Division of Research
Graduate School of Business Administration
The University of Michigan

April 1984

FOREIGN DIRECT INVESTMENT BY KOREAN FIRMS:

TESTS OF FDI THEORIES

Working Paper No. 373

Choong-Min Han
and
Thomas L. Brewer

The University of Michigan

Foreign Direct Investment By Korean Firms:

Tests of FDI Theories

Choong-Min Han
and
Thomas L. Brewer

Graduate School of Business Administration
The University of Michigan

The authors gratefully acknowledge the valuable suggestions by Professor Sang-Kee Min of Seoul National University and Professor Adrian E. Tschoegl of The University of Michigan. We also acknowledge the cooperation of officers in the following banks: Bank of Korea, Korea Exchange Bank, Hanil Bank, and Korea First Bank.

Abstract

Foreign Direct Investment By Korean Firms: Tests of FDI Theories

This paper analyzes data on foreign direct investment by Korean firms in the light of (a) propositions in the theoretical literature on FDI and (b) findings from previous studies of FDI by Third World MNCs. The data concern FDI in manufacturing, natural resources, construction, banking and other industries. The variables considered are home government policies, ownership advantage, location, internalization variables, and elements of the product-cycle theory. In addition, the geographical distribution and ownership patterns which arise as a result of these variables are also considered. The findings are generally consistent with many previous theoretical and empirical studies. FDI by Third-World MNCs is subject to multifarious forces, as is FDI by MNCs from industrial countries. There is therefore no single theory that can adequately explain FDI by Korean-based firms.

Foreign Direct Investment By Korean Firms:

Tests of FDI Theories

The purpose of this paper is to determine whether existing theories of foreign direct investment can explain FDI by Korean firms. The paper reviews the theoretical literature on foreign direct investment and the findings of studies of FDI from developing countries. Then it describes the basic patterns and trends in Korean firms' FDI, and it compares the Korean experience with previous theoretical and empirical studies.

Theories of FDI

Early FDI theorists such as Hymer and Kindleberger explained FDI as a consequence of imperfections in goods and factor markets throughout the world. In a perfect market, no advantage could accrue to multinational companies; some advantages are required in order for the MNC to be able to compete successfully in an unfamiliar foreign environment. As Kindleberger (1969, p. 13) stated:

> For (foreign) direct investment to thrive there must be some imperfection in markets for goods or factors..., or some interference in competition by government or by firms, which separates markets.

Numerous ownership-specific advantages have been suggested by other MNC theorists: technology and marketing skills (Caves, 1971); oligopolistic market structure and behavior (Kindleberger, 1969; Caves, 1971; Vernon, 1971); excess managerial capacity (McManus, 1972; Wolf, 1977); financial and monetary factors (Aliber, 1970), including access to cheap capital and diversification of investments (Grubel, 1968; Rugman, 1976); access to raw material (Lall and Streeten, 1977).

The possession of ownership-specific advantages alone, however, would not explain why a firm should engage in foreign production, since it could exploit its advantages by licensing a foreign producer. In addressing this issue, theorists such as Buckley and Casson (1976) have turned to the ideas of Coase (1937), who introduced the concept of internalization. Since a market is costly and inefficient for undertaking certain types of transactions, firms may reject the market and organize these transactions within the firm itself. For example, because of difficulties in placing a value on the knowledge obtained from research and development, firms may internalize knowledge markets by engaging in FDI.

Furthermore, however, ownership-specific advantages represent only a necessary and not a sufficient condition for investment abroad as compared with exporting from the home country. Location-specific factors therefore need to be taken into account as well (Dunning, 1976). These factors include trade barriers, host government policies, relative labor costs, and market size and growth. One or more of these factors may encourage the firm to locate production facilities abroad rather than produce at home for export.

These three theories collectively represent the essential conditions for FDI. However, the theories provide more satisfactory explanations of horizontal FDI than either export-platform FDI in low wage countries or FDI in resource-based industries. Additional factors need to be taken into account in explaining those two latter forms of FDI.

The export-platform type of investment occurs when certain stages of the production sequence are located abroad or labor-intensive products are manufactured in foreign countries. Much of Japanese FDI is of this type and an increasing volume of US investment is designed to utilize inexpensive labor in the Far East and elsewhere. The product-cycle theory of Vernon (1966) is

relevant to this type of investment. According to that theory, in the last stage of the product cycle a firm faces intense price competition because the production technology has become widely diffused and the product has been standardized. In such a situation, a firm may move its plants abroad to increase its price competitiveness.

