CHAPTER I
INTRODUCTION

1.1 BACKGROUND

The sustained growth and rapid industrialisation experienced by the first-tier newly industrialised countries (NICs) of East Asia since the 1960s, followed by the so-called second-tier NICs of Southeast Asia since the mid-1980s, had attracted tremendous attention to the East Asian region long before the 1997 financial and economic crisis.\(^1\) Over the 1970s, evidence of the superior economic and industrial performance of the market-led, export-oriented first-tier East Asian countries over the relatively poor record of other developing countries which adhered more closely to the state-led and regulated inward-looking policies had led to the emergence of a 'new orthodoxy' in economic policy advocacy. The East Asian experience was interpreted by neoclassical development economics as proof that while developing country governments that intervened strongly in markets suffered from gross inefficiencies, those relying on competitive markets operating broadly on neo-classical principles could foster high levels of economic efficiency and rapid self-sustained growth.\(^2\) Although gradually this interpretation came under increasing attack, especially in terms of the crucial role of government intervention in these market-oriented economies, one element that has continued to be highlighted by the neo-classical school has been the apparent openness to foreign direct investment (FDI) of these countries, which facilitated their rapid economic restructuring.

It has been observed that the extraordinary growth of these countries was accompanied by significant changes in the structure of their economic activity, both in production as well as trade. In domestic production, manufacturing industries have become increasingly important in all these economies. Within the manufacturing sector, there has been a prominent shift towards more capital- and technology-intensive activities, apart from a remarkable increase in the share of services. There have been

\(^1\) Following the classification used in the literature, first-tier NICs are Singapore, Hong Kong, South Korea and Taiwan, and second-tier NICs are Malaysia, Thailand, Indonesia, and the Philippines.

significant changes in the pattern of trade flows associated with the countries in this region as well. In the 1970s, the first-tier NICs exported labour-intensive manufactures and the Southeast Asian countries exported primary commodities to developed countries, from which they imported intermediate inputs and capital goods. However, there has been a substantial rise in the share of manufactured goods in total exports initially from the first-tier NICs, which was followed by the Southeast Asian countries (especially Malaysia and Thailand) since the mid-1980s, reflecting the changes in their aggregate production pattern.

The fact that the changes in the production and trade structures in these countries have been associated with substantial inflows and outflows of FDI in them since the late eighties, has led to the widespread adoption of the ‘flying geese’ paradigm to explain the pattern of industrial restructuring and development of the countries in this region. This is similar to the well-known ‘product-cycle’ theory, which fits the strategic behaviour of a developed country innovating firm and the life cycle of a product and industry developed in an advanced economy through innovation. However, the ‘flying geese’ model is essentially a “catching-up product cycle” model constructed from a late-industrialising developing country’s point of view, where the cycle begins when the product is introduced through imports, rather than innovation.

Originally, Kaname Akamatsu used the ‘flying geese’ pattern to illustrate how Japan followed and tried to catch up with the US and Western Europe beginning in the late 19th century, with the production first of simple consumer goods introduced from abroad, then consumer durables, and eventually capital goods. The industrialisation of the country was perceived as proceeding in the manner of import substitution followed by export expansion of successively advanced products and industries, in a sequential pattern of industrial upgradation by which the country caught-up with the advanced countries of the time in one industry, before moving onto the successful development of newer industries. It was later pointed out that just as Japan tried to catch up with the US, so the first-tier NICs followed and tried to catch up with Japan. The Southeast Asian countries, and later on China and Vietnam, have also been expected to have followed on this model of rapid catching-up, accompanied by large changes in their economic structure and pattern of economic growth. Thus, the catching-up-product cycle (CPC) model, which was originally developed for explaining the interaction between industrialisation and changes in trade structure in the late-starting industrial growth of Japan since the late 19th century, came to be propagated as a ‘rational’ pattern of

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industrial development and trade in late-starting industrialising countries. The shift observed in several Asian countries (commencing with Japan in the 1870s), from light industry such as textiles to a range of heavy industries one after another, beginning with basic material producing industries such as chemicals and metal industries, and then further to processing-assembly machinery sectors like automobile and electronics industries, has been pointed out to be a standard example of such industrial upgradation and diversification.

In subsequent adaptations, this paradigm has been used to argue that rather than attempting to domestically generate and accumulate the technology and managerial resources required for catching-up industrialisation through trial and error or/and relying on imported machines and new technology under licensing agreements (that is, non-equity forms of technology transfer), CPC development can be hastened for a late industrialising country through inward FDI, which brings in capital, technology, external market access, and managerial and marketing techniques in a packaged form. According to these later variations in the model, FDI-led domestic production of a product is predicted to lead to exports and FDI outflows and also lead to industrial diversification and upgradation in the host country, as it happened in the original home country's CPC development. FDI-led industrialisation across a cross-section of countries is thus believed to promote shifting of industries across different countries at different stages of development, through transmission of the changes in industrial structure from one country to another, all occurring in terms of benign and mutually beneficial relationships.

Although Akamatsu's thesis was first translated into English in 1956, the theory began attracting widespread attention of economists in the Asia-Pacific region after its introduction at the Fourth Pacific Economic Cooperation Conference (PECC) in Seoul in May 1985. It soon acquired a strategic assertion in the debate on import substitution versus export expansion confronting developing countries. Although Akamatsu's and the later Japanese studies which substantiated the CPC theory clearly recorded the continuity of Japanese import substitution policies while pursuing export expansion, and equally significantly, a very low level of dependence of Japan on external capital (especially FDI) during its period of CPC development, the neo-classical orthodoxy put

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5 Therefore, the CPC model has also been deemed able to explain linkages between countries at different stages of development in the regional hierarchy, as a cascading pattern of FDI-propelled industrialisation. See for example, WIR, 1995.

6 See Yamazawa, opcit, p. 35.
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forth and has continued to propagate the CPC model for supporting the case for trade (import) and investment (FDI) liberalisation in successful export-led industrialisation by late-industrialising developing countries.

While the CPC model holds that FDI plays a major role in shaping all the shifts or structural changes described above in the course of industrial development of recipient countries, no study so far has systematically analysed this relationship from the point of view of a late industrialising host country. Thus, broadly, the objective of the present research is to examine the role of FDI flows in industrial restructuring in the East Asian region, using the framework of the "flying geese" paradigm. If any countries could be said to approximate the mechanism suggested in the FG hypothesis, it is the II-tier newly industrialising countries of Southeast Asia, which experienced very large increases in relocative FDI since the late eighties into the mid-nineties, and also delivered high rates of export growth over this period. It is therefore, the experience of essentially Indonesia, Malaysia and Thailand (ranked third, fourth and fifth respectively in terms of inward FDI stock in Asia in 1995) and to a much lesser extent, the Philippines, which corresponds more closely to the positive view that links ‘openness’ with economic growth based on FDI-led export expansion and industrial restructuring. Given the fact that these economies have encountered severe difficulties in their manufactured export expansion since the late nineties makes an enquiry of this hypothesis even more crucial. In particular, as a country whose industrial policy was heavily influenced and directed by such ‘rigid’ prescriptions, Thailand presents an ideal case study for examining the nature and outcome of an FDI-led industrial catching-up strategy.

Before moving on to discussing the role played by FDI in the structural changes in the East Asian countries, the following section discusses the overall trends in FDI flows to the developing countries, with specific reference to East Asia.

1.2 TRENDS IN INTERNATIONAL CAPITAL FLOWS

1.2.1 The Historical Backdrop

Even though international capital flows in the form of lending can be dated back to as early as the 14th century, the phenomenon of foreign investment began on a substantial scale only after the 1770s. Its subsequent growth was closely intertwined with the industrial revolution spreading out from England. England was the principal capital exporter in the 19th century and up till the First World War. Around the middle of the 19th century and up to 1870, the bulk of British foreign investment had gone to Europe. However, during the latter part of the century and in the years leading up to the first
World War, British capital went mostly to the developing countries of the period i.e.; the US, Canada, Latin America, Asia (mainly India and Ceylon), Australia and New Zealand. During this period, the capital flows took two main forms: fixed-interest bond issues by various levels of government, and direct foreign investment. The flows in this period were also associated with a pattern of specialisation in international trade, which ensured outlets for the merchandise exports of the capital-importing countries.

During the interwar period, foreign investment played a very small role. While before the First World War, a net flow of $1.1 billion had gone to debtor countries, in the period between the two World Wars, only a fraction of this amount was invested abroad. During the 1930s, the net flows virtually stopped. Whatever capital flows occurred during this period was from the repatriation of capital.

After the Second World War, when capital movements became substantial again, there were profound changes in the pattern of foreign investment related to far-reaching modifications in the international monetary and trading context. The US became the major creditor nation. The virtual collapse of the private international capital market in the inter-war period (after the widespread debt defaults provoked by the Great Depression), the re-emergence of capital controls in most industrial countries after the Second World War, and the radically different political framework in many of the newly independent developing countries meant that no significant flow of private capital could be expected to these countries. While all forms of international capital flows (long-term borrowing, portfolio flows, acquisitions, etc.) constitute a counterpart to negative current account balances and allow host countries to invest more than they save, FDI is known to be distinct from other forms of capital flows in providing host countries with much more than a large amount of capital. Even so, due to the circumstances mentioned, few developing countries attempted to attract foreign direct investment in the 1950s and 1960s, except into certain "import-substitution" industries. Thus, up to the late 1960s, official funds became the predominant flows of foreign capital to the developing countries, with governments of industrialised countries offering loans and grants to developing country governments. In addition to this kind of bilateral lending, there was lending by the multilateral agencies such as the World Bank and the regional development banks, under the Bretton Woods label.

