

Foreign Direct Investment and Japanese Economic Development, 1899-1931*

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Too often accounts of the economic development of Japan underrate the impact of foreigners. Through statement or omission, for example, much of the literature on modern Japanese economic development attaches little significance to foreign direct investment (FDI) in that country's growth process. William Lockwood, the noted economic historian of Japan, concluded in one study that: "Except in the handling and financing of overseas trade in the early decades, one cannot fail to be impressed with the meager contribution of foreign business *in Japan* to the industrialization process" [11, p. 323]. Few studies have analyzed the development of foreign direct investment in Japan, published data are scarce, and standard economic histories sometimes do not even mention its existence.¹

Was the role of foreign direct investment in Japan's economic development early in this century really "meager"? This essay examines the roughly three decades between the end of extraterritoriality and the rise of militarism

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¹There are but two comprehensive published accounts of foreign direct investment in prewar Japan, one by the Ministry of Foreign Affairs [9] and the other by the Industrial Bank of Japan [7]. As the economist Kozo Yamamura recently noted, "The full extent of the involvement of Western firms in the Japanese economy during the interwar years is not easily ascertainable, partly because sufficiently detailed information has never been systematically compiled" [22, p. 67].

in Japan--the period from 1899 to 1931--to test the validity of this received view of the history of foreign enterprise in Japan. Only from 1899 did changes in international treaties explicitly give foreigners the right to directly invest in Japan outside the so-called Treaty Settlements. The subject here investigated is foreign direct, rather than portfolio or indirect, investment. By foreign direct investment is meant business enterprise based in one country yet operating abroad, with real or potential management participation in a foreign entity--not simple financial flows across boundaries.

Western Electric could hardly wait for treaty revision to establish an operation in Japan. "I am more than ever convinced that there is a large amount of business for us here," wrote Harry Thayer, the manager of the International Department, from Tokyo in 1897. "It will come and continue to come if we give it first class attention, and if we do not it will go to some one, either native or foreign, who does." Conditions called for a direct business presence: "It is too far from home to do it well in any other way than having some technical mechanical and business ability here" [2, Thayer to Welles, 1897].

Yet there were difficulties. For one thing, Japanese law did not yet permit direct investment by foreigners outside the Treaty Settlements. For another, even when the laws would change he worried about a "strong popular and governmental sentiment in favor of home manufacturers" [2, Thayer to Hudson, 1898].

Thayer had a plan. Western Electric would form an alliance with a native concern, Oki Shokai, to manufacture and sell Western Electric telephone equipment in Japan. In Yokohama, the American firm would establish an office to coordinate the importation and supply of necessary parts and know-how to enable Oki to manufacture. Oki and Western Electric would split profits from sales down the middle. The U.S. company would have the option of a one-half interest in the business "whenever the laws of Japan permit foreign ownership of stock or partnership interests in native enterprise" [2, Thayer to Hudson, 1898]. The talks failed.² Western Electric then turned to its Japanese sales agent, Iwaware Kunihiko, and proposed a similar arrangement. On August 31, 1898, Iwaware and an associate formally established Nippon

²According to a biography of Oki Kibataro, during the course of the negotiations "there emerged a difference of opinion between the two sides with respect to the basis on which profits would be calculated. Furthermore, [Oki] did not obtain the collaboration of Mr. Iwataro [a close advisor to Oki], because there was a feeling of uneasiness in doing business with foreigners." For these and other reasons, the negotiations ended in failure [As quoted in 3, p. 118.]. All Japanese names in this article are cited by surname first as is the Japanese custom.

Electric Limited Partnership. It was agreed that, upon treaty revision, the concern would be reorganized into a joint stock company with Western Electric holding a direct interest [14, pp. 5-7].

Western Electric wasted no time entering Japan as a direct investor: the Nippon Electric Company (NEC) was organized under Japanese law, with 54% of the capital supplied by Western Electric, on July 17, 1899--the very day that the revised treaty between Japan and the United States went into effect! As such, it was one of the first joint ventures in Japan proper between foreign and Japanese business in modern history [14, p. 8].

What was the value of foreign direct investment in Japan from 1899 to 1931? Scattered data offer clues.³ One set of estimates, derived from balance of payments figures of the Ministry of Finance, put total "direct foreign investment in Japanese enterprise" at about \$50 million in 1913, \$72.5 million between 1919 and 1922, and \$122.5 million in 1929 [13, pp. 507-533]. Government figures cited by the Bank of Japan place total foreign investment in Japanese banks and companies at \$2.5 million in 1905 and \$57 million in 1931 [6, p. 161]. Lockwood figured total foreign direct investment in 1934 at between \$75 and \$100 million [11, p. 260].

