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The Asia Strategy of Japanese Multinationals: Focus on China

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Abstract

The emergence of China and the progress in the regional economic integration of East Asia are likely to have a profound impact on the management of multinational corporations (MNCs) in East Asia with the increasing attraction of China as a production base as well as a market and the structural changes in the Asian market as a whole. While Japanese MNCs have had a relatively greater presence in East Asia, their backyard, than American and European MNCs, they have not performed as well – worse than American MNCs, for example. Japanese MNCs have been laggards in the most important Chinese domestic market.

In addition to the cyclical factors such as the negative impact of the Asian Financial Crisis in 1997-98 particularly on their ASEAN operations and the impact of the lost decade of the Japanese economy in the 1990s, the underperformance of Japanese MNCs in China is probably the combined result of the different strategies of Japanese MNCs and American and European MNCs in China. These differences are as follows:

First, Japanese firms' investment in China has been more gradual because of the need to preserve their large stock of investment in ASEAN countries. Their recent shift of investment to China has brought them more in balance with the investment pattern of American and European MNCs in the region. Second, Japanese MNCs have lagged American corporations in building international production networks with extensive outsourcing of labor-intensive functions in low-cost countries such as China. Japanese corporations have gradually de-integrated their production chains and shifted more production to China. Third, Japanese investments in China have focused on building export platforms and de-emphasized market-seeking. Japanese investments in China are naturally more production-oriented because geographical proximity makes it easier to build production networks, but the recent shift to market-seeking investments has restored some balance. Fourth, most importantly, American and European MNCs are more strategic in their involvement in China in the sense that they design functional strategies to serve their marketing goal. Moreover, they have been better in dealing with governments in China to secure market access. Fifth, American and European corporations have done a better job of localizing their operations in terms of management and R&D.

Some of the differences in China strategies between Japanese and non-Japanese MNCs are probably due to different types of innovation systems. Japanese MNCs' lower degrees of production de-integration, strategic orientation and localization can be explained by their greater reliance on experience-based tacit knowledge and an integral production system involving extensive collaboration among closely knit groups and less reliance on logical, explicit knowledge and a modular production system. Japanese corporations need to capitalize on the strengths of their innovation and production systems and correct their weaknesses by learning from the strategies of American and European MNCs. In fact, they are moving in that direction.

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Introduction

The emergence of China and the progress in the regional economic integration in East Asia are likely to have a profound impact on the management of multinational corporations (MNCs) in East Asia as they are increasingly attracted to China as a market as well as a production base and as the Asian market as a whole undergoes structural changes. Negative evaluation of Japanese investment in China is aplenty, both within Japan and abroad, however. Japanese investment in China is behind not only that of U.S. and European MNCs but also that of Taiwanese and Korean firms, and its performance has been inferior to the performance of U.S., European, Taiwanese, and Korean investment. The inferior performance is usually attributed to two basic reasons. One is that Japanese MNCs have not adequately benefited from the rapidly growing Chinese domestic demand. This is because, while U.S. and European investments in China are mostly seeking domestic demand, Japanese investments are overwhelmingly designed to utilize China as an export platform, particularly for exports to Japan. The other major reason cited is that Japanese investment has not adequately benefited from China's domestic human and knowledge resources because of a failure so far to localize operations. While U.S. and European MNCs are willing to transfer technology through such measures as locating R&D facilities in China, Japanese firms are thought to be reluctant to transfer technology. Moreover, the domestic content of Japanese production in China is much lower than that of U.S. and European production. Furthermore, management of Japanese subsidiaries in China is localized to a much lesser degree than that of U.S. and European subsidiaries, and Japanese MNCs have not benefited enough from local human resources and the knowledge they bring with them.

The basic questions of research are: first, are these allegations true, second, if so, what are the reasons, and third, what are areas for improvement both in management and public policies. The methodology is as follows. I categorized corporate activities of U.S., European, Taiwanese, Korean, and Japanese MNCs in East Asia according to eight management functions, based on reports in newspaper and journal articles and corporate interviews. The management functions are: marketing, production and procurement, research and development and technology transfer, logistics, human resource management, financial management, equity participation and other strategic alliances, and regional headquarters. (I do not discuss financial strategy in this paper because I have not obtained enough data.) Obviously, MNCs' strategies in these categories are not independent but related to each other. I tried to deduce the general directions of management and general causes for such directions, and then I compared those directions and causes between Japanese and non-Japanese MNCs.

1. The Presence of MNCs in East Asia and Their Performance

In this section, I compare the presence and performance of Japanese and non-Japanese MNCs, first, in East Asia as a whole and, next, in China.

1.1. Japanese and Non-Japanese MNCs in East Asia

Japanese Firms Shifting Investment Focus from ASEAN to China

In terms of overseas investment, East Asia as a whole and China are more important for Japanese MNCs than for U.S. and European MNCs. East Asian economies have a much greater weight in direct investment from Japan, and the amount of direct investment in ASEAN economies by Japan has been much higher for the U.S. and Europe. Moreover, Japan sends a larger proportion of its direct investment to China than do the U.S. or Europe.

For the United States, foreign direct investment outstanding in East Asia excluding Japan (China, NIEs and four ASEAN countries - Malaysia, Thailand, the Philippines and Indonesia - combined) amounted to U.S.$66.7 billion at the end of 1996, which was slightly less than the ¥8.98 trillion (about U.S$78.8 billion) Japanese investment in the area at the time (Table 1). Japanese investment in East Asia had surged in response to the sharp appreciation of the yen since 1985. However, U.S. investment grew rapidly during the second half of the 1990s to reach U.S.$111.6 billion at the end of 2001, outstripping Japan's investment of ¥6.31 trillion (about U.S.$48.0), which actually declined from 1996, probably due to the writing down of assets in ASEAN as a result of the Asian Crisis. East Asia receives a much larger share of Japan's total global outstanding investment—33.8% at the end of 1996 and 19.1% at the end of 2001—than of U.S. global investment—8.4% at the end of 1996 and 8.1% at the end of 2001.

MNCs in general have shifted their investment from ASEAN to China significantly since the Asian Crisis. China has received investment of over U.S.$40 billion annually while investment in the six countries of ASEAN (ASEAN6)—Singapore, Malaysia, Thailand, the Philippines, Indonesia and Vietnam—shrank in the post-crisis period (Table 2). While China received just 1.3 times the amount of foreign investment that ASEAN6 received during the period from 1991 to 1996, the gap widened to 4.3 times after the crisis. The amount of U.S. investment in China grew rapidly in the second half of the 1990s from US$3.8 billion at the end of 1996 to US$10.5 billion at the end of 2001, which was about equal to Japan's outstanding investment at the time. During this time, Japan's outstanding investment in China grew more moderately from ¥0.9 trillion (about U.S.$8.1 billion) at the end of 1996 to ¥1.3 trillion (about U.S. $10.0 billion) at the end of 2001 (Table 1). At the same time, Japan's outstanding investment in ASEAN4 shrank from ¥4.82 trillion (about U.S.$41.6 billion) at the end of 1996 to ¥2.3 trillion (about U.S.$17.6 billion) at the end of 2001. Since this shrinkage probably

reflects write-downs due to the major exchange rate adjustment, the real Japanese investment in ASEAN should be much greater.

Thus, while for American and European MNCs, which have not invested in ASEAN significantly, investment in China is straight forward, for Japanese MNCs, which have a large stock of investment in ASEAN, investment in China is a delicate balancing act. They need to increase their investment in China to benefit from large new opportunities while at the same time defending their existing business bases in ASEAN. Japanese MNCs tend to benefit from their higher shares in ASEAN countries than in China. As ASEAN economies have more or less recovered from the damage inflicted by the Asian Crisis and there is growing integration of ASEAN economies as a result of the progress of the ASEAN Free Trade Area (AFTA), Japanese firms are beginning to have more confidence in ASEAN as a market.

The greater extent of their past investment in Asia, and in ASEAN in particular, gives Japanese MNCs a different perspective on China compared to American and also European MNCs. For American and European MNCs, investment in China is straightforward because they have not invested significantly in ASEAN except in Singapore heretofore. For Japanese MNCs, however, investment in China is a delicate balancing act, because they already have a large stock of investment in ASEAN. They need to increase investment in China to benefit from large new opportunities while at the same time defending existing business bases in ASEAN. Moreover, Japanese firms are beginning to have more confidence in ASEAN as a market, since the ASEAN economies have more or less recovered from the Asian Crisis and they are becoming more integrated with the progress of the ASEAN Free Trade Area (AFTA).

Nevertheless, the shift of investment from ASEAN to China is a natural process to adjust to the actual balance of the two economies in size and growth prospects in response to the opening of the Chinese economy. In 2001 the Chinese economy was 2.3 times as large as the total of the five ASEAN economies in nominal terms and 3.2 times as large in purchasing power parity (Table 3). Moreover, it is growing much faster. Although this implies that opportunities for selling to China's domestic markets are greater than opportunities for selling to ASEAN markets, Japanese MNCs control ASEAN markets while they have a much weaker market position in Chinese markets. Moreover, China is more attractive than ASEAN countries in general as a manufacturing base for export for labor-intensive industries because of its greater supply of low-cost labor due to its large population, low average income, and wide internal income disparities (Table 4).

The regional management strategies of Japanese MNCs in East Asia generally have three components: management of ASEAN region, management of China, and management of East

Asia as a whole. This regional management essentially involves coordination with the international production network and local marketing. While Japanese MNCs clearly need to shift their emphasis from ASEAN to China, they need to do it by preserving their competitive advantage in ASEAN and also by leveraging on their investment in ASEAN.

Japanese Investment Less Profitable

Japanese investment in East Asia is not as profitable as American investment there, although it is more profitable than the average for Japan's investments globally. The returns on Japan's direct investment in East Asia fell drastically to negative territory after the Asian Crisis, –4.8% in 1999 and –2.8% in 2000, but profitability has recovered sharply since then to 9.0% in 2001 and 10.2% in 2002. While Japan's 2002 figure was lower than America's 16.4% return on investment in the region in that year, the profitability gap between Japanese and U.S. investments has been narrowing since 2001 (Table 5), and Japan's direct investments in East Asia returned substantially more than its average return on direct investment globally, which was – 5.7% in 2001 and 5.5% in 2002.

The return on Japanese direct investment in China was meager, hovering around zero percent until 2000, even though the Asian Crisis had not affected it. The profitability of investments in China has improved significantly since then to 6.4% in 2001 and 8.2% in 2002, however. According to a survey by the JBIC Institute, the satisfaction level of Japanese direct investment in China has continued to improve until leveling off in 2002 due to the cyclical downturn of global economic climate and the satisfaction level has reached the same level as in other areas (Table 6).

The rapid increase in America's presence in East Asia, particularly in China, since the second half of the 1990s and the high profitability of U.S. direct investment in East Asia are in parallel with the favorable global performance of American corporations in recent years. The waning Japanese presence and the low profitability of its direct investment in East Asia reflect the weak performance of Japanese corporations due to the long stagnancy of Japan's economy and the damage inflicted on them by the Asian Crisis. However, the above statistics show that the performance of Japanese corporations in East Asia including China has been recovering significantly since the turn of the century. Nevertheless, Japanese MNCs still need to rebuild profitability in ASEAN and to establish profitability in China.

1.2. MNCs in China

NIEs Dominate FDI in China

Despite our focus on MNCs from Japan, the United States and Europe, the dominant foreign investors in China so far have actually been NIEs, Hong Kong and Taiwan in particular.

Neighboring economies have long maintained large shares in foreign direct investment (FDI) in China. According to Chinese statistics, Hong Kong dominated direct investment in China with a share that remained around 60% from 1987 until 1991. China's sources of inward direct investment have diversified since then and Hong Kong's share declined to around 40% for 1996-2002 (Table 7). These same statistics show Taiwan with a much smaller presence, accounting for 7.5% of China's inward direct investment in the period 1987-1991. That share decreased to 6.9% for 1996-2002. These data likely overstate the presence of Hong Kong and understate the presence of Taiwan, however. Official Chinese statistics must significantly overstate Hong Kong's share because they include investment by mainland subsidiaries located in Hong Kong, or so called round-tripping.[1] They must also include investment by subsidiaries of other foreign companies that are based in Hong Kong. On the other hand, official Chinese figures must substantially understate investment from Taiwan because they neglect indirect investment through foreign locations and unreported investments.

Investments in China from the Asian NIEs differ from investments by advanced economies. First, the average size of investments from neighboring economies is generally smaller than that of investments from advanced economies. Investments from Hong Kong on average are slightly smaller than ones by Americans and Japanese, but Taiwanese and Korean investments have been much smaller (Table 8). Moreover, FDI from NIEs tends to focus on the areas of China that are closer to the investing economies.