In the two decades since the demise of the Bretton Woods System in the early 1970s, with intermittent energy crises, more pronounced business cycles, and a gradual

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7 Cardoso and Dornbusch, 1989
8 In many host countries, private foreign capital was subject to strong political attacks for being an instrument of "exploitative" Western capitalism. See Ito and Krueger, 2000, p. 1-2.
shift in earnings from foreign investment towards countries with persistent trade surpluses such as Japan, larger current account imbalances and correspondingly larger long-term capital flows re-emerged. These capital flows were also associated with the removal of capital controls and financial liberalisation in the industrial countries. Unlike earlier times, however, capital flows in the 1970s primarily took the form of floating-interest bank loans rather than fixed-interest bond finance.

This sharp recovery in financially intermediated investment and the accompanying ease with which such commercial bank loans could be obtained led to a sharp rise in the private debt of a number of countries of Eastern Europe, Africa and a few countries of Asia. The overvalued exchange rates, huge budget deficits, and large build-up of external debt in many of these developing countries, provided just the mix of domestic factors that would make them extremely vulnerable to changes in the external environment. The sharp deterioration in the world economic environment following the shift to tight monetary policy by the US and other OECD countries in 1980-81, brought things to a halt. While the rise in interest rates increased the debt burden of these countries, the resultant recession in the world economy drastically reduced the export earnings of many developing countries, further exacerbating the ability of these countries to service the increased debt service burden. Unlike in the 1970s, automatic financing of interest payments became impossible as lenders began rationing credit. Following this debt crisis, growth in commercial lending was drastically scaled back. Relatively little capital flowed to the developing world and the net movement of funds was mostly between the industrial countries with Japan being the main capital exporter and the US being the principal capital importer. After reaching a peak in 1979, total FDI outflows declined continuously till 1983.

1.2.2 FDI Flows To Developing Countries During 1980-97

However, from 1983 onwards, FDI outflows increased at an unprecedented rate, three times faster than that of the growth of exports and four times that of the growth of world output. The unparalleled growth of FDI since 1985 was due to a combination of factors like the strong recovery of the world economy from the recession of the early 1980s and the ensuing high growth rates in both developed and developing countries, the realignment of the major currencies in the G-5 Plaza Agreement of September 1985, and the expanded FDI activities of non US-based firms eroding the established position of the US and the UK.

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9 Kuczynski, opcit.
With large current account surpluses and facing protectionism in its export markets, Japan emerged as a significant outward investor as a strategy to thwart the loss of competitiveness triggered by the yen appreciation and to fend off trade friction with other developed countries. The higher-valued yen, along with land price increases, caused production costs in Japan to become the highest in the world, and made Japanese products less competitive internationally. The weakening competitiveness forced Japanese companies to look for lower-cost production sites. At the same time, setting up plants in Asian countries and distributing their products to the US, EU and other countries, also became an effective way of dealing with the trade conflicts. Thus, Japan replaced the US from 1986 and the UK from 1989, and became the largest source country of investment flows, accounting for 23% of total worldwide outflows in that year. In addition, a number of East Asian newly industrialising economies, such as Singapore, Hong Kong, and Taiwan, again facing current account surpluses, appreciating currencies, rising production costs at home, and protectionist forces in their export markets, also emerged as outward investors. The loss of Generalised System of Preferences (GSP) status for these economies led to an increase in outward investment and influenced its pattern especially in industries most affected by the removal of that status, such as electrical equipment and food processing.\footnote{WIR, 1995, p. 25.} Taiwan, in particular, emerged as a major investor in the region, establishing production facilities in several countries in Southeast Asia and China, either directly or through affiliates in Hong Kong. FDI from Hong Kong has also grown rapidly since 1986. But, overall, the five largest investors were France, Germany, Japan, the UK and the US, with a clear decline in the relative position of the US as the largest investor in five Asian host economies (Hong Kong, Taiwan, Thailand, Singapore, and South Korea), in favour of Japan.

On the other side, the negative attitude of developing countries towards FDI had also begun to change by the 1980s, due to increased demand for FDI inflows. While the debate on the costs and benefits of FDI to the host country which raged in international economics during the sixties and the seventies was never settled for lack of conclusive evidence, with the widespread acceptance of the neo-classical development paradigm especially after the mid-1980s and also due to the debt-crisis faced by many developing countries, the latter found themselves in favour of attracting FDI. Many policymakers began to consider FDI as major and essential resource for accelerating economic growth and industrial upgradation, and FDI regimes across the developing world have come to reflect these liberal views. Many countries and many sectors or industries, which were previously closed to FDI, began to be liberalised in explicit attempts to attract greater...
amounts of FDI. Other FDI-related policy changes which have been part of a wider financial liberalisation trend included: reduction or removal of exchange controls, permitting wider currency convertibility and greater repatriation of profits and dividends; removal of price controls to allow greater role of market forces; and overall, more flexibility in the rules and regulations pertaining to FDI.

Thus, FDI flows to the developing countries increased continuously since 1983. During 1985-89, they grew by an average annual rate of 22%, compared to the 3% during 1980-84 and 13% during 1975-79. However, in spite of a near doubling of average annual flows to the developing countries between 1980-84 and 1985-89, their share in worldwide inflows fell from 25% to 19% between the two periods. This was due to the fact that the five major home countries (with the exception of Japan) were also among the largest host countries with an average share of 57% of world flows during the 1980s, and reflected the concentration of FDI inflows in developed countries.

Within developing countries too, there was a high level of concentration of FDI inflows. Ten developing countries maintained a share of about three fourths of total inflows to developing countries throughout the 1980s. These were Singapore (12% in average annual flows to developing countries), Brazil (12%), Mexico (11%), China (10%), Hong Kong (7%), Malaysia (6%), Egypt (6%), Argentina (4%), Thailand (3%), and Colombia (3%). In the case of the Latin American countries of Mexico, Brazil and Argentina, a large part of the rise in capital inflows recorded as FDI was in fact due to the debt-for-equity swaps which occurred in these countries following the debt crises. Debt equity swaps that converted these countries debt into foreign equity in domestic firms essentially discouraged the inflow of net new capital, whether they involved the creditor banks themselves which wanted to convert their debt portfolio into real assets in a debtor country (mostly in the financial sector) or transnational corporations. In any case, the highest rate of inflows during the 1985-89 period was experienced by East, South, and Southeast Asia, where it reached a growth rate of 37%. In 1986, the region surpassed Latin America and the Caribbean for the first time as the largest host region for FDI inflows in the developing world. Their share in total FDI inflows to the

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12 The UNCTC/ECLAC Joint Unit has estimated in the 1985-89 period, total debt conversions in the major debt countries (Mexico, Brazil, Chile, Argentina, Philippines, etc.) amounted to around $15.2 billion. See UN, 1990, Debt Equity Conversions, p. 9 and 12-13. See also Thorp, Rosemary and Laurence Whitehead, 1987, Latin American Debt and the Adjustment Crisis, London, Macmillan Press.

13 Most transnational corporate investment through such conversion schemes was initially by corporations already well established in the host country, with most of this investment concentrated in privatisations, tourism and especially automobiles. However, since the late eighties, there has been growing use of such programmes by smaller and/or first-time investors into a relatively unfamiliar developing country's markets. Ibid, p. 27-28.
developing countries also increased from 37% during 1980-84 to 48% during 1985-89.\(^\text{14}\) The continuous attractiveness of the fast growing NICs, the growing investment opportunities in several ASEAN member countries which had begun growing rapidly after 1985, and the emergence of China as an important host country in the region, all contributed to a sustained increase in inflows to this region. In addition, as mentioned earlier, intra-regional FDI became increasingly important for East, South and Southeast Asia in the latter half of the 1980s.

Apart from the changes in attitudes and policies towards FDI and the changed macroeconomic variables of both host and home countries, all of which created a favourable environment for FDI flows, the rapid increase in inflows to the East Asian region was also the result of a regional networking strategy of Japanese firms. This marked a shift in emphasis by the Japanese firms from an export-led strategy to a strategy in which FDI came to play a central role. Japanese firms were aiming to establish access in each of the most prominent markets, the US, EU, and Asia, to protect Japanese exports against the protectionist threats in the two developed country markets, and to exploit the locational advantages in each of these locations. The 1988 reduction in tariffs on intra-firm trade in the ASEAN countries encouraged the emergence of Japanese regional network strategies in automobile industry in the early nineties, similar to those, which already existed in the electronics industry.

The rapid increase of FDI flows in the 1980s has been accompanied by a transformation in the sectoral composition of both flows and stocks of this investment. During the 1950s, FDI was concentrated in raw materials, other primary products, and resource-based manufacturing. By the mid-1980s, the composition had shifted to technology-intensive manufacturing and services, conforming to long-term changes in the structure of economic activities in both home and host countries, in which the role of the primary sector in gross national product has declined, while that of the services sector has increased. By the late 1980s, services came to account for some 55 to 60% of annual flows. The distribution of foreign assets by industry showed that TNCs based in developing countries also invest primarily in services.\(^\text{15}\) That the industrial pattern of FDI has shifted increasingly towards technology-intensive activities is reflected in the fact that between two-thirds and nine-tenths of technology payments and receipts\(^\text{16}\) are intra-firm in nature.

\(^{14}\) World Investment Report, 1991, p.11
\(^{16}\) Flows of royalties and license fees paid by technology recipients and received by technology providers.
After a drop in the growth rate in worldwide FDI outflows in 1990, worldwide FDI outflows declined in absolute terms in 1991 for the first time since 1982, largely because of the economic slow-down in the major developed countries. This fall was attributable mainly to declines in outflows from Japan and Western Europe. After several years of strong growth, outflows of FDI from developing country sources also declined in 1991. While US outflows increased by 77% in 1993 reaching a historic high of $69 billion, it declined in 1994. On the other hand, outflows from Western European home countries (except for the UK which recovered in 1993 itself) and Japan continued to decline in 1992 and 1993, and regained their 1991 level only by 1994.

