading companies benefit from an important protected market and from the state financial and institutional support which consider both sectors as highly strategic. Apart from this, they have not proven the possession of ownership-specific advantages to compete on open global markets. The comparison of Sinochem and Cofco with their global competitors is not impressive. The gap is widening between them and the industry global leaders in terms of profits and assets. Chinese firms are less capital intensive in 2006 than in 2001 while there is strong increase for two of three global leaders (see graphs 9. 10. & 11. in annex).

A fourth group are the mining and oil industries. They include Sinopec and the CNOOC for the oil industry. These firms have been mainly engaged in resource-seeking investments. These companies are considered by the Chinese government as tools to diversify energy and ores supplies for the development of the Chinese economy. Chinese oil companies are overstaffed compared to global competitors and their capital intensity has risen more slowly in this decade (see graph 12. in annex). Exxon Mobile, Royal Dutch Shell and Total are more than ten times more capital intensive than Sinopec and Chinese National Petroleum and three times more than CNOOC (see graph 13. in annex). In terms of profit, the gap continues to widen with the largest competitors of the industry except for the CNP which has only managed to slowly reduce the gap with Total (see graph 14. in annex). Taking into account the fact that the Chinese oil companies are operating in one of the most protected industry in China and the exceptional rise of the Chinese domestic demand for oil products, these results are not impressive. Despite a positive growth rate in profits and assets, on these performances alone, it is not possible to claim that the largest Chinese firms have reached the playing level of the global competitors.

The largest Chinese firms of the manufacturing sector constitute one last group. It includes the two largest carmakers China First Auto Works and Shanghai Automotive. Baosteel group, Shanghai steel champion can also be added to this group. Baosteel is the result of mergers organised by Chinese authorities in an attempt to rationalise the steel industry. Since the mid 1990's, the Chinese government has encouraged the internationalisation of its business (Wu, 2005). There is also China Minmetals, a champion of metallurgy which is vertically integrated and operates mining facilities also. Its activities have also been diversified into construction, mechanical and electrical products. The Chinese car makers achieved very poor results in terms of profits compared to the global competitors of their industry (see graphs 15. 16. & 17. in annex). Even a medium-size global competitor like Hyundai is out of reach for Chinese carmakers in terms of profit, assets and capital-intensity. The largest Chinese firms in the metal industry perform better in terms of assets and capital-intensity. This is true at least for Baosteel. Baosteel has almost as many assets as the South Korean Posco albeit far less than Mittal Arcelor or Nippon Steel. In terms of profit however, Baosteel and Minmetals results are much lower than the global competitor. This low level of profit is problematic considering the high growth of the Chinese economy and the exceptional level of the Chinese domestic demand for steel which is unlikely to be sustainable. Furthermore, the South Korean Posco is far more capital-intensive than Baosteel (see graphs 18. 19. & 20 in annex).

The qualitative analysis of China's outward FDI and China's largest firms, as well as the comparative analysis of their performance vis-à-vis the global competitors in terms of profit, assets and capital intensity, reveals the gap in ownership-specific advantages that Chinese champions have still to close. An optimistic view is that Chinese firms are still in a very early stage of their globalisation process. Nevertheless, even when compared to the level of return on assets attained by their Japanese counterparts at the beginning of their globalisation (in the early 1960s), Chinese MNEs perform rather poorly except in the telecoms industry (see graph 21 in annex). As a percentage of the average return of the firms in the industry that belong to the top global 500 firms, Chinese firms in 2001 (the year China accessed the WTO) clearly compared less favourably than their Japanese counterparts in the 1960s or their South Korean counterparts in the 1980s (see graph 22 and 23). Given this existing gap in terms of performance, the question is which path can these Chinese MNEs take to acquire these missing intangible assets?

Naturally, one could argue that some of the Japanese and Korean largest firms had been created decades before their internationalisation and that Chinese firms in the 2000s are much younger. Therefore the relatively weak performance of the Chinese largest firms would be explained by the fact that they are still in an infancy stage and have not fully exploited the learning-by-doing effects. Nevertheless this maturation gap should not be overstressed. Even if Samsung was established in 1919 (as a fruit and vegetable company), it only entered manufacturing activities in WWII (Hobday, 1995). Most of the South Korean *chaebol* really entered their present core industry in the 1960s and 1970s under strong government backing (Jones, 1997). As for the case of Japanese firms, some of the Japanese MNEs like Mitsubishi date back to the 19th century but other like Toyota and Sony only

emerged after WWII (Hunter & Ito, 1996). Some the Chinese largest firms are not that young and date back from three decades or more (Zhang, 2003 & Barton, 2007). Even if such a maturation gap might be significant, the different domestic and international business environments that these relatively young Chinese largest firms face in the 2000s is completely different from the sheltered domestic market enjoyed by the Japanese and South Korean MNEs during their infancy stage respectively in the 1960s and 1980s (see *infra*).

4. Chinese industrial policy: The limits of the relevancy of the Japanese and Korean experiences for Chinese MNEs

The Chinese government has been developing a “going global strategy” inspired from the Japanese and Korean experience of strong interventionist and window guidance industrial policies. The problem is that the past experience of these two countries might not be relevant for Chinese MNEs.

4.1. A domestic market contested by foreign-based MNEs

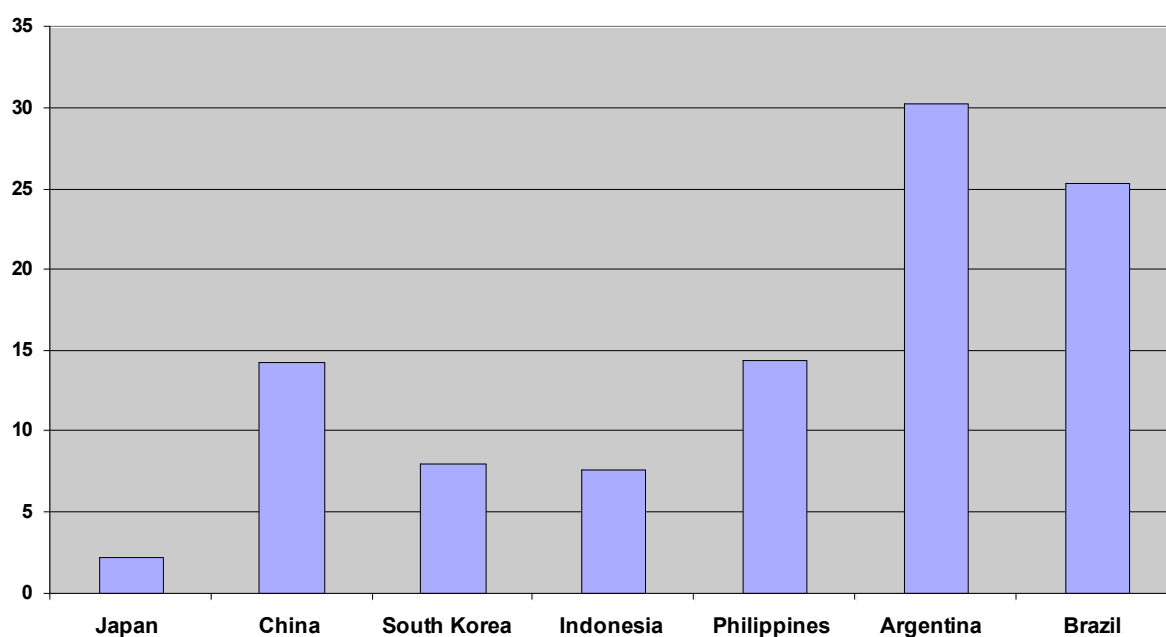
Firstly, China’s largest firms have to face much stronger competition from global competitors than their Japanese or Korean predecessors. At the time when the Japanese *keiretsu* and the Korean *chaebol* became global firms, their domestic markets were highly protected compared to current standards. Distribution networks made it difficult for foreign firm to penetrate these domestic markets (Ito, 1996). Inward FDI regulations were much stricter (Dicken, 2003: 182). Multilateral trade related investment measures were only negotiated at the time of the Uruguay Round (1986-1994) which gave South Korea and Japan’s industrial policy-makers considerably more room for manoeuvre before the 1990’s. After having welcomed for two decades US and Japanese MNEs in order to let local firms benefit from spill over and learning-by-doing, South Korea established a negative list for inward FDI in the telecom industry on the ground of national security (Yamamura, 1997: 37). These protectionist policies in East Asia were accepted because of some geopolitical factors (see section below) and because of the limited interest of European and American MNEs in the East Asian markets. The 1950s, 1960s and 1970s were decades characterized by exceptionally high growth rates in the OECD countries. Most of the FDI flows were directed towards Europe and the US then considered as the main markets. East Asia was not a priority for Western MNEs, some of which were actually divesting out of the region (Yamamura, 1997: 37 & Yoshihara, 1988). This has changed radically since the late 1980s. East Asia is perceived as the most dynamic emerging region of the world. Most MNEs have since adopted more ambitious strategies to penetrate East Asian markets (as the aftermath of East Asian crisis of 1997 revealed), notably China.

These developments imply that the Chinese government would encounter major difficulties in maintaining China within the world trading system should it follow the same path. Obviously, returning to the economic isolation of the 1960s and 1970s is not an option for the Chinese government. Since China has opened its economy, it has become evermore dependent on overseas markets. The exporting industries generate barely enough jobs to offset the depressing effects of the closure and downsizing of the SOEs. China is experiencing a slower growth of unemployment compared to the experience of other transition economies, notably due to the extraordinary growth of its traditional labour-intensive exporting industries such as textiles, lighters or toys. Furthermore, over 50% of China’s exports are made by foreign-based MNEs. Export revenues also enable China to preserve its ailing financial sector. Finally, the Chinese government has opened its economy to foreign-based MNEs in order to generate some spill over in technology, the previous evidence show that Chinese firms are far from having caught up with the foreign-based MNEs located in China. Studies have shown that the subsidiaries of MNEs located in China were still responsible for most of the increase of total factor productivity growth of the Chinese economy. For these reasons, a drastic move towards more protectionist measures on trade and investment inward flows is highly unlikely.