American capital clearly accounted for a greater proportion of foreign direct investment in Japan by the end of this period than did any other single country. Yet the US Department of Commerce estimated all American foreign direct investment in Japan at just \$60.7 million in 1929, and manufacturing investment at about \$40 million [18, p. 26]. The total capital of the 13 US branch factories in Japan listed in a 1932 report of the Commerce Department stood at about \$27 million [calculated from data in 19].

Whatever the precise figures for world and U.S. foreign direct investment in Japan during this period, in international terms they were small. Foreign direct investment in China, an East Asian neighbor for which there is adequate historical data, far exceeded levels in Japan. According to Remer, total foreign direct investment in China stood at \$503 million in 1902, \$1.084 billion in 1914 and \$2.532 billion in 1931 [16, p. 69]. It therefore appears that, even if we accept the upper end of the range of estimates for Japan, foreign direct investment in China exceeded foreign direct investment in Japan by about a factor of 20 at the time of the Manchurian Incident.⁴

³The following figures have been converted, where necessary, from yen to dollars at the rate of two yen per dollar.

⁴Comparing Japan and China in this respect raises, of course, a number of difficulties. The exercise is meant only to offer some sense of relative scale.

United States direct investment in Japan as compared to all US foreign direct investment similarly suggests the paucity of direct foreign business investment in Japan during this period. It has been estimated that total American direct investment abroad grew from \$634.5 million in 1897 to \$7.553 billion in 1929. If we accept the 1929 Commerce Department data for Japan cited above, just 0.8% of all US direct investment abroad had found its way to Japan by that year [10, p. 605]. Indeed, even within Asia, the share of US foreign direct investment in Japan accounted for less than 14% of total US FDI for the region in 1929 [10, p. 606].

Yet foreign direct investment in Japan during this period proved highly significant *qualitatively* even if it did not amount to much *quantitatively*. A closer look will bring out numerous aspects of its importance for the developing Japanese economy.

First, of course, foreign enterprise brought with it the manufacture in Japan of a whole range of products using advanced western techniques. Dunlop Rubber, a British firm, established the first modern tire factory in Japan. Libbey-Owens Sheet Glass, an American firm, joined with Japanese interests to modernize the production of window glass. Ford and General Motors assembled automobiles from imported "knocked down" kits using the conveyor belt assembly method. Siemens brought to its joint venture with the Furukawa group new technologies for the production of electrical machinery. As two western economists therefore concluded, "To the rise of manufactures [based upon advanced western technology], after the turn of the century--and still more after the First World War--foreigners made important contributions, sometimes in close partnership with Japanese firms and sometimes alone" [1, p. 228].

A substantial range of foreign companies set up operations in Japan. These included trading firms, commercial banks, shipping concerns, investment houses, life insurance companies, and manufacturing operations. A survey of major foreign capital-affiliated manufacturing firms which had entered Japan by 1932 lists among their output everything from electric lamps to oxygen to bicycle seats [8].

It is additionally interesting to observe the patterns of entry by time between 1899 and the Manchurian Incident. In general it seems clear that there was a shift from foreign direct investment in trading and related activities to

Interestingly, the proportion of direct to indirect foreign investment in the two countries was roughly opposite: the great preponderance of foreign direct investment in Japan during this period was indirect; in China it was direct [16, pp. 68-9; 13, p. 524].

FDI in the manufacturing industries.⁵ In the industrial field, available studies indicate that a clear majority of foreign direct investors in this period entered between 1917 and 1931. A study of American branch factories in Japan as of 1932 points to a similar pattern. According to this report, at least nine of the reported 13 US direct manufacturing investment entries in Japan during these three decades began operations from 1917. Moreover, five or more of the 13 plants started to operate from 1927, and during these closing years of the period three previously established producers each doubled their capitalization [19]. (See Table 1.)

Japanese and United States Government data reveal the pattern of foreign direct investment by industry. These studies indicate that a plurality of major direct investments took place in the machine tool and electrical machinery industries. Also important were rubber products, automobiles, records and miscellaneous mechanical goods based on engineering developments in the West.