But, FDI inflows to developing countries grew, and since there was a sharp drop in inflows to the US, the share of total flows going to developing countries increased in 1990. Within developing countries, however, the concentration of flows increased further, with Asia and the Pacific accounting for almost 60% of total flows to developing countries. In 1991 too, despite the decline in worldwide outflows, FDI flows into developing countries continued to increase and they received over 25% of all inflows in 1991. Strong economic expansion and sustained profitability of investments in South and Southeast Asia, along with privatisation programmes in many developing countries (especially in Latin America), and low investment demand in OECD countries due to the recession contributed to this widespread growth. In 1991, India also liberalised its FDI regime and obtained a notable increase in inflows, while China became the region’s single largest recipient of FDI. In fact, China became the second largest recipient of inflows among all developing countries, exceeded only by Mexico. Vietnam has also recently emerged as a recipient of substantial flows of FDI. Although East, South and Southeast Asia continued to account for over half of the inflows to developing countries, the region’s share fell in 1991. This was due to increased inflows to Latin America and the Caribbean as well as to Africa, which grew significantly in 1991. However, the rise in FDI inflows to developing countries levelled off in 1994.

17 Apart from the onset of recession in the US, which was among the largest investors, the recession in the UK and larger domestic investments by Japanese corporations also contributed to a reduced growth of outflows from these economies. On the other hand, outward investments from Germany and France increased significantly in 1990.

18 Outward FDI from Japan declined for the first time since 1983. Domestic economic slowdown, declining profitability, and difficulties in financial markets left Japanese companies with less capital to invest abroad. Indeed, some were obliged to sell foreign assets to cover losses at home. See World Investment Report, 1993, p. 39-40.

19 France, Germany, the Netherlands, and Sweden accounted for the latter. Outflows from the US and UK did not decline in 1990 and 1991.
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China accounted for over three-quarters of the increase in flows into the Asia-Pacific region during 1991-94.\(^{20}\) From 1993, China became the second largest recipient of FDI in the world (after the US). Apart from rapid economic growth, a large domestic market, low costs, and rising per capita income, two other factors that contributed to increased inflows to China were its improved relationship with some of its neighbours (Indonesia, Singapore, and Taiwan), and its most-favoured-nation status with the US that was renewed.\(^{21}\) China has attracted significant amounts of FDI into labour-intensive manufacturing for export as well. TNCs have played a lead role in the expansion of export-oriented processing activities, in particular in the special economic zones.\(^{22}\)

A new wave of FDI flows into and from developed countries began in 1993 following the end of the FDI recession. But, this wave in inflows primarily reflected a sharp rise in foreign investments in the US, the largest recipient worldwide in 1993 and 1994. TNCs have been investing more than ever in new or existing businesses in the US, to establish a presence in its domestic market or to acquire strategic assets such as technology and know-how. The largest flow in the US in 1994 was registered by the UK. In contrast to inflows, outflows of FDI from the US have been more sensitive to the cyclical downturn of the domestic economy in the early 1990s, and have risen unabated throughout the 1990s- to a record level of $69 billion in 1993. This has been the outcome of the implementation of an ongoing strategy of American TNCs to seek a local presence in large and growing markets across the world. In this context, a special factor has been restructuring of US TNC operations within NAFTA, which has led to a doubling of the outward stock to Mexico by 1994.

In 1994, Japan re-emerged as a sizeable outward investor, especially in South, East and Southeast Asia. As in earlier years, the new wave of FDI flows from Japan was caused partly by the appreciation of the yen vis-à-vis the dollar. Many Japanese firms see the shifting of production overseas, especially to Asia, as a strategy to thwart the loss of competitiveness triggered by the yen appreciation and to fend off trade friction with other developed countries. While outflows from the UK recovered in

\(^{20}\) According to the WIR (1995), however, overvaluation of equipment and technology brought in by foreign investors into China and round-tripping were substantial until about 1994, and should be kept in mind while considering the inward and outward FDI data of China. Round-tripping involves the circular flow of capital out of China - in most cases to foreign affiliates of Chinese TNCs, and the subsequent "re-investment" of this "foreign" capital in China for the purpose of benefiting from fiscal entitlements accorded to foreign investors. One estimate suggested that round-tripping inward FDI accounted for 25% of China's FDI inflows in 1992. Round tripping can also distort the FDI data for countries used as round-tripping "bases". See WIR, 1995, p. 56-60.

\(^{21}\) WIR, 1993, p. 47.

\(^{22}\) The massive investment by TNCs in export-oriented production in China is particularly visible from the high share of foreign affiliates and other TNC-related enterprises in China's exports to Japan (53%). See WIR, 1995, p. 212-213.
1993 itself, more countries- Denmark, Finland, Spain and Sweden, recovered from the FDI recession in 1994.

Following the end of FDI recession in 1993, worldwide investment inflows rose by 9% in 1994 and another 40% in 1995. Investment outflows also hit new highs. About two-thirds and 85% of the 1995 increases in FDI inflows and outflows occurred in developed countries, led by the US, UK, France and Australia on the inflow side, and the US, UK, and Germany on the outflow side. Although FDI inflows to developing countries also rose in 1994 and 1995, their share in global inflows declined to 32%, after having increased consecutively for the previous six years. With some 40% of the total, China was still the single largest recipient of FDI flows among developing countries in 1995. Even so, inflows into developing countries other than China rose by some 16% between 1993 and 1994, and by another 10% between 1994 and 1995. On the other hand, developing countries’ share in outflows increased to 15%, accelerating their integration into international production networks. This was a reflection of the fact that more and more companies have been seeking to exploit new markets or to take advantage of factors of production to build international production networks.

A significant part of the increase in FDI during this phase was also attributable to mergers and acquisitions (M&As). This was helped along by the increasing acceptance of privatisations with foreign investor participation especially in developing countries, giving rise to new investment opportunities in previously closed industries, including infrastructure. Another important factor has been the regional integration schemes such as the single market programme in the EU, MAFTA, MERCOSUR, APEC and ASEAN, which facilitate regionally integrated production networks for both insider and outsider firms.

The European Union TNCs, after having neglected Asia in the past decade, have been paying increased attention to the region since the mid-1990s or so and have invested more, often in large-scale projects. They are also supported by a range of programmes of the European Commission and later on by the Asia-Europe Investment Promotion Action Plan after the Asia-Europe Summit in March 1996.

The most striking feature of the sectoral distribution of inward FDI stock is the decline by half of the share of primary sector between 1988 and 1997, globally as well as in both developed and developing countries. While the share of manufacturing sector remained stable and represented the single most important sector in developing countries, the share of services sector experienced an increase corresponding to the


\[24\] See WIR, 1996, p. 5-6.
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The decline in share of the primary sector. The industry distribution of FDI inflows shows that finance was the largest recipient in both 1988 and 1997, followed by trade. Manufacturing sector FDI inflows are dominated by capital- or technology-intensive industries such as chemicals, electrical machinery and motor vehicles, reflecting the global strategies of TNCs in these industries to benefit from technological development, and scale and scope economies from international production.

1.2.3 FDI Outflows from Developing Countries

As the reach of international production by TNCs increased in width and depth, FDI by enterprises from developing countries that began growing in the 1970s has expanded rapidly thereafter. Their share in FDI outflows increased from 0.7% share in 1970-75 to 2.2% of total outflows worldwide during 1981-85 and further to 3.5% during 1986-91. Asian economies played an important role in the recovery of FDI outflows from the FDI-recession of 1991-92, accounting for about two-thirds of the increase in outflows during 1993-94. Their share increased further to about 14% of world FDI outflows in 1997 (but declined to 8% in 1998). While Taiwan\(^\text{25}\) and the Republic of Korea\(^\text{26}\) had emerged as significant investors since the late 1980s, Hong Kong, Singapore, and China also joined in and together these five countries accounted for 90% of outflows from developing countries in 1993. The major home economies in terms of FDI stock are Hong Kong, Singapore, Taiwan, China, Republic of Korea, Malaysia, Nigeria, Brazil, Argentina, and Chile. These 10 largest investors account for about 80% of FDI stock from the developing world.\(^\text{27}\)

The destination of this FDI is mainly other developing countries, dominated by intra-regional FDI flows in Asia. MNCs from the NICs began to focus on Asia as a low cost production base for supplying the region and the rest of the world, and as a means

\(^{25}\) Although rising labour costs, appreciation of the new Taiwan dollar and increased pressure from environmental groups have all contributed to this surge in investment from Taiwan, the easing of Cross-Straits contact in 1987 was also a favourable factor, after which Taiwanese investment in mainland China increased dramatically. Until then, most of Taiwan's outward FDI had gone to Southeast Asia, mainly Malaysia. Since 1987, there has been a large-scale transfer of labour-intensive activity to the mainland. Further, the relaxation of foreign exchange requirements beginning in the mid-1980s with the explicit aim of facilitating domestic industrial upgradation also facilitated outward FDI. (In 1989, the financial requirements for Taiwanese SMEs investing abroad were also lifted to promote outward investment by SMEs.) But, by 1993, concern about the possible adverse implications of excessive investments by Taiwanese investors on mainland China made Taiwanese authorities announce an explicit policy to move labour-intensive industries to Southeast Asia. By relocating in ASEAN member countries, Taiwanese firms would also have access to the vast Southeast Asian market as trade barriers declined with progress towards AFTA. See Islam, Iyantul and Anis Chowdhury, 1997, Asia-Pacific Economies A Survey, Routledge, p. 179, and Jomo et al., 1997, p. 47.

\(^{26}\) Korea had begun investment in overseas manufacturing in 1968.

\(^{27}\) World Investment Report, 1999, p. 25.
of diversifying export market in the face of growing protectionism in developed countries. In Indonesia, Malaysia, Philippines and Thailand, one-quarter of FDI inflows during the period 1985-92 were from Singapore, Taiwan and Hong Kong. Indonesia has been the largest recipient of Korean FDI among Southeast Asian economies, followed by Malaysia. The FDI boom throughout Southeast Asia from the late 1980s benefited greatly from the I-tier NICS experiencing rising production costs, currency appreciation, tightening labour markets and stricter environmental restrictions. The withdrawal of Generalised System of Preferences (GSP) from the I-tier NICs in February 1988 also encouraged relocation to these countries, which still qualified. However, since the early 1990s, the Northeast Asian investors have been reducing their new investment in the region in favour of China and Vietnam. While Taiwan and Hong Kong are the largest and second largest home countries for FDI in Vietnam, Singapore has become the largest investor in Myanmar. On the other hand, most of the total FDI stock from the NICs in developed countries was concentrated in the North American and European markets, especially in the manufacturing sector, although the service sector has also attracted a significant share of investment from those economies.