But maintaining the openness of the Chinese economy has generated an intense level of competition on the domestic market. Furthermore, the Chinese market is still highly fragmented by provincial

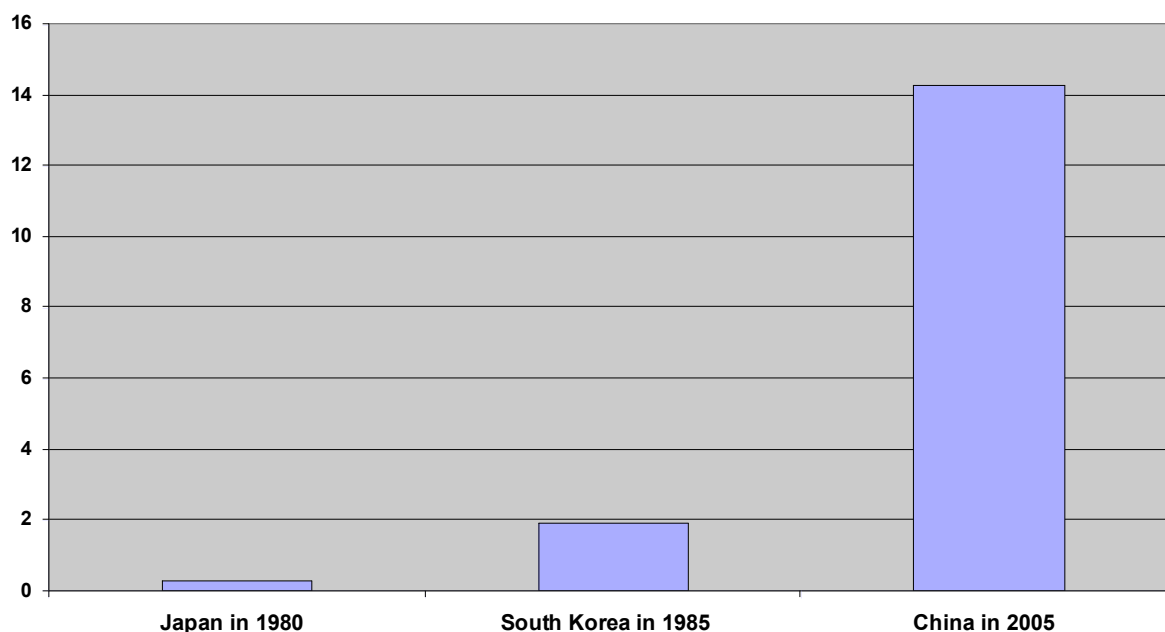
barriers to trade despite some recent progress which prevents some of the Chinese national champions benefiting from economies of scale of a large domestic market (Gipouloux, 2006; Huang, 2003 & Wedeman, 2003). Due to cheap credit and competing provincial industrial policies, numerous industries are riddled with overcapacities (Hiang, 2003; Lardy, 2006 & Aglietta, 2007). The presence of foreign-based MNEs in the Chinese economy is already very high by international standards and far above the level experienced by South Korea and Japan (see graph 4. & 5.). The degree of effective openness of the Chinese economy will rise if the Chinese government respects the timing of liberalisation set by the WTO accession protocol negotiated before the fall of 2001. As it has been outlined above, falling profit margins and intense competition on the domestic market are one of the main factors behind market-seeking outward flows by Chinese MNEs. This means that, unlike their Japanese and Korean counterparts, Chinese MNEs do not possess a protected domestic market to develop learning by doing effects before going global.

Graph 4. FDI inward stocks as a % of GDP in 2005



Source: World Investment Reports

Graph 5. FDI inward stocks as a % of GDP



Source: World Investment Reports

4.2. The absence of a benevolent attitude from the US

Secondly, Japan and South Korea benefited from an exogenous factor that gave both economies important opportunities in terms of advanced technology acquisition and overseas market. Because of the cold war and the US policy of containment of communist expansion in Asia, the economies of these two countries benefited from massive US support in the 1950s and 1960s. In the early 1950s, South Korea and Japan were both exhausted by war and had little access to international markets.

In the case of Japan, American experts and considerable financial aid contributed to the reestablishment of a sound macroeconomic environment with the adoption of the Dodge plan in 1949. The American forces in Asia provided Japanese industries with new markets and helped Japan to restore its trade balance. In 1949, Japan was in serious need of imported raw materials but lacked outlets for industrial exports. The so-called *tokujū* procurements of the US army to Japanese firms during the Korean War helped a moribund Japanese industry to recover (Friedman, 1993 : 260). The *tokujū* accounted for more than 70% of the Japanese exports from 1950 to 1952 (Samuels, 1994 : 133). The American procurements continued with their growing military involvement in Asia, especially after their involvement in the Vietnam War in the 1960s (Cook, 1996: 170). Not only did the US administration offer Japanese firms outlets for their production through procurements but it also helped Japanese exporters to re-access world markets. The Eisenhower administration opened the US domestic market to Japanese products in the early 1950's before Japan's accession to the GATT. It imposed on its European and Asian allies the reinsertion of Japan in the capitalist world community (Komiya, 1988 : 179). The US government sponsored Japan's application to join the GATT and the OECD. Without this help, it is very doubtful whether Japan could have fully benefited from the trade liberalisation trend occurring within the GATT and therefore whether it would have experienced its exceptional export success.

Even Japan's success in creating dense political and business networks across Asia cannot be understood without taking into account the US diplomacy in the region. The fight against communism and anti-imperialist nationalism often resulted in the elimination of the strongest anti-Japanese

political movements throughout Asia and in the rehabilitation of local elites which had collaborated with the Japanese during the 1930's and 1940's. This was certainly the case for South Korea, for Indonesia and for Thailand.

Another decisive aspect of the US "containment" policy that had profound lasting effects on Japanese industry was the technology transfer encouraged by the Eisenhower administration. In the early 1950's, the bilateral Mutual Security Assistance programme provided US financial aid and technological transfers to Japanese defence firms. The Japanese largest firms benefited from new American engine and machinery technology; from American large-scale engineering know-how to programmes introducing American methods of quality controls and manufacturing process (Friedman 1993: 275). The range of industrial sectors that benefited from these measures varied from wireless communication to propulsion to materials processing. The Japanese government managed to negotiate that transferred US patents could also be used for civilian and not exclusively military production. This free ride, without comparison, in Asia certainly accounted for a substantial part of the successful rebuilding of its industries in post-war Japan (Friedman, 1993 : 261).

The US provided a very important aid package to the Korean economy. From 1953 to 1975, US aid to South Korea amounted to \$13 billions (Jones, 1997 : 69). This aid package helped to relieve the serious post-war food shortages and to finance the land reform but it also generated long-lasting effects. US financial flows provided South Korea with foreign currency during the first post-war decade, at a time when there were virtually no Korean exports. During this period, the amount of US aid financed 70% of all imports and represented also 80% of the fixed capital investment (Lanzarotti, 1992 : 36). US military aid also enabled South Korea to avoid paying for its defence costs until the 1970's. This saving certainly helped the government to increase the level of public spending on education, which rose from less than 3% at the end of the war to 22% in 1987 (Hobday, 1995: 54). Military co-operation also gave the young Koreans drafted into military duty a valuable technical training. The Korean army built infrastructure thanks to American technical assistance (Lanzarotti, 1992 : 40). This proved crucial in an economy crippled by a shortage of engineers and trained technicians (Hobday, 1995 : 53). Finally, the US administration helped the South Korean economy by providing a privileged access to its domestic market (Jones, 1997: 79). Until the 1980's, successive US administrations were cautious not to block imports from South Korea.

China cannot expect such a benevolent attitude from the US in the near future. There is no common external threat like that of communism which pushed the US to offer important opportunities to the Japanese and Korean economy. On the contrary, for many American geo-strategists China could constitute one of the main threats to the US in the 21st century. The change of China's label from "strategic partner" under Clinton's administration to "strategic competitor" under the Bush administration reflects this rising tension between the two nations (Domenach, 2002: 190). Washington is developing a policy of containment of Chinese expansion through a renewed alliance treaty with Japan in 1997 and through the development of military presence or alliances in the neighbouring countries (Bulard, 2006 & Domenach, 2002 : 196). In the field of economic relations, the US has developed a defensive unilateral strategy vis-à-vis China. Since China's accession to the WTO, there have been sporadic cases of limited protectionist outbursts by the Bush administration. Washington has been constantly battling against China on the enforcement of the WTO intellectual property commitment and on the necessity to let the RMB appreciate. As it has been mentioned earlier, the US administration is also wary regarding the acquisition of advanced US technology through M&A activities launched by Chinese firms. Overall, apart from the few so-called "rogue countries" of the "axis of evil", it is difficult to see what other country generates more distrust from Washington than China, a situation radically different from the situation enjoyed by Japan and South Korea from the 1950's to the 1980's.

4.3. A greater need and a greater difficulty to acquire technology

There is abundant evidence that in most sectors, the minimal efficient scale has been rising drastically in the last two decades. The change from fordist methods of production based on standardized mass production to “flexible specialisation” or “postfordist” methods of production have generated an increase in the size of the global competitors. Albeit, the newer emphasis put on product differentiation since the late 1970’s implied the shift to smaller autonomous production units closer to the market they serve, it has required more sunk costs in R&D, design and marketing (Oman, 1999 & Oman, 1994). Furthermore, these new methods of organisation required more skills in international management to coordinate globally these different regional production units. The shift from fordist to postfordist methods of production implied an increase in fixed costs, naturally accompanied by a need for bigger financial and management resources. This trend is supported by empirical evidence for all the major capital-intensive and high-tech sectors (Defraigne, 2004: 225). For the Chinese MNEs attempting to transform themselves into global competitor in the early 21st century, they will have to overcome much higher barriers to entry than those met by the Japanese or even Korean firms two decades ago.

The development of the multilateral trading system on the issue of intellectual property rights (IPR) makes it much more challenging for Chinese firms to copy freely the existing technology. The development of an extensive TRIPs regulation which has extended the protection period of patents and copyrights makes it more difficult for Chinese firms to copy some technological process as did their Japanese and South Korean counterparts three decades ago. During the 1980’s, Chinese firms often openly violated IPR of foreign multinationals but after joining the WTO China had to pass a new legislation to protect intellectual property. Despite the length of the legal procedure and the leniency of the penalties inflicted on the counterfeiters which constitute obvious infringements to the TRIPs WTO regulations (Faure-Bouteiller, 2003), surveys have revealed that foreign-based MNEs located in China think that the situation has been significantly improving since China joined the WTO (EUROPEAN UNION CHAMBER of COMMERCE in CHINA, 2003). The continuous pressure applied by the US, the European Union and Japan are forcing the Chinese government to make some progress in the enforcement IP rights.

5. The challenge of developing a specifically-Chinese “going global” strategy

The three main differences outlined above explain why the internationalisation of the first Japanese and Korean MNEs and the strategies that these firms and their national state developed in order to enable them to join the global competitors from the Western industrialised economies are of little relevance to the current situation in which Chinese MNEs find themselves. The Chinese MNEs will not as easily be able to acquire the ownership-specific advantages held by their Japanese and South Korean counterparts because of the change in the global economic and geopolitical context.

The Chinese MNEs and the Chinese government will have to adopt a specifically Chinese path if some Chinese firms are ever to join the group of global competitors possessing numerous ownership-specific advantages. To do this, the Chinese authorities and these firms have limited room for manoeuvre because of their global commitments and the increased international competition in East Asia and particularly on the Chinese market.

Nevertheless, the Chinese government can still use some of the traditional tools of industrial policy such as ensuring a privileged access to government procurements for Chinese national champions. It will also attempt to slow down the opening of its domestic market and to delay the enforcement of TRIP WTO regulation. It is using technical standards to erect non tariff barriers (Cao, 2006). However, these tools are inevitably raising some tensions with the most advanced economies. The Chinese government is also likely to continue to subsidize the expansion of Chinese MNEs through its overseas development programs and its opaque banking system. However, the Chinese MNEs will

find it increasingly difficult to acquire advanced technology thanks to the Chinese government subsidies as Europe, America and Japan are developing “golden shares”, “poison pills” and national security legislation to prevent hostile foreign take-overs (Pokarier, 2007 & Financial Times, 23/07/2007). Special clauses like the Transitional Product-Specific Safeguard Mechanism (TPSSM), or the fact that China has still not been granted the status of market economy, make Chinese exports highly vulnerable to reprisals by WTO member states.

Considering that the Chinese MNEs will continue to struggle to upgrade their technological base and acquire some international management know-how, in order to avoid tensions with its main trading partners, the Chinese government could adopt a horizontal industrial policy aiming at increasing the pool of highly qualified labour force in high-tech industries and in management. Despite tremendous achievement since the 1980's, China remains far behind Japan in terms of technology and may just be about to catch up with South Korea (Chen, 2004 & Nam, 2004). Spillovers from foreign-based firms operating in China do not seem to be sufficient to close the gap. Even in the Zhejiang province which benefits from a very open economy and high FDI flows per capita, local authorities are conscious that the firms operating in their export-processing zones are not engaged in high-tech activities but mostly in assemblage (Interview 2, 2003).