Taiwanese and Hong Kong investment in China was mainly in labor-intensive industries such as footwear, garments and electronics assembly. For example, investment in electronics and electrical appliances accounted for 35.8% of Taiwan's FDI in China, basic metals for 9.3%, rubber products for 7.8%, chemical products for 7.3%, food and beverage for 6.2%, and precision equipment for 5.9%.[2] Korean investment has been primarily in labor-intensive industries, but there have been some large-scale investments in consumer electronics, automobiles and chemicals. Many investments from NIEs, particularly earlier investments, constituted part of an international production network linked with firms in advanced economies. For example, Taiwanese investments in Southern China mostly focused on assembling IT products and components outsourced by U.S.-based IT brand marketers such as Dell Computers, Hewlett Packard and IBM. Over time, Taiwanese investments, including these in notebook PCs and semiconductors, became larger and more high-tech in nature, moving to the Yangtze River Delta. Some large Korean conglomerates have also started to invest aggressively in high-tech sectors.

1. According to an estimate, the portion of round tripping accounts for a quarter of the total.
2. Data from *Investment Commission* Website cited by Wang (2004).

Moreover, FDI from NIEs tends to concentrate in areas of China that are close to the investing economies. Over three-fourths (76.8%) of Korean investment went to the Bohai Bay Area, mostly to neighboring Shandong, Liaoning and Tianjin provinces. About one-quarter of Hong Kong investment went to its neighboring Guandong province. About one-third of Taiwanese investment went to the South China area (Table 9). The Hong Kong, Taiwanese and Korean investment consisting mostly of SMEs has been directed to mostly their neighboring provinces, where they have strong ethnic ties

China Investments by MNCs from Advanced Economies

Among advanced economies, Japan's share of FDI in China has declined recently while the share of other advanced economies has held steady or increased. For the latest period, 1996-2002, 9.3% of China's FDI came from the United States, 8.7% from the EU, and 8.3% from Japan. The EU almost doubled its 4.7% share for 1987-91, while the share from the U.S. is the same as in 1987-91, after declining to 7.4% in 1992-95. Buoyed in part by the yen appreciation from 1985 to 1989, Japan's share of FDI into China reached 12.7% for 1987-91, but difficulties encountered with initial investments and the financial crisis at home led to a declining share in the 1990s. Japan's share fell half to 6.6% for 1992-95, and then recovered somewhat in the present period.

On average, investments from advanced economies are generally larger than those from NIEs, and investments from the EU are the largest, followed by those from the U.S. and Japan (Table 8). European direct investments in China tend to be large in scale because they are concentrated in capital-intensive industries such as automobiles, automobile parts, telecommunications, chemicals, food and pharmaceuticals and because the long distance hinders investments by European SMEs. American firms have invested in such industries as automobiles, telecommunications, electronics, chemicals, and petroleum. Over 80% of Japanese FDI in China is in manufacturing industries, while investment in service industries has picked up recently (Table 10). Manufacturing industries attracting major shares of Japan's investment include electrical and electronics, which accounted for 24.7% of Japan's total investment in China, transportation equipment which received 11.8%, chemicals, 9.0%, and machinery, 8.3%.

Most European, American and Japanese investment is concentrated in two development centers, the Yangtze River Delta, which includes Shanghai, Jiangsu, and Zhejiang, and the Bohai Bay Area, which includes Beijing and Tianjin. In 2001 52.8% of investment from the EU was located in the Yangtze River Delta and the Bohai Bay Area accounted for 28.1%. In the same year, 41.5% of U.S. investment went to the Bohai Bay Area and 34.6% to the Yangtze

River Delta while 55.4% of Japanese investment was located in the Yangtze River Delta and 30.9% in the Bohai Bay Area (Table 9).

Geographic and cultural proximity constitutes a comparative advantage for investing in a foreign country, as shown by the prominent place of the Asian NIEs as investors in China. Japan is culturally and linguistically different from China, but distance still gives Japanese MNCs have a decided advantage over European and American MNCs, particularly in production networks involving China. This partly explains why Japanese firms have used China more as an export platform, particularly back to Japan. At the same time, it shows that Japanese MNCs have not used their advantage effectively in selling to China's domestic markets.

Production Orientation of Japanese Firms

China attracts essentially two types of investment, for export platforms and for selling to its domestic markets. While European and American direct investment in China has been primarily market-oriented, Japanese investment has been oriented more to investing in production facilities for export, particularly export to Japan. Of non-Japanese foreign companies investing in China that responded to a survey by the Ministry of Economy, Trade and Industry (METI), 52.2% answered that they will strengthen their domestic sales function while only 8.7% answered that they will strengthen the final product assembly function and 17.4% intend to strengthen the production of parts (Table 11). In another survey of Japanese firms, as many as the 72.8% of respondents answered that they would strengthen the production function and 58.1% answered that they would strengthen the sales function (Table 12). Thus, roughly the same proportion of Japanese firms as non-Japanese firms intend to strengthen their sales function in China, but this percentage is much lower than the percentage of Japanese respondents intending to strengthen the production function.

Reasons for Lower Profitability of Japanese Firms in China

We can cite at least five reasons for the relatively poorer performance of Japanese direct investment in China compared to American investment (see Table 5).

First, in the electronics industry, which accounts for the largest part of Japanese investment in China, Japanese firms lost competitiveness because they failed to adapt to the structural change in production system towards a modular architecture and thus could not benefit sufficiently from outsourcing.[3] American electronics firms initiated a drive to de-integrate and modularize the vertical production chain and outsource non-core production

3. In modular production architecture, each part of a product is a module, and the production sub-functions and the product's structure are in a one-to-one relationship (Fujimoto pp. 88-89).

functions such as final assemblies and parts production, which tend to be labor- and capital-intensive. They concentrated on knowledge-intensive functions such as research and development and also on marketing to build and maintain brands. The structural change in the industry created a two-sided threat to Japanese electronics corporations, which retained vertically integrated organizations. On one hand they faced increasingly tough competition in knowledge-intensive businesses from the American and other brand-marketers in advanced countries that had concentrated in this area. On the other hand, they faced increasingly tough competition from low-cost producers organized by Taiwanese and other contract manufactures, which utilize low-wage labor in China and invest massively in capital-intensive production processes in semiconductors and other devices to supply brand marketers in advanced countries (Borrus and Haggard).[4]

Second, the measured and cautious pace of market-oriented investment by Japanese corporations allowed European and American MNCs to gain dominance in many of China's often-protected domestic markets. This meant that Japanese firms were left behind when these markets grew more rapidly than expected. Some American and European firms—such as Volkswagen in automobiles, Motorola, Nokia, and Siemens in mobile phones, and Kodak in film—have a commanding lead in many industries in China, while many have failed as well. Some Korean and Taiwanese firms, which moved in and invested aggressively, also have a strong position in some sectors, while the presence of Japanese firms is marginal (Table 13). The early movers have earned oligopolistic profits and built economies of scale, while late movers, including many Japanese firms, have been able neither to earn such profits nor to benefit from economies of scale.

Third, competition with local firms has limited the profitability of Japanese firms in China. In the JBIC survey, tough competition in the market was the factor cited by the largest percentage of firms (52.6%) as a reason for their unsatisfactory levels of profitability in China (Table 14). Also, Japanese firms in China cited competition as a factor more often than Japanese firms in any other location. Many Japanese firms in such industries as household appliances, consumer electronics, and motorcycles have to compete against domestic firms that learned to produce reasonable quality, low-cost PCs, home appliances, and mobile phones and developed nation-wide distribution channels. To a large extent, outsourcing technologies and key components in the framework of a modular production architecture have enabled Chinese

4. At the same time, Japanese manufacturing firms have continued to excel in products based on an integral architecture such as automobiles and miniature consumer electronics products, in which the sub-functions and structure (parts=modules) are in more complex relationships of one-to-many, many-to-one, and many-to-many (Fujimoto pp.89-90).

firms to develop competitive products and achieve low-cost production despite their lack of R&D capability. At the same time, Chinese consumers of food products, home appliances, and consumer electronics are price-sensitive and not so loyal to international brands, which makes it difficult for Japanese to compete against local firms. Japanese firms in China have not been able to repeat success stories they had in ASEAN and other markets where they could dominate with established brands, and they have not been able to achieve low-cost production based on scale.

Fourth, the relatively short history of investment by Japanese firms in China is another reason for their low profitability there. In the JBIC survey, 29.9% of respondents cited their low operating rate in the early period after initial investment as a reason for unsatisfactory profitability. The percentage is the highest in all areas (Table 14). Generally speaking, it takes time for FDI to begin to pay off, making profitability low in the early period. This suggests that the profitability of Japanese investments in China should improve in the future.

And finally, the lower profitability of Japanese firms in China reflects the long cyclical downturn in the profitability of Japanese firms at home and globally since the beginning of the 1990s. This has occurred due to multiple factors including stagnant domestic demand after the collapse of the bubble economy in the 1980s and the bureaucratization of Japanese management during the long period of post-war prosperity. Moreover, the previously mentioned failure of Japanese firms to adapt to the modular type production system that emerged with the information technology revolution and globalization undermined their profitability globally, not just in China, particularly in industries amenable to such a production system.

The recent rebound of the profitability of Japanese firms in China apparently reflects their correction of these weaknesses and their refocusing on their strengths. They have increased their emphasis on selling to China's domestic markets and have shifted labor-intensive operations to China. In Japan they concentrate on the development and production of high value-added products and key devices, which often rely on an integral architecture. Recently, Japanese firms have been increasingly able to capitalize on their strength in the growing Chinese markets through trade and investment.

2. Comparison of Functional Strategies of MNCs in China

We analyze seven categories of functional strategies adopted in China by MNCs from Japan and various other advanced economies. The purpose is to identify the distinctive patterns in individual functional strategies or in the strategies collectively adopted by Japanese MNCs and to see the commonalities with and differences from those adopted by non-Japanese MNCs.

2.1. Sales Strategies

Challenges in Selling to Chinese Markets

As mentioned before, European and American firms put primary emphasis on selling to China's domestic markets and Japanese firms have been also shifting the emphasis of their China operations from producing for export to selling to the domestic markets. According to the JBIC survey of Japanese firms in fiscal year 2002, 78.7% of respondents cited "response to expanding market" as a reason for their expanding activities in China in the medium term and 33.2% cited "cultivation of new customers" (Table 15).

MNCs need to adjust their sales strategies to the basic features of the Chinese market, i.e., a huge expanding market with a bias to intermediate demand for production and infrastructure construction, a collection of segmented markets separated by a vast distances with underdeveloped transportation infrastructure, a wide income gap between large cities and rural areas and among the general population, much stronger competition from domestic firms in certain industries than in other developing economies, and heavy, though lessening, government intervention in economic activities.

The complexity of the Chinese market puts MNCs at a disadvantage against domestic firms and firms from economies with close ethnic ties to China such as Taiwan and Hong Kong. MNCs need to have strategies to overcome this disadvantage. For example, they need to decide which segments of China's market they should target and how to expand to multiple segments in order to achieve economies of scale. Since domestic firms tend to dominate in less knowledge-intensive industries, in low-end products, and in industries that rely on extensive distribution channels, foreign MNCs can often differentiate their target markets from the markets of domestic firms by concentrating on high-end products. On the other hand, high-end markets become crowded by overseas firms with similar strengths. Sometimes, MNCs need to challenge domestic firms in lower-end product markets to attain economies of scale. Moreover, in a number of industries MNCs need to satisfy government policy requirements to gain access to certain segments of China's domestic markets. How to meet those requirements without undermining other objectives is a major challenge in their sales strategies.

Strategies of MNCs

Faced with these challenges, MNCs are adopting at least five types of strategies including targeting particular segments, utilizing both international and local brands, extensively researching and introducing special products for local markets, and building-up and enhancing distribution channels.

First, with regard to sales to targeted sectors, many MNCs tend to successfully target sales of high-end products to high-income population in coastal cities. Motorola of the United States, which has dominated China's mobile phone markets, concentrates on the production and sale of high-end products with high profit margins. Samsung Electronics of South Korea tried initially to target demand for low-price products, but could not compete with domestic producers. Then it reset its target at the population in the top 5% income bracket, or about 65 million people, who live in coastal cities and whose purchasing power is on a par with the population in advanced countries. Japanese firms adopted similar targeting strategies. For example, facing tough competition from domestic producers of CRT TVs, Matsushita Electric concentrated its sales efforts on high-end products such as plasma TVs, capturing more than 30% of the market. Honda targeted affluent city-dwellers and successfully introduced the higher-end Accord model instead of the more economical Civic (Ishii et al.). Kirin Beverage gained the top share in the tea category by establishing a high-quality image through an advertising campaign. Shiseido has gained one of the largest shares in the premium cosmetics market by building up a brand image. Japanese textile manufactures such as Toray have found it difficult to compete in standard products against local firms and concentrate in high-end products.

