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**THE GROWING COMPLEXITY OF THE EAST ASIAN
DIVISION OF LABOR**
Implications for Regionalism and ASEAN Industrial Development

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**THE GROWING COMPLEXITY OF THE EAST ASIAN
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Implications for Regionalism and ASEAN Industrial Development

1. Introduction

Current trends in the international political economy are simultaneously reshaping the architecture of global and regional order and affecting the power and well-being of states, corporations, financial institutions, classes, groups and individuals. Central among these trends is acceleration of a transition that has been underway since mid-century between an 'international economy' of classic arms length trading relationships and a 'world economy' comprised of transnational production networks. The distinction comes from Cox (1987), which is one of the fullest and most interesting theoretical expositions of this theme, but there are many current analyses that elaborate this theme (Bonacich, *et. al.*, 1994; Doherty (ed.), 1995; Gereffi & Korzeniewicz (eds.), 1994; and Harrison, 1994). These networks center on transnational corporations (TNCs) that manage the activities of production sites in many countries. The stages of manufacture of their products in this new international division of labor are carried out or the parts and components of their products are made in states at different levels of industrial development. The resultant intermediate goods are traded, frequently on an intra-firm basis, for eventual incorporation into finished products. The latter are then sold both internationally and/or locally. This activity is organized both globally and regionally. Local producers may be owned or directly controlled by TNCs or they may simply be licensees or subcontractors. Development of transnational production networks is fueled by TNC foreign direct investment (FDI) and facilitated by the public policies of the states whose economies this activity serves to integrate. These

are worldwide processes, but no region has been more affected by them than East Asia.

The purposes of this paper are to examine the growing complexity of intra-East Asian investment patterns and of regional production networks and their implications for regionalism and industrial development in the ASEAN states. I have shown elsewhere (Machado, 1995) that Japanese TNCs in concert with Japanese financial institutions and key ministries and agencies of the Japanese government have systematically promoted expansion and integration of regional production in East Asia on a sector by sector basis and that the result has been the formation of a vertically integrated, hierarchical, Japan-centered regional division of labor. I have also argued that in the absence of any formal arrangements, Japanese corporate organization extending throughout the region has become the central architectural feature of East Asian regionalism and that it forms the boundaries within which national industrial development efforts of other regional states, to varying degrees, take place. These boundaries are maintained, most importantly, by Japan's technological superiority over its neighbors as well as by its market power and its supply of capital. This paper shows that while Japanese investment remains predominant in most East Asian countries, patterns of FDI and the division of labor in East Asia have become increasingly complex since the late 1980s as firms based in the Asian Newly Industrializing Countries (ANICs) (Korea, Taiwan, Hong Kong and Singapore) and, to a lesser extent, in some ASEAN-4 (Indonesia, Malaysia, Thailand, the Philippines) countries have become international and regional investors. Reflecting these trends, about 40 percent of all FDI in East Asia is now intraregional (UNCTAD/DTCI 1996: 36). In some recent years, aggregate ANIC investment has matched or exceeded (in some cases substantially exceeded) Japanese FDI in some other regional countries. Some analysts think

these developments mean that “Japanese firms already have lost their dominant position as carriers of Asian regionalization” (Ernst, 1995: 45).

This paper begins with some comments on regionalism and industrial development. This is followed by an analysis of the expansion of Japanese production networks in East Asia, other forces often said to be shaping the structure of regionalism, notably United States based TNCs and Sino-Capitalist networks, and the growth of ANIC and ASEAN-4 FDI. The reflection of these trends in Malaysia is then briefly shown. Finally, the paper considers the extent to which growing complexity is increasing pluralization and decreasing hierarchy in the regional division of labor and improving prospects for industrial development in ASEAN states. It concludes that the emerging structure of regionalism is not shaped by United States—East Asia economic linkages or Sino-Capitalist networks to the degree that the volume of money and goods flowing through them might suggest. It also concludes that increasing complexity does not translate into pluralization to the degree that an uncritical examination of FDI data would suggest. This is because in many cases, ANIC and ASEAN-4 manufacturing investment (including its Sino-Capitalist component) is found not to be autonomous but rather a direct proxy for or to some degree dependent on firms based in industrially advanced countries (particularly, but by no means exclusively, Japan). It further concludes that such Japanese proxy or dependent investment tends to extend and consolidate the hierarchical, Japan centered regional division of labor, not to make it more pluralistic.