Not only did foreign direct investors during this period represent a variety of foreign commercial interests engaged in a broad range of activities, they also included some of that era's great multinational enterprises. There were, among others, major producers of electrical goods such as General Electric, Western Electric and Siemens; the automakers Ford and General Motors; the rubber manufacturers Dunlop Rubber and B. F. Goodrich; and Sweden Match and others.

A second aspect of the importance of foreign direct investment is that foreign capital-related firms provided the Japanese with business knowledge not only of advanced technology but also of western methods of business management--what together might be termed "knowledge transfer." This knowledge the Japanese acquired from the direct investor in two ways: by learning about new business methods and production techniques that the foreign enterprise imported and practiced in Japan, and by participating in

⁵As noted by one Japanese economic historian, "It was during...World War One that Japan could restore her commercial right at one stroke, which had long been in the hands of foreign merchants since the opening of the country at the end of the Tokugawa Shogunate. In other words, the exceedingly rapid development of Japanese manufacturing industries, the wonderful growth of her shipping companies and commercial concerns made foreign trade companies [leave] Japan. Foreign investments in Japanese manufacturing industries, however, became more and more active" [5, p. 58].

TABLE 1
US Branch Factories in Japan as of 1932

Japanese Firm	U.S. Parent	Year Operations Commenced
Nippon Electric (NEC)	International Telephone & Telegraph	1899
Tokyo Electric	International General Electric	1905
Shibaura Engineering	International General Electric	1910
Yokohama Rubber	B. F. Goodrich Rubber	1917
Japan Steel Products	Truscon Steel Products	1919
Ford Motor Japan	Ford Motor	1925
Nippon Hanovia Quartz Lamp	Hanovia Chemical	1926
General Motors Japan	General Motors	1927
Victor Talking Machine Japan	Victor Talking Machine	1928
Toyo Carrier Kogyo	Carrier Engineering	1931
Toyo Otis Elevator	Otis Elevator	1931
Mitsubishi Oil	Associated Oil	1932
A. P. Muning & Co.	A. P. Muning & Co.	N/A

Source: [19].

Notes: ITT acquired Western Electric's operations in Japan in 1925 through its takeover of International Western Electric. No date given for the commencement of operations by A. P. Muning & Co. Omitted from the above list is Japan Corn Products (U.S. Parent: Corn Products Refining; Year Operations Commenced: 1931), listed as a U.S. branch factory in the Commerce Department data. This branch was located in Korea, a Japanese colony when the Commerce study was written. However, the Commerce Department data fail to include all major instances of U.S. branch factories in Japan in 1932. One clear omission is Libbey-Owens Sheet Glass, which had a direct equity investment in American-Japan Sheet Glass from 1918.

training programs and inspection tours of the foreign company's home operations.⁶

The Western Electric-NEC joint venture provides a clear illustration of this knowledge transfer. Even before NEC began to produce telephone equipment, the US firm sent over an advisor to supervise the renovation of the NEC facilities. Western Electric shipped to Japan telephone sets, switchboards, meters, gauges and so forth for sale through NEC to Japanese consumers--thus providing NEC workers with the latest examples of Western Electric engineering and product design [14, p. 7].

At the suggestion of one of the resident American managers of the joint venture, NEC's Managing Director, Iwaware, travelled to the United States in 1905 to observe Western Electric's home operations at first hand. He was impressed with the American firm's "advanced systems of management and production control, and he readily acknowledged the fact that NEC's methods were rather primitive in comparison" [14, p. 9]. As a result, Iwaware directed that the two Japanese NEC trainees at Western Electric concentrate their study on the US firm's accounting and production control systems.

Western Electric's contributions did not stop there. Under the guidance of the American firm, NEC replaced its traditional Japanese *oyakata* system of subcontracting with a system through which NEC itself employed not only supervisors to oversee the completion of individual tasks but also the workers directly responsible for these specific duties. This established "a clear chain of command. At the top of this chain was the plant superintendent and under him came section chiefs, branch chiefs, and foremen, in that order. All work was paid at a set rate for each completed piece. The plant also employed clerks whose tasks included keeping work records of employees and computing the wages to be paid to them" [14, p. 10]. The US partner also helped organize a production control staff, which "enabled the plant to shed its former inefficiency and emerge into a fully modern manufacturing facility" [14, p. 10].