The first problem is the number and the qualification of Chinese scientists. The number of researchers has progressed by 20% between 1999 and 2003 reaching 633,000 (Aglietta, 2007: 35), albeit the high tech qualified labour force is not as numerous as Chinese official statistics suggest. Indeed, the requirements to obtain a Chinese scientific diploma are not the same as in most OECD economies. Mc Kinsey estimates that only 10% of the graduated Chinese engineers meet the international standards of an international competitor (de Jonquières, 2005). It is true that there has been a dramatic increase of Chinese overseas students in the last twenty years with more than 700,000 studying abroad between 1978 and 2003. However, not all these students have studied science and international management in top universities. Many overseas Chinese students study the language of a developing country, tourism or management in low level private schools or unranked universities. These Chinese students trained in foreign countries, Chinese official statistics reveal that only 172,000 of a total of 700,000 returned to China after their graduation (Naughton, 2007: 362). Amongst the Chinese graduates meeting international standards and that will be staying in China, Mc Kinsey estimates that 70% of them will work for foreign-based MNEs (de Jonquières, 2005). Despite the recent progress, the pool of highly qualified labour available for Chinese MNEs remains scarce.

The second problem is the nature of the research conducted in Chinese R&D centres. China has certainly upgraded its technological capacities as the dramatic increase in the number of patents registered in China has shown. China is also among the group of countries whose expenditures in R&D are growing four times faster than the industrialized countries (BoozAllen, 2006 : 51). The volume of Chinese scientific publications has risen by 84% between 1996 and 2001 (Aglietta, 2007: 36). However, the gross data on patents and publications do not highlight worrying trends. Most of the Chinese patents and publications generate few international citations (de Jonquières, 2005). This could imply that many of these patents are useless or concerning products designed specifically for the Chinese market.

Furthermore, most of the Chinese high tech capacity remains controlled by foreign-based MNEs (Aglietta, 2007 : 40). The majority of the patents registered in China are made by foreign firms. As late as 2004, foreign firms were also responsible for 85% of the Chinese high-tech exports (The Economist 06/01/2005). Cao, Suttmeier and Simon claim that the dependency of the Chinese economy upon foreign technology has been rising these last two decades (Cao, 2006: 36).

A positive point for the technological development of Chinese firms is that these R&D investments made by foreign firms in China will generate some spillovers. The negative point is that their scope is likely to be reduced. Indeed, since China opened up, foreign-based MNEs are getting more familiar with the Chinese economy, and they are now choosing to opt for 100% controlled subsidiaries in China rather than entering into joint ventures (Luo, 2000; APCO, 2003 & Naughton, 2007). In 2004

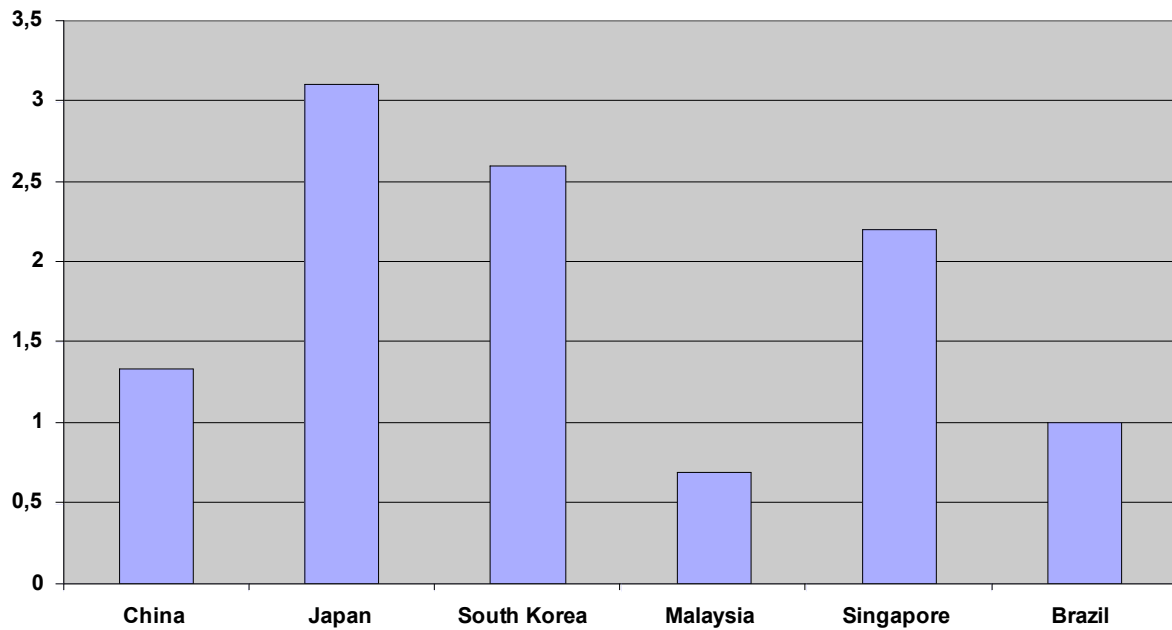
wholly foreign owned subsidiaries accounted for about two-thirds of the total FDI inward flows in China (Naughton, 2007: 412). Another factor that could limit future spillover is the possibility that the bargaining power of the Chinese government vis-à-vis foreign firms will weaken over time. Since the late 1990's, to spread the risk of macroeconomic crisis and local governments interventionism, some Japanese MNEs have adopted a two-pronged investment strategy in East Asia by locating some of their facilities in the ASEAN and some in China (Nesadurai, 2003 : 185). The JETRO has also developed further commercial and investment ties with India so as to reduce the bargaining power of the Chinese state vis-à-vis Japanese MNEs. As India and the ASEAN are adopting more open FDI hosting policies to attract MNEs, it will be increasingly difficult for the Chinese central or local authorities to impose measures to facilitate technological spillover from subsidiaries of global competitors.

Even if the Chinese authorities could continue to apply measures to favour such spillover from foreign-based MNEs , the R&D centres opened in China by these foreign firms might not possess the innovatory capabilities to launch new models of products. As a matter of fact, even after China joined the WTO, many of the R&D investments made by the foreign-based MNEs were product-development facilities for the specificities of the Chinese market rather than fundamental research (Chen, 2004: 13). The weakness of fundamental research is an obstacle to transforming national firms into global competitors that even a more advanced economy like South Korea continues to face (Kwon, 2003 : 43). Only firms possessing fundamental research capacities can hope to develop new generations of products and to generate a Schumpeterian wave of innovation.

As for Chinese firms, despite some progress, they still lag far behind their global competitors. In 2001, China did not have a single company among the global 300 R&D spenders (Nolan, 2002). In 2005, there was not a single Chinese firm inside the 100 “top leverage innovators” listed by the consultancy firm Booz-Allen while some South Korean, Taiwanese, even Brazilian and Indian firms have managed to join this group (BoozAllen, 2006: 54). Kroeber claims that even advanced firms like Lenovo or TCL do not enjoy sufficient profit margin to engage in ambitious R&D schemes comparable to those pursued by their Korean and Japanese counterparts decades ago (Kroeber, 2005).

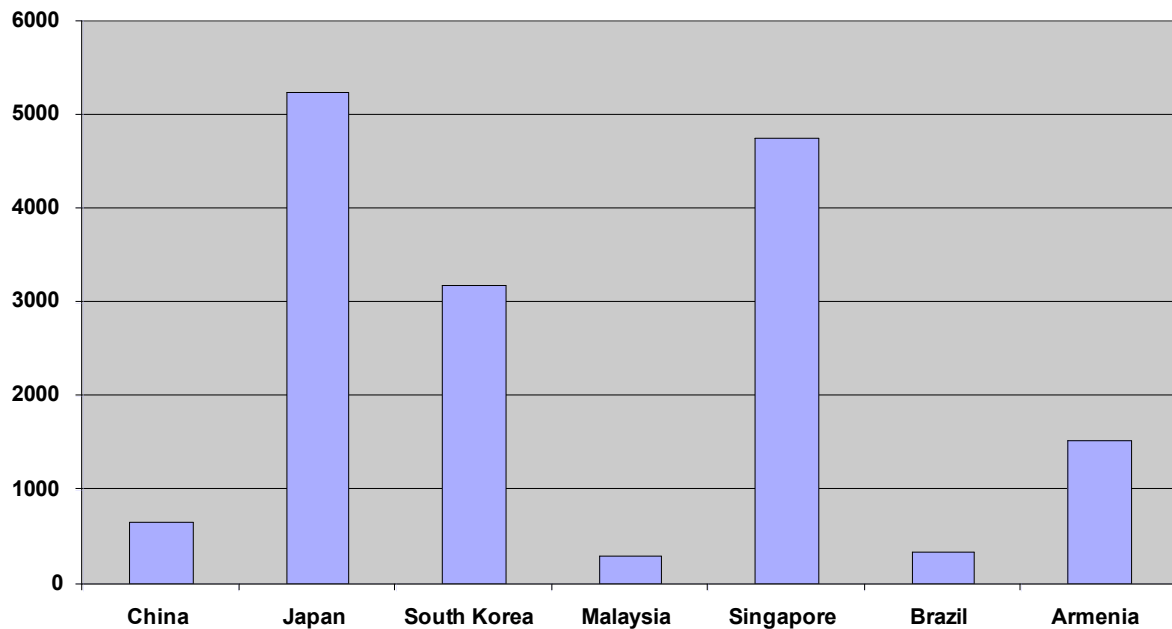
For these reasons, the Chinese government cannot expect the largest Chinese firms by themselves to close the technological gap with global competitors. China will have to increase public expenditure in R&D centres like the South Korean model (Jones, 1997: 71). China remains far below its most developed East Asian neighbours in terms of percent of GDP spent on R&D (see graphs 6. & 7.). Spending more on R&D infrastructure might not necessarily succeed in upgrading the innovatory capabilities of Chinese champions. Some analysts argue that R&D centres sponsored by the Chinese government are not always generating the expected spill-over because of inadequate links to the private sector (de Jonquières, 2005). Nevertheless, maintaining a R&D expenditure level similar to South Korea will not be sufficient to close the technological gap. The “863 programme”, a R&D five-year scheme launched by the government in 2003, was given a budget of \$84.3 billion. Albeit this has constituted a 100% increase compared to the preceding program, it is still far from the \$1000 billions spent by the European Union economies during the same period (CEPII, 2004 : 105 & Devoluy, 2004 : 223). China's last Medium to Long-term Plan for Science and Technology is more ambitious. One of its objectives is to raise the share of R&D expenditures in the GDP from 1.34% in 2005 to 2.5% by 2020 (Cao, 2006). Should China reach this official objective which is far from certain, China's effort in R&D would still lag behind those of Japan, South Korea and Singapore. In absolute terms, Japan would continue by far to be the first R&D spender in East Asia.

6. R&D expenditures as % of GDP



Source: PNUD 2006

7. Researchers per million people in 2000-2003



Source: PNUD 2006

The Chinese government will also have to foster the growth and the integration of its domestic market. This will not only benefit Chinese national champions but also the foreign-based MNEs operating in China. Nevertheless, if China remains a domestic market fragmented by competing provincial protectionist policies using local standards, local procurement exclusion policies and all types of non-tariff barriers to protect their provincial champions, then the Chinese MNEs will not benefit from the

potential economies of scale and the rationalisation of production capacities. If reforms accelerating the integration of the Chinese market are not pursued actively, China's largest firms face only two perspectives. Either they will have entrenched themselves behind local protectionist measures until the multilateral pressures force the Chinese authorities to lower these barriers. Should this defensive option be taken, it is highly unlikely that the Chinese champions will be able to acquire the ownership-specific advantages to transform themselves into global competitors. Alternatively, Chinese firms will have to try to expand overseas without a strong domestic market base and without being granted a special access to Western markets, for geopolitical reasons. This option has never been attempted by any global competitor before. Accelerating the integration of the Chinese market is not without risk. It will generate unemployment as the smallest provincial champions will be driven out by the more efficient national champions and, in the short run, it might reinforce the level of economic and social disparity between the richest and poorest provinces as most national champions' corporate headquarters are still located in the coastal area.