I have argued elsewhere that ASEAN states have derived some significant economic benefits from the spread of industry and the high rates of growth that have accompanied integration into Japan-centered regional production networks. In some cases, interested parties in these states have to

their advantage successfully extended or even occasionally broken through the boundaries tended by Japanese interests, and in others the latter have on their own initiative adjusted them. Malaysian experience is a case in point. Generally, however, the costs of incorporation in production networks have been diminished autonomy and acceptance of benefits that are largely concessions granted on Japanese terms or, less frequently, extracted only after hard bargaining, rather than gains anchored in national industrial strength (Machado, 1994). Given the enormous asymmetries of economic power and technological capacity between Japan and the ASEAN states reflected in the steeply hierarchical regional division of labor, the likelihood that the latter states will make secure and self-sustaining (as distinct from dependent) industrial advance has appeared to be a very long term prospect. This paper concludes that the recent growth of ANIC and ASEAN-4 investment and the growing complexity of the regional division of labor that follows from this, at best, promises to modify this picture in small ways not to alter it fundamentally.

2. Regionalism and Industrial Development in East Asia

One prominent interpretation of changes underway in the world political economy treats them as movement, however halting, toward the formation of three major economic regions centered on Germany, the US and Japan (Thurow, 1992). This does not mean that regionalization is at this point displacing globalization, as these trends still evolve simultaneously. Because most of the debate on regionalist tendencies has been concerned with their implications for trade and, by extension, relationships between trade and development, it has tended to focus on whether key actors are promoting 'open regionalism' that will remain extensively intermeshed with the world economy, or creating exclusive regional blocs. Stallings and colleagues (1995) have taken

a different tack in linking features of globalization and regionalization to debates concerning third world economic development. They argue that such trends as globalization of trade, production and finance have produced differential development results as they have been "refracted" through "regional prism(s)" (1995: 22). Stallings sees the central mechanism at work here as the regional tendency to follow the model of the dominant capitalist power. While this is true, and important, with respect to some key elements of these models (e.g. propensity for openness to imports), there are some major problems with pushing this line of argument too far. MacIntyre, for example, raises significant doubts about the extent to which the ASEAN-4 states are, in fact, following the Northeast Asian model (1994). Stallings' and colleagues' work is considerably more nuanced when it moves beyond this central assumption and deals with such issues as differences in the kinds of 'implicit conditionality' imposed by Japanese and American investors (Griffith-Jones & Stallings, 1995: 171-72). In any case, Stallings' emphasis on the importance of connections between regionalism and development is well placed and informs what follows.

The concern here is with power relationships in the emerging structure of regionalism in East Asia and its consequences for the industrial development of the states in the lower tiers of the regional division of labor. There are several possible underpinnings for regionalism: formal arrangements (i.e., institutions, agreements, common policies, treaties), a regional division of labor, a regional market, and a regional society and culture. As has been widely noted, the underpinnings of regionalism in Europe, North America, and East Asia differ in important ways. Governments have played a leading role in the promotion of common arrangements, albeit of very different character, for the EU and the NAFTA, while there are no formal regional arrangements for East Asia. ASEAN is sub-regional, and APEC is trans-regional. The most prominent proposal for an East Asian regional entity, Malaysian Prime Minister Mahathir's

EAEC scheme, languishes for lack of effective support. Elements of regional society and culture are evident in some realms in Europe but far less so in North America. They are virtually non-existent in East Asia, however, numerous efforts to argue the reality of 'Asian Values' notwithstanding. Absent regional arrangements, Japanese companies, much facilitated by their government, have through investment and finance been creating the underpinnings of a much less institutionalized regionalism (Doner, 1993; Unger, 1993). Many regional political and business leaders and academics of globalist persuasion stress the superiority of market-driven, non-institutionalized regionalism.

