

The Role of Japanese Foreign Direct Investment and Technology Transfer in South Korea's Economic Development Strategies in the 1980's and Beyond

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The present study aims at highlighting some aspects of the inter-relationship between South Korea's economic development strategies and ensuing government policies vis-à-vis foreign direct investment (FDI) and technology transfer (TT) on the one hand and the inflow of Japanese direct investment on the other hand. One of the salient features of the Japanese-Korean economic relationship is the fact that Japan has been the biggest provider of FDI and TT since the normalisation of relations in 1965. Over the same period policy-makers in Korea tried to control and guide the inflow of capital and technology so that it would not only facilitate industrial development in the direction desired by the government but also help to nurture domestic entrepreneurs. Changing government perceptions of FDI and TT and policies and regulations in this field have thus to be seen against the background of changes in the prevailing development strategies in the past three decades.

It seems appropriate to start off our paper by looking at some explanatory approaches regarding FDI and TT. First, we are concerned with the question of what kind of factors determine foreign direct investment. Drawing on Caporaso (1981), Chan and Mason have summarised and categorised in a recent study¹ what they regard as the main incentives for FDI. They suggest that both 'push' and 'pull' factors are of relevance in this context. Push factors encouraging corporations to invest in overseas operations include

- the natural obsolescence of production technology, meaning that corporations "are inclined to invest in production lines abroad in order to prolong their diminishing technological lead and to extend their market share as a product and its technology become more common";²
- the intensity of inter-company competition, i.e. in case of intense competition other companies will follow suit if one company invests in a given country;
- the nature of industrial transformation, i.e. increasingly strict social and environmental regulations in the home country lead companies or whole industrial sectors to move facilities abroad where regulations are less strict; and
- particular aspects of a country's position in the international political economy, e.g. the threat of protectionism can lead to trade-replacing or supplementing investments.

While push-factors explain why companies want to invest abroad the choice of the host nation is determined by pull factors which represent the attractiveness of a given nation. Pull factors include:

- a pliable, inexpensive, and educated workforce;
- government policies with regard to profit repatriation, tax treatment, export quotas, ownership regulations, production subsidies, local-content requirements;

- business climate, political stability, economic vitality and business cycles;
- a big or expanding domestic market; and
- geographic or strategic location of a host nation.³

With regard to technology transfer it has been noted that companies in developed countries like Japan benefit from transferring technology because it allows them

- (1) to prolong the life cycle of products that are becoming obsolete in the home market;
- (2) to find new, growing markets; and
- (3) to ensure (their) own survival by relocating production segments to (less developed countries) where labor costs are lower.⁴

However, in some cases TT might not take place because the potential technology supplying companies are for example afraid that recipients could use these technologies to increase their market shares to the detriment of the technology transferring companies or industries: the so-called 'boomerang effect'. On the other hand, developing countries can be wary about TT because it might lead to economic and technological dependence from the supplier nations. Table 1 gives an overview of the different possible modes of TT, taking into account three variables - the mediation of the market, the role of foreign suppliers, and the role of recipients. In this study we will focus only on formal mechanisms of technology transfer, i.e. FDI and licensing because of the only fragmentary quantitative evidence on non-market mediated technology transfer (cells 3 and 4 of table 1) and the difficulty of measuring the value of technology embodied in imported machinery.⁵

An analysis of the interplay between government policies and the overseas activities of Japanese companies thus requires both an understanding of policy aims/bureaucratic mechanisms in the host nation and strategies/perceptions of the investing and/or technology transferring companies. In other words, what is needed is a multi-disciplinary approach transcending the usual narrow paradigms of political scientists and international business specialists. While the first group tends to concentrate on the role of governments in the international political economy or the political economy of a given country the other actors, i.e. the companies, remain a 'black box' for them. Vice versa the same holds true for students of international business and economists.⁶ Studies successfully integrating both points of view are still an exception to the rule.⁷

In this paper we will show how (a) Japanese corporations perceived investments in Korea, (b) the Korean government perceived FDI in the period under review, and (c) both the Korean government and the private sector perceived TT from Japan. The main focus of this study will be on the period from 1980 to 1991, the last year for which comprehensive statistical material was available. The paper will be concluded by a short assessment of future FDI and technology flows from Japan to Korea and suggestions what the Korean government and private sector can do to promote these inflows.

Korea's Economic Development Policy since Chun Doo-whan

Development strategies, i.e. policies that are pursued to "shape a country's relationship to the global economy and that affect the domestic allocation of resources among industries and major social groups",⁸ consist in an idealtypical way of coherent, consistent and concise policies that are closely matched to achieve the synergy necessary to arrive at the desired results. In reality, however, development strategies are seldom of the "grand design" type but are rather the result of various improvised decisions or ad hoc policy changes. Even though development blueprints such as 5-year plans may exist, development strategies are devised in a pragmatic and incremental way. Only in retrospect policy-makers and scholars are able to systemise former error and trial policies into a concise development strategy. Furthermore, the initiative for changes in development strategies arise seldom out of conscious long-term policy choices but is more often induced by outside stimuli, i.e. changes in the economic environment and the like.

Korea's development pattern can be described as follows. From 1953 to 1960 the prevailing economic development strategy aimed at primary import substitution industrialisation (ISI), i.e. local production of basic consumer goods replacing imports. This primary ISI phase was in a way the inevitable consequence of decolonisation and postwar economic control. In the late 1950's and early 1960's, ISI reached its exhaustion point, not in the least because of the limited domestic market in Korea. After experimenting in 1961 to 1963 with secondary ISI, the new military regime under General Park Chung-hee finally opted for an export-oriented industrialisation approach with the aim of fostering efficient production and competitive exports. Foreign capital was required for investment in export and other basic industries and in social infrastructure. However, instead of luring as much as possible FDI to Korea, the government emphasised loans as the primary source of foreign capital in order to protect domestic enterprises and to remain in control of the allocation of foreign capital.

Having the political and institutional capacity to do so, the Korean state devised a number of regulations, incentives and bureaucratic mechanisms, inter alia the 1960 Foreign Capital Inducement Law (FCIL) and its subsequent amendments, for mediating, screening, and regulating FDI and TT and shaping these inflows into a sectoral and ownership pattern congruent with existing economic development strategies. To promote exports, entirely export-oriented investments were allowed with very little restrictions. Secondly, to upgrade the level of domestic technologies and to facilitate import substitution, technology-intensive investments were strongly encouraged and sometimes directly promoted through various incentives and subsidies.

Being faced in the early 1970's with mounting competition from other developing countries in some low-wage manufacturing export industries, increasing protectionism in major markets and balance of payments deficits due to the high import content of exports, Korea answered these challenges with a move towards heavy and chemical industrialisation (HCI) whose main aim it was to develop national production capability in these sectors and to lay the groundwork for more diversified exports. In 1973, the FCIL was changed in order to limit foreign majority ownership and the repurchase of equity held by foreign firms was subsequently actively supported by the government. The years 1972 and 1973 saw also the first real boom of Japanese FDI in Korea as many small and medium-

sised enterprises (SMEs) with labour-intensive production but also bigger companies were pushed out of Japan because of rising wages, labour shortage and increasingly strict environmental regulations and pulled to Korea where free export zones offering preferential treatment were set up in Masan (1971) and Iri (1974). The above mentioned tightening of government regulations concerning FDI and TT, however, led to a conspicuous decline of Japanese FDI in 1974 and thereafter.⁹

Korea entered the 1980's experiencing two important changes. The first change was the end of the military regime of General Park Chung-hee which, in terms of economic policy, was characterised by a heavy hand of the government in the management of the economy, especially in the 1970's. His successor General Chun Doo-hwan, however, emphasised the government's intention to gradually liberalize and internationalize the economy. The second change was the inevitable end of Korea's comparative advantage based on cheap labour. A change requiring hastened efforts in the direction of industrial adjustment and upgrading with a view to moving towards a more technology and knowledge-intensive industrial structure with industries producing high-value added goods and services.¹⁰

In addition, Korea's economy was faced with a variety of problems at the end of the 1970's, either emanating from the international environment or home-made, which also asked for a change in existing policies. The externally induced problems were rising interest rates, the second oil crisis, growing protectionism in developed countries and mounting competition from Southeast Asia and even China. On the other hand, the Korean government began to realize that capital-intensive industries might not be the forte of Korea. In any case, parts of the HCI programme had run into severe problems such as inflation caused partly by rapid investment in 1977-79, and access problems to necessary technology from abroad.