Behind the ability of MNCs to concentrate on high-end markets are their superior technology and established brands, which enable them to differentiate from local firms and from other foreign firms. Japanese automobile firms clearly have this advantage. Japanese electronics firms have also benefited from a shift in demand (both in China and globally) from IT equipment to digital consumer electronics, where their integrated development and production system enables them to rapidly develop products differentiated by internally made key devices.

MNCs in some industries have different target market strategies. Since narrowly targeting high-end products often results in excessive competition among foreign firms, some MNCs have successfully moved to middle income markets. For example, Japan's Suntory began selling medium-priced beer and gained a 40% share of Shanghai's beer market. Moreover, in industries that are subject to economies of scale, such as food and beverages, targeting specific segments makes it difficult to attain sufficient scale and limits the scope for growth. Thus, MNCs in some industries try to target diverse markets. In the electronics industry, LG Electronics of South Korea pursues a dual strategy of selling high value-added digital consumer electronics products to the high-income population in coastal cities and selling white goods to the low-income population inland. To produce and sell cosmetics for the mass

market Shiseido set up a new, joint venture in Shanghai separate from its joint venture in Beijing specialized at premium products. The two JVs use totally different brand names and distribution channels.

Second, MNCs utilize both international brands and local brands by differentiating them to sell in those highly segmented markets. International brands are usually competitive as high-end products and can be a means for foreign MNCs to differentiate from local firms. American and European consumer products firms, such as Procter & Gamble (P&G), seem to be much stronger than Japanese firms in systematically developing and defending brands in China. In some industries, local brands are competitive and foreign food firms such as Nestlé and Dannone have bought local firms to gain their brands as well as production facilities. Asahi Beer of Japan also operates five joint ventures in coastal cities selling mostly local brands.

A third sales strategy that MNCs use in China is to conduct extensive market research to devise sales strategies for the complex, rapidly changing markets. MNCs renowned for marketing expertise such as P&G and Nestlé conduct elaborate market research drawing on their wide experience in various markets accumulated over many years. American and European consumer goods firms seem to be more systematic in their marketing efforts than Japanese firms. In the beer industry, Suntory chose a mass market in Shanghai after extensive marketing research while many other MNCs stuck to the premium segment. Despite some success stories such as Shiseido and Suntory, Japanese firms seem to have a lot to learn in this area from leading European and American firms such as P&G and Nestlé.

Fourth, MNCs develop products specifically for the local market, often at R&D centers established in China. We will address this point in the later section covering R&D strategies.

A fifth strategy that foreign MNCs use in China is to make a strong effort to establish and expand their distribution channels. These efforts are particularly important in China because the country still lacks a modern, national distribution infrastructure, and domestic firms often gained an upper hand by moving early to establish national distribution channels when there were barriers to foreigner firms.

Establishing nationwide distribution channels is crucial in industries where economies of scale are significant, such as home appliances, PCs, mobile phones, and household products. For those foreign (mostly American and European) MNCs that moved in early and developed their own distribution channels in China's large cities, the next challenge is to build distribution networks in the countryside. Motorola is said to be the first mobile phone maker to have moved in this direction and Nokia is now catching up. In the automobile industry, GM divided

the Chinese market into first-class cities (Beijing, Shanghai, Guangzhou, and Chengdu), second-class cities (the other provincial capitals), and third-class cities (regional medium- and small-size cities), and it concentrated initially on the first-class cities until expanding into the second-class cities in 2004. Shiseido is organizing specialized stores in the countryside as a distribution channel for medium-priced cosmetics, capitalizing on the know-how it gained in Japan, Korea, and Taiwan at similar development stages.

Since the Chinese market is geographically vast and it requires huge investment to establish nationwide sales and after-service networks, which are necessary to market such products as consumer electronics, MNCs are concluding strategic alliances with domestic firms that already have established such networks. In the consumer electronics industry, European and Japanese firms alike have concluded strategic alliances with Chinese firms to gain access to strong distribution channels. On August 8, 2002, Philips (Netherlands) agreed with China's TCL that TCL would sell Philips brand color TVs through its subsidiaries in five provinces including Guizhou and Jianxi. Matsushita Electric has also concluded an agreement for a comprehensive alliance with TCL. It consigns sales of premium TVs and gets OEM supply of low-end TVs from TCL for sale in the Chinese market. Although Matsushita has its own distribution channels in large cities, it has not established them in inland areas. Sanyo agreed to a comprehensive alliance with Haier of China that provides for each company to sell the other's brands by sharing distribution channels in each country. In addition, Sanyo will give Haier technical assistance in key parts such as batteries, LCDs, and motors and it will supply such parts.

The ideal is for MNCs to tightly control their own distribution channels, however. In some industries, MNCs try to strengthen their grip on distribution channels by establishing their own sales networks to replace outside agents. For example, Hewlett Packard (HP) changed to direct sales of PCs in consumer electronics shops to reduce costs and increase margins. Siemens established a direct sales department responsible for sales to large specialized stores and increased its direct sales of automation equipment. GM has been building its own sales networks and flattened its distribution channel to improve feedback from consumers. Honda also adopted a sales network strategy of integrating four functions – sales, after-sales service, after-sales parts, and management of client information and market information feedback (Ishii et al.).

And finally, cooperating with China's industrial policies in order to gain access to domestic markets has been an important sales strategy followed by foreign MNCs. This is because, while China's shift towards a market economy is accelerating, particularly since its

entry to the WTO, its interventionist industrial policy is still strong and is expected to be so for the foreseeable future. China demands technology transfer as a condition for investing in some industries. European and American firms have been better than Japanese firms at acceding to such demands as a means to further their own strategic ends. Volkswagen in automobiles, Motorola in mobile phone, and Kodak in film, for example, captured the lion's share of their respective markets by cooperating with the government's industrial policies. GM tried to establish good relations with the Chinese government including having its CEO visit in the early period of China's reform and opening policy. As a reward for Kodak's 1997 agreement to absorb ailing SOEs with huge debt by keeping employment and investing US$1 billion, the government banned investments by other foreign film companies for four years. As a result, Kodak's market share rose to 65% while Fuji's declined to 25%.[5]

2.2. Production and Procurement Strategies

Since China has a comparative advantage in labor-intensive industries and industrial clusters have developed in such areas as the Pearl River Delta and the Yangtze Delta, MNCs have been attracted to China as an export base. They have expanded local production in such industries as garments and electronics with such motives. Moreover, local production has become crucial for supplying products to domestic markets. In industries such as telecommunication equipment and automobiles, local production is required by industrial policy often through joint ventures with local partners. Furthermore, increasing production for both export and domestic sales purposes attracted investments by suppliers of intermediate goods, which served to deepen industrial clusters, raising China's competitive position further.

The tendency for Japanese investments in China to be more production-oriented than European and American enterprises can be explained by at least three factors. First, Japan's industrial structure is more oriented toward manufacturing than America's or Europe's; relatively speaking, Japanese investments, not only in China but also globally, are more concentrated in manufacturing. Second, geographical proximity makes it easier for Japanese manufacturers to operate international production networks with China than for European and American manufacturers. Third, de-integration of the production system is less advanced in Japan than in the U.S. For example, the international production networks of American IT firms based on the modular architecture framework involve Taiwanese and other contract manufactures and their suppliers based in China, and direct investment by American manufactures is therefore limited. Japanese firms tend to retain an integrated production architecture, and their use of such contract manufacturers, although increasing recently, is much

5. *Asian Wall Street Journal* Jan. 9, 2003.

less. As a result, Japanese firms themselves tend to invest directly in production facilities in China.

Shift of Production from ASEAN to China

MNCs firms have shifted their production from ASEAN to China in recent years because China's human resources and more developed industrial clusters create a comparative advantage over ASEAN in manufacturing. There have been notable shifts involving prominent companies such as Sony, which divested its production facility in Indonesia. Japanese firms are shifting their investment from ASEAN to adjust to the change in the geo-economic situation. Many Japanese electronics firms either closed factories or reduced employees in ASEAN countries in the late 1990s and early 2000s. However, that does not mean Japanese companies, which have a large stock of investment in ASEAN, will abandon ASEAN altogether for China. They try to strike a balance between their presence in ASEAN and in China. As seen in Table 16, a much higher percentage of Japanese firms answered that they will establish new production bases in China (31.9%) than in ASEAN (11.1%). However, a higher percentage of Japanese firms in ASEAN (48.1%) answered they will expand existing production lines.

Japanese firms that earlier invested in separate production bases in individual ASEAN countries are now trying to consolidate the management of these facilities in order take advantage of the internal market that will be created with AFTA. Japanese automobile makers such as Toyota and Honda have increased their stake in production firms in several ASEAN countries so that they can integrate their production systems more freely.

As mentioned before, MNCs have constructed international production networks by positioning China as the core-manufacturing center, particularly in labor-intensive assembly operation. U.S. IT firms have formed such international production networks involving Taiwanese and other subsystem providers. Japanese firms tended to establish such networks between Japan and China. Moreover, attempts to establish international production networks encompassing ASEAN and China are particularly relevant for Japanese manufacturers because of their stock of existing investments in ASEAN production bases. In the automobile industry, Honda, for example, is reportedly making its Guangzhou factory an export base for Asian and European markets by supplying parts from Thailand, Malaysia, and Indonesia. This project is thought to be feasible now because of China's elimination of the 40% local content requirement.[6] This suggests that a reduction of trade barriers between ASEAN and China through such mechanisms as the agreed ASEAN-China FTA will induce intra-firm trade by

6. Reported by *Asian Wall Street Journal* July 11, 2002. Moreover, it is said that another motive is to gain a majority stake by making the second factory specialized in export. The report also says that Toyota doubts whether such a scheme will satisfy quality requirements.

Japanese and other MNCs.

MNCs invest in local production also to supply domestic markets. This pull factor is particularly strong in the case of China because its realized and potential market is so large and also because of its industrial policy intervention. Local production is crucial for economic reasons in some industries such as the food and beverage industry because of perishable products. Another purpose of local production to supply domestic markets is to overcome import barriers created by the industrial policies of local governments. As it is necessary to produce locally to have access to local markets in many industries, MNCs have established joint ventures with local firms, mostly SOEs. Primary examples are telecommunication equipment and automobiles. European and American MNCs were more aggressive in pursuing this strategy than Japanese MNCs and used it to acquire a dominant market position in some sectors. Motorola was the first foreign firm to invest in local production in the mobile phone industry and gained market position in return. Nokia followed suit and now produces most of the mobile phones it sells in China locally as well as some for export.

Japanese firms are generally laggards in this respect and have started to play a catch-up strategy. This phenomenon is particularly conspicuous in the automobile industry, where Toyota, Honda, and Nissan have each recently expanded production capacity by forming joint ventures with local SOEs. This policy-responding local production obviously entails a long-term cost of either reducing management freedom or sticking with inefficient partners if government intervention is reduced over time.

MNCs try to increase the local content of production either for economic reasons such as purchasing cheaper inputs and quicker delivery or for meeting industrial policy requirements. In the electronics industry, local procurement of parts is generally economically justified as the parts industry has expanded greatly, particularly in Southern China. Motorola has increased its local content to cooperate with the Chinese government's policy of increasing local content and also to reduce costs. Its company-wide local content ratio in China rose from 20% in 1994 to 65% in 2002. Japanese electronics manufactures also strive to increase local content. Matsushita Electric increased its local content ratio in CRT TVs from 22% in 1999 to 78% next year by cultivating local suppliers[7]. In the automotive industry, however, the increase in local content is more of a political decision because locally produced parts are still inferior in quality or often more expensive. Ford made an aggressive plan to procure automobile parts not only for local production but also for global production, but it is reported to have faced difficulties in

7. An article in *Nikkei Business* December 8, 2003.

achieving the goal.[8] Japanese automotive manufacturers also try to increase local content. Honda has achieved a local content ratio of more than 60% thanks to the investment by tens of Japanese suppliers in China and also an improvement of local suppliers (Ishii et al.).

Such increased investment in production facilities by MNCs together with increased production by domestic enterprises will induce investment in supporting industries by both domestic and foreign firms and enhance industrial clusters in China, as has taken place already in the electronics industry. Japanese firms are particularly aggressive in investing in semiconductor fabrication plants along with Taiwanese firms.