Whatever the relative merits of more and less institutionalized regionalism, the lack of arrangements complicates the task of investigating questions of power. While examination of arrangements can never provide an adequate basis for dealing with power issues, it is a good place to begin. For example, the evolving arrangements concerning European monetary union and central banking institutions provide a good starting point for assessing the apparent gravitation of power over budgetary policy from elected governments to a committee of central bankers, in which Germany's Bundesbank will be predominant. In the absence of formal arrangements in East Asia, those interested in regionalism have tended to focus on trade (see, for example, Garnaut & Drysdale, 1994). Trade patterns and changes in them may, of course, reflect exercises of power (e.g., imposition of 'voluntary' export restraints, government procurement decisions), in this one realm. Moreover, as Gereffi points out, trade produces only 'shallow' forms of economic integration, whereas it is corporate strategies leading to networked production that produce 'deep' integration (1995: 138-39). Fundamental power relationships are much more likely to be revealed in such 'deep' patterns of organization. This is why a focus on the division of labor in East Asia, centered as it is on Japanese corporate organization, is essential to understanding the emergent structure of

regionalism and its meaning for the industrial development of states lower in the hierarchy. If 'deepening' of formal arrangements in Europe is extending German domination over the economic policies of its neighbors, is it not likely that 'deepening' of the East Asian division of labor is, correspondingly, reinforcing Japanese control over its neighbors' opportunities for upward mobility in that hierarchy?

3. Foreign Direct Investment, Production Networks and the Growing Complexity of the East Asian Regional Division of Labor

*3.1 Japanese FDI and Expanding Production Networks*¹

Japanese postwar overseas investment only began on a significant scale in the late 1960s. Between 1969 and 1990, there were three 'waves' of FDI characterized by accelerating rates of year on year growth, a crest, and then either slower growth or decline (*Nihon boeki shinkokai*, 1993: 63-64). Japan's world wide cumulative FDI stood at US\$ 2.0 billion in 1968, but the end of the third 'wave' in 1990 it had reached US\$ 310.8 billion. Some perceived a 'new wave' starting to rise in 1993 (NRI & ISEAS, 1995). As **Table 1** shows, the cumulative total reached US\$ 422.6 billion by the end of FY 1993 (31 Mar 1994). Japanese FDI was concentrated in third world natural resources until the mid-1970s, but it was relatively evenly distributed across the major regions of the world up to that time. After that, it began to increase in manufacturing in North America and in both industry and additional natural resource development in Asia (overwhelmingly East Asia) while lagging in Europe. Then from 1984 through 1990, FDI increased very substantially in both North America and Europe while lagging in Asia.

¹ This section is abbreviated and updated from Machado (1995)

Overseas manufacturing investment initially represented an effort to cut costs in the face of rising wages and land prices in Japan and to solve market access problems by jumping over other countries' protective barriers. After the advent of flexible exchange rates in 1971, periodic episodes of yen appreciation had adverse consequences for the price competitiveness of Japanese exports and was thus also a stimulus to new 'efficiency-seeking' overseas investment, which included relocation of many established Japanese firms in lower wage countries. The sharp continuing rise in the value of the yen after the 1985 Plaza Accord as well as increasing market access problems were major motivations for the big increases in investment in North America and Europe and in third world export platforms during the third 'wave' of Japanese FDI. In 1993, as **Table 1** shows, by far the largest cumulated amount of Japanese FDI, US\$ 184.9 billion (43.8%), was in North America, and the amount in Europe, US\$ 83.6 billion (19.8%), exceeded the amount in Asia, US\$ 66.5 billion (15.7%). The primary feature of the 'new wave,' has not been a big increase in overall FDI but an upturn from 1993 in the total amount and a substantial increase in the portion of Japan's manufacturing FDI going to Asia, particularly ASEAN countries and China. Total FDI outflow increased 20 percent in 1994 and 15 percent in 1995, though it still remains far below peak year (1989/1990) levels (UNCTAD/DTCI, 1996: 46). The portion of manufacturing FDI in Asia climbed from 19.8% in third 'wave' peak year 1989 to 32.9% in 1993, while the portion going to North America declined from 58.9% to 37.2% in the same years (NRI & ISEAS, 1995: 4). Manufacturing FDI going to Asia exceeded that going to North America for the first time in 1994 and did so again in 1995 (UNCTAD/DTCI, 1996: 47).

The more than US\$ 47 billion of Japanese FDI in East Asia (particularly the US\$ 20.8 billion in manufacturing) cumulated since 1985 has been the primary force behind the rapid expansion of the regional division of labor. As **Table 1** shows, the total number of individual Japanese companies increased

two and two thirds times between 1985 and 1994. While amounts of FDI were lower in Asia than elsewhere until 1993, the largest number of individual companies have consistently been in Asia. There were 2,333 companies (38.7% of the total) in 1985 and 6,632 (41.7%) by 1994. Clearly there are larger numbers of smaller Japanese investments in Asia than elsewhere. While Japanese TNCs have an extensive presence and take the leading role in Asia, there is a disproportionate amount of activity by small and medium industries