Resource-based FDI is also not adequately explained only on the basis of market imperfections, internalization, and location factors. Japanese investment in extractive industries, for instance, is designed to reduce Japan's overseas resource dependency. From an individual firm viewpoint, this is quite compatible with the internalization model, but Japanese government policy also plays a key role (Ozawa, 1975).

These and other theoretical propositions have been tested in several recent studies of foreign direct investment by firms based in developing countries.

Studies of FDI from Developing Countries

Wells (1977, 1981, and 1983) contends that FDI from developing countries tends to flow from newly industrialized countries (NICs) to smaller and poorer LDCs. In particular he contends that firms in NICs have acquired technology from industrial countries and adapted it to the special needs of their home markets. When products are later demanded in sufficient quantities in poorer/smaller developing countries, production is shifted to those countries from the NICs.

Wells (1981) provides several explanations for internationalization by LDC investors. First, potential buyers do not have information about the manufacturing technologies of LDC investors because the investors tend to be less well known than IC investors. Secondly, LDC firms' technologies are often not patented. Thirdly, the knowledge of LDC firms' managers and technicians is not

codified. Vernon (1979) has suggested that NICs, which produce innovations in the form of a new product or a new process or a significant adaptation of existing products and processes, are in a position to initiate their own product-cycle of exportation and eventual FDI toward the other LDCs--especially countries that have lagged behind in the industrialization process. White (1981), in his study of Latin American firms, found such a pattern of FDI flow. Firms from larger and wealthier countries like Argentina, Brazil, and Mexico are major investors in smaller and poorer countries such as Ecuador, Paraguay, and Uruguay. Agrawal (1981) also found that most Indian FDI is located in Asia and Africa.

As for the distribution of FDI across industries, Wells (1977) suggests that LDC investors tend to be found in mature industries. Consistent with this suggestion, Lecraw (1981) found that in the ASEAN region, compared with the subsidiaries of multinationals based in industrial countries, the LDC investors produce unbranded, low-quality products and compete on the basis of price. He also suggests a modified version of the product-cycle theory as a partial explanation for the internationalization of LDC firms.

With respect to the ownership pattern of FDI from LDCs, Wells (1977) found that the vast majority of LDC investors use joint ventures with local partners. In Indonesia only 13% of the projects of LDC investors were wholly-owned[1]--a preference that appeared to be due to exchange controls in their home countries which made it difficult for them to gain a large portion of the shares. Agrawal (1981) found that Indian investors have formed joint ventures because the Indian government insists that its firms do so, preferably as minority equity holders. Lecraw (1981) observed a similar ownership pattern of LDC investors in the ASEAN region.

As for the ownership-specific advantages of LDC investors which enable them to compete with local firms and local affiliates of MNCs from industrial countries, Wells again contends that the advantages follow from the special nature of the home markets. According to him, the LDC markets induce firms to develop small-scale, labor-intensive processes and products and find ways to substitute available local inputs for imported ones. As a result, the LDC investors who have come to possess that type of technology would have a competitive edge over multinationals from industrial countries because the technology is more appropriate to the needs and socioeconomic environments of host nations.

Ting and Schives (1981) conducted case studies of two Taiwanese firms. One of their findings was that both firms, with little investment in R&D, succeeded in making suitable adaptations in the original technologies imported from ICs and the possession of the adapted technologies gave them a competitive edge in foreign markets. Lecraw (1981) confirmed the nature of technologies possessed by LDC investors with the findings that the subsidiaries of LDC firms were smaller in size, used more labor-intensive technologies, and imported fewer inputs than those of IC investors. Other evidence is Agrawal's finding (1981) that Indian participation in overseas joint ventures have been primarily in the form of the supply of capital goods, machinery, basic materials, technical know-how, and management services.

However, interesting counter evidence is advanced by Namburddi, Iyanda, and Akinnusi (1981). They found that 7 out of 8 subsidiaries of LDC firms in Nigeria import their machinery from industrial countries, not from their home countries. The authors argue that LDC firms nevertheless still have some cost advantages over IC-based investors. In particular, cost of managerial and technical manpower is lower for LDC-based firms than for IC-based investors.

The authors also point out that LDC firms have some marketing advantages that pertain to product selection, distribution, and catering to the special requirements of the local market.