FDI among ASEAN member countries is also fairly significant: 28% of total outflows from Malaysia and 38% from Thailand went to other ASEAN member states in 1997. In the case of Singapore, 72% of its total outflows were invested in other ASEAN member states in 1997. Thus, most outward FDI goes to other countries of the region to take advantage of cost differentials and liberal trade regimes that allow export-oriented FDI to flourish, facilitated by ethnic and cultural links. Investment from South, East and Southeast Asia to Latin America and the Caribbean is also on the rise. Incentives to export-oriented investment as well as privileged access to the US market have played a role in attracting, for instance, garments and other labour-intensive industries from Asian to Central American and Caribbean countries.

1.2.4 Post-Crisis Trends in FDI Flows

The year 1997 witnessed several economic changes, which included: (a) the financial crisis in Asia and the subsequent economic deceleration in East and Southeast Asia; (b) the worst recession in Japan since the mid-1970s; and (c) weak commodity and

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28 See Jomo et al., 1997, p. 51-54, 103, etc.
29 In fact, Taiwan and Hong Kong were the single largest investors in Vietnam in terms of total invested capital during 1988 to July 1995. But, Japanese firms were rapidly moving in. In the first half of 1995, Japan was the largest home country. See WIR, 1995, p. 54.
31 It has been pointed out that growing intra-regional trade and FDI is leading to FDI-led integration in the region, as opposed to policy-led integration.
petroleum prices that affected the economies of Africa and West Asia. However, FDI continued to increase in all regions, including to the developing countries. This was due to the continued high economic growth in the US, strong economic recovery in the EU and Latin America, and the reversal of economic decline in Central and Eastern Europe for the first time since the end of central planning.

However, there were significant changes in the pattern of FDI flows into developing countries. Developing Asia – a region that had continuously claimed an increasing share of FDI among developing countries since the early 1980s and had received the largest share among developing regions in 1996- lost in relative importance in 1997. There was a corresponding increase in the share of Latin America, due to the continuation of the integration process in MERCOSUR, and privatisation programmes on stream in many countries. Despite the financial crisis that hit several of these countries during the second half of the year, FDI inflows to Asia and the Pacific increased slightly. Even though there was a modest decline in inward investment in the five countries most affected by the financial crisis, investment in China compensated for that decline, partly as a result of the reinstatement of special fiscal incentives to foreign investors in 1997. Flows into India also increased.

Another major factor behind the FDI growth is the continued trend towards large-scale cross-border M&As, as well as privatisations and further liberalisation. Cross-border M&As accounted for the bulk of the increase in FDI flows; their value in relation to total FDI inflows rose from 49% in 1996 to 58% in 1997. Developed countries continued to account for about 80% of all cross-border M&A sales, and about 90% of all cross-border majority purchases. Clearly, developing countries remain in a relatively unimportant position in the cross-border M&A market. As in the case of outflows, South, East and Southeast Asia accounts for the bulk of developing country cross-border M&A purchases. Majority M&A sales by developing countries, particularly in South, East and Southeast Asia have also been increasing after the 1997 financial crisis.

In 1998, world FDI outflows reached a record level of $649 billion, making it the single most important component of private capital flows to developing countries. On average, virtually all the increase in FDI in 1998 was concentrated in developed countries. In developing countries, which grew at a rate of only 1.5 per cent in 1998 (which was essentially owing to China’s growth)- the first time in ten years that they recorded a lower rate of economic growth than developed countries- inward FDI flows decreased by four per cent during 1997-98. The extent of the decline was moderated by factors such as currency depreciations, FDI policy liberalisation and more hospitable attitudes towards M&As. Thus, the share of developing countries in world FDI inflows,
which had increased till 1997 to reach 37%, declined in 1998. Among developing countries, the five largest host countries in 1998 were China, Brazil, Mexico, Singapore and Indonesia, which together accounted for 55% of FDI inflows to all developing countries in 1998, compared to 41% in 1990.32

Further, in the principal outward investor sub-region of East and Southeast Asia, outflows from the Republic of Korea, having risen for the past several years, declined for the first time since 1988 as a result of the problems faced by Korean firms caught in the Asian financial turmoil. Outward FDI from other countries affected by the financial crisis such as Thailand and Malaysia (relatively large investors within the region) also decreased significantly. Thus, FDI inflows into Vietnam and Cambodia in which these countries have been major investors declined. On the other hand, Taiwan, relatively unscathed by the crisis, is emerging as a large investor in the region. Hong Kong continued to invest mainly in China, the largest host country in the region.

Thus, while FDI flows to the East Asian region have increased in importance continuously, at the same time, the four NICs of East Asia - Taiwan, Korea, Singapore and Hong Kong- also rank top among the leading overseas investors now, apart from Japan. The four countries II-tier NICs of Southeast Asia as well as China and Vietnam are also seen to be following a similar path of industrialisation with rising flows of outward and inward FDI. The increased magnitude of such inflows and outflows has been observed to be associated with significant changes in the structure of economy in these countries, as noted earlier. Since the "catching-up product cycle" model was first attributed to the pattern of structural changes in post-war Japan, below we look at the kind of production-level changes experienced by Japan over the past several decades and the role played by FDI in it.

1.3 FDI FLOWS AND INDUSTRIAL RESTRUCTURING IN THE EAST ASIAN REGION

1.3.1 The Japanese Experience
Japan experienced one of the fastest rates of structural change worldwide in the post-World War II period. Yamazawa (1990) opines that the largest shifts in structure in Japan were the expansion in the shares of light industrial goods (particularly, textile products- except raw silk) and heavy industrial goods (such as chemicals, metals and machinery); each of which, occurring at different points in time, followed the sequence of imports, production, and exports. In many of these industries, loss in export

competitiveness (due to a variety of reasons) led to outflows of FDI from Japan in that particular industry.

Outward FDI played a major role in the transformation of Japan's domestic production structure from labour-intensive light manufacturing towards capital-intensive heavy industries. After Japan's BOP had passed into surplus in 1965 with the great success in world trade and as it continued to improve rapidly, the Japanese government had partially lifted the restriction on foreign investment in 1969 and abolished it altogether in 1971. Japan's drive towards internationalisation was motivated by the irremovable scarcities of labour and industrial space at home, increasing uncertainty associated with imports of key resources, and most importantly, the declining competitiveness of Japan's labour-intensive industries starting in the late sixties.33

The first wave of outward FDI from Japan thus took place during 1969-1973 when Japan relocated production to neighbouring economies, especially into Taiwan, Korea, Singapore and Hong Kong, where the abundant supply of unskilled labour helped Japanese firms to retain their competitiveness. Later, increase in production costs due to regulatory policies related to environment pollution, the oil crisis in 1973, and decline in export demand resulting from the yen's appreciation and export restrictions, led to reduced production and export of capital-intensive and energy-intensive heavy industrial products.34 Thus, there was a second restructuring of the Japanese economy, which was towards more human capital- and technology-intensive products such as transport equipment and electric machinery; a shift away from basic materials-producing sectors to the processing-assembly sectors in production. Further, within machinery groups, the emphasis shifted away from the highly intensive-intensive industries such as shipbuilding and radio assembly to technology-intensive industries such as automobiles, VCRs, and industrial machinery. FDI played a similar role as in the first phase of Japanese industrial restructuring, by relocating industries that had lost competitiveness, thus releasing resources from the declining heavy industries into the expanding ones. The rising share of metal products industries and the continued high share of chemicals, petroleum and coal products industries in FDI outflows during 1978-85, reflected this role played by resource-seeking FDI into the NICs, in this restructuring.

At the same time, with increased research and development (R&D) investment by Japanese government as well as private firms since the late 1960s, Japan had gained comparative advantage in human capital- and technology-intensive industries such as transport machinery and electric and electronics machinery. By 1980, automobiles and electronics accounted for close to two-thirds of the country's manufacturing exports.

However, Japan's large trade surplus in these industries led to trade frictions in the Japanese export markets of North America and Europe, which in turn, led to the imposition of trade restrictions. This stimulated Japanese firms to undertake 'assembly-type FDI', so as to retain their competitiveness and access these markets which were now closed to Japanese exports. During the third surge of Japanese FDI (1986-1990), machinery and transport equipment alone accounted for a half of the total value of outward manufacturing FDI.

By the mid-1990s, Japanese FDI abroad came to be driven by a desire to recover or increase their international competitiveness rather than to avoid trade frictions. Many Japanese firms considered overseas production a necessity in the face of a more than 25% increase in the value of the yen between 1993 and 1995. At the same time, economic recovery in the US and dynamic growth in East and Southeast Asia continued to attract investors.

Efficiency-seeking FDI has become an increasingly important type of investment for Japanese TNCs. Japanese TNCs have been observed to be in the forefront in the establishment of regional or global networks. This process creates intra-firm division of labour and a growing integration of international production networks. Thus, the increase in Japanese FDI in the mid-1990s is seen to have taken place increasingly in manufacturing and some service industries, unlike in the late 1980s when most FDI went into financial services and real estate. Japanese FDI in such traditional industries as food, textiles, and iron and non-ferrous metals, re-surfaced again in South, East, and Southeast Asia, this time by many small and medium-enterprises. Manufacturing FDI in that region exceeded than in North America for the first time in fiscal year 1994. By fiscal year 1994, chemicals became the second largest destination of FDI after electrical machinery, reflecting the global reorganisation of that industry. Investment in transport equipment in developing countries also increased fourfold in 1994, reflecting a rising demand for automobiles. Manufacturing TNCs, especially in

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35 The principal forces that have driven the globalisation process, alone or in combination with one another—improvements in technology, markets more open to trade, FDI and technology flows, and the resulting competitive pressures—have led to a reconfiguration of the ways in which TNCs pursue their resource-seeking, market-seeking, and efficiency-seeking objectives. Earlier, TNCs’ strategies were based on stand-alone horizontally organized foreign affiliates, relatively independent from parent companies and without links to other affiliates of the same parent firm. Vertically integrated structures were limited to natural resource TNCs. But, forces of globalisation have given rise to vertically integrated TNC structures in other sectors as well, across the globe. In such strategies, firms split up the production process into various activities (such as finance, R&D, accounting, training, parts production, distribution), or segments of these activities, with each of them carried out by affiliates in locations best suited to the particular activity. See World Investment Report, 1996, p.47, Dobson and Chia, 1997, and World Investment Report, 1998, p. 110-112.