⁶Americans assessed Japanese management practice somewhat differently earlier in this century than they do today. For example, one US official in Japan reported in 1932: "Experience indicates conclusively that there are no serious difficulties in Japanese capital participation [in US manufacturing plants in Japan], provided control is maintained by Americans . . . the only factory with a substantial majority of Japanese capital is also the only one which has been operated at a loss for a number of years. This does not necessarily imply that Japanese management is hopelessly bad . . . However, Japanese management is notoriously weak in curtailing overhead expenses, reducing executive personnel and bonuses during hard times, and this accounts for much in this company's loss" [19].

Western Electric sent to NEC roughly a dozen advisors who offered guidance through their positions in the Engineering, Materials, Accounting, Administration and other Departments. In accounting, for example, Western Electric had:

. . . considerable influence. . . Allocation of funds was clearly set down in a budget to which NEC was expected to conform, and the company's staff was taught by WE [Western Electric] how to keep and close books and adjust accounts. Another area on which WE placed emphasis was cost accounting. Modern cost accounting methods were not commonly used by Japanese firms at that time, but through WE's guidance, NEC's accounting practices became as advanced as those of leading foreign enterprises [14, p. 11].

The American firm also sent punch card clocks to NEC, new in Japanese business practice [14, pp. 10-11]. In short,

. . . there can be no doubt that NEC's early successes owed much to WE's tutelage and early expertise . . . the innovations which NEC introduced [through Western Electric] were quite significant in the history of Japanese industry, contributing greatly to the nation's modernization scheme [14, pp. 11, 12].

Yet instances of knowledge transfer through foreign-affiliated companies extend well beyond that effected through Western Electric's ties to NEC. As a study of the Industrial Bank of Japan noted, "the majority of foreign direct investments were accompanied by technology transfer," and together with the transfer of modern, western methods of management practice, foreign companies made important contributions to Japanese business [7, p. 15]. Another study rightly points out:

In both the joint enterprises and the wholly-foreign undertakings, of whatever nationality, a prime contribution was the technical knowledge and skill which nowadays are termed "knowhow," but even more important was the sheer impact of innovation. The direct examples, virtually "demonstration projects," of foreign technique and management were a repeated stimulus to Japanese thinking, and helped prevent a premature halt in modernization [17, pp. 177-8].

Third, there is significance in what might be termed the "geography" of foreign direct investment in Japan. That is to say, foreign direct investors did not choose to locate in any single part of Japan--although they clearly preferred certain locales over others--but rather spread their investments among many different regions. Major foreign direct investments were particularly prevalent in Tokyo, Kobe, Yokohama, Osaka and Kawasaki, yet others located in Hyogo and Miyazaki prefectures, in Hokkaido and elsewhere throughout the country [8].

There are indications that this internal dispersion not only influenced the economies of different regions in the short term through the activities of these firms, but that it also had significant long-term effects on the distribu-

tion of economic activity in Japan. One Japanese writer noted the example of Dunlop Rubber:

One of the most famous examples [of an FDI-affiliated firm which established an independent company in Japan] was the purely British firm Dunlop Rubber (Far East), established in Kobe...which began operations with the purpose of manufacturing tires and tubes for automobiles and bicycles, medical equipment, industrial products and so forth. Its establishment influenced the development of the Japanese rubber industry in more than one sense. In other words, not only did it encourage the development of [rubber] goods manufacture, it also shifted the center of the rubber industry from Tokyo to the Osaka region [4, pp. 121-2].

Fourth, the entry of many foreign direct investments created or stimulated domestic Japanese industries to supply intermediate goods. The establishment of Ford in Yokohama and General Motors in Osaka illustrate this point well. "The growth of these firms," observed two western scholars, "created a large demand among Japanese producers of tyres, batteries and upholstery" [1, p. 230]. Moreover, the US Trade Commissioner in Tokyo reported that:

An analysis of the [foreign, and in particular US, branch factories which had begun operations in Japan as of 1932] shows that all of them are using domestic materials to some extent and that . . . this is a very important factor. For example . . . [t]he two phonograph companies . . . use a large proportion of domestic materials . . . About the only things which come direct from the United States are some of the component parts of the machines, and of course the Master Records recorded by American artists. These particular companies have been extremely successful in developing local sources of supply . . . [19].

Fifth, much of the foreign direct investment during this period took the form of joint partnerships with the great economic combines, or *zaibatsu*. As shown in Table 2, Mitsui, Mitsubishi, Sumitomo and a number of other *zaibatsu* joined with foreign interests to establish firms in Japan. Through these associations foreign direct investors directly influenced the operations of some of Japan's leading business organizations.