Cross-currents towards a Modular as well as an Integral Production System

The increasing use of modular architecture in production systems has been a major force behind advanced countries' shifting of production to China, particularly production for export, as I have described before. It has enabled brand marketers in advanced economies to outsource labor-intensive production processes to low-wage countries such as China. Moreover, it has enabled local producers, which have a marketing edge in domestic markets, to compete effectively with MNCs by outsourcing R&D and key components as they have done in PCs, household appliances, cellular phones and also low-end motorcycles. A counter-trend to an integral architecture for production systems is now emerging, however. As digital technology has become crucial in producing electronics products, customized semiconductors have become a key technology to develop and differentiate products. For example, Motorola, whose once dominant market share of mobile phones has been eroded by competition from local brand manufacturers, introduced a new business model of selling the service of developing new mobile phone models together with semiconductors as key components. Similarly, Japanese electronics firms have invested in production of semiconductors in China in order to sell to China's domestic markets. In a way, their strategy is to earn profits in the middle of the "smile curve" by producing key components such as semiconductors.

Moreover, while continuing to invest in China, Japanese firms are becoming involved in a new counter-trend of shifting production of high-end products back to Japan from China and elsewhere. This is because the businesses of digital products such as mobile phones, digital cameras and flat display TVs, which have very short product cycles, need rapid development and production with continuous collaboration among researchers, engineers and suppliers. In this process, some Japanese firms have found that an integral architecture is more advantageous and that it is effective to do R&D and production in Japan since the increasing importance of key components reduces the weight of labor costs in total costs. Canon has offered a model for

8. *Asian Wall Street Journal*, June 20, 2003.

this type of strategy by emphasizing production in Japan by shifting production from a belt-conveyer system to a cell-production system, which requires more skilled labor. Japanese firms also believe that focusing on key devices and emphasizing production in Japan will reduce the risk of losing technological leadership by having their technologies copied.

These developments are significant for Japanese MNCs because they introduce a business model that complements the traditional Japanese corporate system and should enable them to regain profitability by aggressively developing new products and pouring in resources to cultivate the Chinese markets.[9]

2.3. Logistics Strategies

MNCs' strategies in sales and in production and procurement need to be supported by their logistics capability. This aspect is particularly important because business models in the information age are increasingly dependent on the efficient management of logistics and it is difficult to achieve logistics efficiency in China as the transportation infrastructure is not adequately developed, particularly in the inland area, and the logistics industry is still underdeveloped. MNCs have found that poor logistics constrains the growth of their businesses, particularly the pursuit of expanded sales in the domestic market. For example, Wal-Mart,[10] whose business model is heavily dependent on logistics efficiency, has been slowed in developing domestic business by the logistics environment and its engagement with China is mostly confined to purchases of Chinese products for its stores in the United States. As the production of Japanese corporations in China becomes more sophisticated and as Japanese MNCs shift their emphasis from utilizing China as an export platform to selling to China's domestic market, the poor quality of logistics has become a constraint on their China strategies. Moreover, for Japanese corporations, which have extensive investments both in production facilities and sales channels in ASEAN countries, the efficiency of integrated supply chain management (SCM) encompassing China, ASEAN and Japan will become crucial (Ishii et al.).

Many foreign MNCs have started to use third-party logistics service providers (3PLs) in China. Nokia uses Excel, a 3PL, for its operations in China and Southeast Asia. Unilever uses a Shanghai-based local 3PL for 90% of its distribution. Volkswagen uses the subsidiary of TPG, a Dutch 3PL, to transport cars and parts. GM has developed an e-supply system to manage its value chain on-line. Dell Computer, which had supplied all its Asian markets from

9. This strategy also enable them to keep a competitive edge by reducing production costs rapidly with the learning curve effect, which strongly accompanies production of key devices such as semiconductors (An article on Shukan Tokyo Keizai, Jan. 31, 2004).
10. SinoCast China Business Daily News Jan. 8, 2003.

its factory in Penang, Malaysia, decided to open a factory in Xiamen, Fujian Province, China to supply mainly Japan because of the city's geographical proximity to Japan and the abundant labor. The move to China increased delivery time because shipments to Japan involved overland transport to Shenzhen and then to Hong Kong and air transport from Hong Kong. To solve this logistics problem the company negotiated direct flights from Xiamen to Japan, which started from March, 2001. Japanese competitors in PC manufacturing have faced the challenge of reorganizing their logistics to reduce lead-times (Ishii et al.).

Japanese MNCs have increased their focus on logistics and made investments and formed alliances to achieve efficiency. Matsushita Electric and Sanyo are reported to have entered into agreements with local companies in order to develop their logistics in China. Since the infrastructure in rural China is not developed enough for Matsushita to manage distribution itself, the company allied with TCL to use its infrastructure to distribute Matsushita's products.[11] On the other hand, Canon has allied with a Japanese firm, Mitsubishi Trading Corporation, to construct a dedicated logistics network for its products in China. Together Cannon and Mitsubishi will build about 40 warehouses nationwide and aim to deliver products anywhere in China within three days after receiving orders. (Ishii et al.)

2.4. R&D Strategies

MNCs have increased their R&D activities in China. As of the middle of 2003, 82 foreign firms had established R&D bases (Table 17). Japan is on a par with the U.S. and European countries in terms of the number of companies with R&D bases in China. However, individually, Japanese R&D investments are still generally smaller in scale and European and American firms are more aggressive in local R&D, as revealed by the JBIC surveys cited before (Tables 11 and 12). General Motors (GM), for example, brought the R&D function to China and established an independent automobile R&D corporation, PATAC, as a joint venture in Shanghai in 1997 in response to a request by the Chinese government when other foreign automobile companies operating in China hesitated to bring the R&D function out of fear of technology dilution.[12] The venture was very much localized from the outset as there were just 13 foreigners among its initial 650 employees. Since China's domestic markets are still protected to a larger degree than other large markets and the Chinese government has pursued a policy of trading technology for market access, this perception of the reluctant technology transfer may be working as a constraint on the cultivation of Chinese markets by Japanese firms.

11. An article in Nikkei Business, Feb. 24, 2003.
12. Honda claims that it has a policy to do R&D and produce where the demand is and made significant investments in R&D facilities. Other Japanese manufacturers seem to have increased their R&D activities in China.

Moreover, this perception dissuades competent Chinese engineers from working in Japanese corporations, a great disadvantage for them in operating in China moving towards a knowledge-based economy.

Several factors may explain the limited localization of R&D by Japanese firms. First, as in other operating areas, Japanese investment in R&D has been constrained by the low profitability of the parent corporations. Secondly, because in the past Japanese firms placed little emphasis on domestic sales in China they had little need to carry out R&D work to develop products to suit local markets or to satisfy local governments. Most R&D activities of European and American MNCs are aimed at developing products adapted to local market conditions but they do it on a much larger scale (Table 18). European and American firms' R&D activities are mainly to develop products suitable for local markets while Japanese firms' R&D activities are mainly to support a division of labor in international production systems encompassing Japan and China (Jiang).

Localization of R&D is seen in three categories: first, product development to meet local demand conditions, second, R&D in areas where the host country is more advanced, and third, R&D in areas where the home country of the MNC or other third countries are more advanced. Obviously, MNCs desire to accelerate localization in the first two categories because it contributes to fast expansion of local sales and to enhancing their knowledge base. However, they usually find it undesirable to proceed in the third category. In fact, most of the R&D activities of MNCs in China are in the first category, particularly in an environment of inadequate protection of intellectual property rights. There are not many areas in which China is ahead of advanced countries. The R&D activities of Japanese MNCs tend to concentrate in Japan and, to a lesser extent, in other advanced countries. The core of Toyota's R&D activities, for example, will remain in Japan as its integral development and production architecture requires close cooperation with components manufactures in order to develop automobile products. However, mature industries, such as textiles, have a strong incentive to shift R&D to China, where they are still growth industries. R&D activities in such industries are very limited in advanced countries, and it is difficult for MNCs to find qualified researchers in those areas.

MNCs pursuing China's domestic markets face a trade-off question. On the one hand, localizing R&D serves to develop products suited to local conditions, to satisfy industrial policies, and to benefit from the large pool of local researchers, but on the other hand, because of weak protection of intellectual property, it increases the risk of losing control of proprietary technology and it may engage in economically unjustifiable activities. According to a survey,

Japanese manufactures had high expectations for increased protection of IPR after China's accession to the WTO (Table 19), but they feel that there has not been real progress in this matter (Table 20).

A common strategy for MNCs at this stage seems be to concentrate on expanding local R&D to develop products targeted at the local market and those that support local clients. While European and American firms are commonly perceived as more willing to transfer the R&D functions to China, these R&D activities are mostly confined to supporting marketing efforts. Such activities will enhance local sales and improve relations with local authorities. On the other hand, it is easier to prevent competitors from copying core technologies by concentrating local R&D on the modification of products developed in MNCs' home countries or in other advanced countries where intellectual property is better protected. Moreover, the increased amount and sophistication of local production by MNCs has been inducing them to also localize R&D.

Japanese firms are increasing their R&D operations in China from two directions—because of their increasing emphasis on local sales from the original focus on manufacturing for export and expanding and because of their upgrading of local production. Japanese electronics companies have established R&D centers in China with an increasing emphasis on semiconductor technologies based on a new business model as discussed before and on software. Matsushita Electric, which has a long history of investment in China, is particularly aggressive in localizing R&D. It has two R&D centers and plans to increase the number of employees at the two centers to about 1,750 by 2005 (Table 18). A Japanese automobile company has started local design of parts as it increases local content. As Toray of Japan started to concentrate on high-end products in the synthetic fiber sector because of its difficulty in competing with local producers in standard products, it recognized the need to increase its local R&D in order to support client services.

Another major reason for R&D localization is the utilization of local talents. Research collaboration with Chinese research organizations and universities is an effective avenue for tapping local talents. This is particularly so because traditionally under the planned economy framework, R&D activities in China were conducted by centralized research institutes based in large cities rather than by state-owned enterprises, and those research organizations and universities have moved aggressively into the commercial research area with the changes in the economy. European and American companies seem to be more aggressive that Japanese firms to establish out-research collaboration with these Chinese organizations. Among others, Microsoft, P&G, IBM, Motorola, GM and Siemens have all established research institutes

jointly with such first-class universities as Tsinghua University, Beijing University, Shanghai Jiao Tong University, Fudan University, Zhejiang University and Nanjing University. Moreover, Japanese consumer electronics firms have found that home appliance researchers, who are scarce in Japan because of the maturity of the industry, are in greater supply in China. Somewhat uniquely, Matsushita Electric is trying to have its R&D center in Suzhou focus on developing products for export to global markets.[13]

Japanese corporations will be increasingly compelled to localize R&D activities, particularly in order to compete in attracting Chinese talents. To do this they need to make their organizational structure more modular in order to distinguish transferable technologies and to make a calculated trade-off between technology transfers and market gains. Because of these developments, it seems reasonable to expect that more and more R&D work will shift to China, particularly if China improves its protection of intellectual property.

2.5. Human Resource Management Strategies

Effective mobilization of local talents is crucial not only for MNC's business in China but also for their global businesses, because of the vast supply of knowledge workers in China. It is widely pointed out that European and American MNCs promote local management talents, but Japanese MNCs lag in localization of management. Most top managers of local subsidiaries of European and American MNCs are said to be either locals or overseas Chinese. A survey by the Japanese Ministry of Economy, Trade and Industry found that among thirteen CEOs of subsidiaries of European and American MNCs, six were locals, three were third-country nationals, and only one was a home-country national. Also, the three third-country nationals were Taiwanese or other overseas Chinese. Prominent foreign MNCs such as IBM, Dupont, Unilever, McDonalds, and Carrefour have Chinese nationals in the top positions of their China headquarters. Dupont conducts a 'China 15' program, which tries to develop human resources capable of supporting its China businesses and aims to fill the 15 key positions of its China headquarters with locals. Korean firms such as Samsung and LG also promote locals to senior managers while keeping Koreans in the CEO positions of their China headquarters.

European and American firms have much clearer policies aimed at attracting talents than do Japanese firms. Promotion is more rapid for high achievers and performance evaluation is more strict for low achievers. Moreover, they offer attractive incentives for training opportunities for Chinese employees with a strong desire for advancement. For instance, the parent company of Motorola China offers more than 130 special training courses for Chinese staff. Since 1980, Ford Motors has offered Chinese engineers opportunities to participate in

13. *Nikkei*, April 5, 2002.

research activities at its headquarters and at present about 80 researchers from Ford's joint ventures and research institutes in China participate. In addition, its employees can take courses towards a master degree at Tianjin University. To a large extent, the joint research projects that MNCs established with prominent Chinese universities are intended as a means for the firms to recruit China's best students. Moreover, they invite young researchers to research centers in home countries by establishing international exchange programs in cooperation with local universities. Japanese corporations lag far behind in such efforts. To some extent this is due to the fact that Japanese corporations, in contrast to American and European corporations, tend to value experience-based tacit knowledge more than the explicit knowledge which is more in common with the academic world.

