

Comparative Analysis of R&D Investment Strategy of Multinationals of United States and Japan in China

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Abstract

With the economic globalization increasingly development, American and Japanese multinationals are the leader on the area of technology and innovation in the world, their foreign investment characteristic expressed as that established R&D institutions in developing countries and from area of traditional manufacture and sales to expand in research and development areas, it becomes the new trend of American and Japanese multinationals foreign investment. This article detailed analysis of transnational corporations of America and Japan's R&D investment in China, then proposed the Chinese enterprise countermeasures.

Key words: Transnational corporations; Globalization; Research and development; Investment strategy

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INTRODUCTION

Multinational corporation's research and development activities is one of the important means to create and maintain their core competitiveness. Almost 30 years, multinational overseas research and development has become a common phenomenon in the world. The behavior of setting up research and development institutions in China by multinational corporations started

in 1993, followed by accelerated growth in more than 10 years. According to the data of the Ministry of Commerce in China, there were less than 200 multinationals research and development centers in China in 2001, and the total number has reached more than 750 in 2005. Over the last two years, an average of more than 200 multinational companies have set up research and development facilities in China. Through comparison with American and Japanese multinational R&D investment location, indicates that, the United state and Japan are main investment R&D countries in China. Investment scale constantly rose, and investment structure is becoming more and more senior; there are two common characteristics of the United state and Japan R&D investment location distribution in China: first, it is preference coastal areas; second, it is near University. Differences are that Japan like to invest Yangtze River Delta, but United States expressed as the extended trend from coastal to inland; while American and Japanese famous multinational companies all established the R&D agencies in China, but in terms of investment scale or investment speed, the United States investment scale is much larger than Japan's. R&D localization features are significant.

1. ANALYSIS OF THE UNITED STATES AND JAPAN INVESTMENT STRATEGY CHANGES IN CHINA

1.1 Investment Strategies Continuous Adjustment and Investment Size in Increasing

There are three stage of United States and Japan investment process in China: first stage was in 80 early, United States and Japan investment features was that between governments cooperation, investment industry mainly concentrated in heavy industry area; second stage was in 90 early, some famous enterprise of United States and Japan began invested in China, large enterprise and

group was as the main investment body; third stage is in now, from “resource and labor-intensive” investments to invest in research and development area. According to statistics, the actual amount of United States investment in China amounted to \$5.45 billion in 2004, accounting for 8.7% of the total amount of foreign direct investment; the actual amount of Japan investment in China amounted to \$3.94 billion, accounting for 7.9% of the total amount of foreign direct investment, United States and Japan became one of the most important countries of direct investment in China. On the list of top 50 multinational corporations in China, there are 10 United States enterprises, only 5 of Japan, 5 of Germany, 3 of France and Finland respectively.

2.2 Investment Diversification and Geographical Distribution High Concentration

United States multinational corporation investment on industrial in China proportion is 75.5%, manufacturing investment is 67.0%, mainly concentrated in the electronic machinery, especially computer-related products area, followed by oil, pharmaceutical and transportation and so on. And the United States multinational corporations more concentrated in the manufacturing sector than Japan, particularly in the electronic machinery and transport machinery, other manufacturing industries also account for a certain proportion. On the investment location, United States and Japan transnational corporations common features are that concentrated in the eastern coastal areas. 73% of the United States's investment is in the coastal. Investment in the Central and Western and inland is significantly higher than Japan's. Japan transnational corporations more concentrated in Yangtze River Delta region, achieve to 51.5%. In addition, investment of Japanese companies also demonstrated that the development trend from the big cities to the small cities and suburbs, such as Japanese corporate investment in Shanghai, Guangzhou, Dalian and the surrounding area, Songjiang district of Shanghai is one region of high concentration of Japan enterprises. Recently, established of the “Japan Industrial village” Industrial Park in Suzhou high-tech zone. There are famous Japan transnational corporations in Suzhou Industrial Park: Panasonic, Hitachi, Fujitsu, Nitto Denko and other large enterprises.

2.3 United States Transnational Corporations Pay Attention to Both Production and Sales in China, Japan More Like Output to Home Country After Production

The biggest difference of United States and Japan of transnational corporations is that United States pay attention to the production and sales in China market, and Japan favor of output to their home countries after production. And compared to every company's global profit ratio, United States' business average revenue growth and profitability in China is higher than other parts of the world. 42% of the United States company profit

margins in China more than the global profit rate in 2002. Three-fourths enterprises in China return on profits more higher than other nations of the world in the 2004. China Economic Quarterly study showed that United States companies benefit by extending the \$1.9 billion in 1992 to \$400 million in 2003 in China, plus royalties, license fees, education consulting services fees, total profit will amount to \$8.2 billion.