As a result of overlapping and excessive investments, many large facilities were underutilised for years after completion while others eventually had to be shut down. Preferential access of HCI projects to subsidised loans also led to the crowding out of other industries. Eventually, all these problems caused slow growth and increasing inflation. Combined with the political instability after the assassination of General Park these factors led to a deep economic crisis in 1980.

The new government of Chun Doo-hwan, as a response to all these pressures, set new priorities in Korea's development strategy. First, new emphasis was put on upgrading sectors in which Korea already had a comparative advantage. Secondly, steps were taken towards liberalisation and privatisation of the economy plus a more neutral role of the government in the managing of the economy. According to Choi and Lee, the corresponding government policies launched in 1980 or shortly thereafter consisted foremostly of:

- macroeconomic policy aimed at stabilisation;
- structural readjustment of the heavy and petrochemical industries; - revocation of the large incentives given to the heavy and chemical industries in the 1970's;
- promotion of market competition and the elimination of various factors inhibiting a competitive environment; and
- emphasis on the growth of small and medium-sized enterprises.¹¹

Korea's economic development strategy reorientation can be characterised as export-oriented but more technology-intensive,¹² i.e. it represented an attempt to upgrade the entire industrial structure by climbing up the ladder of comparative advantage, entering more technology and skill-oriented industrial niches with the overall aim of arriving at an appropriate mix of "high-quality labor-intensive traditional industries and skill-intensive heavy and chemical industries".¹³ Among other liberalisation measures¹⁴ Korea reviewed its FDI policy in order to gain better access to the technology necessary for upgrading the industrial structure and to alleviate the burden of foreign debt. Entering the 1980's, foreign investment was allowed in many new areas, majority-owned or wholly-owned foreign firms were permitted in a large number of cases, and the required minimum amount of investment was reduced to US\$ 100,000. In the case of small-scale and technology-intensive projects, the minimum amount was even lowered to US\$ 50,000.¹⁵ In 1984 the major revision of the FCIL was a milestone on the road towards liberalisation of government regulations vis-à-vis FDI. The main changes can be summarised as follows:

First, the negative (list) system on FDI was adopted, allowing for free investment in principle. Second, there was a considerable reduction of prohibited and restricted sectors for foreign investment. Third, an automatic approval system was introduced for investment under a certain amount and with less than 50% equity owned by the foreign investor. Fourth, the distribution of equity holdings was left to investors themselves. Fifth, free remittance of principles and dividends was guaranteed.¹⁶

Since then regulations concerning market access for FDI have been continuously liberalised. The liberalisation ratio, i.e. the number of sectors open to FDI as a percentage of all sectors on the standard industrial classification system, increased from 61.1% to about 66% in 1984 alone and to 79.4% in 1991 (97.7% for the manufacturing sector). The negative list of January 1992 includes 51 prohibited and 155 restricted sectors out of the total 1,148 sectors eligible for FDI.¹⁷

These figures signal a more pragmatic approach to FDI in the 1980's as far as official policy was concerned. This basic policy change, however, did not mean that not other, more subtle bureaucratic means continued to exist to control or influence investment decisions of foreign companies as we will see later. Moreover, FDI restrictions in other laws, and restrictions contradicting the principle of national treatment, remained a source of trouble and confusion for foreign investors.

Patterns of Japanese FDI in the 1980's

Japanese overseas investment in the 1980's differed in some respects from FDI in earlier periods. We will therefore begin this section by briefly highlighting some of these changes. Our main focus will be on the developments in the post-1985 period, i.e. the time after the Plaza Accord and the subsequent rapid rise of the yen which put a high amount of pressure on Japanese companies to readjust their corporate strategies in order to remain competitive. Finally, we will have a closer look at Japanese FDI in Asia, in particular in the newly industrialising economies (NIEs), in the latter half of the 1980's.

According to a study by Yoon, there were five major changes in the pattern of Japanese FDI in the 1980's. Firstly, cumulative FDI on an approval basis increased more than five-fold from US\$ 36 billion in 1980 to US\$ 186.4 billion in 1988. This rapid rise in a way reflected the changing attitude and policies vis-à-vis FDI. FDI was no longer seen as a possible supplement to trade but rather companies and the Japanese government began to evaluate FDI as a necessary and increasingly important tool for overseas business activities. A second change concerned the shift from the concentration of FDI on the exploitation of natural resources and cheap labour in developing countries to "market-oriented, technology-based" FDI in developed countries.

Thirdly, large Japanese companies assumed a higher profile in FDI as projects became bigger, more technology-intensive and located further away from the home base. In particular, many producers of electronical goods and automobiles set up facilities in industrialised nations, inter alia, in order to circumvent mounting import barriers and to be closer to the consumer. A fourth change was the increasing amount of non-manufacturing FDI, especially in the United States. This phenomenon was caused to a high degree by the internationalisation of Japanese financial institutions which concentrated by their very nature more on FDI in finance and insurance objects. Investment in real estate became popular for manufacturing companies and financial institutions alike. The fifth change was the declining role of the general trading companies in the organisation and handling of FDI projects. The decline of the *sogo shosha* in this field must be seen in the context of the increasing international experience of other Japanese corporations which were thus no longer in need of the services rendered by the general trading companies.

Yoon traces these changes in the pattern of Japanese FDI, which as a consequence has become closer to the Western pattern of FDI, back to two factors. On the one hand there was the need on the part of the Japanese to up-scale their projects or to move into high-tech areas because of the diminishing importance and profitability of investments in labour-intensive and low-technology industries in the NIEs which in turn was caused by the efforts of these countries to develop their own similar industries. On the other hand, as indicated before, high-technology product makers in Japan found themselves forced to invest in their major markets, the USA and Europe, in order to counter protectionist tendencies.¹⁸ What, however, was the consequence of the changes for Asian recipients of Japanese FDI?

Before we look at this question we first have to note some developments in connection with the rapid rise of the yen vis-à-vis the dollar after 1985. The Plaza Accord in September 1985, leading to an appreciation of the Japanese currency from 250 to 120 yen per dollar, had quite a dramatic impact on the business environment of Japanese corporations. To cope with the loss of export competitiveness, companies reacted in three different but related ways. First they rationalised their production facilities by means of automation and improvement of facilities. Secondly, they moved into higher value-added products and diversified their business activities. Another logical step was to put more emphasis on the domestic market. Finally, adjustment of the industrial structure took place by relocating production to other Asian countries. Especially labour-intensive industries increased their FDI activities in ASEAN and mainland China to manufacture or merely assemble there the goods for which production in Japan was no longer attractive.

With regard to the activities of Japanese companies in Asia in the period under review two things have to be pointed out. First, even though the relative share of developing countries in general and Asia in particular in Japanese FDI declined in the 1980's due to the rapid expansion of FDI in developed countries, FDI increased substantially in absolute terms. Secondly, along with traditional FDI new forms of investment, i.e. production co-operation like original equipment manufacturing (OEM), technical tie-ups, business tie-ups, and outsourcing came to play an increasing role in the globalisation strategies of Japanese companies. With regard to FDI in Asia, Owada, Kohama and Urata note the large share of manufacturing and the particularly fast increase of the share of electrical machinery among the manufacturing subsectors. They also see a firm link between increasing Japanese FDI in the Asian NIEs and the investment incentive policies of these countries:

Resurgence of the Asian NIEs as attractive hosts to Japanese FDI is attributable mainly to the FDI promotion policies in these countries. FDI promotion policies reflect the view of the governments in these countries that FDI would speed up the process of structural change required for their continued economic growth. Specifically, policy-makers in Korea, Singapore and Taiwan thought that the development of high-tech sectors, their targeted sectors, would be promoted with the help from FDI... Responding to these FDI promotion policies in the NIEs, Japanese FDI to the Asian NIEs increased. The rate of Japanese FDI was accelerated by the substantial appreciation of the yen in the mid-1980s as the appreciation of the yen increased the cost of production in Japan.¹⁹