According to many surveys, American firms are the most popular among Chinese employees, and Japanese firms rank below not only them but also prominent local firms. Japanese firms have had difficulties providing sufficient financial and promotional incentives for Chinese employees with high levels of ambition.

The promotion of locals in the China businesses of European and American firms is not necessarily proceeding at the same speed across all functions, however. As seen in Table 21, the delegation of authority is most advanced in functions related to local sales activities followed by functions related to local business relations. Delegation is least advanced in global headquarters and related functions.

One reason why European and American firms have localized their management in China to a greater extent than Japanese firms seems to be that their organizational structure is more modular than that of Japanese firms. This makes it easier to divide functions into those which they can delegate and those which they keep closely within the global headquarters. Such a distinction is not clear in Japanese firms with a more integral architecture, and there is a tendency for global headquarters in Japan to keep tight control on decision-making in every function. The negative consequences of Japan's less flexible organization structure are most apparent in attempts to attract the best local talents with prospects of rising to high positions. Under Japanese corporations' integral system it is more difficult for them to adopt local systems that diverge considerably from the systems of moderate remuneration and slow promotion at home. A second reason seems to be that the use of international language standards, particularly English, is limited in Japanese corporations. European and American corporations can recruit top executives from a large pool of local Chinese who are proficient in English, but Japanese firms recruit their local staff mostly from a much smaller pool of those who are proficient in Japanese. A few Japanese corporations, though, use English extensively. In the

sales department of Sony's China headquarters it is said that 90% of communication is in English and local staff are bilingual in English and Chinese.[14]

In the current transitional stage of China's development when there are not yet enough local managers with adequate experience in the management of modern MNCs, many European and American MNCs use overseas Chinese, particularly Taiwanese, as managers in their China operations. For example, out of about 200 marketing and sales employees of Shanghai GM, there are two American leaders and five Taiwanese senior employees. And IBM's China business employs many Taiwanese managers.[15]

Japanese MNCs clearly need to improve their human resource management to compete in China, particularly in selling to the domestic market and in R&D. They need to incorporate a more modularized system that would enable them to adopt more independent personnel and other systems locally, unconstrained by corporate practices and policies unique to Japan. At the same time, such local systems need to be integrated with the global system coordinated by the global headquarters. The recent rush of Japanese MNCs to set up regional headquarters in China should serve this purpose.

2.6. Strategies for Equity Participation and Corporate Alliance

Corporations invest in controlling shares in other corporations or form strategic alliances with them to buy time. The element of buying time is particularly crucial in the rapidly developing China. MNCs' strategies in equity participation and strategic alliance have two dimensions: the functional purpose the alliance is designed to achieve and the logical basis for the alliance. The first dimension refers to whether the alliance is intended to pursue domestic markets or to build production capability. The second dimension, whether the alliance is based on economic or non-economic logic, is important in China, where the degree of market protection and government intervention is still fairly high. For the foreseeable future MNCs have to face a trade-off between economic rationality and the need to meet the requirements of industrial policies.

Joint ventures and strategic alliances with Chinese domestic firms are mostly to enhance the ability to sell to domestic markets, because domestic firms tend to have a comparative advantage in domestic sales. Also Chinese industrial policies are usually designed to offer MNCs access to China's domestic markets in exchange for technology transfer to Chinese domestic firms through the formation of joint ventures in production.

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14. According to an interview in 2003.
15. According to a research report by Fujitsu Research Institute assigned by the Ministry of Finance, Japan (March 2002).

In the food and beverage industry where industrial policy intervention is minimum, MNCs have purchased Chinese domestic firms to expand sales by gaining local brands, sales channels, and production capacities. In 1998, Unilever bought Shanghai's largest seasoning manufacturer as well as a Hong Kong ice cream company that had large market shares in Hong Kong, Shanghai, and Guangzhou. MNCs, including Japanese ones, have bought stakes in Chinese domestic beer companies to gain access to local brands and production capacities.

In one case, a Japanese firm decided to ally with a low-cost Chinese producer after having difficulty competing with it in low-end products. Honda formed a joint venture with a Chinese firm that produced clones of its motorcycles, impressed by the local firm's low-cost production capability. That joint venture is to export low-end motorcycles to Japan. The ability of Chinese producers to produce at low cost is believed to be due to their mastering of module production technology. In higher-end products, integral technology seems to be required and Japanese manufactures still have an edge.

MNCs sometimes set up joint ventures with overseas Chinese corporations which are more familiar with China. In 2002, Japanese MNC, Minebea Corporation, a manufacturer of machinery components and electronic devices, set up a joint venture with an overseas Chinese corporation, Hua Hsin Holdings Ltd. of Singapore, to produce PC keyboards in Shanghai. One of Minebea's motives in forming the alliance was to be able to draw on the overseas Chinese company's experience to smooth relations in China.

In some key industries, Chinese policy requires foreign firms to form joint ventures with domestic firms, mostly SOEs, in order to sell to domestic markets. The automobile industry is the case in point. The recent surge of car sales under such a regulatory framework in China has prompted a rush of joint venture formation by MNCs. Moreover, pressure on domestic producers in the industry to form corporate alliances is intensifying as the reduction of import duties following China's accession to the WTO heats up competition in the market. Even when it is economical to import and there is no official import barrier, some foreign firms have decided to invest in production facilities in China because of a concern about future protection. Nippon Steel concluded a joint venture agreement with Baoshan Iron and Steel to produce flat steel for automobiles, with 50% equity participation from Baoshan and 35% from Nippon. Nippon Steel's intention, reportedly, is to secure a foothold in China's growth market by avoiding trade friction, although there is some concern at home about technology leakage from the venture.

It is natural to expect that some policy-induced joint ventures will pose problems for MNCs in the long run. Joint ventures with Chinese domestic firms are often necessarily

concluded with SOEs, but this usually brings many problems such as the lack of managerial control by MNCs, difficult labor relations, and the influence of inefficient SOE management (Fujitsu Research Institute). Thus, there is a tendency for MNCs to try to gain a controlling stake in such ventures in the long run. In fact, many MNCs are already making such efforts. Siemens, for example, is trying to attain two-thirds majority in its joint ventures.[16] Japanese MNCs must face a similar challenge in gaining effective control in policy-induced joint ventures, although their relatively late entry may work as an advantage in this respect.

2.7. Strategies for Regional Headquarters

MNCs have started to set up regional headquarters in China, mostly in Shanghai and Beijing. Most are to responsible for the China business only, but some are to responsible for the business in the entire Asian region. There is obviously a case for setting up a separate regional headquarters to manage China businesses because China is a vast market, which is complex, growing rapidly, and in need of a lot of attention and quick response. Although China is a short distance from Japan and it is feasible for Japanese MNCs to manage China businesses from home, more and more Japanese corporations including Sony, Toray and Denso have set up regional headquarters in China. This is in response to the growing importance of their businesses in China in comparison with businesses in Japan, where markets are not growing, and also to overcome the slow decision-making in Japanese headquarters. Some Japanese MNCs such as Hitachi manage "Greater China" including Hong Kong and Taiwan as a region because of their increasing integration.

Establishment of regional headquarters is more urgent in the sales function than in production. Since Japanese MNCs tend to form international production networks connecting China and Japan—and sometimes also ASEAN—and since language and culture are not as significant a barrier to the management of production as in the management of sales, it is more logical to manage the activities of all the parts of the production network in a combined way. Chinese markets are different from Japanese markets and separate management of the sales function is required. For example, the China headquarters of Japanese chemical company Toray, mainly manages the sales function, while production and R&D functions are still managed from the corporate headquarters.

Some U.S. companies have set up Asia-Pacific regional headquarters in China, particularly in Shanghai, sometimes by shifting around existing headquarters in cities such as Singapore and Hong Kong, but few Japanese corporations have done so. Alcatel and

16. "New Entrants to Market Have Some Advantages Over Pioneers." The *Asian Wall Street Journal*, February 9, 2004.

Honeywell, for example, relocated their Asian Headquarters from Singapore, responding positively to financial incentives offered by the City of Shanghai. The different approach of American and Japanese MNCs seems to be due to the importance of ASEAN markets to each. For European and American MNCs, the Chinese business is much larger than the ASEAN business, and it may make sense to locate their Asia and Pacific headquarters in China, whereas for Japanese MNCs, which have invested heavily in ASEAN countries, it is difficult to justify locating a headquarters for the Asia region in China. Japanese firms tend to have two headquarters – one for ASEAN and one for China. Moreover, some Japanese corporations feel that the level of China's institutional infrastructure such as capital movement and the protection of intellectual property is not adequate to support moving all regional headquarters functions to China. Even so, Japanese MNCs increasingly have a clear policy to shift to China.

3. Differences in the Direction of Asia Strategies between European and American MNCs and Japanese MNCs

This examination of the functional strategies of various MNCs operating in China reveals at least four differences in basic direction or thrust between the American and European MNCs on one hand and Japanese MNCs on the other. These differences are as follows:

First, it is largely true that European and American MNCs are more oriented to selling to Chinese markets and Japanese MNCs are more oriented to use China as a base for manufacturing for export both back to Japan and to global markets. As mentioned before, the difference is natural because overall Japanese industry is more manufacturing-oriented and also because Japan's proximity to China facilitates formation of international production networks that encompass China and Japan and also ASEAN. At the same time, Japanese corporations have gradually shifted from seeing China mainly as a production base to looking to sell to Chinese markets. In the future, Japanese investment in China will become more balanced between investments for export production and investments for domestic market sales.

Japanese firms, which have invested cautiously in the past, need to implement catch-up strategies as latecomers against established European and American MNCs. In fact, stimulated by growing demand particularly in large coastal cities, many Japanese firms have started to implement strategies focused on cultivating China's domestic market. This trend is exemplified by the accelerated investment by Japanese automobile firms. Toyota, which currently has a market share of less than 1%, aims to capture a 10% share in the future.

Second, European and American MNCs are more strategic in the design and implementation of their China strategies. This is reflected in their concentrated and speedy investment in marketing and production in targeted businesses, which is designed to put them in

a dominant position as rapidly as possible. But most striking from a Japanese perspective is that all the functional strategies of non-Japanese MNCs in China seem to be structured to serve the marketing goals in an integrated way. Their local R&D activities are mostly to support their local sales activities by developing locally suited products and the localization of management in terms of human resources is mainly to improve their sales capabilities including business relationships. Moreover, their more aggressive cultivation of relationships with the Chinese government seems also intended to serve their marketing goals. In this connection, non-Japanese MNCs have taken more calculated risks, investing in production facilities, R&D centers and regional headquarters. Motorola, for example, recognized that China's telecommunication industry is characterized by heavy government involvement and made establishing a good relationship with the government as its top priority. To this end, Motorola formed a committee with the electronics department of the government and made comprehensive efforts in localization such as setting its own target for local content and engaging in philanthropic activities. Japanese MNCs seem to have taken less risk as they lack strong leadership from CEOs.

Third, European and American MNCs have a stronger internationalization capability as shown by their greater localization of management personnel and R&D activities. This enables them to market more effectively and also to utilize local talents for management and research not only in China but also in global operations. The greater localization seems to be possible because of the modularity of their management system and the more effective internal governance. Such architecture enables non-Japanese MNCs to distinguish between those subsystems that are localizable without undermining overall management integrity and corporate secrets such as intellectual property. As sales-related management personnel and R&D activities can be localized fairly easily, localization there serves the marketing-oriented strategies of MNCs. Since Japanese management systems are less modular and more integral, it is more difficult to separate those areas. Moreover, the language barrier is high for Japanese corporations where few are proficient in English or Chinese. However, it is also true that the internationalization of Japanese firms in their China businesses has been and will be greatly supported by Japan's proximity to China and the heritage of cultural exchanges between the two countries over more than thousand years, although the problems in recent history pose a challenge.

For Japanese corporations, the lack of internationalization capability is largely disadvantageous for their China business, particularly on the marketing side but it has some merits from a public policy standpoint. In East Asia, the two economies with very high

internationalization capabilities with China–Hong Kong and Taiwan—are facing a severe problem of hollowing out, as China is a closer substitute for them as a location for knowledge-creation. Japan's lack of internationalization capability allows its economy more time for adjustment.