**Table 1: Japanese Cumulative FDI and Numbers of Overseas Companies:
All Sectors and Manufacturing**

FDI in	Amounts		No. of Companies		M'fact	% M'fact
	US\$ bil (%)		All Sectors (%)		No. (%)	
	1985	1993	1985	1994	1994	1994
Asia	19.5 (23.3)	66.5 (15.7)	2,333 (38.7)	6,632 (41.3)	3,517 (58.8)	(53.0)
North America	27.0 (32.4)	184.9 (43.8)	1,524 (25.3)	4,091 (25.5)	1,289 (21.5)	(31.5)
Europe	11.0 (13.1)	83.6 (19.8)	1,172 (19.5)	3,417 (21.3)	706 (11.8)	(20.7)
Other	26.2 (31.3)	87.6 (20.7)	994 (16.5)	1,903 (11.9)	474 (7.9)	(24.9)
Total	83.7 (100.0)	422.6 (100.0)	6,023 (100.0)	16,043 (100.0)	5,986 (100.0)	(37.3)

Sources: Amounts* 1985—Dobashi, 1988: 13
1993—*Nihon boeki shinkokai*, 1995: 511-12
Companies *Toyo Keizai*, 1995: 32-47.

* These Japanese Ministry of Finance figures for FDI represent the sums of equity investment, cash loans, establishment of overseas branches and, through 1981, acquisition of real estate. By the end of 1990, 58% of cumulated FDI was in equity and 40% in loans (*Toyo Keizai*, 1992: 1027).

(SMIs) in the region. Many SMIs are manufacturing firms, and a number are suppliers to locally based TNCs (Takeuchi, 1993). A much larger portion of Japanese companies in Asia are in manufacturing (53.0%) than in any other region, and by far the largest number of Japanese overseas manufacturing companies, 3,517 (58.8%) are in Asia. These facts are of particular importance because manufacturing companies are the key components of expanding production networks.

Central to the promotion of a regional division of labor is the effort by Japanese government and corporate interests to promote what they euphemistically call in English 'complex international work sharing' (MITI Japan, 1992: 101-118) in manufacturing based on 'agreed specialization' between the firms in Japanese regional production networks. The aim is to optimize complementarity within specific transnational industrial sectors (Aoki, 1986; Dobashi, 1988). 'Work sharing' means that the stages of manufacture of a product are carried out or the parts and components of a product are made in different countries, depending primarily on the cost efficiencies they offer, and that the resultant intermediate goods (semi-finished goods and parts) are traded among them for eventual incorporation into finished products. 'Agreed specialization' means that corporate leaders determine which local firms are to produce what, where. At its simplest, 'work sharing' is what takes place in the manufacture of semiconductors when "the first half of (the)...process (e.g., chemical and exposure treatment)--which requires high technology--take(s) place in Japan, while the labor intensive second stage of assembly, testing and the like occurs in Southeast Asia" (MITI Japan, 1992: 103). In its more complex forms, it takes place within "reciprocal networks for interchanging spare parts, components, and finished items" (RIM Studies Group, 1988: 9). Such processes are particularly advanced in the electronics and motor vehicles industries. For example, East Asian motor vehicle assemblers and parts and component makers

affiliated with each of the major Japanese firms are increasingly integrated into regional production networks, which are in turn tied into their global networks. These are 'complementation' systems involving the exchange of parts and components made in one country for use in several other countries. Japanese TNCs favor this approach partly because it permits taking advantage of an economy of scale in part and component making, something it is impossible to do in the many countries with small domestic markets.

The character of Japanese corporate organization and practice extended overseas is made much clearer in the unsentimental analyses of Japanese management specialists and economists than it is by MITI and corporate officials. A professor of business explains that vertical integration is common in Japanese corporations. This means that the "market mechanism is replaced by internal transactions" and that "the stages of production and distribution are included in one hierarchical system." Such integration "serves to unify the decision-making on and operation of several processes for a common purpose,...(and to accomplish it)...some kind of power is necessary...It (need not) come from ownership, but (can come) from unequal transactions between the (core corporation) and the integrated companies" (Kono, 1984: 118-20). Tokunaga explains that the reason Japan counts loans as FDI is that the "essence of FDI...is...not necessarily to acquire(e) 'ownership' but to exercis(e) effective influence on the management of a foreign-located firm." He also stresses that if such a firm is important to "the main company's business activities, and further, if it has strong bargaining power in the area of technology or other matters,... management control must be sought by the Japanese firm" (1992: 14-15). If substantial technology is being transferred, he says, "Japanese firms aggressively pursue the acquisition of majority ownership of their overseas...production facilities,... a crucial strategy...to keep local firms from becoming competitive on their home ground" (1992: 43).