From about 1988 onwards, however, Japanese companies were, for a number of reasons, less inclined to invest in manufacturing in the NIEs. The appreciation of the currencies of the NIEs vis-à-vis the dollar and to some degree vis-à-vis the yen, combined with rising wage levels, meant higher production costs in these countries. In place of the NIEs, ASEAN, in particular Malaysia and Thailand, became more attractive for Japanese investment in labour-intensive manufacturing sectors. Moreover, the FDI policies in some ASEAN countries plus the role of foreign trade in the economics of ASEAN helped to lure Japanese FDI. This shift was especially apparent in the important electrical and electronic equipment sectors and led to a new pattern in the division of labour in the region:

Initially, NIEs were the Japanese base for intermediary production. However, in the latter half of the 1980's ASEAN countries took over their place. On the other hand, NIEs, with their rising technological level are now developing a horizontal division of labour with Japan. For instance, Korean manufacturers are engaged in the production of VTRs, color TV sets and radio-cassette tape recorders on a OEM basis for the Japanese, and the pattern of specialisation division of labour, in which the Japanese manufacture high-quality, large and multi-functional products while the Koreans manufacture cheaper single-function products, is currently firmly established. In this sense, the regional division of labour in the area of electrical & electronic products developed from being composed of Japan and the NIEs into a stratified and diversified structure including the ASEAN countries in the late 1980's.²⁰

Thus in the post-Plaza Accord period the NIEs gained a prominent place as targets for production co-operation which includes OEM and licensing. With regard to technological tie-ups the NIEs became the second largest target area after North America. Technological tie-ups and production co-operation reached their peak in January to June 1987 before they slowed down to 1986 levels.²¹ Now, after having summarised the pattern of Japanese FDI and TT in the 1980's in general, we will turn to the situation in Korea.

Japanese FDI and Technology Flows to Korea since 1980

After the first Japanese investment boom in Korea in the early 1970's FDI from Japan basically stagnated until the early 1980's (see table 2). A number of reasons account for this fact. A main factor contributing to the stagnation of FDI was the impact of the two oil crises in 1973 and 1979/80 on the general level of investment. Moreover, the economic and political situation in the late 1970's and early 1980's, i.e. the lower growth rate of the Korean economy 1979 to 1981 plus the regime change from Park Chung-hee to Chun Doo-hwan also made Korea not an ideal site for investment. Finally, government policies vis-à-vis FDI, in this case the measures introduced in 1973 and in force until 1982 aimed at regulating the quality of FDI, must be seen as a factor that contributed to the stagnation of Japanese FDI to Korea from 1974 to 1982.²²

In a recent study, Aihara highlights the boom and stagnation cycle of Japanese investment in Korea noting the inter-relatedness between this phenomenon and the changes in Korean FDI policy. In his opinion, FDI policy was a reaction to the inflow of FDI rather than a cause to it; in periods of booming Japanese FDI the Korean government, inter alia, raised the minimum investment barrier, tightened regulations pertaining to the inflow of investment, and attempted to diversify the sources of FDI while in times of stagnation of Japanese FDI, regulations were mitigated and a positive stance was adopted vis-à-vis investment from abroad. Government regulations were thus used to try to readjust of FDI.²³

The second Japanese FDI boom in Korea started only after the rise of the yen as table 3 shows and reached its peak in 1988 in terms of value. The apparent inconsistency between the rise of value of FDI and the number of FDI cases in 1986 to 1988 can be explained to quite an extent by the large number of SMEs which used the first possible opportunity to move their production to lower wage countries after the Plaza Accord. Many of the small and medium-sized joint-ventures with Korean companies were centred on the parts and components sector. In addition, a number of large Japanese companies, even such with bad experience in Korea, went back there for new ventures, although with different partners in the case of the latter.²⁴ The sector which attracted the largest share of Japanese FDI around the mid-1980s was the high-growth hotel industry. Not only had the tourism sector been targeted by the Korean government in its fifth Five-Year Plan (1982-86) but the approaching Asian Games in 1986 and Olympic Games in 1988 helped to lure Japanese FDI, especially by Korean residents in Japan, to this lucrative sector.²⁵

Two distinct patterns in the division of labour between Japanese and Korean companies in the immediate post-Plaza Accord period can be discerned. The first was the expansion of OEM deals. OEM basically means production for the brand

of the partner's side. The company receiving an order is responsible for design, development and production while the company giving the OEM order sells the product under its own name. A related case is production on a commission basis but usually both cases are dealt with together under the broad label of OEM. OEM deals between Japanese and Korean electronics companies for VTRs, small TVs, refrigerators, car stereos and the like nearly tripled right after the rise of the yen. Supply of OEM products from Korea to Japan went up from US\$ 543 million in 1986 to US\$ 1,542 billion in 1988. Both sides benefitted from these OEM contracts since Japanese companies could concentrate their resources on high-level products while Korean companies gained access to the marketing and sale networks that they still lacked in Japan.

The second pattern was the decline of the processual division of labour between Japanese and Korean companies. Even though many missions from Japanese electronics companies were sent to Korea during the high yen period to study possibilities for procurement of parts and components from Korean companies only few genuine results were achieved. The reason was basically the technological difference between Japan and Korea; Korean parts makers were just not able to meet the quality level required by the Japanese. Later on, wage rises in Korea since 1987 forced existing Japanese parts makers in Korea to shift their production to lower wage countries in the region. Due to the rise of the yen unit prices of Japanese parts and components big Korean companies reduced their procurement in Japan and turned to Korean suppliers as far as possible. The result of these developments was the reduction of inter-company trade between Japan and Korea.²⁶

The second Japanese investment boom in Korea came to an end in late 1987 with the onset of the labour strife in Korea which lasted for nearly two years and led to rapid wages increases which made the country unattractive for labour-intensive investments. Japanese companies which had come to Korea in the 1970's because of cheap labour were the first to move their production to countries like the ASEAN states and mainland China which still enjoyed a comparative advantage in labour-intensive manufacturing. Likewise large Japanese retailers turned to Indonesia and mainland China for supplies of textiles and sundries. More recently, they were followed by electrical component manufacturers and other companies.²⁷ Apart from the sudden and dramatic increase of wages and the deterioration of management-labour relations, the rise of the won (26% vis-à-vis the yen from 1986 to 1989) was another factor responsible for the decline of Japanese FDI. Furthermore land prices and rents went up significantly and it became increasingly difficult to acquire sites to set up factories.²⁸

What needs to be added is that in addition to the factors that pushed mass production manufacturing out of Korea, FDI was pulled into ASEAN not only because of the cheaper wages there but also because of the more liberal investment regimes, especially in Malaysia and Thailand, which for example allowed 100% ownership in sectors where regulations were more restrictive in Korea. Anecdotal evidence suggests that Japanese businessmen are also more at ease dealing with their counterparts in ASEAN which are in many cases ethnical Chinese who are said to be more interested in making a profit than in the question of whose side has management control in a joint-venture. The business atmosphere for Japanese investors thus seems to be more relaxed than in Korea where management decisions can consume a lot of time for consensus-finding

between the Japanese and the Korean side. A basic problem here is certainly the often prevailing lack of mutual trust between Korean and Japanese entrepreneurs; a phenomenon that can be traced back to the "unfortunate past".²⁹

A 1990 survey of Japanese manufacturing companies in Korea sheds more light on the reasons for discontent on the Japanese side. Asked about the biggest problems they faced, 21% of the respondents pointed to the labour-management problem, 17.3% to difficulties in capital procurement because of the still highly-regulated financial markets in Korea, 11.7% to problems with the thoroughness of quality control, and 11.4% to competition with other companies. Less frequently named problems were the rise of the won (7.9%), problems in joint-ventures (5.7%), tax problems (4.8%), technology transfer (3.8%), and finally the FDI policy in Korea (3.4%).³⁰ Before we come back to problems in the business environment of Japanese companies operating in Korea in the context of our discussion of divestment we will first have a look at some general features and more recent trends with regard to Japanese FDI in Korea.