36 WIR, 1996, p. 47.
electronic machinery and transport equipment, have been establishing global integrated production systems since the late 1980s to maximise efficiency.\footnote{One indicator of this trend has been that intra-firm transactions among Japanese affiliates within same TNC systems accounted for 48\% of the exports of these affiliates in Asia, 23\% in the EU, and 28\% in the US in 1992. See WIR, 1996, p. 47.}

Thus, the ‘wild geese flying pattern’ of catching-up seems to correctly capture Japan’s historical progression from imports to domestic production, exports, and outward FDI. This transformation occurred first in light industries (e.g. textiles) and later in heavy industries (e.g. machinery). Further, in the CPC development of its industrial structure, exports were followed by outflows of FDI, with FDI outflows initially taking place in the primary sector, and then in manufacturing. Also, within manufacturing, it occurred first in light industries and subsequently in heavy industries. Further, its FDI in manufacturing has gradually moved from more to less industrialised countries of the region.

However, there are certain crucial characteristics to be noted in Japan’s industrial transformation. First of all, the Japanese government had played a crucial role in making it happen. Especially in the earlier phases, when the two oil price shocks of 1973-74 and 1978-79 had begun to induce the transfer of Japanese industries abroad, the Japanese government sought to work with other governments to facilitate this transfer of industries, typically the decreasingly profitable segments, thus changing the division of labour in East Asia. It is pointed out that the planned sequencing was made congruent with the interests of Japanese industry by reorganising its investment and production in specific industrial sectors in different countries. Indeed, as the “flying geese” theory continued to be elaborated upon in the 1970s and 1980s, it had come to be associated with Japanese domestic industrial policy in the form of both phasing out “sunset” industries and supporting “sunrise” industries and technologies.\footnote{See for example, Jomo et al., 1997, p. 1-2. Suthy Prasartset, 1991, p. 60-66.} The benevolent and complementary nature of Japanese investments were stressed by arguing that whatever the motivations behind Japanese direct investment in the East Asian countries may have been, these investments were almost exactly the kind of investments that these developing countries needed for their industrialisation.\footnote{The yen appreciations of the mid-1980s and 1990s had induced the same results.} Secondly, contrary to the view propagated by the later versions of the “flying geese” model, inward FDI did not play any major role in the process of Japanese structural change until the 1970s, by which time, Japan had long reconstructed itself from the damages of the Second World War, into a viable economy with solid industrial
bases. Inward FDI was discouraged in the early post-war period, as the development of new growth industries by domestic enterprises was promoted. While foreign multinationals were involved through contractual agreements (mostly licensing agreements and subcontracting) to obtain advanced technologies, there was hardly any technology transfer through inward FDI. Japan’s reliance on FDI was limited to a few industries within a certain period of time. In many industries in Japan, indigenous firms accumulated their own managerial resources through trial and error, using domestic capital and relying on imported machines, equipment, and materials. It was only in a few industries that CPC was hastened by introducing managerial resources from abroad. New technology was introduced under licensing agreements (technology transfer), or only if foreign suppliers of technology insisted, through investment in kind or joint ventures with the foreign firms (i.e., FDI). By the mid-1960s, Japanese firms had already achieved international competitiveness and overtaken their American and European rivals.

It is pointed out that even in the 1980s, when there was a dramatic increase in global FDI with significant increases in inflows to the US and Europe, FDI inflows to Japan were much smaller. According to the Trade and Development Report (1996), ratio of FDI flows to gross fixed capital formation in Japan was historically a minuscule 0.1%, and continued to be the same even during the periods 1981-1990 and 1991-1993. Although there was a significant increase in FDI inflows into Japan in 1997, Japan’s share in world FDI inflows, which had been miniscule during the preceding four decades, did not surpass 1 per cent even in that year. Thus, the share of inward FDI flows to Japanese gross fixed capital formation was still a minuscule 0.3% during 1997-98.

1.3.2 The Experience of The First-tier NICs

The first-tier East Asian NICs’ experiences with FDI inflows also vary. The share of FDI inflows in gross domestic capital formation (GCF) in these countries shows that the countries that developed the most diverse, deep, complex and technologically dynamic industrial sectors, namely, Korea and Taiwan, had the least reliance on inward FDI.

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41 Lawrence, 1993
42 Foreigners control only 15% of Japan’s industrial assets, and other data also indicate a similarly low share of FDI in Japanese employment and sales. See Lawrence, 1996.
43 Inflows rose due to among other reasons, the response of foreign firms to the ongoing liberalisation measures in the retail and financial industries and low asset prices, particularly inducing M&As by foreign firms.
during their industrial catching-up phases. The ratio of FDI inflows to gross capital formation remained less than 2% for Korea and Taiwan until the mid-1980s. Taiwan’s ratio increased slightly thereafter, but still remained between 2-3% until 1997. The laissez-faire economy of Hong Kong also had only around 5-7% of its GCF contributed by FDI until the mid-1980s. Singapore is the only country where FDI inflows was on average more than 10% of gross capital formation during the earlier periods (1965-84). This went up to 35% or more during 1986-90 and increased further later on. Thus, clearly, except in the case of Singapore and Hong Kong, inward FDI played a rather limited role in the I-tier NICs. Below, we therefore provide a brief overview of the policies followed by these countries, which enabled them to achieve successful technology development, without an over dependence on FDI.

Hong Kong is exceptional in East Asia in that it always maintained a free-trade regime and did not explicitly influence technology imports. Given its initial endowment of skills and experience, Hong Kong’s industrial development was dominated by indigenous firms (which accounted for over four-fifths of its manufactured exports), despite open-door policies to FDI. MNCs went mainly into service activities, while those that entered manufacturing specialised in slightly more advanced technologies within the same labour-intensive set of activities as local firms. The government made no effort to target high-technology FDI or to induce industrial deepening and technological upgrading. Over time, there was significant upgrading of equipment and products within the low-technology activities that the colony started with, (such as textiles, garments, toys and consumer electronics), but there was relatively little entry into complex and research-intensive technologies that the other NICs were targeting. Hong Kong lagged behind other NICs in high technology areas in the first half of the nineties.

On the other hand, Singapore’s policies for attracting FDI were based on liberal entry and ownership conditions, easy access to expatriate skills, and generous incentives for the activities that it was seeking to promote. It set up an Economic Development Board (EDB) in 1961 to coordinate policy, offer incentives to guide foreign investors into targeted activities, acquire and create industrial estates to attract MNCs, and

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46 Based on Table 2.1 in Jomo et al., 1997, p. 14.
47 Hong Kong’s manufactured export growth was sparked off by an influx of seasoned textile and other entrepreneurs and technicians from Mainland China (after the communist take over of China). This led to the emergence of dynamic small and medium-sized exporters specialising in relatively simple labour-intensive activities such as textiles, garments, toys and simple electronics aimed at world markets. Lall, 1996, p. 66.
generally to mastermind industrial policy. At the same time, to attract foreign investment while inducing it to upgrade, Singapore invested heavily in education and training and in physical infrastructure. It developed an efficient, industrially targeted, higher technical education structure, together with one of the best systems in the world for specialised worker training. At times, it deliberately raised wages to accelerate technological upgrading, though in the mid-1980s a sharp rise in wages was modified to restore competitiveness. The public sector has always played an important role in launching and promoting activities chosen by the government, acting as a catalyst to private investment or entering areas that were too risky for the private sector.

Thus, the decision of MNCs about what new technologies to bring into Singapore were strongly influenced by the incentive system and direction offered by the Singapore government, responding (or anticipating through proactive planning and consultation) by providing the necessary skilled manpower in consultation with the MNCs. In many instances, it was the speed and flexibility of government response that gave Singapore the competitive edge compared with other competing host countries.49

As labour and land costs rose, the Singapore government used the opportunity to encourage MNCs to reconfigure their operations on a regional basis, making Singapore their regional headquarters and/or regional marketing/ distribution/ service/ R&D centres to support manufacturing and sales operation in the ASEAN and Asia-Pacific region. While the main thrust of Singapore’s technology-import policies has been to target FDI, in recent years the government has also sought to increase linkages with local enterprises by promoting subcontracting and improving extension services. Singapore has harnessed the technological, managerial, and marketing resources of MNCs to transform the traditional entrepot economy into an export-manufacturing economy, and to further engage MNCs in moving Singapore up the product-, process-, and functional-value chains.50 The contrast in this success of Singapore in industrial upgradation with the experience of Hong Kong is thus clearly traceable to their different technology strategies.