In extending production networks, many Japanese corporations have also structured them in an increasingly 'multilayered' way. This is associated with their strategy of decentralizing global operations and giving them greater regional focus. The aim has been to hasten and improve decision-making about activities in the proximate market. This has led to the development of more integrated and 'multilayered' management and production networks within major world regions. By 1993, one out of every 20 overseas Japanese affiliated firms was a regional headquarters (UNCTAD/DTCI, 1996: 47). 'Multilayering' has been particularly pronounced in East Asia. Many Japanese TNCs have established regional management systems in sub-regions of Asia. Singapore has become the chief regional center for Southeast Asia, as that country's Operational Headquarters (OHQ) scheme (Rodan, 1993) has proved attractive to Japanese TNCs. OHQ perform administrative, technical and managerial functions, do R&D and design work, and manage finances for regional affiliates of TNCs. Affiliates of Japanese TNCs in some countries have also been used to establish their own affiliates in third countries. According to JETRO, by 1993, 47 per cent of Japanese affiliated firms in Hong Kong and 43 per cent in Singapore had established foreign affiliate networks in the region. While only 4 per cent of Japanese affiliated firms in Malaysia and Thailand had established affiliates in other Asian countries, 35 per cent of those in Thailand and 28 per cent in Malaysia planned to do so by the year 2000 (cited in UNCTAD/DTCI, 1996: 47). As will be seen in another context, implementation of this Japanese corporate strategy is reflected in FDI statistics as an increase in Hong Kong and Singapore regional investment.

Japanese corporate ties with and coordination of the activities of their regional subsidiaries are central to the production networks under construction in East Asia, but understanding the real complexity of these networks requires looking at a broader set of relationships. A recent survey found that in the

ANICs and ASEAN states together, 30 percent of Japanese affiliates used at least 20 local companies as subcontractors, and another 21 percent used between five and 19 (MITI Japan, 1992: 141). Some firms that act as subcontractors to Japanese corporations in Japan have followed them to regional production sites, set themselves up as local firms, and continued to supply these corporations' affiliates there. Larger Japanese companies may, but do not necessarily, hold a stake in such firms. Wholly locally owned firms may also act as subcontractors. Tokunaga argues convincingly that if local firms, Japanese affiliated or not, are incorporated "in a Japanese corporation's intracompany production network ... (they are) ... overseas production facilities of Japanese corporations." He stresses that Japanese corporations may incorporate local firms in their networks by furnishing directors, technology, raw materials, parts, or semi-finished products and such practices as production sharing and renting or lending capital equipment and buying products back (1992: 14-16).

Japanese financial and transportation services extend regional networks beyond simple production and trade relationships. Japanese banks have branch offices throughout East Asia, and other Japanese financial institutions have established ties for joint lending with local finance companies and merchant banks. Some Japanese joint ventures in the region have also listed on local stock markets to boost local fund-raising, and Japanese securities houses have established a regional presence to facilitate this. International and domestic integrated intermodal transportation systems, which coordinate all elements required for door-to-door physical distribution on a worldwide basis, have also been organized both by Japanese transportation firms and on an intra-company basis (Tokunaga, 1992: 25-30). All of the forgoing support expansion of regional production networks and advance ties between the regional and global divisions of labor.

The integrative power of expanding regional production networks has been augmented by an accompanying increase in intra-firm trade. The portion of intra-firm trade is a good indicator of the extent of an 'intra-industry international division of labor' (Kobayashi & Hayashi, 1993: 39-40). **Table 2** shows the extent to which Japanese overseas manufacturing firms purchased their inputs from and sold their products in Japan, third countries and locally in 1989 and 1992. It also shows what portion of those transactions were on an intra-firm basis. The 1992 figures show that firms in East Asia buy mainly in Japan (38%) and locally (48%) and sell mainly locally (66%). They also show that a big portion of their purchases from Japan (78%) and of their relatively small sales there (84%) and a significant portion of their purchases (43%) and sales (43%) in third countries were intra-firm, while only a small portion of local purchases or sales were on that basis. **Table 2** also shows significant to very large increases between 1989 to 1992 in the portion of intra-firm transactions between Japanese overseas affiliates in East Asia and both Japan and, in most cases, third countries. For example, combined transactions in Toyota's 'complementation' system for exchanging motor vehicle parts and components among its ASEAN affiliates were \$25 million in 1993 (EIU, 1993: 37), but they had risen to \$160 million on the basis of trade in 12 parts and components by the end of 1994. They were slated to grow to \$ 1.3 billion on the basis of trade in about 100 parts by 1998 (*The Nikkei Weekly*, 1995a). Most of this will be intra-firm trade. Such increases clearly reflect the growth of production networks and East Asian economic integration.