The first point that can be made concerning Japanese FDI in Korea concerns its relative weight and importance. For Korea Japan has been the largest investor in the past thirty years with accumulated investment of US\$ 4.3 billion, i.e. nearly half of all investments made in the period up to March 1992. From Japan's perspective the picture is quite a bit different. For example Japan invested a total of US\$ 67.5 billion overseas in 1989 but only US\$ 600 million in Korea, i.e. less than 1%. Seen as part of investments in Asia, we can note that from April 1984 to March 1991 Japan's FDI in the region amounted to US\$ 28,056 billion of which US\$ 2,456 billion went to Korea, i.e. less than 10% and only half the amount that went to Singapore. From 1941 to March 1991 Korea's share of Japan's worldwide FDI was not more than 1.3% and in 1991 Korea was even overtaken by Thailand in terms of Japanese investments thus falling back to fifth place among Asian host nations of Japanese FDI.³¹ In 1992, Japanese FDI in Korea declined by a further 31% to US\$ 154 million as compared to an overall decline of 36% to US\$ 895 million, a decline of European FDI of 65% to 282.3 million and a rise of US FDI of 22% to US\$ 380 million.³²

It seems questionable whether "Korea still maintains a strategically important role in Japan's globalisation scheme" as one Korean business magazine maintained in 1992. It can rather be argued that Korea lost this role in the late 1980's when many Japanese companies shifted their production bases to ASEAN. The meagre degree of intra-company trade between Japan and Korea, e.g. when compared to Japan-ASEAN intra-company trade, is certainly an indicator for the declining role of Korea in the global and regional division of labour plans of Japanese companies. This however does not mean that Korea is no longer an interesting place to be for Japanese companies but certainly the focus of interest and involvement has changed as recent trends show.

The first trend that can be discerned is the rapid rise in the level of consumption in Korea which offers new business opportunities. This holds true for both private consumption (e.g. pharmaceutical products, family computers etc.) and industrial consumption (e.g. industrial robots, workstations etc.). The second pattern is an extension of the first one. The increasing sophistication of demand also entails a push to set up more research development programmes and technical centres in Korea. Since demand patterns in Japan and Korea grow closer a

sort of common market is in the making; products can be targetted at the two markets at the same time. For production the increasing sophistication means that while the assembly of mass-products like household appliances can better be undertaken in ASEAN, Korea enjoys a comparative advantage with regard to production on a smaller scale and in greater variety, e.g. parts for machine tools and chemical goods. Thirdly, even though Japanese and Korean manufactures are competitors in third markets, there are examples of strategic tie-ups, in particular between large Japanese producers and the *chaebol* in Korea which go a couple of steps further than the hitherto existing OEM ventures.

The model case that one used to hear perennially about is the co-operation between Hitachi and Lucky Goldstar concerning 1 MB, 4MB and 16MB semiconductors. Hitachi, which provides the technology for Goldstar's production of the semiconductors, gains since it can concentrate its resources on new developments while Goldstar, a latecomer in this business, gains by acquiring the needed technology and having a safe market for its output.³³ The more recent case of the co-operation between Toshiba and Samsung in the field of DRAMs falls into the same category.³⁴ Although numerous examples could be found for pattern one and two, pattern three still consists of a limited number of cases. In spite of the fact that there is some potential for further strategic co-operations in a number of industrial sectors or in geographical terms, e.g. joint development projects in Northeast Asia, the Korean side has a number of challenges to overcome to qualify for more strategic tie-ups of the kind just mentioned. We will explore this topic further in our concluding comments.

Turning to the Japanese perception of Korea as an investment site we have to look at the reasons why Japanese corporations have invested in Korea. In the already mentioned 1990 survey of 93 Japanese manufacturing companies operating in Korea, investment motives was one of the topics covered. The majority of companies (53) stated that their reason for coming to Korea was product sales or securing/gaining market share. 17 companies used Korea within the context of their intra-company division of labour as their base for end assembly or production. 7 companies responded that their aim was to secure a production base as part of their overseas strategies. 5 companies said that they saw Korea within their intra-company division of labour as a base for parts and components and medium-term capital investment. Another 5 companies gave other reasons. The main result here is certainly the significant change of motivation in the last 30 years. Rather than by cheap labour for export production most manufacturing companies have been pulled to Korea by the expanding domestic demand. This finding is underlined by the fact that less than 40% of the companies surveyed (33) exported more than 50% of their production in Korea.³⁵

Korean domestic demand has also attracted a growing number of service companies from Japan with the result that the ratio of FDI in the non-manufacturing sector vs. FDI in the manufacturing sector has turned around from 31.4% vs. 68.6% in 1980 to 52% vs. 48% in 1990. This trend reflects the liberalisation of investment regulations for the service sector in recent years. The further loosening of restrictions regarding foreign retailers in July 1991 will probably contribute to further increases of non-manufacturing FDI from Japan in Korea.

Further liberalisation of FDI policy seems to be anyway the watchword in the Ministry of Finance in Seoul. Starting from March 1991 the formalities for investing in Korea were simplified and the system for FDI in 95 sectors (e.g.

computer programme development, industrial design etc.) with foreign ownership of less than 50% was changed from approval to notification modus.³⁶ Furthermore, there are plans to gradually ease current FDI regulations and to liberalize FDI entirely in 1996.³⁷ This new round of FDI liberalisation is obviously a renewed bid of the Korean government to carve out and secure its stake of FDI in a world where more and more developing nations adopt similar policies, realising that today's competition between nations is no longer over territory but rather over economic advantages.³⁸ New incentives alone, however, will not do the trick of attracting more FDI. What is needed is rather a more complex approach which we will discuss in our concluding comments.

Just by looking at trends in investment it is not possible to gain a clear picture of the business environment for Japanese and other foreign corporations in Korea. A short examination of trends in divestment is needed to round off the picture. One of the first things one will notice is the exceptional amplitudinal width of investment vs. divestment which for example is significantly wider than in Taiwan. According to Japanese statistics, more than half of the 450 Japanese companies that invested in Korea from 1981 to 1987 have either withdrawn or gave up their investment plans. In terms of accumulated investment in Korea, Japan went down from 66.5% in 1975 to 51.6% in 1985 while her share went up in Taiwan from 21.7% to 28.4% in the same period.³⁹

In a survey of Japanese companies compiled by Matsuura in 1988 the following reasons were given for stopping or scaling down operations in Korea:

- (1) Too many and sudden government restrictions (12 firms);
- (2) Financial cost and risk too high (11 firms);
- (3) Managerial and cultural conflict (9 firms);
- (4) Fear of control of technology (8 firms);
- (5) Shortage of skilled workers and low labour quality (7 firms);
- (6) Political instability (5 firms);
- (7) Others (including anti-Japanese sentiment, reorganisation of foreign operations, elimination of Asian operations etc.) (5 firms).

According to Matsuura's findings the four most significant factors behind the apparent investment conflict were:

- (1) The so-called boomerang effect, i.e. fear on the Japanese side that technology transferred to Korean enterprises might be used to increase the Korean market share in certain sectors to the detriment of the Japanese producers (prominent examples: shipbuilding, steel and to a smaller extent automobiles and consumer electronics);
- (2) Efforts to nationalise foreign investment, i.e. restrictive policies by the Korean government to force Japanese investors to transfer their shares to the local partner in case of a joint-venture;
- (3) Discriminatory treatment, including excessive export obligations, domestic procurement duties, discriminating tax system, and immigration procedures;
- (4) Victimization of Japanese subsidiaries in terms of privileges for Korean managers forced upon Japanese companies.