Fourth, the strengths as well as the weaknesses of Japanese MNCs in their operations in China seem to emanate from the distinctive type of innovation systems found in Japanese corporations. The lack of modularity in the Japanese management system seems to be due to the fact that the innovation process of Japanese corporations is based more on tacit knowledge, which is difficult to codify and de-integrate, compared with the innovation process of European and American corporations, which is based more on explicit knowledge. As Professor Takahiro Fujimoto maintains, the Japanese manufacturing industry excels in industries such as automobiles and small electronics products that require 'integral technology,' which is characterized by close co-working relationships among a fairly closed corporate group. Japan has found it difficult to compete in industries, such as PCs and telecommunication equipment, that are characterized by modular technology. Japan's whole corporate system including infrastructure, such as the lifetime employment system and seniority-based remuneration, is structured to support the creation of tacit knowledge by the accumulation of experience over time.

Since there is a certain degree of institutional complementarity, it is neither possible nor desirable for Japan to discard the old system entirely and jump to adopt the western system. Both types of innovation processes and production technologies are necessary, and Japanese MNCs tend to excel in activities based on integral technology. Since the 1990s the emergence of information technology and globalization have worked to favor explicit knowledge and a modular production system. Nevertheless, the automobile industry continues to rely on integral technology and the rise of demand for digital products such as digital cameras and flat panel TVs has reinvigorated the Japanese electronics industry by requiring a greater input of integral technology. In essence, since China needs both types of technology to expand its manufacturing industry, Japanese corporations will be able to contribute to China's industrial development by capitalizing on their strength in integral technology. But also they need to complement it by adopting the capability to create explicit knowledge discretely. The recent behavior of Japanese corporations, i.e., an accelerated shift of their labor-intensive manufacturing to China and an increased focus on the development and production of high value-added products and key devices, more amicable to integral technology, in Japan is in line with this logic.

4. Conclusion

4.1. Agenda for a Greater Role of Japanese MNCs in China's Growth

The agenda for a greater role of Japanese MNCs in China's economic growth may should include the following items.

First, Japanese corporations need to shift their orientation even further toward selling to China's domestic markets. In this connection, Japanese corporations can learn from the persistent and scientific marketing efforts and channel strategies of successful western MNCs such as Procter & Gamble.

Second, Japanese corporations should strengthen their strategic orientation. Compared with western firms as well with Korean and Taiwanese enterprises, they lack the commitment to concentrated and speedy resource mobilization in promising business areas in China. Moreover, they do not tend to coordinate the strategies of individual functions, such as production, R&D, and human resource management, to serve marketing goals as much as western corporations do. While Japanese MNCs have improved their profitability through cautious investment, they have come to a stage when it is necessary to take major risks to reap substantial returns. In order to take a large risk, they need coherent strategies.

Third, one element of improved strategic orientation can be to strengthen regional headquarters in China to coordinate strategies related to China, particularly marketing strategies. This is especially necessary to increase the speed of managerial decisions, which in the past caused difficulties for Japanese firms in operating their China businesses. As MNC's regional strategies must be part of and consistent with their global strategies, regional headquarters need to be coordinated by global headquarters. In this respect, Japanese parent corporations need to be reformed so as to possess more capability to develop global strategies and to delegate authority to regional headquarters.

Fourth, another element of strategic orientation in China is to improve governmental relations. While it should gradually diminish, government intervention in Chinese businesses is expected to persist for a long-term as China is a transitional developing economy. Also, the policy of trading market access for technology may work more effectively for China than for other developing economies because of the size of its market and its pool of knowledge workers. As Japanese corporations seem to be weaker than European and American corporations in managing the trade-off between the cost of technology transfer and the gains from access to markets, there may be scope for improvement.

Fifth, another element of strategic orientation is to make a consistent long-term strategy by distinguishing short-term strategies from long-term strategies. Since China is rapidly

developing and changing, strategies appropriate for the short-term may not be suitable in the long-term. For example, although joint ventures with SOEs may be a good way for foreign firms to gain access to China's domestic market in the short run, they are not a stable formula in the long run as each side wants to have management control to increase management integrity. Moreover, important conditions driving such strategies today may change in the long- run as protective barriers and government intervention may disappear or majority ownership may become possible. Already, many MNCs have been transforming their joint ventures to fully owned subsidiaries when they have found this possible. MNCs need to have an overall strategy to fill this gap between short- and long-term strategies.

Sixth, Japanese corporations need to enhance their internationalizing capability, or capability to adapt to new foreign environments. This ability includes localizing human resources and communicating with local clients, suppliers and governments. Japanese MNCs need to rebuild their human resource strategy in China in order to repudiate the image of being closed and to be able to benefit from China's wealth of local talents. If parent companies keep life-time employment and the seniority wage system, they need to develop different structures in China, possibly with help from local consultants (Konomoto et al.). Another element is language. Japanese MNCs need to strengthen their ability to work in English and Chinese. At the same time, it is necessary to train Chinese employees and job seekers to use Japanese. To meet such demand, some Japanese employment service companies have started training courses in China specifically for employment opportunities in Japan. Moreover, Japanese corporations should hire more overseas Chinese, particularly Taiwanese, to fill the positions in their Chinese operations until local Chinese employees accumulate experience in working in MNCs. Furthermore, Japanese corporations need to offer local employees more opportunities for learning with training courses in Japan and increasing technology transfer. They need to take a more calculated risk of technology leakage with strengthened protection of intellectual property rights.

Seventh, in order to increase their strategic orientation and internationalizing capabilities, Japanese corporations need to incorporate more of the elements of a modular system and the innovation process in explicit knowledge. This is important for improving the international competitiveness of Japanese corporations not only in China but also elsewhere in industries such as IT and finance that require more inputs of explicit knowledge. As mentioned, it is not desirable to dismantle altogether the current corporate system that caters to implicit knowledge. In fact, the current strength of Japanese industry is based on that system to a large extent. However, it is beneficial to expand the area where explicit knowledge and modular management

systems are more effective.

4.2. Some Implications for Japanese Public Policies

In order for the Japanese economy to benefit from increased activities of Japanese businesses in China, the following public policy issues may need to be explored.

First, there should be public policy support for improving the internationalizing capability of Japanese corporations with regard to China. There should be increasing capacity to educate Japanese in international languages, mainly English and Chinese. The system for accepting foreigners at schools and corporations should be strengthened.

Second, since the controlled transfer of technology is a key element of success in businesses in China, the Japanese government should support Japanese corporations in their dealings with governments in China in such areas of industrial policies and intellectual property rights. The government might consider how its dealings with China could benefit from cooperation and competition with European and American counterparts.

Third, Japan should increase its efforts to develop industrial clusters throughout Japan. Although the Japanese economy as whole is complementary with the Chinese economy and will benefit from increasing activities of Japanese corporations in China, the benefit will mostly accrue to the Tokyo metropolitan area where innovation infrastructure concentrates. The rest of Japan faces a real danger of hollowing out. The government should accelerate its policy efforts toward de-centralization to create and enhance multiple industrial clusters throughout Japan.

Fourth, the Japanese government should support the capability of Japanese to create explicit knowledge, while preserving their existing strength in creating tacit knowledge. This requires improving higher education and increasing association with foreigners. Attracting inward FDIs to Japan through more deregulation and promotional activities by local governments serves this purpose.

Fifth, the Japanese government should facilitate its FTA negotiations in careful consideration of their effects on the production networks of MNCs, particularly Japanese MNCs. The formation of FTAs should improve the efficiency of Japanese MNCs, but their impact on the Japanese economy may vary according to how regional integration proceeds. For example, the proposed FTA between ASEAN and China could benefit Japanese MNCs by enabling them to effectively leverage the existing large stock of investment in ASEAN by forming production networks that encompass the two regions, but this may come at the expense of networking directly with Japan.

References:

Borrus, M., D. Ernst, and S. Haggard. 2000. *International Production Networks in Asia: Rivalries or Riches?* London: Routledge.

Konomoto, Shingo and Ye Hua. 2003. "Chugoku deno 'Jinzai' Senryaku Saikochiku ga Isogareru Nihonkigyo" (Japanese Firms Need to Hasten Rebuilding 'Human Capital' Strategy in China,) Chiteki Shisan Sozo, February 2003.

Ishii, Shinichi and Wakana, Takahiro. 2003. "Gureitah Chaina Jidai no Nihonkigyo no Rojisuthikkusu Senryaku (The Logistics Strategies of Japanese Firms in an Age of a Greater China)," Chitekishisan Sozo, June 2003.

Fujimoto, Takahiro 2003. *Nouryoku Kouchiku Kyousou* (Competition in Capability Building), Tokyo: Chuko Shinsho.

Fujitsu Research Institute. 2002. *Chugoku ni okeru Gaikoku Kigyo no Katsudo Jittai to Kongo no Tenbo ni Kansuru Chosa* (Study of the Activities of Foreign Firms in China and Future Prospects), study commissioned by Ministry of Finance, Japan.

Fujiwara , Hiroshi. 2002. "Beikoku Kigyo no Taichu Bijinesu Senryauk (The Chinese Business Strategies of U.S. Companies)" in Kimura , Fukunari, Maruya, Toyojiro and Ishikawa, Kouichi ed. *Higashi Ajia no Kokusai Bungyo to Chugoku* (International Division of Labor in East Asia and China), Tokyo: JETRO.

Jian Xiaojuan. 2003. "Transnational Corporations' Investment in China: Analyzing the Salient Features of Source Countries and Regions," paper commissioned by Nomura Research Institute.

Wang Wen-Tuen 2004. "The Impact on the Taiwanese Economy from the Emergence of Mainland China" paper presented at the AT10 Research Conference organized by Tokyo Club Foundation for Global Studies, February 3-4, 2004, Tokyo.

Table 1. Outstanding Direct Investment Abroad of Japan and the U.S.

Japanese Direct Investment Abroad					
	1996		2001		2001/
	Billion yen	%	Billion yen	%	1996
World	26,526	100.0	32,923	100.0	1.2
North America	9,502	35.8	16,411	49.8	1.7
Europe	4,216	15.9	6,051	18.4	1.4
East Asia	8,979	33.8	6,307	19.2	0.7
China	939	10.5	1,311	4.0	1.4
NIEs	3,217	12.1	2,686	8.2	0.8
ASEAN4	4,820	18.2	2,311	7.0	0.5
Others	2,604	14.4	3,269	12.6	1.1
Data: U.S Direct Investment Abroad					
	1996		2001		2001/
	US$ mil.	%	US$ mil.	%	1996
World	795,195	100.0	1,381,674	100.0	1.7
Japan	34,578	4.3	64,103	4.6	1.9
Europe	389,378	49.0	725,793	52.5	1.9
East Asia	66,661	8.4	111,628	8.1	1.7
China	3,848	0.5	10,526	0.8	2.7
NIEs	40,287	5.1	75,362	5.5	1.9
ASEAN4	22,526	2.8	25,740	1.9	1.1
Others	304,578	38.3	480,150	34.8	1.6

Data: Bank of Japan for Japanese investment and USDIA for U.S. investm

Table 2. Shift of Investment from ASEAN to China

(US$ million)

	1991-1996 (Annual average)	1997	1998	1999	2000	2001	2002
ASEAN6							
Singapore	6,856	13,533	7,594	13,245	12,464	10,949	7,655
Malaysia	5,436	6,323	2,714	3,895	3,788	555	3,203
Thailand	1,964	3,882	7,491	6,091	3,350	3,813	1,068
Philippines	1,226	1,261	1,718	1,725	1,345	982	1,111
Indonesia	2,985	4,678	-356	-2,745	-4,550	-3,279	-1,523
Vietnam	1,217	2,587	1,700	1,484	1,289	1,300	1,200
Sub-total (A)	19,684	32,264	20,861	23,695	17,686	14,320	12,714
Northeast Asia 4							
Korea	1,234	2,844	5,412	9,333	9,283	3,528	1,972
Taiwan	1,311	2,248	222	2,926	4,928	4,109	1,445
Hong Kong	6,057	11,368	14,766	24,580	61,939	23,775	13,718
China (B)	25,476	44,237	43,751	40,319	40,772	46,846	52,700
Sub-total (C)	34,078	60,697	64,151	77,158	116,922	78,258	69,835
B/A	1.3	1.4	2.1	1.7	2.3	3.3	4.1
C/A	1.7	1.9	3.1	3.3	6.6	5.5	5.5

Source: UNCTAD, *World Investment Report*

Table 3. Comparison of Size and Growth of East Asian Economies

	Current Price		PPP
	GDP 2001 (US$ bill.)	2001/ 1990 (Annual %)	GNI 2001 (US$ bill.)
North East Asia 3	1,740	8.9	5,912
China	1,156	10.0	5,027
Hong Kong	162	3.8	172
Korea	422	5.7	713
ASEAN 5	505	4.1	1,573
Japan	4,141	1.3	3,246
U.S.A.	10,065	3.4	9,781
Europe4	5,668	1.2	6,536

Note: GDP: gross domestic product; PPP: purchasing power parity: GNI: gorss nationa income
ASEAN5: Singapore, Malaysia, Thailand, the Philippines and Indoensia
Europe4: Gernmany, France, U.K. and Italy
Source: World Development Indicators

Table 4. Income Disparity in East Asia

	Per Capita GNI (2001)		Income Disparity		
	Current Price US$	PPP US$	Gini Coefficent	Income Share (%) Top 10%	Top 20%
Hong Kong	25,330	25,560	43.4	34.9	50.7
South Korea	9,460	15,060	31.6	22.5	37.5
China	890	3,950	40.3	30.4	46.6
Singapore	21,500	22,850	42.5	32.8	49.0
Malaysia	3,330	7,910	49.2	38.4	54.3
Thailand	1,940	6,230	43.2	33.8	50.0
Philippines	1,030	4,070	46.1	36.3	52.3
Indonesia	690	2,830	30.3	28.5	43.3
Japan	35,610	25,550	24.9	21.7	35.7
U.S.A.	34,280	34,280	40.8	30.5	46.4
U.K.	25,120	24,340	36.0	27.5	43.2
France	23,780	24,030	32.7	25.1	40.2
Gernamy	23,560	25,240	38.2	28.0	44.7

Source: World Bank, World Development Indicators 2003.