The expansion of Japanese production networks in Asia after 1985 reflected two corporate strategic responses to immediate problems. The first was to increase 'outsourcing' from overseas affiliates to cut production costs. The other was to try to dampen trade friction with North America and Europe by increasing exports to those markets from production facilities in third countries

Table 2: Intra-Industry International Division of Labor: Purchases and Sales of Japanese Overseas Affiliates in Manufacturing, World and Asia-1989 & 1992 by Source, Destination, and Portion of Intra-Firm Transactions

	Purchases					Sales			
	Year	Amount (billion yen)	Sources (%/ % intra-firm)			Amount (billion yen)	Destination (%/ % intra-firm)		
			Japan Third	Country	Local		Japan	Third Country	Local
World Manu- facturing	1989	15,410	46 / 83	9 / 38	46 / 5	22,267	8 / 62	12 / 44	80 / 8
	1992	9,929	41 / 84	13 / 57	47 / 9	25,114	6 / 78	17 / 38	77 / 17
Asia Manu- facturing	1989	3,411	39 / 63	11 / 24	50 / 4	5,095	16 / 59	20 / 37	64 / 7
	1992	3,413	38 / 78	14 / 43	48 / 4	7,943	16 / 84	18 / 43	66 / 6
NICs Manu- facturing	1989	1,289	37 / 71	10 / 27	53 / 5	3,238	20 / 56	23 / 36	57 / 5
	1992	1,534	40 / 77	13 / 62	47 / 6	4,280	15 / 89	19 / 23	66 / 5
ASEAN Manu- facturing	1989	1,222	41 / 53	14 / 21	46 / 3	1,744	10 / 68	16 / 40	73 / 9
	1992	1,730	36 / 81	15 / 28	50 / 3	3,296	16 / 82	19 / 62	65 / 8

Sources: *Tsushosangyosho*, 1991: 200-235*
 _____, 1994: 188-223*.

- Data on purchase sources and sales destinations are from MITI surveys of overseas firms. The rate of survey return for manufacturing firms was 75% in 1989 and 78% in 1992. Sales and purchase amounts are overall figures.

rather than from Japan (as well as expanding production facilities in those regions). More generally, however, Japanese corporations have long regarded the fragmentation of the East Asian market as an obstacle to expanding and operating profitability in the region. With the help of the Japanese government and of supportive domestic interests in the region, they have been attempting to reduce this fragmentation. To this end, they have for some years been promoting an expanded regional division of labor and have stressed that the best way for East Asian countries to develop is to follow the leadership of Japan. In the context of growing pressures on the Japanese economy and widespread adoption of export-oriented industrial strategies and more open economic

policies in other East Asian countries, such Japanese efforts have in recent years become more assertive.

American economist Leon Hollerman offers a most convincing explanation of the foregoing trends, arguing that Japan's "domestic industrial policy...has evolved into geopolitical strategy (which) coordinate(s) Japan's external relations with the transformation of its indigenous industrial structure,...(including) calculated disaggregation...of the production process, with some stages being assigned abroad and some retained at home." In this process, "Japan retains for itself the higher value added operations that yield the best rates of return." (1988: 8-11) At the same time, "export of plants and equipment (establishes a) dependency relationship (in terms of financing, maintenance, management, and distribution of output)...between Japan and its clients." (1988: 11) He further contends that Japan aims to become a 'headquarters country' able to "impose central management on a world network of joint ventures, subsidiaries, and affiliates...(and to)...coordinate the relations of its foreign clients with each other as well as with itself." (1988: xi) Both Japanese government and corporate interests have actively promoted the foregoing trends in a variety of ways.