Matsuura also makes the point that a good deal of the managerial conflict of Japanese subsidiaries in Korea stems from the fact that labour relations and the employment system as such are totally different in Japan and Korea where a more authoritarian, elite-type of system predominates.⁴⁰

A lot of the problems faced by Japanese companies in Korea result from government intervention and an active policy of "Koreanising" joint-ventures and whole industrial sectors once the process of technology and know-how transfer has been completed. One way of localisation in the past were frequent changes, supported by the Korean government, in the investment ratio between the foreign and the local partner.⁴¹ The problem here as with many other FDI and TT-related matters is that even though official regulations might be fairly liberal, a lot of pressure can be applied by means of administrative guidance from the bureaucracy which has the power to take moves against incalcitrant recipients of these kind of "suggestions". An example of such guidance which related to another problem area for foreign investors is the usage of profits and the issuing of dividends. In January 1982, regulations concerning dividends were devised by the government, stating that the dividend ratio had to be lower than 20%. The next month this ratio was lowered to 10% by means of administrative guidance and finally raised to 12% after foreign companies complained strongly.⁴²

Problems facing Japanese companies in the late 1980's were fairly summarised in a Japanese survey in 1988 on "the actual state of affairs regarding investment and the business climate in Korea."⁴³ Five major problem areas were identified. The first one on policy consistency/adjustment and administrative guidance deals with the inconsistency of government policies, administrative guidance in general, approval formalities, investment ratios, technology transfer royalty problems, the dividend ratio, customs problems, problems related to the dispatch of Japanese staff and export obstacles. Category two on the application of tax matters contains, inter alia, complaints about the various and sudden changes in the taxation system, inconsistencies between tax and trade laws, the opaque decision-making in tax matters, the unprecise character of laws, and tax formalities as such. In the third category problems relating to capital and finance procurement are outlined which ranged from unpredictable changes in laws and regulations, the immaturity of the finance system, and difficulties in domestic or international capital procurement to the high interest rate in Korea.

Category four on labour affairs administration and management-labour relations bemoans the immaturity of labour and management in Korea in general, the lack of consciousness for human rights on the part of Korean managers (!), the fact that control over labour matters has often to be handed over to the Korean side in case of joint-ventures, the radicalisation of certain employee groups, the lack of a firm government policy in view of the then existing labour strife, lack of official labour education programmes, the immaturity of the labour law, the culture gap between Japanese and Korean employees, job hopping in Korea, labour force shortage and the sudden wage rise.

Category five, finally, concentrates on procurement problems. Here the perceived difficulties were the low technological level and insufficient quality control, frequent changes in the quality of procured parts, and bad after sales service. Furthermore, with regard to deadlines for deliveries it was alleged that these were not kept. Korean SMEs were thought to have low technological and dated education standards while big companies often enjoyed a monopoly for

certain products. Difficulties also seemed to exist with regard to the procurement of varied products in small numbers. Restrictive import regulations were seen as one of the biggest problems for procurement.

Although some of these problems, such as the royalty problem, have been solved, remaining problems suggest that Korea is still far away from being an ideal investment site. Before coming back to these problems in our concluding comments we will now look at Japanese TT to Korea since 1980. Figures on technology licensing for the late 1970's and early 1980's reveal the influence of government policies on the inflow of technology licenses. More liberal regulations concerning technology inflows were certainly a force behind the increase of technology licensing (TL) to 297 cases in 1978 from 168 in the preceding year. Again, further relaxations in 1983 helped to push up the number of TL deals from 262 in 1983 to 437 in 1984. A second factor influenced by government policies was the composition equity versus non-equity forms of TT. Here Lee notes that "between 1978 and 1982, the ratio of the cases of TL to the cases of DFI was 5.47 while during 1983-1986 it was 3.28. The period from 1978 to 1982 was an era in which the government has imposed more lenient criteria for licensing contracts compared to the restrictions imposed on (FDI)."⁴⁴

Figures on technology transfer to Korea in the latter half of the 1980's (table 4) confirm Korea's dependence on technology inflows from Japan and the USA. Between 1962 and 1990 50.9% of TT cases (though only 31.2% in terms of value) involved Japanese companies. This compares to the 26.3% of cases (in terms of value 46%) involving US firms. Dependence on Japanese technology in this period was high in the cases of metal (57.7%), electronics/electrics (50.9%), and machinery (61.3%). The Japanese side explains the lower value per case, i.e. compared to the US by (a) the fact that in the case of the US the amount of supply of atomic energy technology was high; (b) that in the case of Japan a large number of SMEs were involved in technology supply; and (c) that in the case of Japan royalties were kept at a lower level by administrative guidance from the Korean government. Furthermore, it has been pointed out that in the case of technology relating to chemicals and machinery the difference between the US and Japan was not significant.

When comparing FDI to TL figures we can note that cases of TL did not drop as much as FDI cases did (TL peak in 1988: 354 cases; 1990: 333 cases). This must be seen against the background of first, the development of automation/rationalisation and second, the increase of demand for software in Korea.⁴⁵ Dependence on technology from Japan is also conspicuous in terms of Korean dependence on Japanese components. This structural dependence means that when Korean companies increase their output they must also increase their input from Japanese companies. Imports of machinery and electrical and electronic components account for more than 60% of Korea's overall imports from Japan; "(c)onsequently, a significant proportion of the profit made by South Korea's exports ends up in Japan."⁴⁶

One point which has to be discussed here is the apparent perception gap between the Japanese and the Korean side concerning technology transfer from Japan. What one hears sometimes from the Korean side is that Japan is niggardly with respect to technology sharing, that technology received from Japan is not high-technology and that when Japanese companies transfer technology they do it to their own benefit, e.g. by bringing already depreciated and outdated techno-

logy into a joint-venture with Korean partners.⁴⁷ Moreover, it is suggested that the main reason for this alleged scrooge-like behaviour is that the Japanese are afraid of the "boomerang effect".

The Japanese private sector and the government counter this allegation by a whole broadside of arguments. First, pointing to the statistics, it is asked how a nation can be called reluctant to transfer technology when it has been the source of more than half of all the technologies received by Korea. Moreover, fees for Japanese licenses, when compared to the American ones, is no indicator for the quality of the technology transferred. A couple of explanations for the difference in price have been given before. A further one is that American technology is often basic technology which is more expensive than manufacturing technology imported from Japan. Apart from the fact that the definition of "high quality" of technology which Korea claims it does not get from Japan is quite vague, it is suggested that this allegation is simply not true in view of actual business experience, statistics, e.g. for licenses in the machinery sector, and examples like the Hitachi-Goldstar deal.

In addition, Japanese businessmen assert that they are not afraid of the boomerang effect which does not exist anyway in macro-economic terms as economists like to point out. Technology is transferred whenever it is profitable for a Japanese company. It is said that if technology transfer would always take place on a purely commercial level there would be no problem at all. However, intervention by the Korean government in technology transfers and government regulations in Korea on the one hand and the sometimes prevailing atmosphere of mistrust on the other hand⁴⁸ make technology transfer more difficult than it would be if it were handled with a more business-like attitude.

Another bone of contention, from the Japanese perspective, is the perennial pressure of the Korean government to transfer more technology. Increased TT has been an issue in bilateral governmental relations since the early 1980's.⁴⁹ Not only Japanese businessmen but also Korean scholars say that statecraft has no place in technology transfer which should essentially be a private sector affair. Besides, it has been suggested that the Korean government has a distorted perception of the role of the Japanese government vis-à-vis the private sector in Japan because of its own much stronger role in the management of economic affairs and the fact that government officials have been influenced by American views of government-business relations in Japan. Finally, the Japanese business community demands that Japan should also be granted comprehensive intellectual property rights protection, i.e. an agreement similar to the ones already signed between Seoul and Washington and Seoul and Brussels. By doing so another unnecessary stumbling block to transferring technology would be removed.