Dunning (1981) has also attempted to explain the emergence of LDC multinationals--by reference to his eclectic theory of international production. He postulates that the propensity of a country's firms for engaging in FDI is determined by ownership, internalization, and location advantages that are available to them as compared to firms from other countries. Dunning also contends that a country's investment position as measured by its "net foreign investment" (FDI inflow minus FDI outflow) is related to its level of economic development. He presents time-series data for Brazil and Korea that indicate that net outward FDI from these countries has increased over time, and attributes this trend to a rising ownership advantage rather than a falling locational advantage of the countries.

Locational factors, however, may also have an effect on outward FDI from LDCs. LDC investors have sometimes moved their plants to poorer LDCs to exploit lower wages and lower managerial costs, and to avoid quota restrictions imposed by some ICs on imports from selected LDCs. Chen (1981) found that most Hong Kong firms were motivated by these factors. Jo (1981) also argued that Korean FDI should be viewed as a means to increase the competitiveness of export industries which are under increasing competition from other LDCs and are experiencing "changing factor endowment." FDI by manufacturing firms from Hong Kong, Korea, and Taiwan was all characterized as a means to increase or at least maintain their present level of exports to industrial countries. Busjeet (1980) confirmed this motivation in Mauritius and the Philippines by finding that the most important motivations behind FDI by LDC manufacturers were to search for low cost labor and to avoid quotas.

Foreign direct investment by LDC firms has also included resource-based FDI, especially by Korean and Taiwanese firms. The motivation to secure vital resources in the midst of surging resource-nationalism has been noted in both countries by Jo (1981) and by Ting and Schive (1981).

The overseas expansion of LDC financial institutions has also been studied (Wells, 1977 and 1981). The geographic distribution of LDC banks is quite different from the distribution of FDI by LDC manufacturers. Approximately 100 out of 325 overseas branches and subsidiaries of 72 LDC banks were in industrial countries. Based on interviews with managers of LDC banks, Wells argues that the reasons for the overseas expansion by LDC banks have close parallels to the reasons for overseas expansion by IC banks: to serve home firms, to serve foreign firms, and to serve their own operations such as fund-raising and local retailing businesses.

Are the patterns and trends in Korean FDI consistent with the theoretical propositions and the findings of these theoretical and LDC-MNC studies?

Patterns and Trends in FDI by Korean Firms

FDI by Korean firms started in 1968 with a timber project in Indonesia which exported back to Korea. Since then, Korean FDI has continued to increase, especially since the late 1970's. As shown in Table 1, major investments have been made in natural resources projects including mining, logging, and fishing. Timbering and construction industries were major investors in the early 1970's; trading, construction, and manufacturing industries played the role of primary investors in late 1970's; and finally overseas mining projects surged in the early 1980's. The surge in mineral investment of the early 1980's, moreover, is expected to continue for at least a few years since US$112.9 million in investments have already been approved by the Bank of Korea,[1] while only US$46.7 million of investments have actually been

undertaken. Major resources have already been developed in coal and also timber in particular. The coal investments are concentrated in Australia and North America and the timber investments in Indonesia. The investments in resources have been undertaken by users and trading companies.[2]

Government Policies and FDI in Resources. Korea is heavily dependent on overseas natural resources. Resources classified as SITC codes 2 or 3 comprise approximately 45 percent of Korea's total imports. Fuel imports in particular surged after the oil price increases in 1979. In order to reduce Korean dependency on imports from unrelated foreign suppliers, the government has encouraged private and state enterprises to invest in overseas resource development. The government, for example, provides loans at favorable rates for 30 percent of investments, as well as tax incentives and other administrative support for "development import projects."[3]

One may question what explains unique access to resources by Korean investors in competition with foreign investors. The answer may be Korea's country-specific ownership advantages. An advantage is the large and growing market in Korea for resources. The demand is vast, and Korea is switching from petroleum to coal. (Most of mineral resource FDI is in coal.) Another important advantage is the Korean government's financial support to reduce investment risks. Thus, the government provides 30% financing of total investment through EXIM loans, and it grants tax incentives and administrative support as well.

The government also plays an important role in promoting FDI in the construction industry. The government has provided special financial and tax incentives as well as assistance in training construction workers (Gymn, 1980). In addition, Korean overseas banks have been encouraged by the government to provide financing for construction firms. As a result, 30 percent of all commercial loans by those banks have been made to the construction industry. The government-owned Korean Exchange Bank has been a leader in this lending. (All Korean banks were government owned until 1982, when some of them began to be

denationalized.) Such government supports in effect enhance a competitive advantage of Korean investors.