In contrast to the free trade regimes of Singapore and Hong Kong, Taiwan had started with import-substituting industrialisation in the 1950s and shifted to export-

50 That is, progressing from products in which technology is mature to more advanced products at earlier phases of the product cycle, adopting capital-intensive and automated production processes, and moving beyond manufacturing into both upstream and downstream activities of design, research, product development, procurement, marketing, and regional coordination. See Chia Siow Yue, 1997, Singapore: Advanced Production Base and Smart Hub of the Electronics Industry in Wendy Dobson and Chia Siow Yue, eds., 1997, Multinationals and East Asian Integration, IDRC, Canada and ISEAS, Singapore, P. 34-37.
orientation in the 1960s. However, it retained protection and targeting to promote and guide industrial growth. It combined these with interventions in technology transfer to support technology development by local enterprises. It drew upon a whole gamut of technology imports.\textsuperscript{51} In the 1950s, it sought to attract FDI within a liberal regime. In the 1960s, FDI was sought in labour-intensive industries like textiles, garments and electronics assembly. In the 1970s, with rising wages and a need to upgrade technology, the government targeted higher technology, discouraging labour-intensive FDI and favouring investments in automation, informatics and precision instruments. This targeting was strengthened in the 1980s, with a number of incentives offered to high technology industries. Thus, as the industrial sector developed and technologies deepened over time, FDI policy in Taiwan became more discriminatory. The government also sought to maximise benefits from FDI for local firms by promoting local sourcing and sub-contracting, by way of local content rules. With yet more development of local firms and capabilities when the latter became multinationals themselves, selectivity on FDI was relaxed, but the guidance and support of technology development has continued.

The government finances around half of R&D in Taiwan, though its contribution has come down over time. Private sector R&D has been relatively weak because of the preponderance of small and medium enterprises (SMEs), which cannot afford the large minimum investments involved in much of industrial research. However, enterprise R&D has risen over time as some local firms have grown in size and become significant multinationals.\textsuperscript{52} In some other cases, the government itself entered into joint ventures, for instance to get into technologically very difficult areas such as semiconductors and aerospace. Thus, the export orientation combined with measures to reduce dependence on technology imports meant that foreign firms accounted for a relatively small part of Taiwan's industrial and export success. Local enterprises, dominated by SMEs, led the export drive. At the same time, large multinational producers, that sourced complex electronic and related products under original equipment manufacturing (OEM, where

\textsuperscript{51} In contrast to FDI which is a fully internalised form of technology transfer in which the investor provides the equity capital, sets up and operates the technology and retains control over all subsequent expansion, upgrading and investments, at the other end it can be fully externalised, with the buyer putting together his/her own package of equipment, know-how and other inputs, with no long-term contractual arrangement with a foreign supplier (An extreme example would be a firm buying machinery in the open market and 'reverse engineering' a product design with no explicit technology agreement). In between lie different equity and non-equity contractual relationships: joint ventures, licensing, franchising, sub-contracting or turnkey contracts etc. See Lall, opcit., p. 65.

\textsuperscript{52} Such R&D has been encouraged by a variety of incentives. See Lall, 1996, opcit. p. 20, 63-4, 71-74; and Ernst, Dieter, Ernst and David O' Connor, 1992, Competing in the Electronics Industry, The Experience of the Newly Industrialising Countries, OECD for detailed discussions of the technology strategies followed by Taiwan, Korea, Singapore, etc.
the product is sold under the brand name of the buying company) arrangements in Taiwan became significant sources of technology transfer to local enterprises.

As in the case of the other NICs, South Korea has also been widely touted as having followed an FDI-led industrial growth in the literature on the “flying geese” model. However, the main orientation of Korea’s investment policies was never an open market strategy at any point in its development path, owing to the fact that the Korean government as well as domestic entrepreneurs were in favour of indigenous industrialisation rather than FDI-based development.\footnote{Kim, June-Dong and Sang-In Hwang, 2000, “The Role of FDI in Korea’s Economic Development”, in Ito, Takatoshi and Anne O. Krueger, ed., 2000, p. 267-94.} After a spell of import substitution in the 1950s, it also switched to a more outward-oriented regime from the mid-1960s onwards. However, Korea preferred externalised technology imports even more strongly. In the early years of industrialisation, FDI was allowed only where it was considered necessary, and the government sought to keep control firmly in local hands. The government encouraged majority Korean-owned or equal joint ventures.

The new emphasis on export promotion since the mid-1960s, on the other hand, pursued growth through targeting foreign direct investment into light manufacturing export sectors, especially in Free Export Zones, while raising domestic resource mobilisation by various measures. But, FDI was discouraged in those sectors still protected by import substitution measures to avoid domination by foreign firms. Foreign majority ownership was not permitted unless it was a condition of having access to closely held technologies, or to promote exports in internationally integrated activities. The Korean government preferred foreign borrowing, which brought foreign resources under its own control. Thus, during the entire period, 1965-84, FDI was less than 2% of gross capital formation in Korea as opposed to 10% in Singapore.\footnote{Islam and Chowdhury, 1997, opcit., p. 165.}

Korea had an explicit policy of promoting its ‘independence’ from multinationals in management control.\footnote{Ai Tee, Koh, 1995, “Technological Development and Technology Policy in East Asia: Prospects for Technological Leapfrogging”, Seoul Journal of Economics, Vol. 8, No. 2, p. 153.} Thus, it relied on capital goods imports, technology licensing and other technology transfer agreements to acquire technology in forms that promoted local control. It used reverse engineering, adaptation and own product development to build upon these arms-length technology imports and develop its own capabilities. It also encouraged the hiring of foreign experts, and the flow (often informal) of engineers from Japan to help resolve technical problems.\footnote{The import of technology was promoted by tax incentives. See Lall, 1996, p.62-63.} The government intervened in major technology contracts to strengthen domestic buyers, and sought to
maximise the participation of local consultants in engineering contracts to develop basic process capabilities. The regime encouraged reverse engineering and R&D by technology-importing firms to develop indigenous technological capabilities; many of the larger firms were able to later enter into collaborative ventures with world technology leaders on a more equal basis. It has been argued that the main stimulus to the tremendous growth in industrial R&D in Korea came less from the specific incentives to R&D than from the overall incentive regime that created large firms, gave them a protected market to master complex technologies, minimised reliance on FDI, and forced them into international markets where competition ensured that they would have to invest in their own research capabilities. Apart from the direct interventions to support local enterprises, the government also provided selective and functional support by building a massive technology infrastructure and creating general and technical skills.  

South Korean FDI policies began to be gradually liberalised only after more than three decades of highly selective targeted FDI, when a new industrial strategy was adopted in the early 1980s to upgrade Korea's industrial structure into one embracing more technology- and skill-intensive sectors. Even then, it is only much later from 1994 onwards that the Korean government began liberalising the business categories restricted for FDI. Further liberalisation took place only when Korea joined the OECD in 1996. However, even in 1996, FDI accounted for less than 1 per cent of total domestic fixed capital formation in Korea. 

Thus, it never was the case that inward FDI was the dominant strategy for export-led growth in the NICs, via technology transfer and capital accumulation. On the contrary, it was because the government played the dominant role with clear industrialisation objectives that they accorded a role for inward FDI and utilised it strategically. The state has been the effective agent of industrial transformation in the successful cases. Restrictions on inward FDI have allowed internationally competitive domestic manufacturing firms to emerge, often with state support, in Singapore, Taiwan and South Korea. The countries which have been the most successful ones in catching-up have been those with: (a) an interventionist FDI policy with selective targeting of FDI; (b) maximum reliance on externalised forms of technology transfer, and (c) a

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58 The only areas that remained closed to FDI were those regarded as sensitive for national security such as mass media, real estate and energy. See for example, Kim, June-Dong and Sang-In Hwang, 2000, "The Role of FDI in Korea's Economic Development", in Ito and Krueger, 2000, opcit, p. 267-89 and Islam and Chowdhury, 1997, p. 165. In 1998, the ratio of inward FDI flows to gross fixed capital formation registered a dramatic rise to 5.5%. See WIR, 2000, Annexe Table B.5, p. 315. This was the result of the large M&As of Korean enterprises that took place following the 1997 financial crisis.
comprehensive and effective set of industrial policies to deepen the manufacturing sector, promote linkages and increase local technological capabilities.

Thus, the industrial policies that were behind the early Japanese and I-tier NICs’ success in catching-up have been very different from what is most closely associated with them in the contemporary ‘flying geese’ literature, and they have not been the policies that have been the most widely emulated. Specifically, in the context of our research, the large amount of literature from this perspective refuses to acknowledge the role of the state in shaping and constraining the way FDI was utilized, for the transformation of the industrial and technological capacities in the economies of Japan primarily, and later on by Singapore, Taiwan, and Korea. Clearly, East Asian economic development has been premised on the idea that domestic governments—unlike their counterparts in the Anglo-American nations—could and should lead, rather than follow markets.59 However, while elsewhere, the Japanese success story was read in terms of the inevitable eclipse of the structures of entrepreneurial capitalism by some form of systematic planning usually of the corporatist or state-corporatist variety60, in Asia particularly in South East Asia, it was read as having to do with the eclipse of state planning by market forces, pushed along by the contemporary shift towards pro-market policies across the world since the mid-1980s.

Thus, the Southeast Asian countries’ reliance on FDI, which was already historically higher than that of the I-tier NICs,61 began increasing steadily in the mid-eighties, as they increased their openness to the huge inflows of relocative and other FDI discussed earlier. In particular, the ratio of FDI inflows to gross domestic capital formation jumped up from 3% during 1981-85 to a peak of 7.2% in 1990 for Thailand, and from 0.8% during 1981-85 to 6.7% during 1986-90 for the Philippines. In the case of Malaysia, at about 12% during 1986-90, the ratio continued to be at a much higher level. All these countries also registered very high export and economic growth rates in this phase, leading to the widespread association of these countries with the ‘flying

60 See Langlois, Richard N. And W. Edward Steinmueller, 1999, the Evolution of Competitive Advantage in the Worldwide Semiconductor Industry, 1947-1996 in Mowery, David C. and Richard R. Nelson, ed., 1999, Sources of Industrial Leadership, New York: Cambridge University Press, p. 20. According to them, corporatism, the coordination of control by an oligarchy of industrial interests, is the underlying hypothesis in Fallows (1994); and state corporatism, corporatism under state direction, is the fundamental position of Johnson (1982). The I-tier NICs have been considered to have followed the latter. They have also been variously referred to as capitalist developmental states.
61 In contrast to the less than 2% share of FDI in gross domestic investment in Korea and Taiwan, the ratio of FDI to gross domestic investment was 3% and 4.6% for Thailand and Indonesia during 1971-75, while it was as high as 15.2% for Malaysia, way back in a period when they had just embarked on their industrialization efforts. Source: Table 2.1 in Jomo et al., 1997, p. 14.
geese' model. However, in the case of Thailand, the ratio of FDI inflows to total domestic investment dropped from 1991 onwards, while those for Malaysia, Indonesia, and the Philippines increased further significantly in the first half of the nineties.