3.2 *The Larger Regional Context*

Japanese construction and elaboration of regional production networks are not, of course, the only forces at work that are playing or could play a role in shaping the structure of East Asian regionalism. While beyond the scope of this paper, it has to be noted that there are regional trouble spots (e.g., divided Korea, divided China, the South China Sea) and potential conflicts (e.g., access to energy sources) that could trigger severe conflicts that would put 'high

politics' in ascendancy and that could even lead to military confrontations in the region (Calder, 1996). In longer range terms, China's developmental path and the role that it will play in East Asia and the world are of critical importance to the eventual character of the region. There is no shortfall of work offering predictions on these matters, but they remain at best problematic. Common scenarios portray China 1/ as succeeding in its current efforts to industrialize and becoming the dominant political and economic force in East Asia or, 2/ alternatively, experiencing an accelerating shift of economic and then political power from Beijing to the provinces, which might or might not result in violent civil strife. A less commonly advanced scenario, but one that complements the view taken here foresees a growing economic integration between Japan and China (Taylor, R., 1996). Inevitably, the balance in such a relationship would for some time reflect Japan's technological superiority. In any case, it must be borne in mind that the advent of prolonged military conflict in East Asia or consolidation of a unified, powerful and assertive China would alter the current trajectory of regionalism.

While Japan is currently the predominant economic power in East Asia, Japanese TNCs that are central to the emergent structure of regionalism obviously do not have East Asia entirely to themselves. United States relationships with East Asia continue to be highly important on both sides of the Pacific. Moreover, the US takes a selective anti-regional posture both in its opposition to EAEC (while promoting NAFTA) and in leadership in pushing APEC as an instrument for trans-Pacific trade liberalization. While not directly challenging the US position on this, the Japanese have simultaneously, and much more discreetly, been attempting to use APEC as a mechanism for coordinating the industrial policies of East Asian states. APEC is not likely to be decisive in either regard, and greater liberalization of US-Japanese trade should not be incompatible with either of these countries presiding over the

further economic integration of their respective regions. For the issue at hand, the more important matter is the degree to which US economic activity in East Asia is creating an alternative set of production networks.

US trade across the Pacific has exceeded trade with Europe since the late 1970s, and in 1994, trade with 'developing Asia' (i.e., excluding Japan) alone exceeded trade with Europe (UNCTAD/DTCI, 1996: 45). During the same period, however, indicative of the regionalization that is taking place, both intra-North American and intra-East Asian trade have also been growing apace. In any case, aggregate trade alone is not an adequate indicator of the structure of relationships between countries. Consideration of intra-firm trade and of FDI associated foreign affiliate sales, makes clear that East Asia is generally though unevenly more economically integrated with Japan than it is with the US. While intra-firm trade is an even larger share of US than of Japanese total trade on a worldwide basis, the incidence of US intra-firm trade is considerably higher with Europe (24%) than it is across the Pacific (16%). **Table 2** has already shown the high incidence of Japanese intra-firm trade in East Asian manufacturing.

The stock of Japanese investment in East Asia exceeds that of the United States generally, and it exceeds it in every regional country except China (where it is about the same), the Philippines and Singapore. In 1993, the respective percentages of Japanese and United States FDI stock in regional countries were: (Korea—40/29; Hong Kong—34/28; Taiwan—29/27; Singapore—7/18; Thailand—33/17; Malaysia—22/11; Indonesia—21/5; Philippines—44/20; China—9/9) (UNCTAD/DTCI, 1995: 49-50/Table II.1). Taking FDI and the sales associated with it into account, provides a more comprehensive and quite different picture of US linkages with Asia than trade alone. "(I)t also draws attention to integration of production—that is, the increased meshing of the

production apparatus of different countries and regions through ownership linkages and division of labour" (UNCTAD/DTCI, 1996: 45). If United States based TNCs' sales abroad and foreign affiliate sales in the US are added to US trade, the dollar volume of this exchange is about 50 per cent higher with Europe than it is across the Pacific and it is five times that of exchange just with developing Asia. United States based companies diversify the division of labor in East Asia, but Japanese companies remain the central integrative force in the regional economy.