At the same time, the government will have to foster domestic consumption. As Lardy suggests, this will firstly reduce the dependency upon overseas markets and the trade frictions with China's trading partners, especially the US. From the point of view of the Chinese MNEs, it will be easier to grab market share and benefit from learning-by-doing in a growing market of Chinese consumers. The Chinese government has made a priority to switch from an export-driven to a domestic consumption-driven growth (Lardy, 2006). This could be achieved by raising the level of public expenditure in subsidies to peasants, in the social safety nets and in the education system in order to reduce household savings. Programs like the "new socialist countryside" or the "harmonious society" are the signs of the will of the central government to make this transition.

This raises the question of the Chinese budgetary means. With a low fiscal base in comparison with OECD standards and having to launch ambitious programs to reduce the economic and social disparity between the landlocked provinces and the coast, having to develop social safety nets to reduce the level of savings in order to foster domestic consumption and having to fund the restructuring of the ailing financial sectors, the Chinese government has been steadily increasing its public deficit. Supporting industrial policies for all of the listed national champions might simply not be financially feasible.

6. Conclusion

Within the constraints imposed by the limited reliability and accurateness of the Chinese FDI outflows data, this paper has outlined elements that suggest that Chinese MNEs have not yet joined the group of global competitors and that they need to acquire more ownership-specific advantages to do so. Despite some progress, they have not engaged in the internationalisation of their production process. The nature of their overseas investments reveals their lack of innovation capabilities, their limited knowledge of international markets as well as of international management know-how and the absence of globally-known Chinese brands. The largest Chinese firms and MNEs have not reached the level of successful *chaebol* like Samsung and Hyundai.

This contribution has also pointed out that the Chinese authorities and the Chinese national champions will not be able to follow the steps of their Korean or Japanese predecessors because of the changes that occurred in the multilateral trading system and the geopolitical environment. The Chinese MNEs will have to find a specifically Chinese path to pursue their "going global strategy". As, the Chinese MNEs cannot benefit from a strong domestic base to finance the upgrading of the technological capabilities, the "going global" strategy will need strong support from the central government. Nevertheless, the government cannot allow this policy to alienate China's trading partners. The remaining options for the Chinese government are to attempt to accelerate the integration of the domestic market and to launch more ambitious research programmes. The challenges facing these options are the increase of the already high degree of inter-provincial economic disparity and the deepening of the public deficit.

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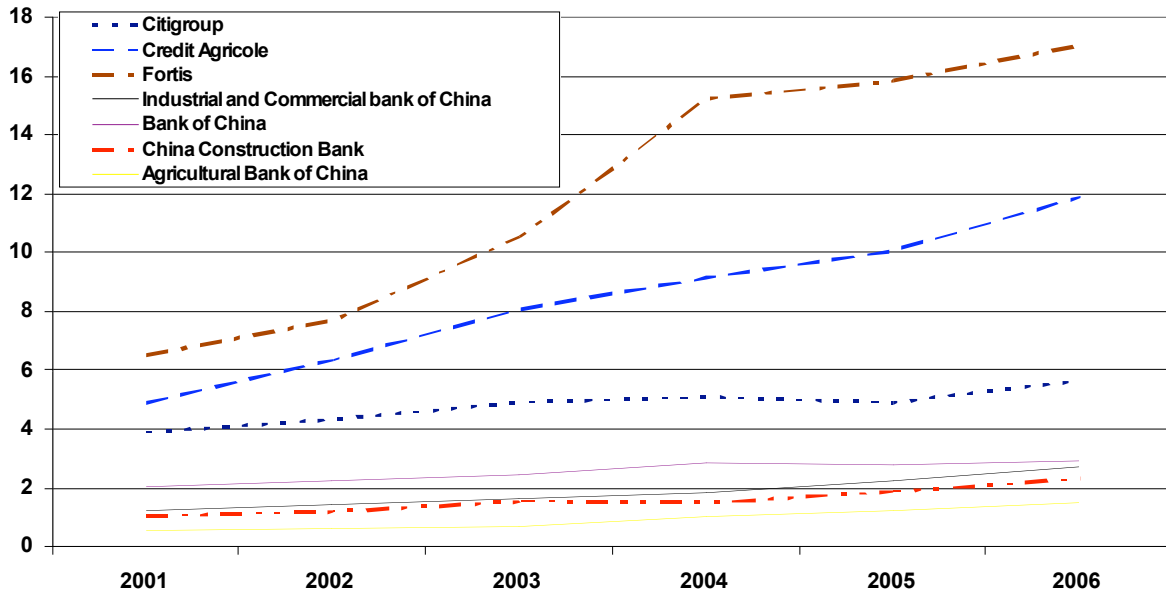
INTERVIEW

(1) with SUEN Tom, Manager of Import & Export Department of WENZHOU YUETU ELECTRIC APPLIANCE GROUP CO. LTD, Wenzhou, Zhejiang province, 23/11/2003.

(2) with NINGBO Export processing zones authorities, Ningbo, Zhejiang province, 18/11/2003.

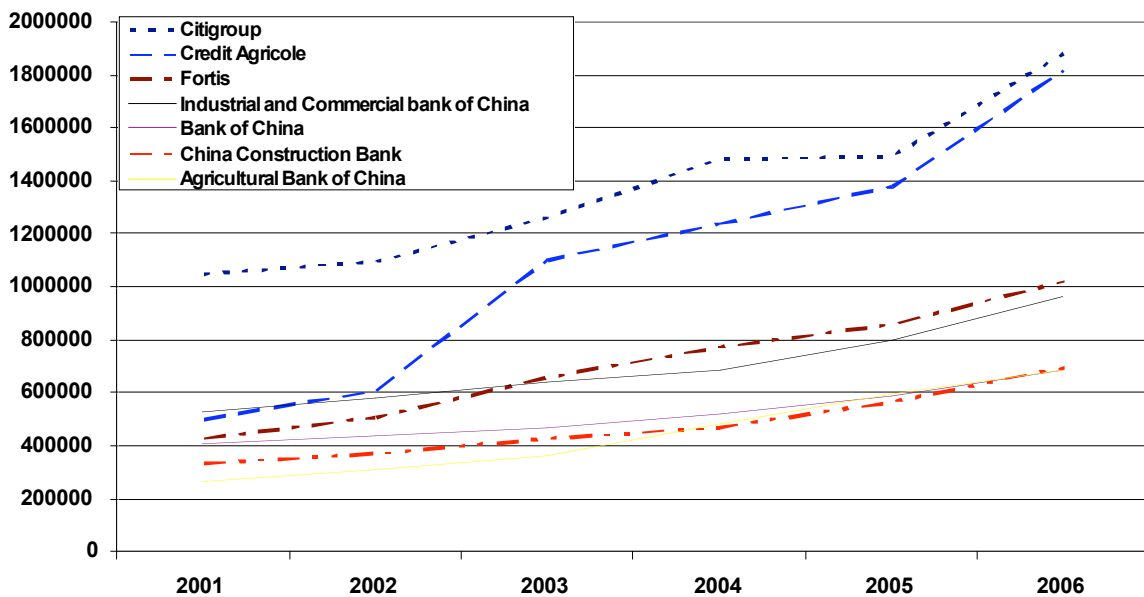
Annex

Annex Graph 1. Capital intensity of the largest Chinese banks and three global competitors