Thus, it is observed that Malaysia and Thailand have been the forerunners among the Southeast Asian countries, in terms of high reliance on FDI in their industrialisation efforts. However, as the country whose policies correspond more closely to the liberal FDI regime propagated by contemporary versions of the 'flying geese' theory, Thailand is chosen for as a case study for examining the nature and outcome of an FDI-led industrial catching-up strategy.

1.4 STATEMENT OF THE PROBLEM

That multinational companies (MNCs) can assist in the restructuring of home and host countries- by introducing in their own interest new activities that would otherwise be unlikely to evolve or would evolve more slowly, or by upgrading existing ones- has been recognised since the time of Dunning (1958). FDI is seen as bringing together firm-specific ownership advantages and country-specific (i.e.; locational) advantages, which complement and reinforce each other to bring out the comparative advantage of the host country. Structural changes take place when the indigenous factors of production are incorporated either directly or indirectly through linkages and technology transfer, which facilitate and further their rapid upgradation. It is argued that countries- both developed and developing countries - tend to benefit in efficiency from FDI-led restructuring in favour of industries (or activities within industries) in which the country is comparatively advantaged (and in which integrated TNCs establish or expand local operations), and in dynamic terms from a greater focus on activities in those industries in which the country's ratio of skills to cost is internationally competitive and/or its potential for innovation is greatest. For developing countries, the latter is considered to be particularly beneficial since foreign affiliates within those industries are presumed to develop greater capabilities as part of the regional or global strategies of their respective TNCs. However, while a lot of significance has been attached to the advantages of having an open and liberal FDI regime in order to obtain these FDI-associated benefits, very less attention has been devoted in the literature towards understanding the actual role of MNCs in the development of host country industrial capabilities, in a holistic manner.

In general, studies on FDI have attempted to address a number of inter-related issues such as: What are the effects of FDI on domestic resource allocation? What are its specific effects on economic growth of the host country? What is the role of MNCs in the development of their host country exports? What is the extent of technology transfer through FDI to the host country? These are studies often linked to endogenous growth theories, which explain growth by endogenizing technological change and consider FDI and international trade to be two major channels for achieving growth by transmitting new ideas and technologies. It has been pointed out that FDI can lead to economic growth through two kinds of channels. First, FDI could induce technology transfer thus causing an advance in technology, and in tum promote economic growth in the host country. Secondly, FDI may induce fixed investment or exports, and this affects economic growth through increased aggregate demand. The latter also links up to studies debating whether factor accumulation or technological progress (and rise in productivity) explains the extraordinary growth performance of East Asia. Chan (2000) is one study in this framework, examining FDI's role in Taiwan's manufacturing sector economic growth. His review of studies on Taiwan has pointed out that existing studies do not offer any conclusive evidence.64

There has also been a substantial amount of literature probing technology transfer from foreign affiliates to the host country. According to Hill and Athukorala (1998), the empirical literature on FDI and technology transfer in East Asia has proceeded in two main directions, a newer one which is macro and econometric, and a traditional one which is more micro, qualitative and firm-based.65 The first approach employs a large secondary data set in which foreign and domestic firms are separately identified for examining any differences in productivity between the two groups. Either total or labour productivity trends are analysed between the two groups and between industries to examine whether foreign presence affects levels and growth rates among domestic firms. Such studies are, in general, not concerned with the transmission mechanism, nor are they able to estimate the relative importance of FDI among other factors in explaining productivity growth in domestic firms. The results vary across

64 For example, Ranis and Schive (1985) who examined FDI's role in Taiwan's development from 1952 to 1980 by industrial case studies found that FDI played an important role in Taiwan's early economic development in terms of being an efficient channel of technology transfer from overseas to Taiwan. On the other hand, using 1986 and 1991 survey data for Taiwan, Chen, Hsu, and Chen (1999) found that FDI has no or even negative effects on labour productivity when examining the competing channels of technology absorption.

countries and industries, indicating that such spillovers do not occur automatically. It is hypothesised, and sometimes empirically demonstrated that spillovers will be positively associated with the level of competition (which pushes firms to adopt improved technology) and negatively associated with the productivity gaps between foreign and domestic firms (on the assumption that a very large gap renders absorption by domestic firms more difficult). The second strand of literature makes use of case studies to probe technology transfer issues related to FDI. One such attempt to examine technology transfer mechanisms is Hou and Gee (1993) reported by Hill and Athukorala. This study found labour mobility from foreign to local firms in Taiwan to be a key source of spillovers.

Another set of studies has examined the question of whether FDI crowds out or crowds in domestic investment. Due to competition for physical and financial resources or competition in the product market, one may view subsidiaries of multinational corporations and domestic investment as substitutes. On the other hand, foreign investment and domestic investment could also be complements, if FDI leads to multiplier effects by acting as a catalyst for domestic investment, either by contributing to the mobilization of financial and other resources of indigenous firms, or by acting as a signal of confidence and future investment opportunities. In the case of Taiwan, Tu (1989) found a crowding-in effect in the overall economy, but a crowding-out effect in manufacturing industries.

Another area of research has been the trade effect of FDI: whether FDI is trade diverting or trade-creating for the host country. Trade signifies the movement of commodities and FDI signifies the movement of capital. From this point of view, international trade and FDI are substitutes. But, if the objective is to cut costs of exports by utilising cheaper labour in export-oriented industries, exports and FDI are complementary. But, such discussion is relevant only for market-seeking FDI. The shift from exports to FDI by firms can be both trade displacing and trade supporting, and on balance, often trade creating. There is considerable evidence to suggest that foreign affiliates have high export propensities and tend to be more export-oriented than domestic firms. Moreover, the export propensity of foreign affiliates has generally been

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66 A doctoral thesis by Fan (1998) examined spillovers, as measured by TFP growth, to state-owned enterprises (SOEs) and those that are collectively owned (mainly the town and village enterprises-TVEs) in China. Her results highlight the importance of the domestic policy and absorptive environment in maximising the gains from FDI. In Sjoholm's study (1997) of Indonesian manufacturing, in which labour productivity was the key variable, competitive pressures were found to be highly significant in explaining inter-industry variations. Interestingly, domestic competition (i.e., a firm concentration variable) was found to be more significant than foreign competition, as proxied by effective protection. (Hill, and Athukorala, 1998, p. 42-43.)
rising over time.\textsuperscript{67} However, it is also observed that foreign affiliates import more than their domestic counterparts. It is then clearly possible to assume that FDI is indeed trade creating. The more relevant objective would however, be to focus on the resultant trade balance. This is more so, because FDI can also change the composition of trade.

Another set of research on FDI has focused on examining the causes or determinants of FDI in individual countries or regions, and on the direction and sectoral or industrial composition of FDI. In this category of studies, some have used quantitative methods based on aggregate macroeconomic data to determine the country-level locational advantages, while others have focused on the microeconomic determinants of FDI using firm-level data. Studies using firm-level data tend to be more qualitative in nature, as the paucity of systematic firm-level data even within an industry makes them dependent on survey data.

There has been some literature directly addressing the role of MNCs in economic restructuring of the countries concerned. Chen (1993), Yue (1993), Lipsey (1991), Urata (1991), Chandrasekhar (1996), Naya and Ramstetter (1991), WIR (1995), among others have looked at the change in the pattern of FDI and related structural changes in the Asia-Pacific region. In general, the following inter-related observations have been popular in the literature: (a) FDI facilitates structural changes in production and trade by moving segments of home country operations such as those that are labour-intensive to foreign locations, and preserving markets for the capital-intensive or technology-intensive elements of home country's production. Thus, it seems to assist in the inevitable shift of their home country production up the technology scale. (b) Further, in the ongoing process of restructuring of production and trade in the home country, its multinationals enter different host countries thus influencing and facilitating the structural changes required there.

Thus, there has been much emphasis on MNCs' positive role in facilitating host country restructuring. However, rarely have studies attempted to look beyond the straightforward contributions of FDI on export growth, domestic investment, technology transfer, etc, into the dynamics of the inter-related factors underlying the impact and consequences of FDI for the host economy's development. As we shall see in the conceptual framework in Chapter II, the ultimate impact of FDI flows in a country's industrial restructuring is determined by a host of conditions whose evolution and interplay induces, restrains or transforms the movement of a country/industry/firm from one phase in the industrial development process to the next, as it attempts to progress through the catching-up mechanism of industrial restructuring.

\textsuperscript{67} WIR, 1995, p. 211-214.
By taking Thailand as a case study, the present research attempts to examine the nature of FDI's involvement and its consequence for industrial restructuring. Although some research has been done in this area, there have been very few comprehensive or systematic studies examining the role played by FDI in Thailand's economic and industrial restructuring since the mid-1980s. Given the limited amount of detailed information available still on the various activities of foreign firms in Thailand, the present study cannot also claim to be exhaustive. However, the attempt in this study is to understand the links between the nature of FDI's involvement in the economy, the policy regime enveloping it, and the industrial and trade restructuring that have taken place in Thailand. It is hoped that such an enquiry would help in understanding the conditions under which FDI-led export growth would indeed lead to industrial diversification and upgradation, enabling sustainable industrial growth. This assumes even more significance in the context of the export growth slow down and economic crisis that hit Thailand after a decade of rapid growth.

The specific objectives of the present research are:

1) To analyse in detail the pattern of FDI flows and its links with the changes in production and trade structure occurring in the Southeast Asian region, taking Thailand as a country case study and its electronics industry as an industry case study;
2) To study the extent to which the policy framework of this country has been consequential in this role of FDI; and
3) To examine issues related to the stability and sustainability of a foreign capital-led industrial development path.