A number of factors explain the high degree of involvement of *zaibatsu* in domestic FDI-affiliated enterprises. Some arose from the needs of the foreign investor. State procurement and other official policies made alliances with domestic firms attractive as a way to sell directly to the Government

TABLE 2
Zaibatsu Participation in Major Prewar FDI Joint Ventures in Japan

Zaibatsu Investor	Foreign Company	Japanese Company
1. Sumitomo	International Standard Electric NEC Westinghouse Electric International Eastern Union Investment; Frazar Trust; & Others Libbey-Owens Sheet Glass Air Liquide	NEC Sumitomo Electric Mitsubishi Electric Japan Musical Instruments American-Japan Sheet Glass Imperial Oxygen
2. Mitsui	International General Electric; Eastern Union Investment Tokyo Electric Tokyo Electric Vicars Armstrong Babcock & Wilcox	Tokyo Electric Shibaura Electric United Paper Products Japan Steel Products Toyo Babcock
3. Mitsubishi	English Electric Westinghouse Electric International Associated Oil	Toyo Electric Mitsubishi Electric Mitsubishi Oil
4. Furukawa	Siemens Schuckert; Siemens & Halske Fuji Electric Westinghouse Electric International	Fuji Electric Fuji Telegraph and Telephone Mitsubishi Electric
5. Yamaguchi	American Linoleum	Tokyo Linoleum
6. Okuragumi	Telefunken Gesellschaft fur Drahtlose Telegraphie Dunlop Rubber	Nippon Telephone and Telegraph Dunlop Rubber (Far East)
7. Dai Nippon Seito	National Cash Register	Japan National Cash Register
8. Nihon Chisso	Benberg A. G.; I. G. Farben	Asahi-Benberg Rayon

Source: Adapted from [9, pp. 77-8].

Note: International Standard Electric was a subsidiary of International Telephone and Telegraph.

and to receive various forms of public assistance.⁷ In addition, many of the foreign firms lacked adequate knowledge of the Japanese market, and saw in the *zaibatsu* a store of relevant expertise. Also, a number of foreign firms learned that allying with powerful domestic interests could overcome a variety of difficulties associated with the size of their organization in Japan.⁸ Finally, some foreign managers sensed a strong economic nationalism in Japan, and believed that a combination with a Japanese concern would shield them from popular prejudice. The *zaibatsu* were a logical choice because they had capital and experience in a variety of business endeavors.

It is equally clear that the *zaibatsu* had their own motivations for tying up with foreign direct investors. Minutes of the 1926 meeting of Mitsui & Co.'s branch managers, for example, show that the firm settled on a policy of establishing joint ventures in Japan with foreign direct investors as a way to compete with domestic manufacturers operating within the newly created tariff walls and receiving other forms of government assistance:⁹

. . . foreign manufacturers . . . sell their goods [in Japan] through representatives....However, as a result of the Government's protectionist policies towards domestic industry together with the development [of this industry], if there is a drop in Japanese domestic demand for these [foreign made] goods, the overseas manufacturer will either construct his own branch factory in Japan or form an association with Japanese to produce domestically . . .

In response, Mitsui should either 1) establish factories on its own...enabling [the firm] to control the sale of output, or 2) form capital tie-ups with top-flight foreign manufacturers, construct new factories in Japan, and obtain the sales rights [12].

⁷According to the 1932 study of the US Department of Commerce, "A company which is organized purely as an American branch factory will not secure the benefits of preferential [Japanese Government] treatment as a domestic plant. However, a company which is organized locally with the participation of Japanese capital and management will very probably secure such preference" [19].

⁸As one study explained, "In cases where the foreigner conducted business in Japan [between 1905 and 1914] with insufficient knowledge of the geography and human feelings [*ninjo*], they learned that they would meet with various disadvantages when the scale [of their enterprise] was small. The proof of this is that in later years, when many foreign companies invested in Japanese firms, they gave management rights to *zaibatsu* such as Mitsui, Mitsubishi, Sumitomo and Furukawa" [7, p. 16].

⁹Mitsui & Co. was that part of the Mitsui *zaibatsu* principally engaged in trade and related activities.