Table 5. Return on Direct Investment of Japan and the U.S. in East Asia

Japan					
	1998	1999	2000	2001	2002
Worldwide	4.9	2.5	3.1	5.7	5.5
East Asia	5.6	-4.8	-2.8	9.0	10.2
China	1.2	0.0	0.1	6.4	8.2
NIEs	15.6	-7.9	-11.9	20.7	20.3
ASEAN4	3.6	-8.4	-0.9	8.4	9.6
U.S.					
Worldwide	9.7	10.9	10.6	7.9	8.5
East Asia	10.9	15.1	18.1	13.4	16.4
China	5.8	9.6	11.8	12.8	13.4
NIEs	10.4	15.0	19.0	13.3	17.4
ASEAN4	13.2	17.4	18.4	14.1	13.4

Notes: Return on direct investment is calculated by dividing income by the average of direct investment outstanding at the end of the preceding and current years
Sources: Bank of Japan and USDIA

Table 6. Satisfaction Level of Japanese Overseas Direct Investment by Area

Fiscal Year	1996	1997	1998	1999	2000	2001	2002	No. of Companies
NIEs	3.29	3.42	3.30	3.12	3.27	3.10	3.00	747
ASEAN	3.31	3.28	2.89	2.89	3.25	2.99	2.99	711
China	2.72	2.70	2.74	2.59	2.93	3.08	2.83	311
N. America	3.22	3.35	3.50	3.21	3.39	3.03	2.69	368
Latin America	2.91	3.11	3.15	2.81	2.89	2.83	2.52	123
EU	3.01	3.23	3.20	3.00	3.03	2.88	2.71	289
Central and Easter Europe	- -	- -	2.82	3.07	3.05	2.79	2.62	60

Note: The range of satisfaction is from 5 (maximum) to 0 (minimum).
Source: JBIC Institute, "FDI Survey of Fiscal Year 2002" (Japanese)

Table 7. Direct Investment in China by Source Economies

(Unit: US$ mil.)

	1979-1986		1987-1991		1992-1995		1996-2002	
	Value	Share %	Value	Share %	Value	Share %	Value	Share %
E.U.	737.4	8.9	790.6	4.7	4,583.2	4.2	27,727.9	8.9
U.S.	1,230.0	14.8	1,562.2	9.3	8,148.0	7.4	29,037.8	9.3
Japan	608.7	7.3	2,126.5	12.7	7,217.7	6.6	25,833.6	8.3
Korea	n.a.	n.a.	n.a.	n.a.	1,859.0	1.7	n.a.	n.a.
Hong Kong	4,132.0	49.7	10,171.3	60.7	66,245.3	60.3	126,258.9	40.3
Taiwan	n.a.	n.a.	843.6	7.5	10,741.7	9.8	21,525.0	6.9

Source: Jiang (2003) based on FDI statistics in China.

Table 8. Average Project Scale of FDI by Source Economy

(Unit: US$ 000)

	E.U.	U.S.	Japan	Korea	Hong Kong	Taiwan	Total
1986	109.98	53.09	30.09		15.35		22.23
1990	27.34	10.02	13.4		8.07	8.07	9.07
1986-1990	**50.7**	**20.33**	**16.27**		**8.72**	**8.05**	**10.79**
1991	46.59	7.9	13.56		8.49	8	9.23
1995	46.9	21.51	25.77		23.85	12.06	24.67
1991-1995	**31.51**	**13.02**	**15.16**		**16.06**	**9.32**	**15.47**
1996	57.92	24.48	29.45	11.47	26.93	16.15	29.84
1999	45.81	29.67	22.21	7.12	22.58	13.5	24.37
1996-1999	**51.24**	**27.15**	**25.18**	**11.92**	**23.74**	**12.27**	**26.45**
2000	78.36	30.67	22.8	4.44	23.56	13.01	27.91
2002	30.33	24.25	19.3	13.18	23.24	13.89	24.22
2000-2002	**48.34**	**27.6**	**22.58**	**10.63**	**24.12**	**14.54**	**25.93**
1996-2002	**42.37**	**20.03**	**19.34**	**12.37**	**17.72**	**11.04**	**19.45**

Source: Jiang (2000) based on FDI statistics in China.

Table 9. FDI Distribution in Three Economic Development Centers of China in 2001

(%)

	Bohai Bay Area	Yangtze River Delta	South China	Others
E.U.	28.1	52.8	6.4	12.7
U.S.	41.5	34.6	11.0	12.9
Japan	30.9	55.4	10.7	3.0
Korea	76.8	14.6	3.2	5.5
Hong Kong	33.7	11.4	38.2	16.7
Taiwan	28.9	22.8	36.6	11.7

Source: Jiang (2003) calculated from the Yearbook of Chinese Foreign Trade and Economy 2002

Table 10. Japanese FDI in China by Industry

(100 million yen)

Fiscal Year	1999	2000	2001	2002	1999-2002	
Food	29	25	14	91	160	2.7%
Textile	34	30	42	90	197	3.3%
Wood and pulp	4	6	27	26	62	1.0%
Chemical	100	72	185	175	533	9.0%
Metal	48	49	166	138	401	6.8%
Machinery	44	95	163	191	491	8.3%
Electrical and electronics	82	358	639	381	1,460	24.7%
Transportation equipment	104	99	258	236	697	11.8%
Other	171	119	100	383	773	13.1%
Total of Manufacturing	614	853	1,595	1,712	4,774	80.6%
Commerce	72	62	116	83	333	5.6%
Financial	-	4	39	146	190	3.2%
Service	102	167	41	39	349	5.9%
Other	25	23	13	26	87	1.5%
Total of Non-manufactur	198	256	209	295	959	16.2%
Branches	36	3	3	146	187	3.2%
Total	849	1,112	1,808	2,152	5,921	100.0%

Source: Ministry of Finance, Japan

Table 11. Functions to Be Strengthened by Non-Japanese MNCs

Function	Firms Located in China	Firms Located in ASEAN
Production of Parts	17.4%	77.8%
Assembly of Final Products	8.7%	44.4%
Sales to Local Markets	52.2%	94.4%
R&D	56.5%	38.9%
Distribution and Logistics	39.1%	50.0%
Regional Headquarters	39.1%	38.9%
Market Research	21.7%	33.3%
Local Procurement of Parts	39.1%	61.1%
Afte-rservice	26.1%	61.1%

Note: Multiple answers.
Source: The White Book on International Trade 2003.

Table 12. Functions to Be Strengthened by Japanese Firms

Function	In China	In ASEAN4
Production	72.8%	70.1%
Sales	58.1%	46.3%
R&D	13.5%	11.7%
Regional Headquarters	12.0%	10.8%

Note: Multiple answers. The numbers of responding firms are 518 and 341respectively for China and ASEAN4.

Source: The Ministry of Economy, Trade and Industry, *The White Book on International Trade 2003.*

Table 13. Presence of MNCs in China

	Recent History	Scale of Presence
< Electronics>		
Motorola (U.S.)	1987 opened the Beijing Office. 1992 set up Motorola (China) Electronics Ltd in Tianjin.	China 2002 sales: US$5.7 billion. Total invesment by end 2002: 3.4 billion. More than 12,000 employees. Has a wholly-owned company, a holding company, 9 joint ventures and 24 subsidiaries.
Siemens (Germany)	1984 Established Siemens China.	China FY2003 (end Sep. 2003) sales: 30.1 bln yuan (US$ 3.64 b.). Accumulated investment: US$6.1billion. (AWSJ Jan. 9, 2003) 21,000 employees. More than 40 operating
Nokia (Finland)	Sold the first analog cellphone system in China in 1986 and GSM in 1994.	Sales: Euro 2.8 billion (9.3% of Worldwide Sales) Accumlated investment: 2.3 bln euros to end 2001. 8 JVs employing 5,000. (South China Morning Post Feb. 2, 2002) Nokia's market share has declined steadily in China from 30% three years ago to 13% in 2003 (ChinaNex)
IBM (U.S.)	1980s opened offices in Beijing and Shanghai.	Major presence in IT service.
HP (U.S.)		Has about a 60% share of the lasor printer market (2003) Major presence in IT service market.
Philips (Netherlands)	1995 established the first joint venture	17 joint ventures and about a dozen wholly owned subsidiaries. Nearlly 30,000 employees. Accumulated investment of US$ 2.5 billion. (2002)
Samsung Electronics (Korea)	Early 1990s Started to produce small-size color TVs, VCRs and monitors in Tianjing.	2002 revenue from China operations US$6.4 bil, 8-10% of global business (Dec. 31, 20022 China Daily) / Has 21 manufacturing companies and employs 35,000.
LG Electronics (Korea)	1993 opened a manufacturing company in Huizhou. / 1996 set up Shenyeng TV plant.	China 2002 sales: US$4 billion. 2001: $1.5 billion invested; 39 subsidiaries. LG Electronics 15,000 employees, projected revenues of $3.7 billion; China's largest TV exporter, accounting for 13% of the total.
Matsushita Electric	1987 established a joint venture to produce color TV monitors.	2003 sales: about 600 billion yen (about US$4.4 billion)
Sony	1993 a first productin joint venture in Shanghai. / 1996 a sales subsidiary in Beijing.	2002 sales of 4 goup cos.: 8.8 billion yuan. Operates 45 factories.
Sanyo		2002 sales of 4 goup cos.: 7.5 billion yuan.
<Automobiles>		
Volks Wagen (Germany)	1984 set up a plant.	Volkswagen China end-Nov 2003 market share at 33 pct vs 41 pct end-2002 (2 January 2004 AFX Asia) About
GM (U.S.)	Jun. 97 estab. Shanghai GM -- JV w/Shanghai Automotive Industry Corp. Apr. 99 began regular production of 4 models	Employs about 10,000 (340,000 worldwide). Operates five joint ventures and two wholly owned foreign enterprises in China. InvestedUS$2 billion to date (7 Dec. 2003 Detroit News) Sold 387,000 vehicles in 2003. A market share of 8.2%
Ford (U.S.)	Oct. 1995 established a wholly owned holding company, Ford Motor (China) Ltd. and entered an equity relationship with Jiangling Motor Company (JMC).	Currently, Ford has 10 dealers, 41 service centers, two nationwide parts distributors, a technical training center and two representative offices.
DaimlerChrysler AG (Germany)	Fomer local Mercedes unit stumbled in a minivan production project, approved in 1995 (Asian Wall Street Journal	Repoted still unprofitable.
Toyota (Japan)	2002 formed a j.v. factory in Tianjin.	2003 sales: about 100,000 vehicles. Market share (2002): about 2%
Honda (Japan)	Jul. 1997 formed a j.v. in Guanzhou.	2002 sales of 4 companies: 18.8 billion yuan. A 3% share in the motorcycle market.
Nissan (Japan)	Jul. 2003 formed a j.v. with Donfeng in	