Explicitly, the following are the hypotheses that form the basis for the proposed study. 

Proposition 1: An apparent move up the technological ladder in the distribution of exports from a country does not necessarily reflect the technological capability of the underlying indigenous production base in the country. Proposition 2: This is especially the case when the export-oriented industries are dominated by foreign production capacities, which have failed to link up effectively with indigenous firms and contribute to the indigenisation of production processes.

1.5 RESEARCH METHODOLOGY

In order to facilitate the study, we have distinguished three distinct levels of analysis. The first is an in-depth country level analysis of the pattern of inward and outward FDI flows, as well as the production and trade structures for Thailand, with focus on the

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68 These studies will be referred to wherever applicable.
manufacturing sector (Level I). Then, given the fact that the electrical machinery industry has been the single largest recipient of FDI inflows into Thai manufacturing sector,\(^{69}\) and also one of the fastest growing export sectors in Thailand since the mid-1980s,\(^{70}\) the country-level analysis is followed by an in-depth analysis of Thai electronics industry's FDI inflows, production, and trade (Level II). Following on this, a firm-level analysis is done making use of case studies from Thailand's electronics industry, for addressing issues related to technology transfer (Level III). Thus, we have attempted to combine the analytical approaches of development economics and industrial economics.

Macro level (Level I and II) analyses are based on secondary data sources mainly from the Bank of Thailand (BOT), National Economic and Social Development Board (NESDB), Board of Investment (BOI), Industrial Estate Authority of Thailand (IEAT), Department of Customs of the Ministry of Commerce, Fiscal Policy Office of the Ministry of Finance, Ministry of Industry (MOI), National Statistical Office (NSO), Ministry of Science, Technology and Environment (MOSTE), etc. While the Board of Investment (BOI) is the nodal agency which provides data on FDI for all promoted firms enjoying special investment incentives, there is no single government body directly responsible for non-promoted companies, and this makes compilation of statistics on them very difficult. Non-promoted firms report to the Ministry of Industry (MOI). But, data for non-promoted firms operating in the industrial estates under the jurisdiction of Industrial Estate Authority of Thailand (IEAT) is detailed by IEAT separately. Therefore, MOI statistics does not include data on all non-promoted firms, while it includes BOI-promoted firms. Qualitative information regarding these different sources would be discussed in detail in the relevant sections. Macro level policy analysis has also been supported by personal interviews held with various officials at many of these government organisations, apart from the Department of Industrial Promotion (DIP, Ministry of Industry) and the Small Industry Finance Office (SIFO) (See Annexe 1).

The case studies for the firm-level analysis (Level III) are based on a primary survey undertaken by the researcher during her field trips to Thailand during 1998-2000. The survey was carried out on a random basis with the assistance of a questionnaire (See Annexe 4). Interviews were conducted with a group of 15 randomly selected electronics companies, 3 firms from consumer electronics, 4 firms from computer & parts, and 8 firms

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\(^{69}\) This share was the highest in 1992, with almost 64% of the net inflows into the manufacturing sector taking place in this industry alone.

\(^{70}\) With a 45 per cent share, it had come to constitute almost half of total manufactured exports, and as high as 37-38% of total Thai exports in 1998 and 1999.
from electronics parts & components sub-sectors. The sample was restricted to large companies, which together shared a large/major portion of the production, employment and exports in the respective industry segments. Restricting the sample to large firms was also expected to generate a better response rate.

In all the selected firms, detailed interviews were undertaken with managerial level staff, in order to obtain information on the history and performance of the firm with respect to product expansion and diversification, modes and channels of technology transfer, investment and technology policies, etc. This analysis was also supported by interviews with officials at the National Electronics and Computer Technology Centre (NECTEC), the Technology Foresight Centre and Industrial Consultancy Services (ICS) of the National Science and Technology Development Agency (NSTDA) under MOSTE; BOI Unit for Linkage Development (BUILD), BOI International Affairs Division, and the Investment Promotion Division V (for Electronics Industry) of the BOI; Bureau of Supporting Industries Development (BSID) of the Ministry of Industry; the Electrical and Electronics Institute (EEI); and the Federation of Thai Industries (FTI).

1.6 LIMITATIONS OF THE PRESENT RESEARCH

Primary data collection in the country of choice was very time consuming and difficult. First of all, more small firms could not be included in the sample selection due to monetary constraints involved in engaging the help of a language facilitator. Overall, a larger number of firms could not be included because of the reluctance of firms to grant interviews and due to the paucity of time available for the process. For the same reason, the selection of firms was also restricted to the Bangkok Metropolitan Region and the adjoining provinces of Samutprakarn, Pathumthani, Chonburi, and Chachaeongsao.

It must be mentioned that for all the attention shown on FDI and the increased demand for FDI in India in the recent years, while attempting to follow a 'Look East' policy, there seems to be a clear lack of understanding of the various interlinked issues involved in utilising foreign direct investment for furthering industrial growth. This is also reflected in a dearth of in-depth literature on the role of FDI in the neighbouring Southeast Asian countries’ transformation. Thus, the majority of the research materials and references reviewed for the purpose of the present research have been based on materials collected during the researcher’s field trip to Bangkok between August 1998 and March 2000. This has constrained the ability of the researcher to update the work in a systematic manner.
1.7 CHAPTER SCHEME

Following this introductory chapter, the attempt in Chapter II is to set up a conceptual framework for basing the analyses and interpreting research findings and policy conclusions that are presented in the following chapters. It questions the underlying assumption of the ‘flying geese’ model of FDI-led industrial restructuring, which depicts industrial development in late-industrialising countries as an automatic consequence of FDI. It is argued that in doing this, the FG hypothesis fails to give allowance for the interaction between the numerous endogenous and exogenous factors that come into play in the growth process of countries. Thus, for a deeper understanding of the nature and dynamics of the mechanism that underlie the shift from one stage to the next in this path, the ensuing conceptual analysis is carried out at three levels, namely, country, industry, and firm levels. At each of these levels, the necessary conditions that need to be satisfied for the progression of the CPC path are dealt with.

Chapter III undertakes an examination of the nature of Thailand’s economic policy regime as it evolved over the years, as well as the specific policies related to foreign direct investment and export promotion. The focus is on how the drastic shift in domestic policy towards aggressive export promotion led to a continuous increase in the demand for and openness to FDI flows. This chapter also examines the macro (sectoral) level structural changes that have occurred in Thailand over the course of this policy evolution.

In Chapter IV, an in depth analysis of the pattern of FDI inflows and outflows is carried out for Thailand, in order to examine the extent and nature of FDI involvement in Thailand’s industrial restructuring. The focus is on three aspects of the contribution of FDI at the aggregate level. These are: (1) the contribution of FDI to capital formation; (2) the extent and pattern of foreign ownership in the manufacturing sector in terms of industrial composition and source of foreign investment; and (3) the ownership structure and export-orientation of foreign-invested firms.

Chapter V carries out a detailed analysis of the structural changes in Thailand’s manufacturing sector since the 1960s, in terms of industry level changes in the contribution to output, as well as the trends and composition of imports and exports. It is established that the competitiveness of Thai exports has not been sustained, and that the consequent slow down in export growth in the nineties following FDI-diversion from export-oriented industries was not accompanied by equivalent reductions in imports, thus leading to widening trade and current account deficits. It is also argued that the import structure in the first half of nineties was not compatible with the needs of industrial restructuring and thus would have contributed to perpetuating the export
decline, in the absence of a re-orientation of the production structure towards newer export products.

In Chapter VI, it is argued that in spite of the large inflows of FDI since the late eighties, there has been an overall absence of deeper technology development in Thailand. We would argue that the loss in export competitiveness of Thai products since the early nineties and the decline in FDI flows into Thailand during 1992-96 seen in Chapters IV and V, are both a consequence of this. This chapter therefore, undertakes a critical assessment of technology development policies in Thailand, in order to understand the weaknesses in its FDI-led industrial catching-up strategy.

Chapter VII provides an in depth analysis of the involvement of foreign firms in Thailand’s electronics industry, while examining the industry’s growth and performance in detail. We would study the dynamic changes in the structure of electronics industry at various levels, namely, size composition, ownership structure, pattern of production, etc., and attempt to link these to changes in the investment pattern within the industry. Further, the various implications of the present manner of growth for the long-run development of the electronics industry, especially in the context of the post-crisis scenario, are also analysed. The analysis in this chapter establishes that the development of the electronics industry in Thailand has occurred through successive waves of foreign investment rather than through indigenous initiatives. The Thai government did not make any concerted or dedicated attempt to build the country into anything other than an export-oriented assembly production base dependent on FDI.

Chapter VIII undertakes a detailed analysis of the trade structure of the electronics industry and explore the links between the changes within electronics industry trade structures and FDI flows. It establishes that Thai electronics exports have been concentrated within the labour-intensive and low and medium technology products, rather than products in the higher-end technology range. Further, the large growth in electronics exports has been accompanied by high levels of imports of technologically advanced parts and components (and equipment) from abroad. It is argued that the absence of strategic government initiatives and the reluctance of Thai electronics industry to make the substantial investments needed to enter the production of high value-added parts and components, could prove costly to the maintenance of export growth in this industry.

Chapter IX provides a discussion of the 15 firm-level case studies from the electronics industry, to look at the level of technology transfer in the industry. It establishes a lack of linkages between foreign-affiliated firms and indigenously owned firms in the industry. Further, it is also shown that deeper technology transfer and diffusion that is the prerequisite for industrial upgradation, has not been forthcoming.
due to the lack of inter-firm linkages. It also discusses how the policy formulation related to electronics industry made dependence on FDI into a virtuous circle.

The last chapter, Chapter X, provides the summary and an overall conclusion to the analyses in the thesis. It also briefly addresses some of the policy measures Thailand has taken recently and analyses the implications of the changed international trade and investment regulatory regimes for the prospects of Thailand’s FDI-led industrial restructuring.