Ownership Advantages. Do Korean investors have a competitive advantage over foreign competitors in the supply of small-scale and labor-intensive technology? An indication that they do lies in the importation of machinery by foreign affiliates from their parents. It fact, many Korean investors have exported machinery and turnkey plant projects as well as raw materials to their overseas affiliates.

For example, a Korean cement mill was expected to sell over US$6 million of plant project, while it invested US$1 million for 60 percent ownership of a cement mill to be established in the Philippines. A similar example is that a plastic firm put up its used machines in exchange for 55 percent ownership of a joint venture in Singapore. Overall, Korean manufacturing investors have exported approximately US$100 million of machinery, plant, parts, and raw and intermediate materials, while total investments have amounted to US$28 million. Although the amount of exports includes the exports of raw material, the figures strongly suggest a substantial element of Korean technology in new investments. This data thus indirectly supports the ownership advantage theory that LDC investors transfer technology.

Table 2 shows the size of individual investments. FDI in trading and transportation is small-scale because the investments are not normally made in physical assets such as plants and large transport vehicles. As for manufacturing industries, investments over US$1 million in size represent 11 out of a total of 33 cases and approximately 75 percent of the total amount of FDI in manufacturing. Although small-scale investments do exist, the data indicate that Korea's investments are not consistently in small-scale projects. In particular, it should be noted that resource-based FDI, except FDI in fishing, involves some relatively large scale investments.

As for the construction industry, the ownership advantage is in the supply of skilled and semi-skilled labor and in labor-intensive technology (David, 1984; Gymn, 1980).

FDI by manufacturing firms involves many types of products, though technologically unsophisticated products tend to be predominant. Major products are textile (5 out of total 33 cases), wood products(5), construction materials(5), electric and electronic products(3), metallics(3), footwear(2), rubber products(2), machinery(2), and others(7). These also tend to be Korea's major exporting products.

Geographical Distribution. Resource-based investments are located in resource-rich countries such as Australia and the Antilles for coal-mining and Indonesia and Papua New Guinea for logging. FDI by manufacturing industries is in poorer LDCs, especially in South East Asia. Construction is in major markets for construction projects. Trading firms, facilities for transportation and warehousing, are in major trading partner countries (see Table 3).

The geographic distribution of FDI by Korean manufacturers is in line with previous studies (Wells, 1977; Vernon, 1979; Agrawal, 1981; White, 1981).

Korean construction firms have been major foreign exchange earners since the Vietnam war. They have accumulated technical capabilities and experience in large-scale overseas construction projects in Vietnam and the Middle East. The main reason construction firms have established joint ventures with local partners is that they can improve their chances of obtaining contracts by abiding by local participation requirements. Approximately one half of these investments are located in the Middle East, 22 percent in North America, and 17 percent in Asia. It should also be noted that the establishments in North America are often involved in trading construction machinery and materials.

FDI by trading companies is a natural result of the rapid expansion of Korea's exports. As Korea's exports were growing and competition in foreign markets was intensifying, an increasing number of trading companies attempted to integrate forward in their foreign markets by establishing branches, warehousing facilities, and distribution channels. Such investments by trading companies are concentrated in three continents: 83 cases in North America 54 in Asia, and 43 in Europe.[4]

The geographic distribution of Korean banks abroad is in agreement with Wells' finding (1977 and 1981). Table 4 shows that 65 out of 110 Korean affiliates abroad are located in ICs and that 22 out of the other 45 are in LDC financial centers such as Hong Kong and Singapore. However, Wells' suggestion that the reasons for the overseas expansion of LDC banks have close parallels to those for the expansion of IC banks is questionable. Interviews with managers of four Korean banks in New York City indicated that although serving their home firms (mostly trading and construction firms) and raising capital from local financial markets were true, ethnic banking with Korean emigrants was an important operation and business with foreign firms was minimal (see Table 5). An ethnic knowledge factor appears to be a competitive advantage they possess over local and foreign competitors.[5] However, interviews with those same bankers indicate that there were other motivating factors as well--in particular to gain access to advanced banking techniques.