	Recent History	Scale of Presence
<Chemical>		
DuPont (U.S.)	1984 Beijing rep office opened; 1986 Shanghai office opened. 1989 registered DuPont China Holding Company	2002 more than US$700 million invested; more than 3,000 employees. 7 wholly owned and 15 joint ventured manufacturing facilities, 3 branch companies, 1 wholly-owned holding company
Toray (Japan)	1987 Opened a Beijing office. 1998 established a fully owned	
<Food & Beverage>		
Unilever (Anglo Dutch)	Reestablished in 1986 (soap JV); 1994 started icecream business.	Investment in ChinaUS$800 million to 1999 1999 reorganized 14 jvs into 3 core businesses(home & personal care, food & Bev, Ice cream)
Nestle (Swiss)	1987 began construction of Shuangcheng factory for milk products. Opened in 1990.	Nestle now operates factories at 18 different locations in China
Coca-Cola (U.S.)	Re-entered China in 1979 after 30 years, first US consumer product to return.	Now 24 bottling companies and 28 bottling plants. About 10% of nonalcoholic beverage market and 35% of carbonated soft drink sales. Employs approximately 15,000 people.
Donne (France)	1996 started in China by buying domestic brand Wahaha drink maker. 1999 acquired Robust	50 plants and 25,000 employees (WSJ 1/9/03) 2003 sales: about 1.1 bil. Euro (AWSJ March 5-7, 2004)
Yum Brands (U.S.)	Pizza Hut opened 1st restaurant in China in 1990. KFC opened first restaurant in Beijing in 1987.	China 1/3 of Yum's international profits (AP 1/15/04). China today makes almost as much money as the United States KFC business. (Business Wire 1/17/04) More than $400 millin total investment (WSJ 1/9/03)
Suntory (Japan)	1984 formed a j.v. for beer production in Shanghai.	Currently, has a 40% share in Shanghai's beer market.
Asahi Beer (Japan)	2000 a joint venture with Qingdao Beer Co.	Conducts a beer business in 5 coastal areas.
Ajiomoto (Japan)	1984 opened a Beijing office. 1994 opened a Shanghai office.	
<Consumer Products>		
Eastman Kodak (U.S.)	1981 opened Kodak (China) Ltd in Beijing office. 1998 took over 3 state film factories (WSJ 1/9/03)	Holds around 50 percent market share (24 October 2003 Shanghai Daily) 5 mfg plants for cameras, chemicals, & film; 8,000 retail outlets, 5,000 employees, $1.2 billion total investment (WSJ 1/9/03)
Procter & Gamble (U.S.)	1988 established in Guanzhou	Accumulated investment over US$1 billion 5 plants for food, personal care & household consumer gods; 4,000 employees (WSJ 1/9/03) 13 JVs. P&G Guangzhou and Guangzho Colgate among leading JVs in China in 2000. P&G share greater than 22% in cosmetics and toiletries mkt (2/1/02)
Fuji Phot Film (Japan)	1995 a join venture to produce cameras and degital equipment.	2003 share of degital cameras: 12.8%
Kao (Japan)	1994 a majority-owned joint venture to produce and sell hair care products. / 1995 a majority-owned joint venture to sell housoehold products	2002 an estimated sales of about 15 bil. yen (about US$1.4 bil.)
Shiseido (Japan)	1981started to sell impoted cosmetics in Beijin. / 1991 established a joint venture in premium cosmetics in Beijing. / 1998 established a joint venture in medium-grade cosmetics in Shanghai.	2002 a cosmetics of about 10 bil. yen.
<Retail>		
Carrefour (France)	1995 entered China retail market	2000 China sales RMB8 billion ($US1 billion). By 2003 28 stores in 16 cities
WalMar (U.S.)	1996 entered China	By 2003 21 stores mostly in southern China.
Metro Group	1995 set up JV; 1996 opened first store	2003 18 outlets
Itoyokado (Japan)	Dec. 1996 formed a j.v. in Chengdu.	
Aeon (Japan)	Dec. 1995 formed a j.v. in Guanzhou.	
Seven Eleven Japan		634 stores in China (as of March 2004) / Jan. 2004 A first convenience store in Baijing. Plans to open 15o in 2004.

Table 14. Reasons for Unsatisfactory Profitability Levels (FY2002 Survey)

No. of responding companies	All Areas 111	NIEs 240	ASEAN 276	China 137	N. America 201	L. America 64	EU 156	C.E. Europe 24
Low operating rate after initial investment	13.2%	12.9%	11.2%	29.9%	6.5%	10.9%	10.1%	29.2%
Tough competition for sales	43.2%	41.8%	35.6%	52.6%	47.3%	34.4%	50.0%	37.5%
Cyclical downturn of demand	35.9%	41.0%	40.3%	12.4%	41.8%	42.2%	32.3%	25.0%
Product maturity	12.7%	10.4%	11.5%	9.5%	11.9%	12.5%	21.5%	16.7%
Forex losses	4.5%	0.8%	8.6%	1.5%	2.5%	14.1%	5.1%	-
Demand for lower prices	18.1%	12.9%	16.2%	21.9%	24.4%	12.5%	20.3%	20.8%
Difficulty in cost reduction	19.7%	18.1%	17.3%	17.5%	26.4%	12.5%	23.4%	16.7%
Unfavorable treatment by host country	2.5%	0.8%	1.8%	10.9%	1.0%	3.1%	1.3%	-
Others	6.0%	5.6%	6.8%	7.3%	4.0%	12.5%	4.4%	4.2%

Source: JBIC Institute, "FDI Survey of Fiscal Year 2002" (Japanese)

Table 15. Reasons for Expanding Overseas Operations (FY2002 Survey)

No. of responding cos.	NIEs 162	ASEAN 4 217	China 444	Other Asia 18	North America 97	Latin America 31	EU 67
Response to market expansion	62.2%	60.4%	78.7%	66.7%	54.5%	67.4%	58.3%
Building production capacity to exisiting clients	29.0%	38.2%	35.3%	22.2%	44.9%	34.8%	34.8%
Cultivation fo new clients	35.5%	31.5%	33.2%	29.6%	42.7%	32.6%	46.1%
Securing labor	35.5%	31.5%	44.5%	37.0%	-	4.3%	0.9%
Securing low-cost supplies	7.3%	12.8%	23.6%	11.1%	1.1%	4.3%	1.7%
Response to regional integration	4.6%	5.0%	1.4%	-	2.2%	2.2%	4.3%
Avoiding exchange	1.5%	1.7%	1.2%	3.7%	7.9%	2.2%	4.3%
Request from host governments	1.5%	-	0.9%	-	-	-	1.7%

Note: Multiple answers.
Source: JBIC Institute, "FDI Survey of Fiscal Year 2002" (Japanese)

Table 16. Areas of Expanding Overseas Operations in Production in the Medium-Term, by Country

	NIEs	ASEAN4	China	Other Asia	North America	Latin America	EU
No. of responding cos.	245	341	518	25	172	44	116
Opening new facilities	6.5%	11.1%	31.9%	20.0%	11.6%	13.6%	10.3%
Expansion of existing lines	18.0%	48.1%	34.7%	32.0%	33.1%	34.1%	23.3%
Opening new lines for new products	6.5%	23.8%	21.0%	16.0%	20.9%	6.8%	12.1%
production	4.5%	3.5%	6.0%	4.0%	5.8%	4.5%	3.4%
OEM production	-	3.8%	2.5%	4.0%	5.8%	4.5%	3.4%
Business alliances	5.7%	4.1%	8.3%	4.0%	7.6%	-	8.6%

Note: Multiple answers.
Source: JBIC Institute, "FDI Survey of Fiscal Year 2002" (Japanese)

Table 17. Distribution of the R&D Organizations among Countries and Regions that are Sources of Foreign Investment for China

Country and Region	No. of MNEs Having R&D Facilities in China	Percentage Share
E.U.	21	24
U.S.A.	31	29
Japan	18	22
Korea	3	9
Hong Kong	1	8
Taiwan	5	11
Canada	2	15
Else	1	
Total	82	

Source: Jiang (2003) based on the data by the Ministry of Science and Technology

Table 18. R&D Operations of Multinationals in China

＜Electronics＞	
Motorola (U.S.)	Has 13 R&D centers in China (5 each in Beijing and Tianjin, and 3 in Shanghai, employing 1,300 and has invested 2.5 billion yuan. Plans to invest US$1.3 billion in six years by 2006. (a newspaper artcle in Sep. 2002)
IBM (U.S.)	Established a R&D center in Beijing employing about 100 researchers with Master and PHD degrees. Plans to significantly expand China Development Lab as part of global software group to work on companywide projects (Andrew Batson 24 February 2003 Dow Jones International News)
Intel (U.S.)	Made an equity investment of 2.6% in a local venture which had developed a technology to transform Chinese character data to voice data (A news paper article May 2002)
Microsoft (U.S.)	Set up R&D centers and will spend US$ 80 million in the six yeas (A newspaper May 2000)
Siemens (Germany)	Three-polar R&D center system consisting of Beijing, Shanghai and Singapore in East Asia (China Daily 2002.4.8) / 1998 established a mobile phone research center in Beijing. Employs 300 persons at the middle of 2003. / A joint R&D on TD-SCDMA, a 3G standard, with Huawei.
Philips (Netherlands)	Shifted the R&D of TV from Singapore to Suzhou. R&D of audio equipment is in the process of moving from Hong Kong to Shenzhen. R&D of LCD for mobile phones will be moved from Hong Kong to Shanghai.
Samsung (Korea)	2003 received an approval to set up R&D centers and will start R&D in semiconductor, mobile phones, etc. (Reuters News 2003.7.10)
LG (Korea)	Set up largest color TV R&D center in Shenyang by moving some of the research and development functions from Korea. / Dec. 2002 started operation of the Beijing R&D center.
Matsushita Electric (Japan)	Has 4 research centers. Established a Matsuchita Electric R&D center in Beijing in Jan. 2001. Plan to employ about1,500 person by 2005. (Nikkei 2002.4.5) / April 2002. Establihed a reserach center for consumer electronics in Suzhou mainly for development of air conditioners and ilumination and the coverage will be expanded to refrigerators . Initial employment of about 50 will be expanded to 250 by 2005. Used also for developing export products to the global market (Nikkei 2002. 4.5.) / Feb. 2003 Established a research center in Tianjin for car audio and
Hitachi (Japan)	Established a semiconductor design center in Suzhou to design microprocessors for consumer electronics products. Employ about 30 enginees (Nikkei Jan. 11, 2000)
Sony (Japan)	2002 established a production research center in Wuxi. Jiangsu, a software development center in Shanghai, and an information system plan R&D center in Dalian.
Sanyo Electric (Japan)	From 2004, will shift the R&D in household appliances from Japan to China in steps and concentrate on digital consumer electronics in Japan.
＜Automobile＞	
GM (U.S.)	Aug. 1997 Established a R&D joint venture, PATAC, with Shanghai Motors in Shanghai. 650 employees (800 by the end of 2003) including 13 foreigners as at the middle of 2003..
Honda (Japan)	Feb. 2002: set up a research center of motorcylce in Shanghai.
＜Chemical＞	
DuPont (U.S.)	Establish an integrated R&D center in China (Operation starts in 2005) for R&D of new technologies and textile products demanded in the Asia Pacific region. Expected number of employees: 175-200.
Toray (Japan)	Established a R&D center in Jiangsu for shnthetic fiver etc. Plan to employ about 500 after 3 to 5 years (Nikkei Sangyo May 12, 2003) .
<Food＞	
Unilever (Anglo-Dutch)	2000 set up a research center in Shanghai for sundry products and packaging. 150 researchers.
Suntory (Japan)	Spring 2003 Establish a R&D facility to develop local beer and beverage products. Emply about 30 local researchers (Nikkei Jan. 7, 2003)

Souce: The author based on various newspaper articles.

Table 19. Expected Effects from China's Accession to WTO

Termination of local contet requirements	61.4%
Reduction of tariff rates	60.9%
Protection of IPR	56.1%

Note: No. of effective responses: 440 companies.

Source: JBIC Institute, "FDI Survey of Fiscal Year 2002" (Japanese)

Table 20. Progress in Realizing the Expected Effects of China's Accession to WTO

State of Progress	Proress	No Progress	Neither
Termination of local contet requirements (266 cos)	12.2%	42.2%	45.6%
Reduction of tariff rates (270 cos)	29.3%	27.8%	42.9%
Protection of IPR (246 cos)	56.1%	5.7%	37.8%

Note: Numbers in the parenthes are effective
Source: JBIC Institute, "FDI Survey of Fiscal

Table 21. Transfer of Decision Making Authority in the China Operations of European and American Firms

Function	Average
Sales and markting	92.3%
Product planning	84.6%
Selection of business partners and suppliers	66.7%
Personnel	30.8%
R&D	10.0%

Source: Survey by Ministry of Economy, Trade and Industry reported in White Paper on Internatonal Trade 2003.