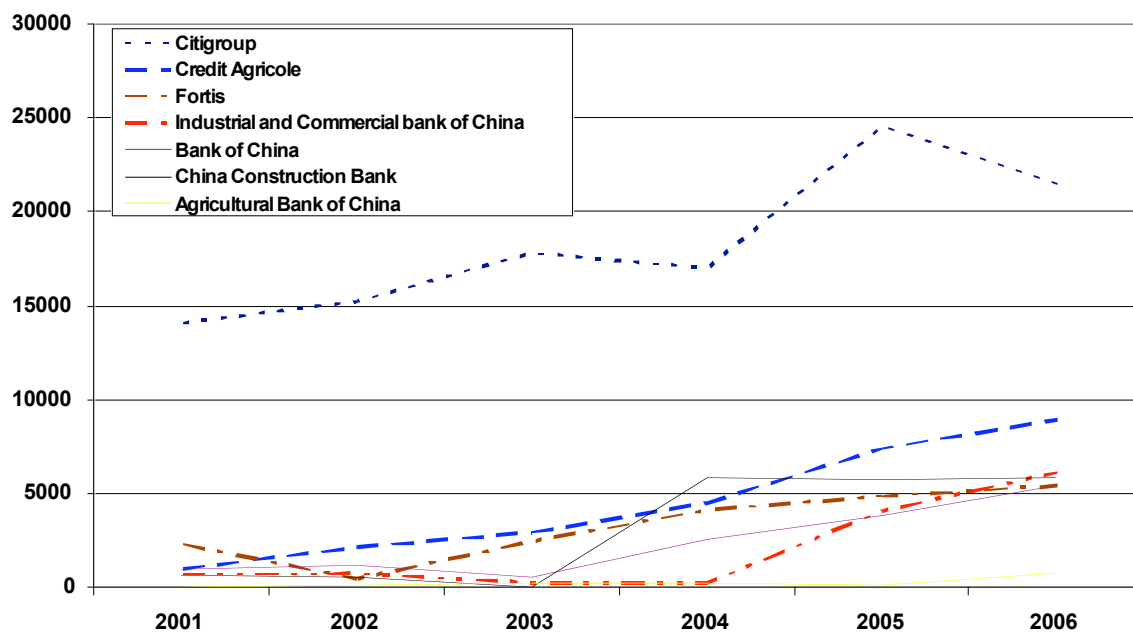
Source: Fortune 500

Annex Graph 2. Assets of the largest Chinese banks and three global competitors



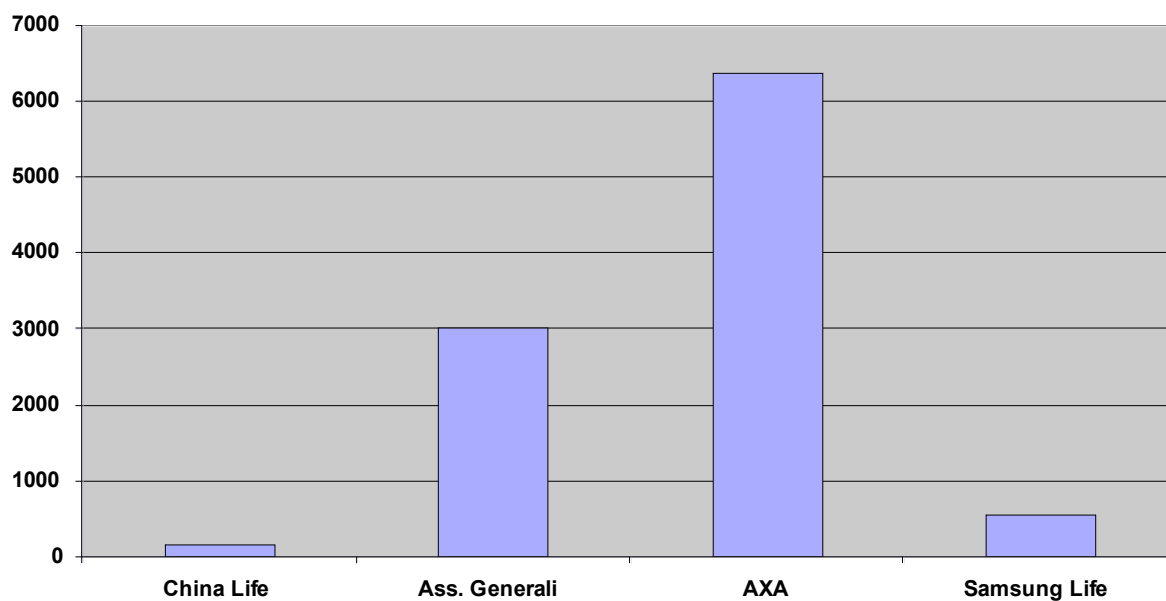
Source: Fortune 500

Annex Graph 3. The profits of Chinese banks and three global competitors



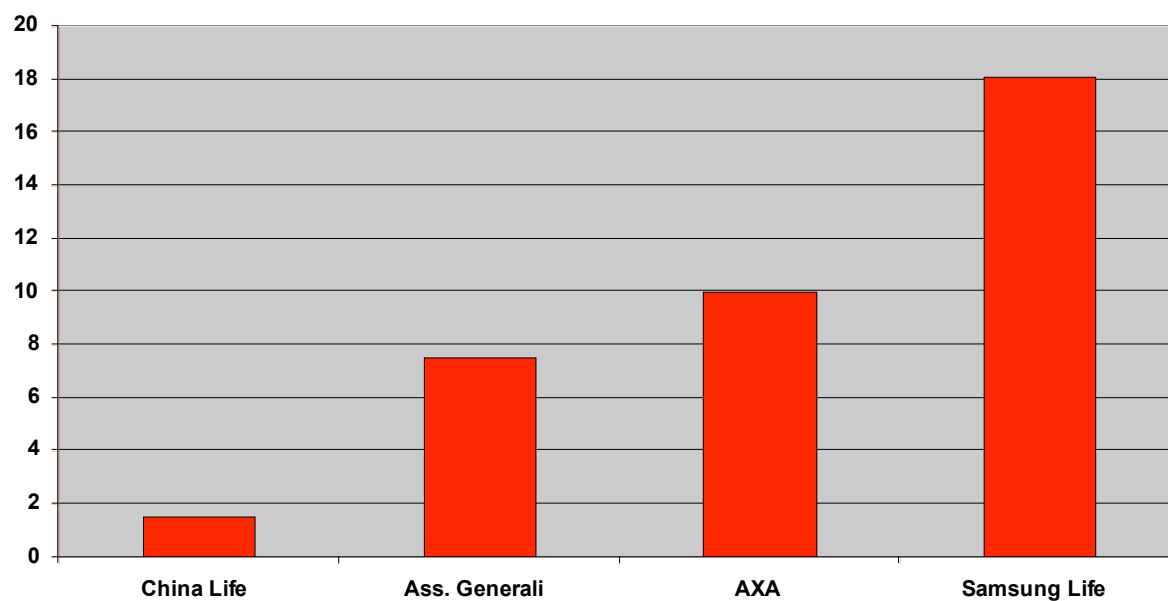
Source: Fortune 500

Annex Graph 4. Profits of the largest Chinese insurance company and three global competitors (\$ million)



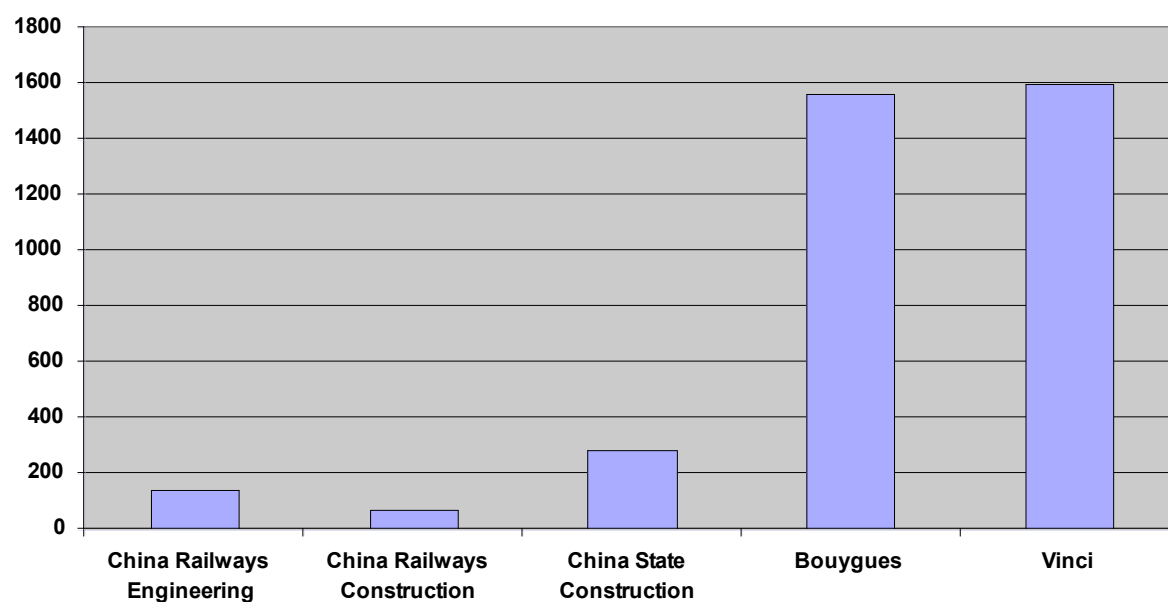
Source: Fortune 500

Annex Graph 5. Capital-intensity of the largest Chinese insurance company and three global competitors



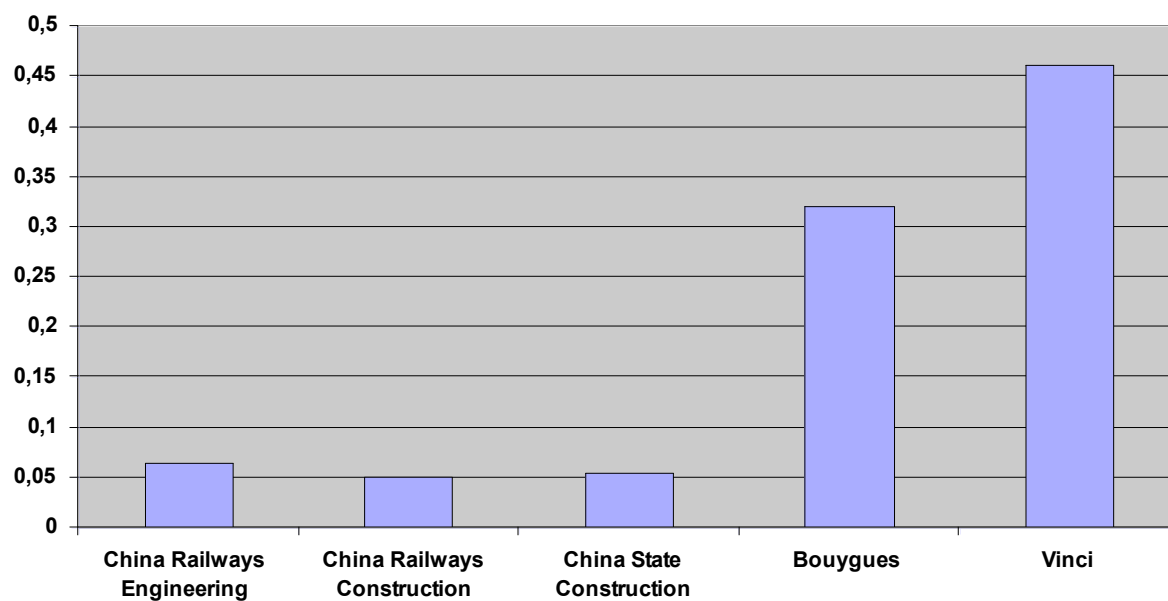
Source: Fortune 500

Annex Graph 6. Profits on the Chinese engineering & construction firms and two global competitors in 2006 (\$ million)



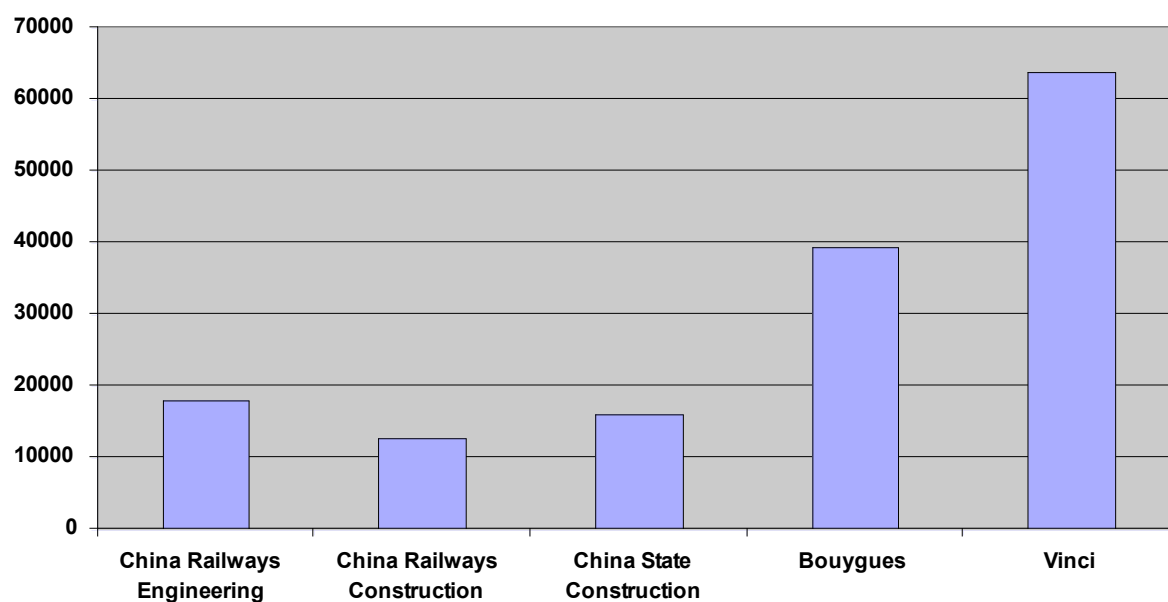
Source: Fortune 500

Annex Graph 7. Capital-intensity of Chinese engineering & construction firms and two global competitors in 2006



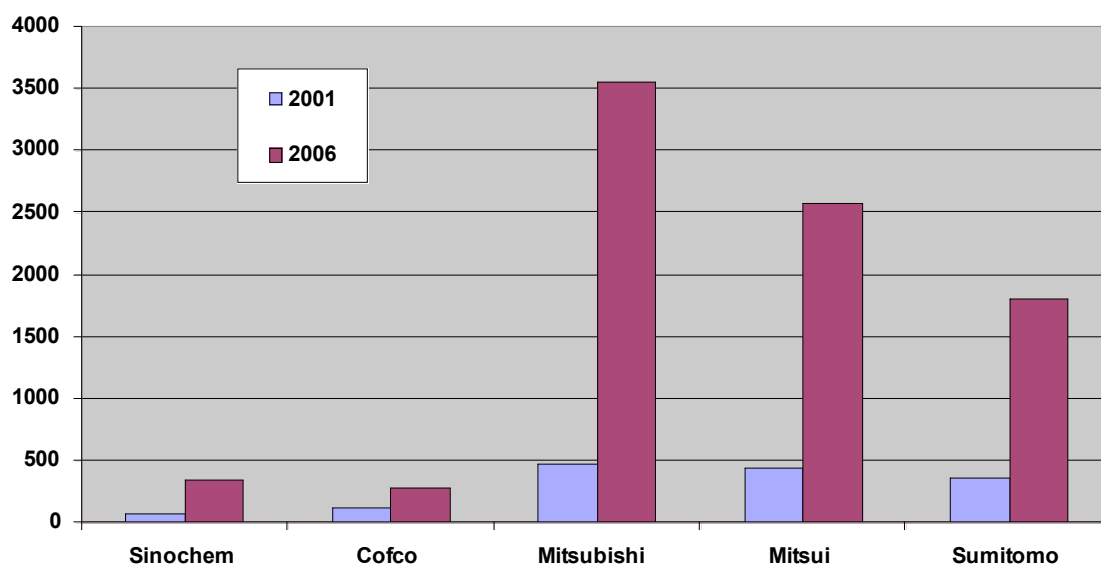
Source: Fortune 500

Annex Graph 8. Assets of the Chinese engineering & construction firms and two global competitors in 2006 (\$ million)