Export-Platform FDI in the Product Life Cycle. Export-platform FDI may be designed to locate production in low-cost countries and serve home and foreign markets at competitive prices--in the mature competitive phase of the product life cycle. Six of the 28 Korean firms studied in detail were identified as undertaking this type of investment: 3 textile plants in Sri-Lanka, Bangladesh, and Honduras, 2 footwear plants in Sri-Lanka and Philippines, and

1 chain plant in the Philippines. For example, in 1978 a footwear producer located its production in an exporting processing zone in the Philippines and has been serving North America and Europe. The investment involved US$1 million. However, other projects involved much smaller scale investments ranging from US$60,000 to US$450,000. Nevertheless, such projects can be regarded as export-platform investments, and they therefore are consistent with previous theory and research (Vernon, 1979; Chen, 1981; and Jo, 1981).

The Role of Trade Restrictions. Another important motivation for those investments was to avoid trade restrictions such as import quotas and high tariffs imposed by industrial countries. By locating their plants in countries not under such restrictions, the Korea firms could avoid the trade barriers. This is in accord with Chen's finding (1981) that Hong Kong firms engaged in FDI to avoid import quota restrictions imposed by its major importing countries.

In addition to FDI in offshore manufacturing facilities to avoid trade restrictions, 3 cases of FDI by manufacturing firms were found as a means of avoiding local trade restrictions-import and export. Gold-Star, a large consumer electronics producer, established its manufacturing facilities, largely for assembly operation, in the United States to avoid American quota restrictions and potential anti-dumping suits. Without such actual and potential restrictions, it would not have relocated its plant from the cheap labor to the expensive labor country. The other two cases involved export quota regulations in Indonesia. Two timber developers began to produce wood products for the Indonesian market in 1980 and 1981, and in return they have received the right to export more timber to Korea than the quotas have permitted.

Ownership Pattern. Table 6 shows the ownership pattern of FDI by Korean firms. Two-thirds of the cases of FDI involve 100 percent ownership, and

four-fifths of the cases involve majority ownership. However, the wholly owned affiliates are highly concentrated in trading firms. Although there is no comparable data for the ownership patterns of investors from other countries, home country exchange controls which encourage LDC investors to hold a minority ownership (Agrawal, 1981) do not appear to be important for Korean FDI.

The joint venture, nevertheless, is the dominant mode of investments by Korean firms in manufacturing, logging, fishing, and construction. One explanation might be that LDC manufacturers have less to protect, although this analysis may be in conflict with the notion of the advantage of LDC investors in the adapted technology. One may suppose that since LDC manufacturing investors are smaller in size, they have less ability to raise a large sum of capital and thus prefer joint ventures. This assumption is not valid in light of Table 7, however; for the data there indicate that the size of investors is not related to the ownership pattern. Therefore, it can be suggested that this phenomenon might be industry-specific and/or home country-specific.

It should also be noted that the dominant form of mining investments, is 100 percent ownership--which enables investors to control the destination of the resources produced. A similar pattern is found in FDI in transportation warehousing as well as trading--a pattern that is consistent with their internalization motive of forward integration. However, the local participation requirement of a host government also appears to influence the ownership pattern; thus construction firms tend to form joint ventures because of local participation regulations in the Middle-East.

Summary and Theoretical Implications

The major findings from this study can be summarized as follows: (1) The dominant type of FDI by Korean firms is in natural resources. The investments

in overseas natural resources by Korean firms appear to derive from the large size of Korean import demand and the government's financial support. (2) The possession of labor-intensive technology which is a competitive advantage of LDC investors over foreign competitors is indirectly confirmed for Korean investors. However, the finding that Korean FDI in manufacturing is not necessarily small-scale contradicts previous suggestions about the predominance of small-scale technology and the smaller size of FDI from LDCs. (3) The geographic distribution of manufacturing FDI is in accord with previous findings that FDI flows from larger and wealthier LDCs to smaller and poorer LDCs. As for non-manufacturing sectors, investments are located in resource-rich countries and major markets. (4) Export-platform type FDI exists in Korean outward FDI. (5) Trade restrictions imposed by major importing ICs motivated Korean firms to locate their plants in countries not under such restrictions. Local import and export quota regulations also motivated them to invest in the countries which imposed such regulations. (6) Korean investors tend to hold 100 percent ownership in some sectors, but joint ventures are common in manufacturing. The former is in conflict with Wells' finding that LDC investors use joint ventures more often. The size of investors from the manufacturing sector did not show any relationship with the ownership pattern. (7) Ethnic banking is an important motivation behind the overseas expansion of Korean banks.