Above, can see that the United States multinationals' investment in China is a “market-oriented”, and Japan transnational corporations are “external output”. Result in the difference of United States and Japan investment model to China mainly due to Japan earnings lower than the United States in China. Partly because of Japan enterprise product in China that output to their home country rates are high, Japan multinational companies export to the home country is the United States multinational company 3 times in 2003. Another reason is because of different investment strategies compare with United States, Japan investment is optimistic about China's high quality cheap labor in China, while the United States is more attention the expanded China's huge domestic market, due to the sustained and rapid development of China's economy, rising purchasing power of the national consumer, market potential is huge.

3. COMPARISON OF UNITED STATES AND JAPAN MULTINATIONALS R&D INVESTMENT STRATEGY IN CHINA

3.1 United States and Japan R&D Investment in China Almost are the Sole Proprietorship Form

Since Chinese government encourages foreign investments in research and development, there are no restrictions. So, United States and Japan of the company development strategic goals characteristic are that from the Chinese market demand, and develop products to meet consumers' demand, which is the main purpose of establishment of R&D institutes in China. United States of R&D investment in China characteristics is that early access to China, there are many scientific research personnel of multinational companies in the field from GM, GE, Motorola, IBM to automotive, electronics, electrical appliances, communications equipment, and so on, employing a large number of “returnees” students, achieving the strategy of combination of personnel localization and introduce talents.

Japan multinationals implement follow-up strategies, and gradually increasing investment in research and development, on the one hand, in order to shorten gap with United States investment enterprise in China, but also to maintain their advantage with other multinationals in the fierce market competition, and thus meet the interests requirements of the investor and the host

countries. Japan's Fujitsu, Panasonic Electric, Hitachi, and other world famous multinational enterprises have set up a R&D structure in areas such as communications equipment and integrated appliances in China, especially Toyota, Honda R&D institutions especially compelling.

3.2 Implementation of R&D Talent to "Localize" Is the United States and Japan Transnational Corporations Important Part of Development Strategy

United States corporate set up various enterprise scholarships systems for Chinese universities, for example there are hundreds of famous enterprises has established assistance scholarship organization at Fudan University, Shanghai Jiaotong University, like GE, IBM, Motorola, P&G, and many other world famous transnational corporations involved. By contrast, Japan also has its own practices, such as the recent, Japan national and private universities began to invest in China, or establishment of MBA education rewards, or implementing "sending mechanism", "sending mechanism" is one of the advantages of Japanese companies, according to statistics, 50% local employees Japanese-owned enterprises in China has opportunity to accept training or learning in Japan headquarters. This is one reason why Japanese companies are very attractive. While Japan enterprises beginning to communicate as "cooperative with production and learning" way, take University as a Center, and Chinese companies, academic institutions, research institutes through conclusion of a cooperation agreement, implement some new practices into the localization. Recently, the Panasonic Electric group has been established "China Research Center for life" in Shanghai, analysis of Chinese consumers fundamental living habit information, research and development for the Chinese consumer tastes, produce and sales in China, achieving a chain of efficient system with development - production - sales.

3.3 United States and Japan Is China's Main Investment Countries and the Amount of Investment and Investment Projects Is Rising

On the amount and the project of investment in China, there are little advantage of United States than Japan. In the form of investment, wholly-owned is the first choice for United States and Japan of transnational corporations. On investment industry and the location selection in China, Japan transnational corporations take machinery manufacturing as core and distribution in the coastal areas, particularly in the Yangtze River Delta area; the United States is focused on electronic communication, chemical, transport mechanical, and so on, on the location selection, United States reflected in the trends from the coast to the Inland extension. In China, United States and Japan of transnational corporations on the proportion of output products to their home countries, Japan was United States 3 times; but United States more important to the

consumer market in China than Japan. Distinct for the United States is "market-oriented" and Japan is "foreign-oriented" model. In China, on R&D investment strategies, although the United States and Japan multinationals all set up R&D agency in China, but in terms of the investment scale or investment on speed, United States investment scale is larger than Japan, industry researchers localize obvious, but mainly with Shanghai as the Center.

4. THE INFLUENCE OF UNITED STATES AND JAPAN MULTINATIONAL CORPORATIONS RESEARCH AND DEVELOPMENT IN CHINA ON LOCAL ENTERPRISES

4.1 Helps Local Enterprises to Improve Innovation Level

The development of transnational corporations in China and efficient configuration of the production resources, design and develop products more in line with the needs of the Chinese market, carry out a high level of technology transfer, made China enterprises innovation on a high level and on a more open platform in the world. Research and development of transnational corporations in China constantly strengthen and deepen, objectively changed the domestic competitive environment, have a role model for local enterprises and research institutions, prompt local enterprises and research and development institutions constantly improve the level of management and market-oriented product development capability. As the country's scientific and technological progress and economic and social development to a new level, many multinational corporations have set their vision, planning, initiatives even more integration with the concept of China's economic and social development, and advantages for China use of global resources for independent innovation. For example, one of the development strategic goals in China of Intel is "continue to promote the sustainable development of China", and Microsoft's philosophy is "Microsoft's research and development and innovation in China, is very important part of an overall independent innovation in China. Microsoft's innovation must integrate with Chinese information industry, only the success of Chinese information industry, Microsoft can succeed"; and Cisco company signed a series of cooperation projects in areas such as education, SMEs with the Ministry of education and the State Development Bank of China, Alibaba group, carrying out of its "grow with China" concept. These help to enhance China's capability of independent innovation and the internationalization of Chinese enterprises.