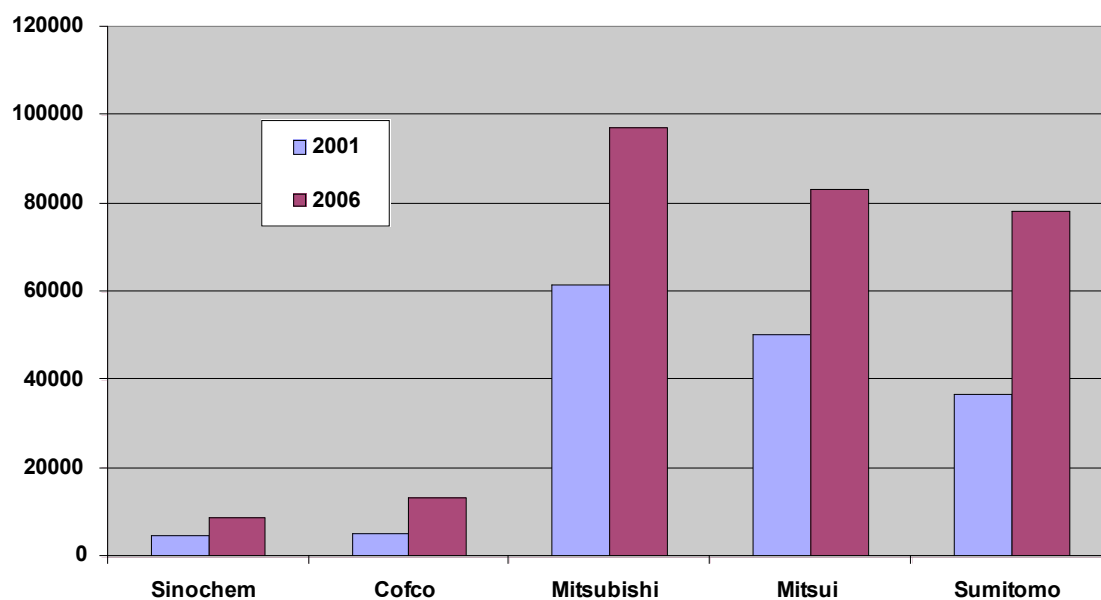
Source: Fortune 500

Annex Graph 9. Profits of Chinese trading companies and three global competitors (\$ million)



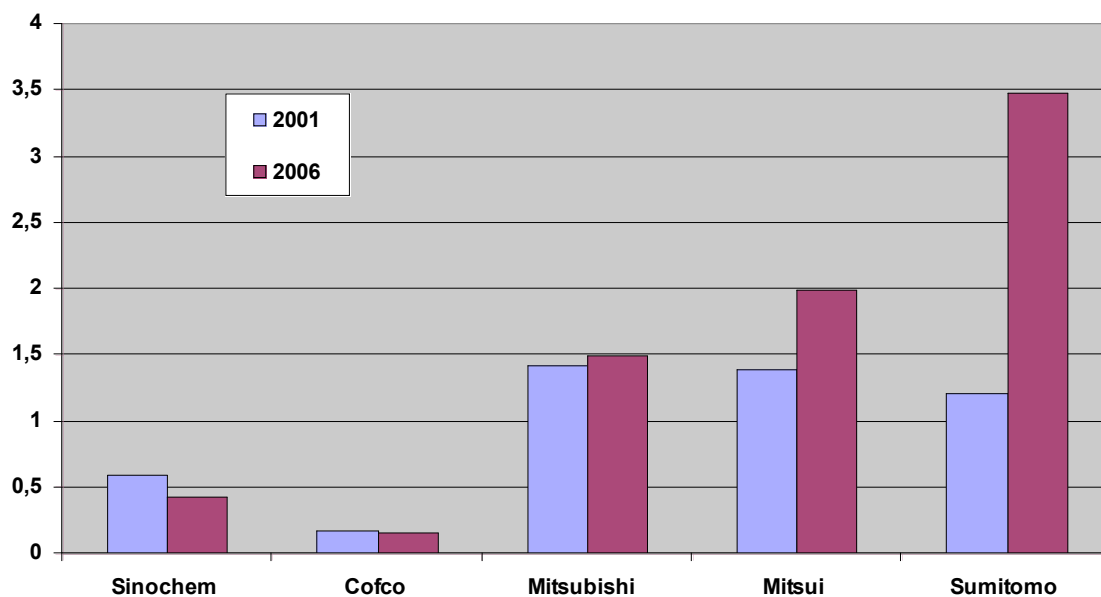
Source: Fortune 500

Annex Graph 10. Assets of Chinese trading companies and three global competitors (\$ million)



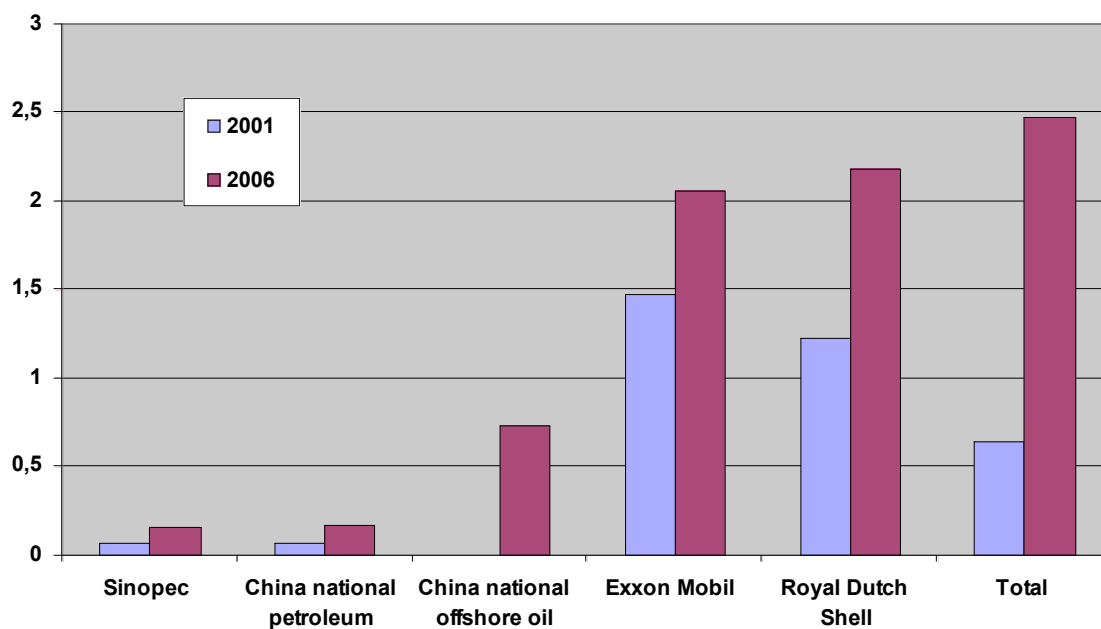
Source: Fortune 500

Annex Graph 11. Capital-intensity of the Chinese trading companies and three global competitors



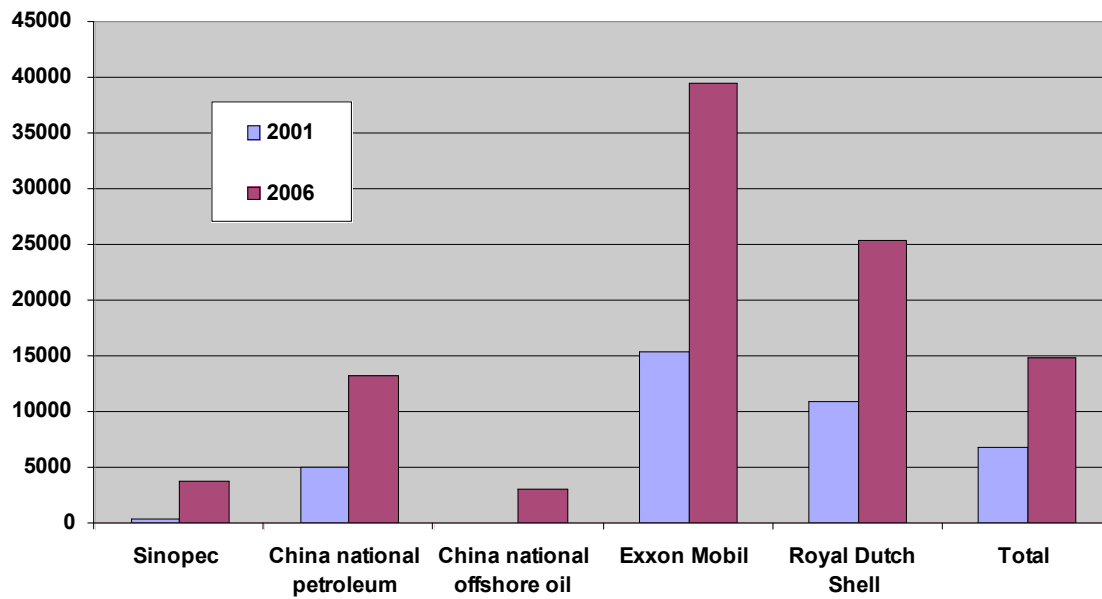
Source: Fortune 500

Annex Graph 12. Capital-intensity of the Chinese oil companies and three global competitors