These findings are therefore generally consistent with previous theorizing about FDI and previous studies of LDC-based MNCs. There are diverse motivations and conditions that are operative in Korean-based FDI. The findings furthermore reinforce the importance of differences in FDI across sectors--manufacturing, natural resources, and banking. The findings also underline the importance of the government policies of the home country and its trading partners as well as host countries. Indeed, one of the challenges in future studies of FDI--whether from industrial or developing countries--is to analyze more systematically the effects of governments' FDI and trade policies.

FOOTNOTES

[1]All capital outflow is subject to the Bank of Korea's approval in accordance with Korea's exchange control regulations.

[2]The size of import demand for resources is the second largest in Asia. Korea's Ministry of Energy Resources predicts that coal demand will grow approximately ten-fold in 1980's. Most mineral FDI is coal.

[3]The government informally has promised to grant priority to state enterprises' purchase bids to the firms which participate in bids with resources produced from the "development import projects." See Korea Herald, February 4, 1978.

[4]The African figure is overstated in the amount of investments since a large number of loans were provided by parent companies because of difficulties in local financing.

[5]Tschoegl (1979) also found that foreign banks in California had followed their emigrant populations.

REFERENCES

Agrawal, R. G. "Third-World Joint Ventures: Indian Experience," in Kumar, K. and McLeod M. G. (ed), Multinationals from Developing Countries, Lexington, 1981.

Aliber, R. Z. "A Theory of Direct Foreign Investment," in Kindleberger, C. P. (ed), The International Corporation, Cambridge, Mass.: MIT Press, 1970.

Buckley, P. J. and Casson, M. The Future of the Multinational Enterprise, London: Macmillan, 1976.

Busjeet, V. "Foreign Investors from Less-Developed Countries," unpublished doctoral dissertation, Harvard Business School, 1980.

Caves, R. E. "International Corporations: The Industrial Economics of Foreign Investment," Economica, 38, 1971, pp. 1-27.

Chen, K. Y. E. "Hong Kong Multinationals in Asia: Characteristics and Objectives," in Kumar, K. and McLeod, M. G. (ed), Multinationals from Developing Countries, Lexington, 1981.

Coase, R. H. "The Nature of the Firm," Economica, 4, Nov., 1937.

David, K. "Home Government Policy and International Competitive Performance of Third World Corporations: A Study of Indian and Korean Service Industries," in Thomas L. Brewer, (ed.) Studies of Political Risks in International Business (New York: Praeger, 1984), ch. 3.

Dufey, G. and Mirus, R. "Foreign Direct Investment: Theory and Strategic Considerations," Teaching Note #10, The University of Michigan, 1983.

Dunning, J. H. "Explaining Outward Direct Investment of Developing Countries: In Support of the Electric Theory of International Production," in Kumar, K. and McLeod, M. G. (ed), Multinationals from Developing Countries, Lexington, 1981.

Dunning, J. H. Trade, Location of Economic Activity and the Multinational Enterprise: A Search for an Electric Approach, University of Reading Discussion Papers in International Investment and Business Studies no. 37, October 1977.

Grubel, M. G. "Internationally Diversified Portfolios: Welfare Gains and Capital Flows," American Economic Review, 58, 1968, pp. 1299-1314.

Gymn, Kyung-il. "Multinational Enterprises from the Third World," Journal of International Business Studies, 9, 2, Fall 1980, pp. 118-122.

Hood, N. and Young, S. Economics of Multinational Enterprise, Longman, 1979.

Hymer, S. The International Operations of National Firms: A Study of Direct Investment, doctoral dissertation, Massachusetts Technology of Institute, 1960.

Jo, S. H. "Overseas Direct Investment by South Korean Firms: Direction and Pattern," in Kumar, K. and McLeod, M. G. (ed), Multinationals from Developing Countries, Lexington, 1981.

Kindleberger, C. P. American Business Abroad: Six Lectures on Direct Investment, New Haven, Conn.: Yale U. P., 1969.

Kojima, K. "A Macro-economic Approach to Foreign Direct Investment," Hitotsubushi Journal of Economics, 14, June 1973, pp. 1-21.

Kumar, K. "Multinationalization of Third-World Public-Sector Enterprise," in Kumar, K. and McLeod, M. G. (ed), Multinational from Developing Countries, Lexington, 1981.

Lall, S. and Streeten, P. Foreign Investment, Transnationals and Developing Countries, London: Macmillan, 1977.

Lecraw, D. J. "Internationalization of Firms from LDCs: Evidence from the ASEAN Region," in Kumar, K. and McLeod, M. G. (ed.), Multinationals from Developing Countries, Lexington, 1981.