Another reason why Koreans tend to be more happy with American technology transfer seems to be that the Japanese and the US way of transferring technology is different. While US companies rely to a great extent on manuals and blueprints Japanese companies prefer on-the-job-training which they think is more effective but which can also lead to misunderstandings between Japanese instructors and employees of technology-absorbing companies, potentially leading to sub-optimal TT processes.⁵⁰

A recent survey on industrial technology co-operation between Japan and Korea, conducted at the end of 1991, sheds some light on the above-mentioned perception gap and other problems related to TT from Japan to Korea. Asked

for the reasons why some technology exports/imports could not be realised Japanese and Korean perceived the reasons quite differently:

	Japan	Korea
- no compromise could be found on the contract conditions	43,5%	36,4%
- the deal was not seen as profitable	26,1%	43,6%
- in order not to disclose technology	15,2%	57,3%
- anxiousness about a future boomerang effect	4,3%	63,6%

The answers underline Korean perceptions about the importance of the boomerang effect and Japanese unwillingness to share technology. Interesting in some ways are also the answers to the question of the aim of the technology export/import. While the main reasons for the Japanese side were to advance on the Korean market (65.2%), the Korean side named strengthening of price competition ability (73.6%) and expansion and strengthening of production systems (56.4%) most often. Asked about problems at the time of the technology export/import, answers varied again, sometimes dramatically:

	Korea	Japan
(1) Shortcomings of the tax system	29.1%	10.9%
(2) Lack of intellectual property protection		26.1%
(3) Excessive meddling of governmental agencies	53.6%	32.6%
(4) Profit calculation	63.6%	32.6%
(5) Royalties too high/low	83.6%	32.6%
(6) Lack of compensation for technology supply (former technology supply not fully paid)		4.3%
(7) Imprecise contracts		19.6%
(8) Differences in the appraisal of the value of the technology	15.4%	36.9%
(9) Deficiencies in the absorption system of the Korean company	14.0%	30.4%
(10) Deficiencies in the guidance system of the Japanese company	8.5%	6.5%
(11) Others		4.3%

While government intervention, profit calculation, and royalty questions were seen as big problems by both sides, Korean companies were much more concerned about these issues. On the other hand, the biggest single problem from the perspective of Japanese companies, different appraisals of the value of technology, received far less attention from the Korean side.⁵¹

Turning to some more recent trends in TT, the Korean government, as we have noted before, has recently launched some new initiatives to attract more FDI and to lure ultra-modern technology by means of preferential tax treatment incentives. Targetted are high-level technologies in which a significant increase in demand is expected in Korea. However, until Japan is granted comprehensive intellectual property protection the positive effect of these measures will be in any event quite limited.

The same can be said about the establishment of industrial technology cooperation foundations in both Seoul and Tokyo which were agreed upon in early July 1992 after the Korean President Roh Tae-woo and Japanese Prime Minister Miyazawa Kiichi met in January of the same year and vowed to expand bilateral economic ties.⁵² Japanese and Korean businessmen and scholars interviewed expressed doubts about the effectiveness of these new foundations. At the most, some high-level technologies might be transferred in order to show good will on the part of Japanese companies. This latest government level initiative to promote TT thus seems to be a stillborn idea.

Concluding Comments

The preceding empirical results lead to the question of how investment and technology flows from Japan to Korea will develop in the future. As always with questions of this kind the answer cannot be clear-cut. Here even more so because Korea is in a transitional period in its industrial development, i.e. somewhere on the road from the labour and even capital-driven stage to the innovation-driven stage of industrialisation.⁵³ Whether Korea can overcome this challenge is an open question which is beyond the scope of this study. In any case, this transitional period means uncertainty for potential investors. What is certain is that there is hardly any scope for investments in manufacturing in the short run as Korea has lost its cost competitiveness in this field for the time being. Japanese investors are likely to be interested in investments in fields like automobiles and electronics but these sectors are still largely closed to them. On the other hand, investments in service sectors are bound to increase further but will hardly suffice to compensate for the decline in manufacturing FDI. Furthermore, as in the sectors mentioned above Korean investment restrictions prevent Japanese FDI from unfolding in a dynamic way.⁵⁴

With regard to technology transfer, the question is even more difficult to answer. Some general observations thus have to suffice in this context. Technology transfer decisions are basically based on cost-benefit analyses and the principle of profit maximisation. Japanese or other corporations are after all not charity organisations even if some Korean commentators would like them to be that way. Observers citing the boomerang effect as a major reason for the alleged Japanese unwillingness to transfer technology have to be reminded that the boomerang effect has not only a negative side but also a positive side in terms of increasing intermediate product sales and the opportunity to give up the labour-intensive portion of manufacturing. Admittedly, among other reasons, corporations might be reluctant to transfer technology if downstream industries would be affected. However, Japanese corporations are likely to transfer technology to support their operations in Korea. The question must thus be how the Korean government and the private sector can stimulate FDI and TT.

First, it should be pointed out that policy-makers in Korea have an interest in promoting FDI and TT since it would be next to impossible to implement the current development strategy and to move into technology-intensive fields without the availability of leading technologies from Japan and other advanced nations.⁵⁵ This is not to say that Korea should not vigorously continue her efforts to develop technologies domestically. Quite the contrary; only domestic R&D and technology transfer taken together will lead to an upgrading of the industrial

structure in Korea. Moreover, indigenous technological advances are also important in the context of attracting foreign investment and technology since Japanese and other foreign companies expect something in return for their own capital and technology. Korean enterprises will also have to prove their ability to obtain technology from other sources than Japan, not only to continue to diversify technology inputs but also to increase Japanese interest in supplying Korea with technologies in order not to lose too much ground to competitors from other nations.

In order to enhance the bargaining power of Korean enterprises in negotiations with their Japanese counterparts it will thus be increasingly important to continue to invest in R&D and human resources. Apart from efforts to develop own production technology, more emphasis will have to be put on management control systems and total quality control activities. With regard to human resources it might be appropriate to move towards long-term employment systems to make best use of the given labour force.⁵⁶ With a view to Japanese-Korean industrial co-operation and strategic tie-ups between Japanese and Korean enterprises there should be more scope for co-operation in capital-intensive sectors like chemicals, steel, or cement where Korea has an overcapacity but the desired co-operation in high-technology sectors can only flourish if the Korean side concentrates even more than before on own efforts in the fields of R&D and human resources.

Finally, turning to the role that the Korean government can play in improving the investment environment our findings imply that if the general investment environment is not right investment promotion policies will not do the trick of luring significant amounts of FDI. As Ryou notes: "Under such circumstances, government incentives take a secondary role in (the) decisionmaking ... of potential investors. In this sense, the incentive is nothing but a compensation for the demerits of the investment environment of the host country."⁵⁷ Thus the structural setting for investments requires the attention of the government. Here, finance remains one of the biggest problems facing investors in Korea. Loans from domestic and international financial institutions are strictly controlled because of the tight monetary policy pursued by the government. Only a thorough liberalisation of financial markets can lead to overcoming this serious obstacle for foreign investors. It is therefore hoped that the financial reforms promised in 1992 and 1993 will be implemented and further expanded. Another problem for foreign investors relates to the soaring prices for real estate in recent years. As a first step in this regard it would seem appropriate to scrap current government regulations on the purchase of real estate by foreign enterprises which allow only for investment in the manufacturing sector. Furthermore, plans to designate special areas for usage by foreign investors should merit some attention.

There is also still some scope for further liberalisation of FDI regulations with regard to national treatment in market access. In order to fasten and simplify investment procedures, the notification system could be expanded to other areas and notification should really mean notification and not notification plus time-consuming scrutinising of investment projects. A further prerequisite for technology-intensive investment from Japanese companies will be the signing of

an intellectual property protection agreement with Tokyo. In more general terms, macroeconomic stabilisation should be high on the agenda of the government. Fighting inflation including the wage-costs-spiral will help to boost investor confidence again.⁵⁸

Many of the measures suggested cannot be implemented from one day to the other. Some measures will necessarily take more time to become effective. In the same vein, Japanese-Korean industrial co-operation cannot be expected to be invigorated in the short-term. But after all, industrial co-operation should never be approached with a short-term horizon.