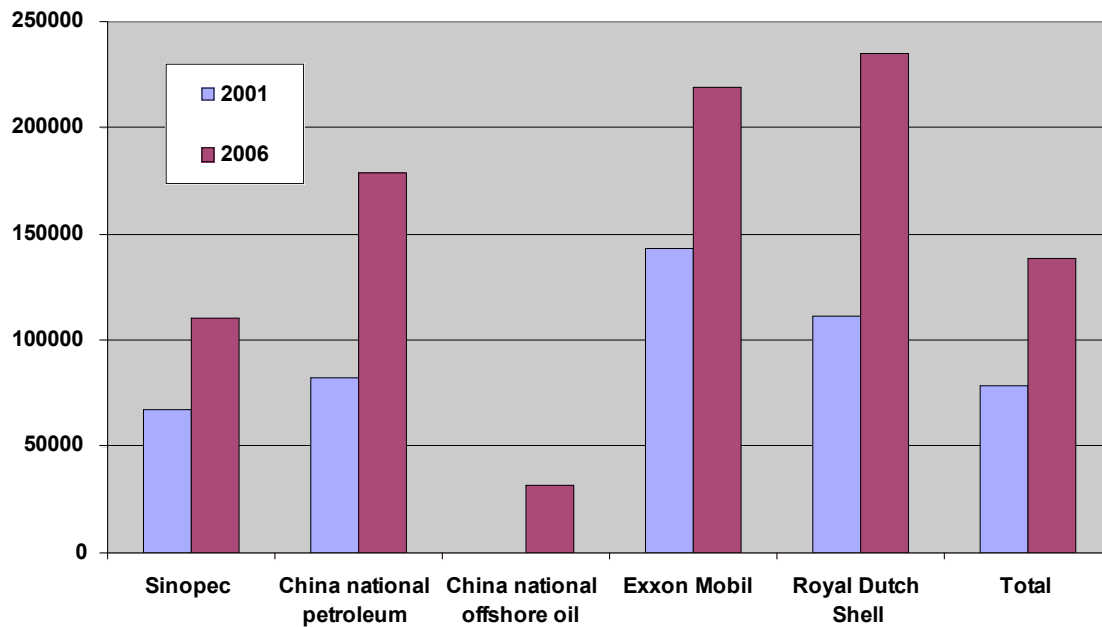
Source: Fortune 500

**Annex Graph 13. Profits of Chinese oil firms
and three global competitors(\$ million)**



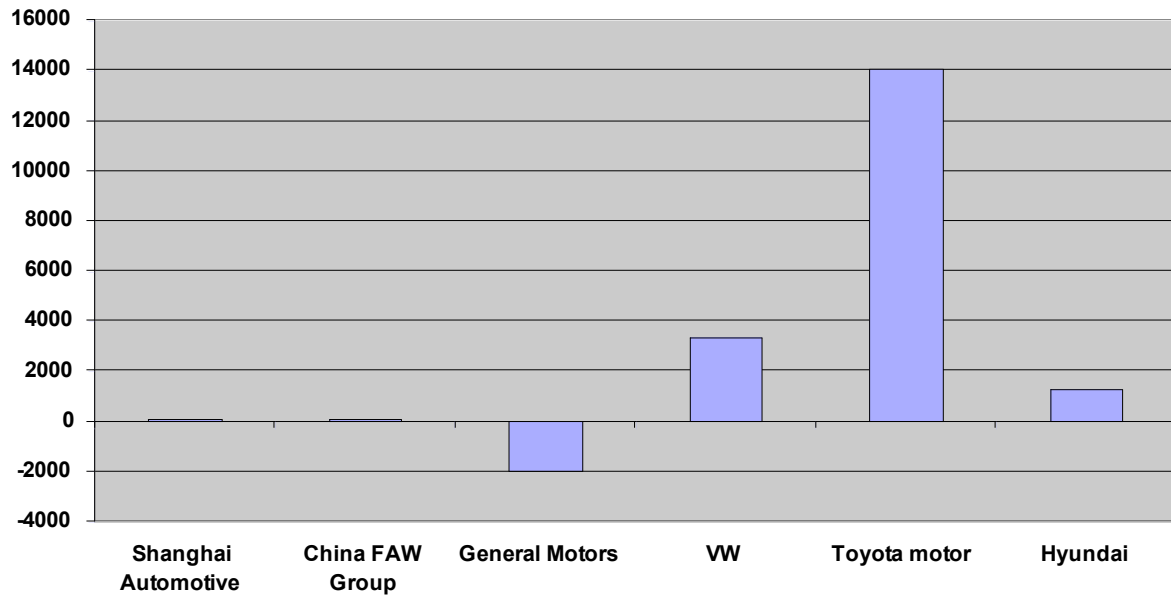
Source: Fortune 500

**Annex Graph 14. Assets of the Chinese oil companies
and three global competitors**



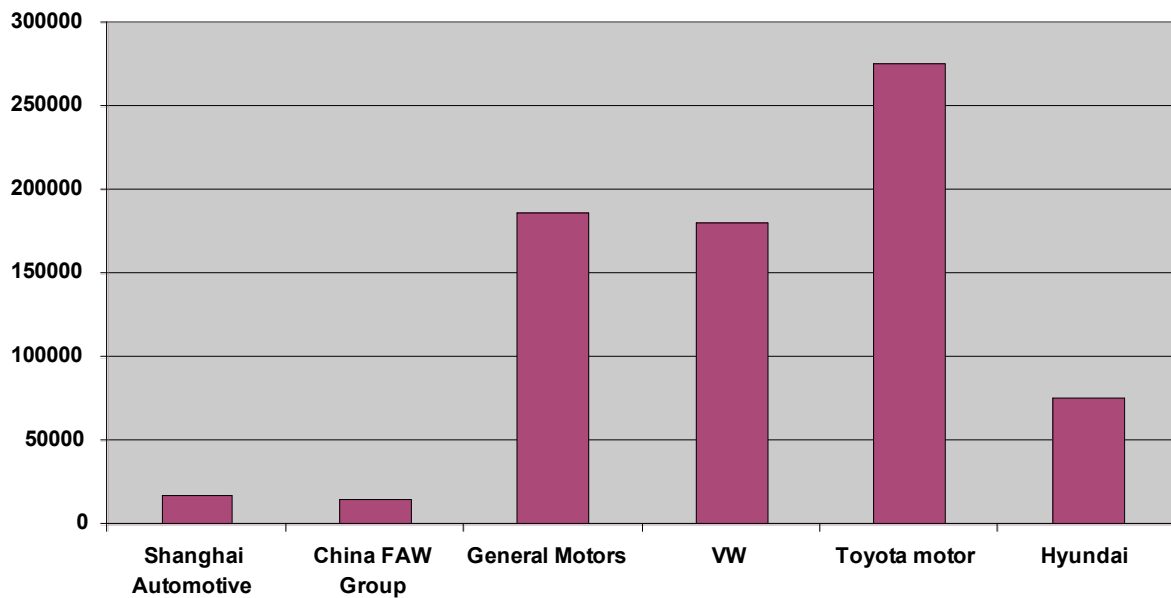
Source: Fortune 500

Annex Graph 15. Profits of the largest Chinese carmakers and four global competitors in 2006 (\$ million)



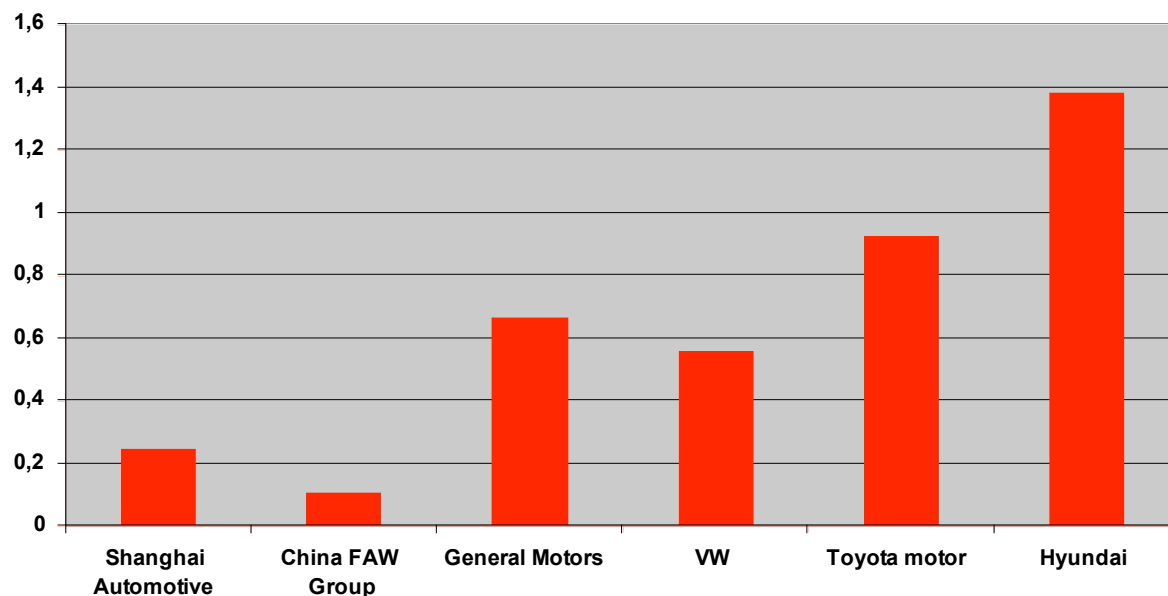
Source: Fortune 500

Annex Graph 16. Assets of the largest Chinese carmakers and four global competitors in 2006 (\$ million)



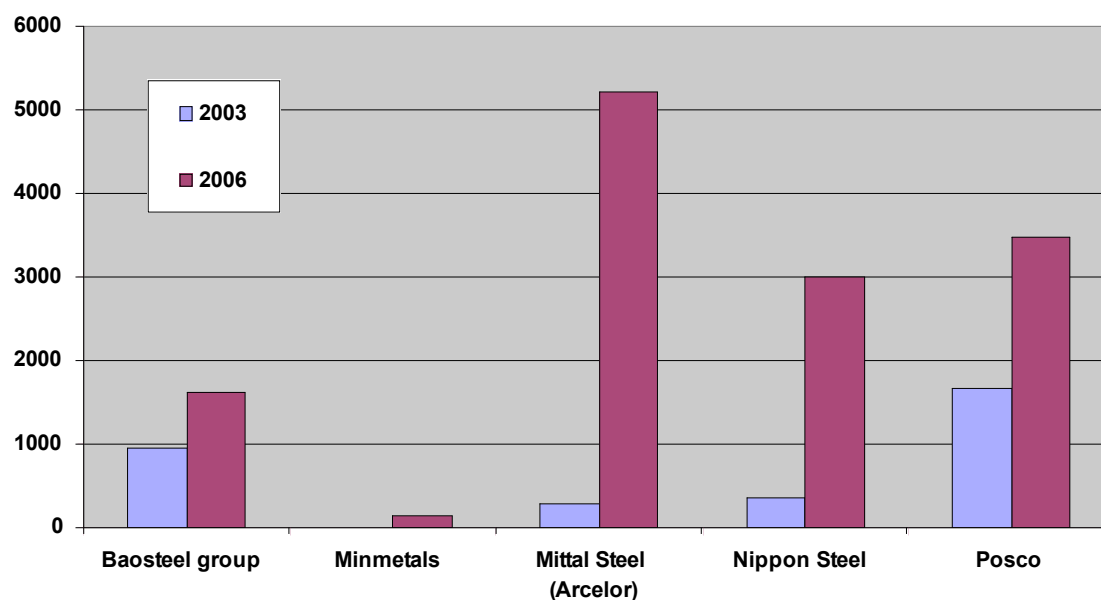
Source: Fortune 500

Annex Graph 17. Capital-intensity of the largest Chinese carmakers and four global competitors in 2006