Lee, K. D. "Foreign Banks in Korea," Monthly Review, Korea Exchange Bank, Vol. XVI, No. 4, April 1982.

McNaus, J. C. "The Theory of the Multinational Firm," in Pacquet G. (ed.), The Multinational Firm and the Nation State, Ontario: Collier-Macmillan, 1972.

Nambudiri, C. N. S., Iyanda, O. and Akinnusi, D. M. "Third World-Country Firms in Nigeria," in Kumar, K. and McLeod, M. G. (ed). Multinationals from Developing Countries, Lexington, 1981.

Ozawa, T. "Peculiarities of Japan's Multinationalism: Facts and Theories," Banka Nazionale del Lavaro Quarterly Review, No. 115, December 1975.

Rhee, M. J. International Banks and Financial Markets in Korea, Korea Institute of International Economics, Seoul, October 1981.

Rugman, A. M. "Risk Reduction by International Diversification," Journal of International Business Studies, Fall-Winter 1976, pp. 75-80.

Thee, K. W. "Indonesia as a Host Country to Indian Joint Ventures," in Kumar, K. and McLeod, M. G. (ed.), Multinationals from Developing Countries, Lexington, 1981.

Ting, W. L. and Schive, C. "Direct Investment and Technology Transfer from Taiwan," in Kumar, K. and McLeod, M. G. (ed), Multinationals from Developing Countries, Lexington, 1981.

Tschoegl, A. T. "Foreign Direct Investment in Banking in California," Working Paper 1058-79 MIT, Massachusetts Institute of Technology, 1979.

Vernon, R. "International Investment and International Trade in the Product Cycle," Quarterly Journal of Economics, 80, 1966, pp. 190-207.

_____. "The Product Cycle Hypothesis in a New International Environment," Oxford Bulletin of Economics and Statistics, 1979.

_____. Sovereignty at Bay: The Multinational Spread of US Enterprises, New York: Basic Books, 1971.

Wells, L. T. Jr. "The Internationalization of Firms from Developing Countries," in Agmon, T. and Kindelberger, C. P. (ed), Multinationals from Small Countries, MIT press, 1977.

_____. "Foreign Investors from the Third World," in Kumar, K. and McLeod, M. G. (ed), Multinationals from Developing Countries, Lexington, 1981.

_____. Third World Multinationals: The Rise of Foreign Investment from Developing Countries. Cambridge, Mass.: MIT, 1983.

White, E. "The International Projection of Firms from Latin American Countries," in Kumar, K. and McLeod, M. G. (ed), Multinationals from Developing Countries, Lexington, 1981.

Wolf, T. A. "Industrial Diversification and Internationalization: Some Empirical Evidence," Journal of Industrial Economics, 26, no. 2, 1977, pp. 177-191.

TABLE 1

FDI by Korean Firms--by Year and Industry

US $Thousands - Number of Cases in parentheses[a]

Year	Mining	Logging	Fishing	Manu.	Constr.	Trans.	Trading	Real Estate	Other	Total
1970[b]	0	4,158	0	0	411	0	244	2,182	467	7,453 (11)
1971	0	2,965	84	140	1,189	0	421	1,366	696	6,861 (8)
1972	0	1,468	539	62	1,566	0	345	744	391	5,115 (13)
1973	0	735	342	24	994	0	670	1,109	33	3,907 (11)
1974	0	3,058	0	11,723	616	2	1,637	33	6,080	23,149 (19)
1975	0	3,976	237	2,039	1,316	0	750	281	542	9,171 (20)
1976	0	26	105	1,562	172	206	4,076	248	1,825	8,220 (46)
1977	0	2,414	5,027	0	0	698	8,156	0	1,500	17,795 (53)
1978	386	4,448	1,363	8,202	11,607	330	7,889	7,158	2,574	43,418 (86)
1979	1,034	3,263	2,616	4,117	2,679	945	2,826	3,321	1,971	22,772 (52)
1980	1,791	0	149	5,349	7,839	365	3,714	752	136	21,095 (44)
1981	10,039	11,053	187	4,202	3,142	237	6,670	4,532	15	40,077 (45)
1982[c]	32,490	3,050	0	0	3,296	100	3,614	0	256	42,806 (18)
Total	45,740	40,606	10,649	37,421	34,317	2,883	42,012	21,725	16,486	251,839
	(6)	(9)	(37)	(39)	(44)	(17)	(237)	(12)	(25)	(426)

[a]Approved cases.