In addition, competition between *zaibatsu* seems to have induced certain joint venture decisions. In 1918, for example, Sumitomo interests joined with the American firm Libbey-Owens Sheet Glass to manufacture window glass domestically. According to one Japanese source, "This [company] was of course established in an attempt to compete with Mitsubishi's Asahi Glass Company" [15, p. 445]. Whatever the motivations, however, it is clear that many of the major foreign direct investors formed joint ventures with the *zaibatsu*--and thereby directly influenced leading Japanese firms in a variety of fields.

Sixth, foreign direct investment in Japan during this period clearly contributed to employment in the modern industrial sector. Evidence shows that the vast majority of the employees of foreign capital-affiliated firms were Japanese--regardless of the relative size of the foreign capital contribution. One official Japanese Government study concluded that, in the manufacturing sector alone, over 24,000 Japanese were employed in firms in which there were substantial direct foreign investments [8]. Japanese employment in US branch factories alone totaled some 10,000 people [19]. (See Table 3)

Moreover, through these jobs Japanese workers were able to develop important skills demanded in the industrializing Japanese economy. In the NEC case cited above, for example, one of the initial impediments to the manufacture of dependable telephones was the inexperience of the firm's Japanese labor force. American advisors helped these workers to turn out a quality product [14, p. 7].

Seventh, foreign direct investment in Japan increased the level of Japanese *exports*. The activity of United States manufacturing plants in Japan clearly illustrates this:

. . . the fact that local American plants are in a position to manufacture for other Far Eastern markets, is a very important advantage which should receive more detailed consideration. Japan is very favorably located geographically with respect to China and other Oriental markets; it enjoys a stable government and there is a large and steady supply of skilled labor at fairly low wages. Moreover, in many cases it is possible to manufacture in bond for export to other markets, thereby avoiding the payment of import duty on material or parts. Practically all of the local American plants do some export business with other Oriental markets, and in some cases this accounts for a very substantial percentage of the total volume. For example, over 15% of the total assemblies during 1931 in one American automobile plant was shipped to China and other markets [19].¹⁰

TABLE 3

Employees in US Branch Factories in Japan as of 1932: Japanese vs. Non-Japanese

¹⁰Emphasis is the author's.

Name of Company	Japanese Employees	Non-Japanese
NEC	1,400	4
Tokyo Electric	2,900	1
Shibaura Engineering	2,800	1
Yokohama Rubber	N/A	1
Japan Steel Products	800	4
Ford Motor Japan	381	41
Nippon Hanovia Quartz Lamp	N/A	2
General Motors Japan	719	12
Victor Talking Machine Japan	541	14
Toyo Carrier Kogyo	26	4
Toyo Otis Elevator	149	2
Mitsubishi Oil	N/A	3
A. P. Muning & Co.	15	2
TOTALS	9,731+	91

Source: [19]

Notes: No data given for the number of Japanese employees at Mitsubishi Oil, Nippon Hanovia Quartz Lamp and Yokohama Rubber. Japan Corn Products not included; refer to note, Table 1.

Finally, foreign direct investment in Japan during the first three decades of this century eased pressure on domestic sources of capital and thereby indirectly assisted Japan in itself becoming a base for overseas multinational expansion. As Horie has observed:

... after the Russo-Japanese War [1904-05], Japan, upon entering an unprecedented period of foreign capital importation, at the same time began full-scale capital exportation. There was an intimate relationship between the import and export [of capital]. That is to say, precisely because there was a large volume of capital imported, Japan could export capital to Korea and Manchuria and so forth. The imperialistic development of Japanese capitalism was undoubtedly backed up by foreign capital [4, pp. 181-2].¹¹

In sum, although the *amount* of foreign capital invested directly in Japan from 1899 to 1931 was not large, the *impact* of this investment on Japan was very great indeed. It is clear that foreign direct investment: first, participated in and stimulated a broad range of business endeavor, often employing advanced methods; second, provided valuable knowledge about western technology and management practice; third, affected the internal economic geogra-

¹¹Horie here makes no distinction between foreign capital directly or indirectly invested in Japan, though it may be presumed that he was referring to both.

phy; fourth, encouraged the growth of intermediate industries to supply its needs; fifth, influenced major Japanese business enterprise through direct associations with the *zaibatsu*; sixth, boosted employment and offered training and skill development for workers, particularly in the modern industrial sector; seventh, raised Japanese export levels; and eighth, indirectly supported the advance of Japanese multinational enterprise abroad.

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MULTINATIONALS IN THE PATENT MEDICINE BUSINESS