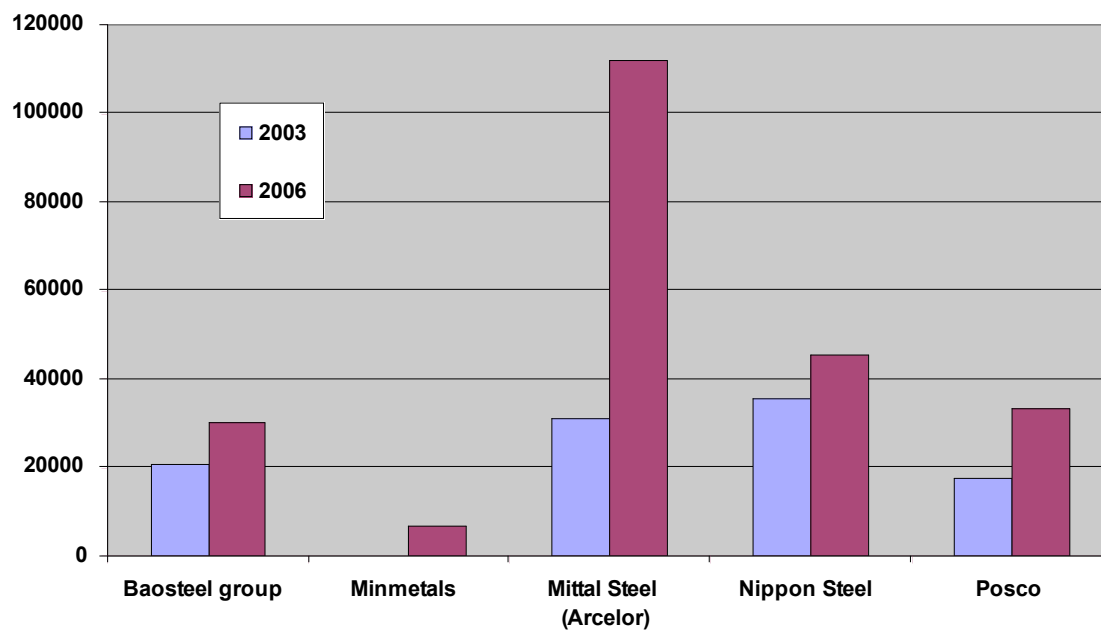
Source: Fortune 500

Annex Graph 18. Profits of the Chinese metal firms and three global competitors (\$ million)



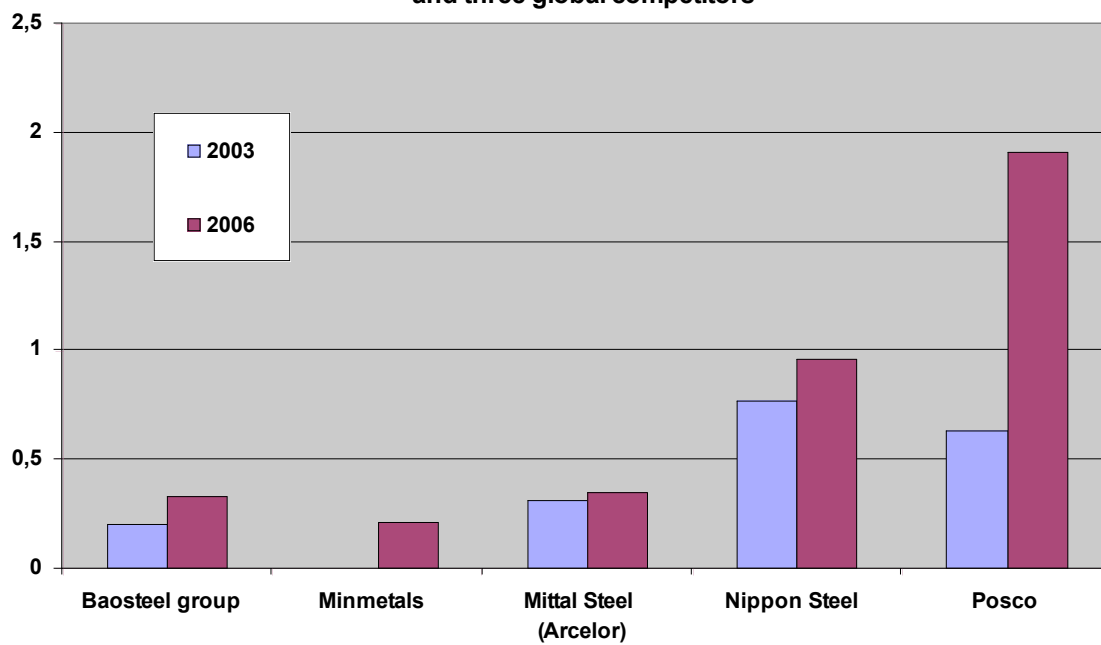
Source: Fortune 500

Annex Graph 19. Assets of the Chinese metal firms and three global competitors (\$ million)



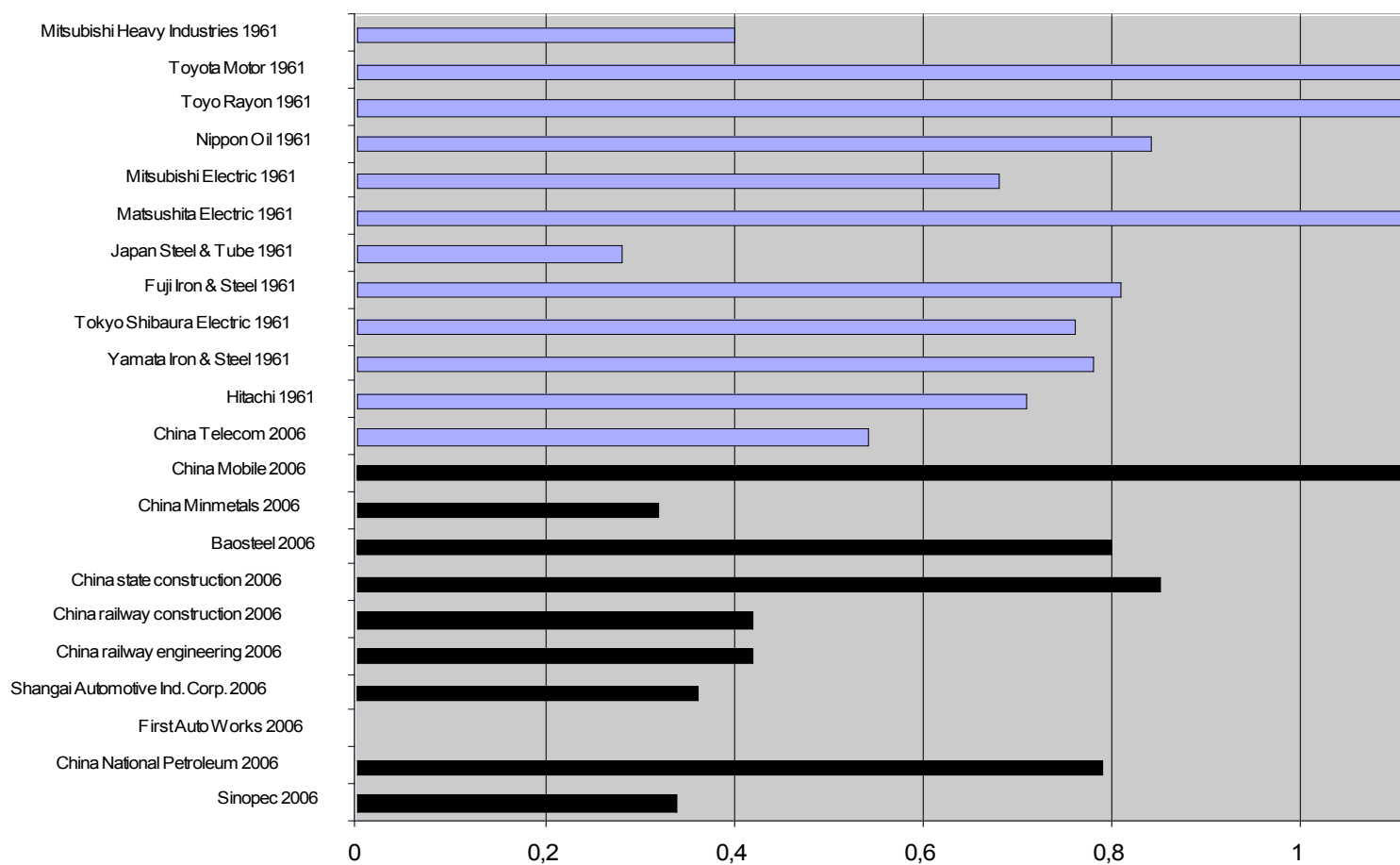
Source: Fortune 500

Annex Graph 20. Capital-intensity of Chinese metal firms and three global competitors

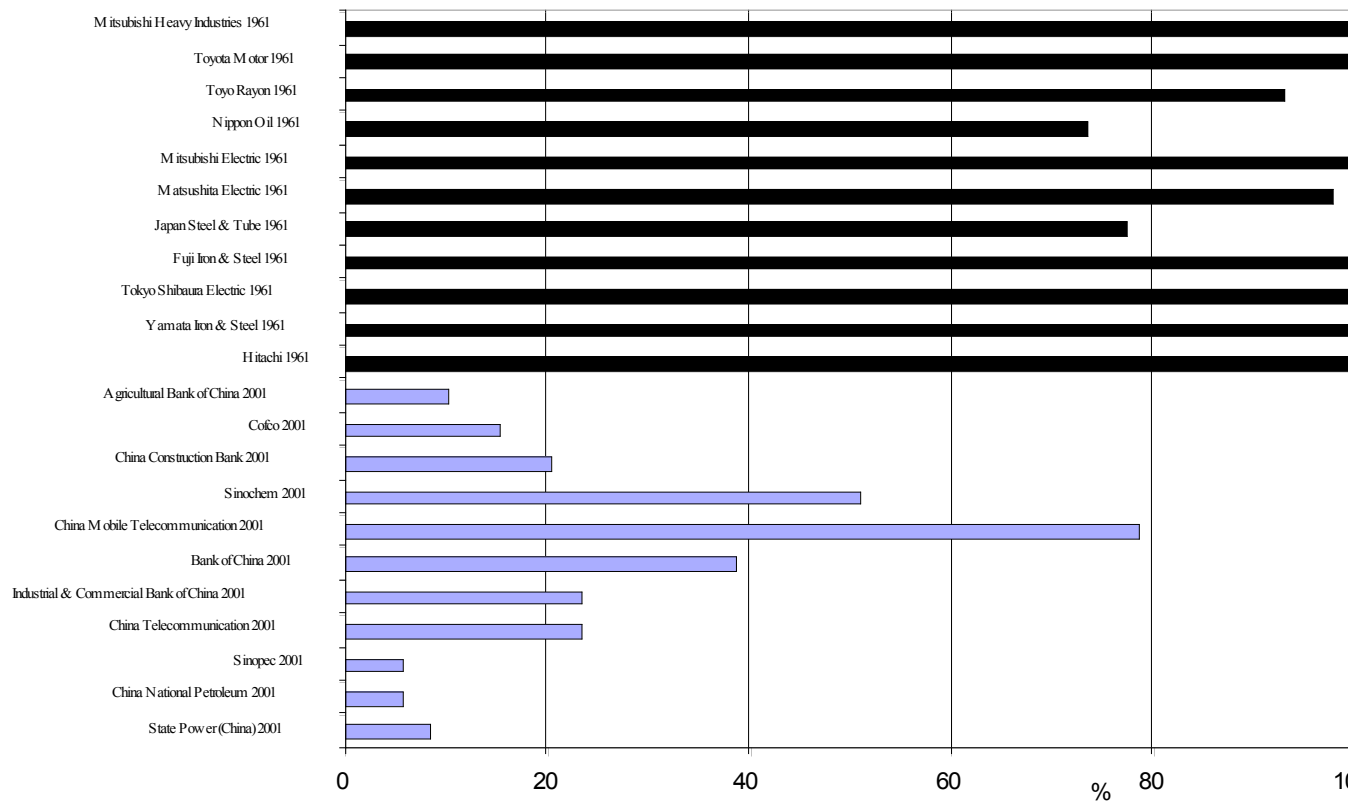


Source: Fortune 500

Annex Graph 21. Comparison of Japanese largest firms in 1961 and Chinese largest firms in 2006
Profits as % of assets.



**Annex. Graph 22. Profit / Assets ratio of the firm in % of the industry average ratio
(firms of the industry belonging to the global 500 firms)**



Source: Fortune 500

**Annex. Graph 23. Profit / Assets ratio of the firm in % of the industry average rat
(firms of the industry belonging to the global 500 firms)**