[b]1970 data are cumulative; they include all previous years.

[c]1982 data are as of June 30.

Source: Bank of Korea.

TABLE 2

Size of FDI Projects by Korean Firms

(Number of Projects)[a]

US$000	Mining	Logging	Fishing	Manu.	Constr.	Trans.	Trading	Real Estate	Other	Total
1-99	1	0	20	5	3	6	111	1	5	152
100-199	0	0	0	3	6	6	38	1	3	57
200-499	1	0	2	9	5	1	27	3	2	50
500-999	0	2	0	5	7	2	9	0	1	26
1000-	4	6	2	11	8	0	3	5	2	41
Total	6	8	24	33	29	15	188	10	13	326

[a]Number of actual projects, not approved projects.

Source: Bank of Korea.

TABLE 3

FDI by Korean Firms--by Location and Industry

US$ Thousands - Number of Cases in Parentheses[a]

Location	Mining	Logging	Fishing	Manu.	Constr.	Trans.	Trading	Real Estate	Other	Total
Asia	590	26,028	90	51,966	7,216	419	5,760	17,220	586	109,875 (108)
Middle East	0	0	0	4,709	19,662	947	645	0	1,907	27,870 (35)
North America	1	700	498	500	7,990	3,860	22,002	2,129	13,043	50,693 (11)
Latin America	53,948	0	3,593	450	0	0	630	155	6	58,782 (19)
Europe	0	0	100	0	0	218	6,297	210	445	7,270 (48)
Africa	0	0	5,503	7,306	2,203	0	10,255	69	0	25,336 (22)
Oceania	58,361	19,500	141	1,980	0	0	1,127	461	1,430	83,000 (17)
Total	112,900	46,228	9,895	66,911	37,071	5,444	46,716	20,244	17,417	362,826
	(7)	(9)	(29)	(34)	(34)	(17)	(200)	(10)	(20)	(360)

Percentages

Asia	1	56	1	78	19	8	12	85	3	30
Middle East	0	0	0	7	53	17	1	0	11	8
North America	0	2	5	1	22	71	47	10	75	14
Latin America	49	0	36	1	0	0	1	1	0	16
Europe	0	0	1	0	0	4	13	1	3	2
Africa	0	0	56	11	6	0	22	0	0	7
Oceania	52	42	1	3	0	0	2	2	8	23

[a]Approved cases.

TABLE 4

Korean Banks Overseas--by Location

(As of February, 1982)

Location	Subsidiary	Branch	Rep. Office	Total
USA	2	16	10	28
Japan	0	6	8	14
France	0	1	2	3
UK	0	5	4	9
Canada	1	*	2	3
W. Germany	0	2	5	7
Netherlands	0	1	*	1
Singapore	1	2	6	9
Hong Kong	3	4	6	13
India	*	*	*	*
Others	2	2	19	23
Total	9	39	62	110

*Separate data not available; included in the Others' category.

Source: Lee, Kyung-Duck, "Foreign Banks in Korea," Monthly Review, Korea Exchange Bank, Vol. XVI, No. 4, April 1982, p. 4.

TABLE 5

Allocation of Loans by Korean Banks Abroad

(As of the end of 1982)

By Customer	
Korean Firms	57%
Koreans Abroad	14%
Foreigners	5%
Financial Institutions	24%
	100%
By Purpose	
Trade Financing	27%
Construction Project Financing	32%
Bill Discount	23%
Others	8%
	100%

Source: Bank of Korea.

TABLE 6

Ownership Pattern of Korean FDI Projects

(Number of Cases)

	Mining	Logging	Fishing	Manu.	Constr.	Trans.	Trading	Real Estate	Other	Total
1-24%	0	0	2	4	0	0	65	0	0	71
25-49%	1	0	11	14	10	1	10	0	3	50
50-99%	0	6	7	13	11	2	14	0	2	55
100%	5	2	4	2	8	12	163	10	8	214

TABLE 7

Relationship between Ownership Pattern and Size of Manufacturing MNCs

(Number of Cases)

Ownership Share in FDI Project	Size of MNC (Assets in US$ millions)					
	Less than 1	1-9	10-19	20-29	30-49	50-
1-24%	0	0	1	0	0	1
25-49%	4	1	2	1	2	0
50-99%	4	4	0	1	1	3
100%	1	0	0	0	0	1

Source: Bank of Korea.