Abbreviations used:

- FCIL - Foreign Capital Inducement Law
 FDI - Foreign direct investment
 HCI - Heavy and chemical industrialisation
 ISI - Import substitution industrialisation
 NIE - Newly industrialising economy
 OEM - Original equipment manufacturing
 R&D - Research & Development
 SME - Small and medium-sized enterprise
 TL - Technology licensing
 TT - Technology transfer

Notes and References:

- 1) Steve Chan and Melanie Mason: "Foreign Direct Investment and Host Country Conditions: Looking from the Other Side Now", *International Interactions*, 17 (1992) 3, pp.215-232. See also J. A. Caporaso: "Industrialisation in the Periphery: The Evolving Global Division of Labor", *International Studies Quarterly*, 25 (1981), pp.347-384.
- 2) Chan and Mason, op.cit., pp.218f.
- 3) See ibid, pp.220f.
- 4) Linsu Kim: "Pros and Cons of International Technology Transfer: A Developing Country's View", in: Tamir Agmon and Mary Ann von Glinow (eds.): **Technology Transfer in International Business**, New York and Oxford: Oxford University Press, 1991, pp.223-239; here p.223.
- 5) This should not be taken to imply that non-market mediated TT was not of importance in the case of Korea. Quite the contrary; L. Kim, op.cit., comes to the conclusion that informal mechanisms, i.e. those in cells 2,3, and 4 in table 1 were as important, if not more so than FDI and licensing. This is especially evident in the case of machinery imports whose total value in the 1962-1986 period was 21 times the value of FDI, licensing, and technical consultancy taken together. Thus capital goods imports may well have been the most important source of technology for Korea. See L. Kim, op.cit., pp.228ff. for details.
- 6) For a discussion of this problem see Susan Strange: "Big Business and the State", *Millennium Journal of International Studies*, 20 (1991) 2, pp.245-50.
- 7) A promising beginning in this respect is John M. Stopford and Susan Strange: **Rival States, Rival Firms - Competition for World Market Shares**, Cambridge: Cambridge University Press, 1991.
- 8) Gary Gereffi: "Paths to Industrialisation: An Overview", in: Gereffi and Donald Wyman (eds.): **Manufacturing Miracles Paths of Industrialisation in Latin America and East Asia**, Princeton: Princeton University Press, 1990, pp.3-31; here p.23.
- 9) For a more comprehensive analysis of Korea's development strategies, changes in the FDI regime and Japanese FDI in Korea in the period up to 1980 see the essays by Cheng, Stallings and Ellison and Gereffi in: Gereffi and Wyman (eds.), op.cit.; Stephen Haggard and Tun-jen Cheng: "State and Foreign Capital in the East Asian NICs", in: F.C. Deyo (ed.): **The Political Economy of the New East Asian Industrialism**, Ithaca and London: Cornell University Press, 1987, pp.84-135; Bohn Young Koo: "The Role of Foreign Direct Investment in Korea's Recent Economic Growth", in: Walter Galenson (ed.): **Foreign Trade and Investment: Development in the Newly Industrializing Asian Countries**, Madison: University of Wisconsin Press, 1985, pp. 176-216; and Russell Mardon: "The State and Effective Control of Foreign Capital: The Case of South Korea", *World Politics*, 43 (October 1990) 1, pp.111-128.

- 10) See Farrukh Iqbal: "External Financing for Korea: The Next Phase", in: Danny M. Leipziger (ed.): **Korea - Transition to Maturity**, New York: Pergamon Press, 1988, pp.137-155; here p. 143.
- 11) See Kwang Choi and Young Sae Lee: "The Role of the Korean Government in Industrialization", in: Ippei Yamazawa and Chung H. Lee (eds.): **The Economic Development of Japan and Korea: A Parallel with Lessons**, New York, Westpoint/Conn. and London: Praeger, 1990, pp.53-69; here p.59f.
- 12) For an analysis of Korea's efforts to enter high-technology sectors like semiconductors see Chi Shvive: "The Next Stage of Industrialisation in Taiwan and South Korea", in: Gereffi and Wyman (eds.), op.cit., pp.267-291.
- 13) Korea Development Institute: **Korea in the Year 2000: Prospects and Issues for Long-term Development, Summary Report**, Seoul: KDI, 1986; quoted in: Peter Allgeier: "Korean Trade Policy in the Next Decade: Dealing with Reciprocity", in: Leipziger (ed.), op.cit., pp.85-97; here p.91.
- 14) For an overview see Danny M. Leipziger: "Industrial Restructuring in Korea", in: Leipziger (ed.), op.cit., pp.121-135; here p.122.
- 15) See Taeho Bark: "Government Policies and Direct Foreign Investment in Korea", in: **Direct Foreign Investment**, Mexico: Banamax, 1991, pp.232-250; here p.234.
- 16) Jai-Won Ryou: **Foreign Direct Investment in Korea: Trends, Issues and Perspectives**, p.7 (Paper prepared for the Roundtable on Foreign Direct Investment, Islamabad, Pakistan, 28-30 April 1992).
- 17) See *ibid*, p.7. For a more detailed account of the policy changes in the early 1980's and figures on the changes in the liberalisation ratio during the 1980s see: Allgeier, op.cit., pp.90f.; Chang-Nam Kim and Sang-Hee Jeong: "Export Promotion and Trade Liberalisation Policy in the Republic of Korea", in: Kim, Jeong and Akira Hirata: same title, Tokyo: Institute of Developing Economies, JRP Series No.75, 1989, pp.1-82, here pp.36f.; Taeho Bark, op.cit., pp.234f.
- 18) See Young-Kwan Yoon: "The Political Economy of Transition - Japanese Foreign Direct Investment in the 1980s", **World Politics**, 43 (October 1990) 1, pp.1-27; here pp.9ff.
- 19) Kinya Onoda, Hirohisa Kohama and Shujiro Urata: "Industrial Restructuring by Japanese Firms and Government Policies", in: Ippei Yamazawa and Akira Hirata (eds.): **Industrial Adjustment in Developed Countries and Its Implications for Developing Countries**, Tokyo: Institute for Developing Economies, 1991, pp.29-62; here pp.51ff. On Japanese investment in Asia after the Plaza Accord see also: Asian Bankers Association (ABA) (ed.): **The Emerging Asia-Pacific Era and the Regional Cooperation Towards the Year 2000**, Tokyo: LTCB Institute of Research of Consulting Inc., 1991, pp.89ff.
- 20) ABA, op.cit., p.91.
- 21) See the charts in ABA, op.cit., p.44 and Onoda et al., op.cit., p.55 for details.
- 22) See Won-Young Lee: "Role of Small and Medium-Sized Enterprises of Industrialised Countries in the Transfer of Technology to the Republic of Korea", **Asian Economics**, (June 1989) 69, pp.40-69, here pp.41ff.
- 23) See Hikaru Aihara: "Nihon no Taikan Toshi to Tetta (Japanese Investment and Divestment in Korea)", **The Yachiyo Journal of International Studies**, 5 (1992) 1, pp.1-37; here p.8.
- 24) See T.W. Kang: **Is Korea the Next Japan?**, New York: The Free Press, 1989, p.121f. See also Rob Steven: **Japan's New Imperialism**, London and Houndmills: Macmillan, 1990, p.150/159/161, for figures and charts on comparative manufacturing hourly wage indices 1981-87, Japanese sourcing of components in Korea, and Japanese FDI and technical tie-ups for car components in Korea.
- 25) See Mardon, op.cit., p.124 and Steven, op.cit., p.152.
- 26) See Junko Mizumi: "Nikkan Kokusai Bungyo no Shintenka (New Developments in the International Division of Labour between Japan and Korea)", in: Teruo Komaki (ed.): **Kokusaika Jidai no Kankoku Keizai (The Korean Economy in the Age of Internationalisation)**, Tokyo: Aija Keizai Kenkyujo (Institute of Developing Economies), 1991, pp.173-204; here p.193ff.
- 27) See **The Nikkei Weekly**, 21.03.1992, p.10. Wages in the manufacturing sector in Korea are nowadays only 20% lower than in Japan.
- 28) See **Nikkan Boeki Imbaransu Mondai to Gijutsu Iten Mondai (The Trade Imbalance Problem and the Technology Transfer Problem between Japan and Korea)**, p.5, mimeo, Tokyo: Nikkan Keizai Kyokai, 1992; **Saikin no Nikkan Boeki Fukinko ni tsuite (On the recent trade imbalance between Japan and Korea)**, mimeo, p.69, Tokyo: Nihon Boeki Kai, 1992; **Seoul Shinmun** 17.04. and 01.06.1992; and Steven, op.cit., p.167.
- 29) See Patrick Köllner: "Japan und Südkorea zu Beginn der 90er Jahre: Aufbruch zu neuen Ufern?", in: Manfred Pohl (ed.): **Japan 1992/93 - Politik und Wirtschaft**, Hamburg: Institut für Asienkunde, 1993.