4.2 Control and Leads the Industry in Innovation System

Due to Multinational companies conducting basic

research and high-end technology and emerging technologies, so they can set up innovation goal, lead innovation process have innovations, control the entire innovation system. In the innovation system, local companies only with assembling according technology paradigm of transnational corporations, it is difficult to promote technology level, even forming technology “dependent”. Such as the automobile industry in China was known as “spurt” development in recent years, but lack of local brands, are basically foreign assembly plants, foreign brand car take 90% of the domestic market share. Multinational companies dominate and control of industrial innovation system, so dominate and control the industry chain that matches innovation system, thereby changing the industry competition. Most direct influence of multinational companies in mergers and acquisitions to expand its market share in China, resulting in many famous national brand was replaced. Wholly-owned operations may crowd out local research and development institutions. Overall industry mergers and acquisitions may direct result of domestic R&D activities stopped.

4.3 Increasing Competition to Scarcity of Research and Development Resource

Multinational corporations have capital and technology advantages, and advanced management concepts and mechanisms, Chinese brain drain from local companies and research institutions, so as to weak the local company's research and development capabilities. Since Chinese companies size, market environment and the internal mechanisms constraints, they less investment in research and development, and personnel lacking; multinationals has ascendancy in competition between domestic institutions, has a very strong effect of talent accumulation, further expanding the domestic talent gap. Market resource is a strategic resource, is also a decisive factor in promoting the process of research and development, transnational corporations more and more attention to research and development activities based on the Chinese domestic market development, and proceeds with the specific market segments, and large areas of occupation of China market, compression of domestic research and development market space. After years of development, China formed a large accumulation of technology with market prospects, these precious scarce resources, has become the current multinational important competition for the object.

5. COUNTERMEASURES AND RECOMMENDATIONS

5.1 Full Using United States and Japan Technology Diffusion, Solution China of “Technology Gap”

United States, and Japan is most developed of economic countries in the world, by established R&D institutions in China, can directly bring the most advanced of technology

to China, also will bring innovation technology of “technology spills”, and “technology transfer”, and “technology diffusion”, this will led technology innovation activities of China local enterprise. According to marginal industry expansion theory, developed countries technology transfer through foreign direct investment are mostly technology and marginal industry with ripe and disadvantage in the panter country, but they may still be a relatively advanced technologies in developing countries. In fact, this theory reality is based on the science and technology innovation, because only technology standers or industry technology has achieved a very high level, there will be technical and marginal industry which has comparative disadvantage, however. This marginal industry transfer success depends on two factors: first, whether direct investor is willing to promote the transfer of technology, second, whether host country is keen to insist on access to technology transfer. As the United States and Japan to seek breakthrough development of basic research and leading-edge technology, so will take to technology in return for market strategies in international economic cooperation. At the same time, China's regional economic development “technology gap” has become increasingly exposed, especially the study of scientific research, applied research and technology manpower shortage, and regional economic development must rely on scientific and technological innovation, we should take full advantage of United States and Japan to set up R&D agency opportunities, make it happen on direct investment modes of technology transfer.

5.2 Encourages China Enterprise “Out to”, to United States and Japan Investment, and Established R&D Institutions, Track Technology Development of Latest Trends

Chinese government should develop related policy to encourage China enterprise to establish R&D institutions with United States and Japan. Although China enterprise has some gap in production scale and technology compared than United States and Japan enterprise, but R&D investment and FDI is different, it does not needs enterprise has monopoly advantage, because Chinese enterprise behind in technology, more necessary to technology advanced national to establish themselves of R&D institutions, to track and monitor new trends of industry technology development, services for the parent company's product development. In this regard, Korea's experience is worthy for reference. From the Korea overseas distribution of R&D institutions, almost all concentrated in the technology developed country, the purpose is obvious.

5.3 Formulate the Policies Aimed at Encouraging Foreign Transfer of Research and Development Industry to China

The global financial crisis of United States shows

that traditional development approaches have serious problems, heralded a new round of the global industrial structure adjustment and industrial upgrading. Outsourcing of research and development in the period beginning from the last century, to the rise of research and development enterprise on today, age of industrialization of research and development activity is coming. Research and development activity is associated with the real economy. After 30 years of reform and opening up of China's development, coupled with the transfer of international manufacturing industry, the real economy of China are huge, but extensive growth. China should make full use of the advantage of real economy huge, seize the opportunity of international industrial structure adjustment in a future, optimization and upgrading of foreign capital structure, vigorously promoting international research and development industry transfer to China, change the mode of economic growth.

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