- 30) See NIES, ASEAN de no Nikkei Kigyo (Seizogyo) no Katsudo Jokyo (The Situation of Japanese [Manufacturing] Companies' Activities in the NIEs and ASEAN), Tokyo: Nihon Boeki Shinko Kai (JETRO), 1992, p.15f.
- 31) See Yukiko Fukagawa: *Nikkan Senryaku Teikei Jidai e no Joken (Conditions for the Age of Strategic Cooperation Between Japan and Korea)*, p.2, mimeo, 1992; and *Korea Business World*, February 1992, p.37.
- 32) *Far Eastern Economic Review (FEER)*, 27.5.1993.
- 33) See Fukagawa, op.cit., p.6f. and by the same author: "Tohoku Ajia Keizaiken no Keisei to Nihon no Yakuwari (The Formation of the Northeast Asian Economic Zone and Japan's Role), in: Tamio Shimakura (ed.): *Tohoku Ajia Keizaiken Taido (Fetal Movements of the Northeast Asian Economic Zone)*, Tokyo: Ajia Keizai Kenkyujo (IDE), 1992, pp.267-300; here p.287f.
- 34) See FEER, 7.1 and 27.5.1993.
- 35) See NIES, "ASEAN de no Nikkei Kigyo...", op.cit., p.6f. and 12.
- 36) That notification, however, does not mean that the authorities will stop scrutinizing the activities of FDI projects goes without saying; old habits die hard.
- 37) On the composition of recent Japanese FDI flows to Korea and FDI liberalisation plans see Nihon Boeki Shinko Kai (JETRO): *Kaigai Chokusetsu Toshi 1992 (Overseas Direct Investment 1992)*, Tokyo: JETRO, 1992, pp.178ff.; *Saikin no Nikkan Boeki...*, op.cit., pp.63ff.; FEER, 13.08.1992 and 27.5.1993.
- 38) For a discussion of the underlying changes and implications of this quest for FDI see Stopford and Strange, op.cit.
- 39) Figures quoted in Aihara, op.cit., p.6f.
- 40) See Nanshi F. Matsuura: "Management Conflict and Foreign Direct Investment: The Case of Japanese Investment in South Korea", *Columbia Journal of World Business*, (Summer 1989), pp.61-67.
- 41) For a more detailed discussion of this problem see Aihara, op.cit., pp.10ff.
- 42) See ibid, p.9, and Mardon, op.cit., p.130.
- 43) Nihon Boeki Kai: *Kankoku Toshi/Jigyō Kankyo no Jittai*, unpublished internal survey, 1988.
- 44) W.Y. Lee, op.cit., p.44.
- 45) See *Nikkan Boeki Imbaransu...*, op.cit., p.5.
- 46) Matsuura, op.cit., p.63.
- 47) Kang, op.cit., pp.125ff. cites these kind of allegations. For a similar line of argument see Young Ho Kim: "Technology Transfer Between Japan and Korea", in: Economics Faculty of Komazawa University (ed.): *The Globalization of Japanese Economy*, Komazawa: Economic Faculty of Komazawa University, 1990, pp.191-205.
- 48) See FEER, 31.01.1991 for Japanese and Korean private sector and government views on TT.
- 49) See Hy-Sang Lee: "Japanese-South Korean Economic Relations on Troubled International Waters", *Korean Observer*, 16 (Summer 1985) 2, pp.166-88.
- 50) For a general discussion of the distinctions between US and Japanese methods of transferring technology see Shoichi Yamashita: "Economic Development of the ASEAN Countries and the Role of Japanese Direct Investment", in: Yamashita (ed.): *Transfer of Japanese Technology and Management to the ASEAN Countries*, Tokyo: University Press, 1991, pp.3-22; here p.17.
- 51) Survey data from Nikkan Keizai Kyokai: *Nikkan Sangyo Gijutsu Kyokai ni tsuite (On Industrial Technology Cooperation Between Japan and Korea)*, 1992.
- 52) See *The Daily Yomiuri*, 02.07.1992.
- 53) See Michael Porter: *The Competitive Advantage of Nations*, London and Houndmills: Macmillan, 1990, for details.
- 54) For a more optimistic assessment of future FDI in Korea see Young Soogil: *Changing Patterns of Korea's Foreign Direct Investment Relations*, paper prepared for the Pacific Economic Outlook Meeting on Structural Issues in Osaka, Japan, 25-26 March, 1992.
- 55) On Korea's high-tech ambitions and the problems in fulfilling them see FEER, 8.4.1993.
- 56) For more detailed suggestions in this context see Keun Lee and Chung H. Lee: "Sustaining Economic Development in South Korea: Lessons from Japan", *The Pacific Review*, 5 (1992) 1, pp.13-24.
- 57) Ryou, op.cit., p.14.
- 58) The author's understanding of the key policy issues with regard to FDI has benefitted greatly from a discussion with Jai-Won Ryou and his above-mentioned paper. See also Doowon Lee: "Korea's Development Strategy in a Changing International Environment: Three Lows, Past and Present", *Korea Observer*, 23 (Winter 1992) 4, pp.415-435.

Appendix

Table 1: The Mode of Foreign Technology Transfer

Market mediated	Direct Foreign Investment, foreign licensing, turn-key plant, technical consultancy, made to order machinery (Cell 1)	Standard (serial) machinery purchase (Cell 2)*
Nonmarket mediated	Technical assistance by foreign buyers, technical assistance by foreign vendors** (Cell 4)	Imitation (reverse engineering), trade journals technical information service (Cell 3)
	Active	Passive

Role of Foreign Suppliers

- * Except for small, standard machinery, foreign suppliers send their engineers to assemble and test-run machinery sold. Often, they teach local personnel how to operate it and provide aftersale service. In this sense, the role of the supplier is not passive, but compared with those mechanisms in cell 1, this mechanism can still be classified in cell 2.
- ** The vendor's service mentioned here refers to technical assistance not directly related to the operation of machinery sold; rather, the suppliers provide technical information and consultancy on operations not related to the machinery sold in exchange to a long-term purchase agreement.

Source: Linsu Kim (1991), p.224.

Table 2: Country Distribution of Technological Licensing and FDI
(Unit: number of cases)

	Japan		US		Others		Total	
	TL	FDI	TL	FDI	TL	FDI	TL	FDI
1962-1976	494	985	164	187	94	93	752	1265
1977	82	27	45	16	41	14	168	57
1978	158	31	67	11	72	10	297	52
1979	159	32	61	13	70	13	291	58
1980	124	19	54	15	44	6	222	40
1981	108	23	75	12	64	9	247	44
1982	164	20	68	20	76	19	308	59
1983	201	37	77	19	84	20	362	76
1984	217	52	99	37	121	19	437	108

Source: MoF Korea, cited in W.Y. Lee (1989), p.46 and calculations by the author.

Table 3: Foreign Direct Investment in Korea (approval basis)

		'85	'86	'87	'88	'89	'90	'91
Total	Cases	130	205	372	352	349	306	297
	US\$	532	355	1063	1283	1090	803	1396
Japan	Cases	57	109	206	177	145	145	112
	US\$	360	139	497	696	462	236	226
USA	Cases	43	49	93	104	97	84	86
	US\$	112	125	255	284	329	317	297

Note: US\$ unit: 1 million (unless otherwise stated).

Source: Figures for 1985 to 1990 Nikkan Keizai Kyokai (1992), p.5.
Figures for 1991 Young (1992) and calculations by the author.

Table 4: Korea's Technology Imports (Licenses)

	Japan		USA		Others		Total	
	Cases	US\$	Cases	US\$	Cases	US\$	Cases	US\$
1985	228	75	114	155	112	66	454	296
1986	264	130	157	192	96	90	517	411
1987	307	181	180	240	150	102	637	524
1988	354	215	200	330	197	132	751	676
1989	343	274	244	416	176	199	763	889
1990	333	341	221	514	184	232	738	1087
1962-90	3536	1539	1826	2291	1582	1096	6944	4926
share (%)	50.9	31.2	26.3	46.5	22.8	22.2	100.0	100.0
amount per case (1000\$)		435		1255		693		709

Note: see table 3

Source: Nikkan Keizai Kyokai (1992), p.5.