Other forces seen to be altering the structure of East Asian regionalism are the so-called ethnic Chinese or Sino-Capitalist networks and the upsurge in ANIC and ASEAN-4 based FDI. Analysts from the Australian Department of Foreign Affairs and Trade estimate that "ethnic Chinese business entrepreneurs have created investment flows within East Asia that may exceed flows from the Japanese" (1995: 6). A recent assessment of the state of political affairs in Southeast Asia by a highly knowledgeable journalist heavily emphasizes China's potential role in the region while barely mentioning Japan's current role (Vatikiotis, 1996). He also emphasizes the integrative role of ethnic Chinese economic "networks based on bonds of clan or kinship, (which) span the region more effectively than any corporate system or web of bilateral ties could devise" and says that "(t)ies like these are part of the human web that makes this region more integrated and interdependent than it often seems in either political or diplomatic terms" (1996: 201). A well known American economist and an associate note the major role played by ethnic Chinese in the private sector of many regional countries and assert that "(t)he net result of...cross- border investment flows by...(this)...community has been the rapid emergence of a new Chinese-based economy that is the epicenter for industry, commerce, and finance in Southeast Asia (Weidenbaum & Hughes, 1996: 16). These are extravagant assessments that pay much greater attention to the size of money

flows than how money is used or who it is used with, issues that are of major importance in assessing the structure of economic networks and the kind of underpinning they create for regionalism.

Because ethnic Chinese regional investment is also ANIC (less Korea) or ASEAN-4 investment, it will be dealt with primarily in that context, but before turning to that a few points must be made about the uses of ethnic Chinese money and where it fits into the regional economy. Examination of the core competencies of the top 500 ethnic Chinese publicly listed companies in Asia, shows 59 per cent to be in services (particularly land and property development) and 38 per cent to be in manufacturing (Australia, Department of Foreign Affairs and Trade, 1995: 149—Table 7.2), which is central to regional integration. Only a minority of ethnic Chinese companies are publicly listed, so this mix is not necessarily the same as it is would be for all companies. Manufacturing companies are very likely be a smaller share of all companies. By contrast, 52 per cent of Japanese companies in Asia are in manufacturing. When Weidenbaum & Hughes turn their attention to the nature and organization of this manufacturing activity, they completely undermine their own argument that it is the economic “epicenter” of Southeast Asia. They advise that “rather than produce consumer goods with a Chinese brand name,” a very large portion of ethnic Chinese manufacturers “make components, manufacture for others, and perform subassembly work (1996: 55). They emphasize that Chinese business families operate through a networks of small to medium sized enterprises rather than large, complex TNCs and advise that “the Chinese family business structure makes it extremely difficult to develop the high-tech products and systems that will provide the foundation for future business growth and national economic progress” (1996: 56-57).

Sino-Capitalist manufacturing activity is also in many cases dependent on ties to Japanese and other TNCs. Because there is no comprehensive list of ethnic Chinese companies in East Asia, it is not possible to demonstrate the above points systematically, but some examples can be given. Of the numerous cases of ethnic Chinese manufacturing investment elsewhere in Asia given by Weidenbaum & Hughes, only two are of the type that clearly extend production networks of the type central to the emerging structure of regionalism, as distinct from such industrial undertakings as animal feed production, flour milling, or cement making. One is a joint venture between a Singapore Chinese company (Kuo International) and Toyota for auto assembly in Vietnam, and the other is a Thai Chinese (Charoen Pokphand Group) motorcycle and parts production firm in China operating under licensed technology from Honda. While not primarily engaged in manufacturing, the large Malaysian conglomerate Hong Leong Group has a substantial industrial division, with associated companies producing building materials, electronic products, steel and structural steel products, and motorcycles, the latter two in joint venture with Marubeni Corporation and Yamaha motors respectively. Hong Leong also produces Yamaha motorcycles in China. It would be easy to multiply such examples. The main points here are, however, simply that ethnic Chinese firms and the networks that they form are not primarily engaged in manufacturing, and to the extent that they are, at present a number of such firms extend Japan centered production networks much more than ethnic Chinese networks when they go abroad. Major aims in many cases are technological upgrading and diversification (Heng, 1994: 27), so such arrangements could lead to greater autonomy in the long run. In any case, it will be more useful to examine ANIC and ASEAN-4 which includes virtually all of the ethnic Chinese investment, while bearing in mind the overlap between the two and being mindful of those cases in which ethnic Chinese investment actually contributes to the diversity of the regional division of labor.

3.3 ANIC and ASEAN-4 FDI

There has been an increasing worldwide incidence of investment abroad by firms from developing countries. Much of this investment is within their own regions of the world (UNCTAD/DTCI, 1995: 26-36). This trend has been clearly manifest in East Asia since the 1980s. ANIC FDI has played a large role and Malaysian and Thai FDI has played a modest role in the growing complexity of the regional division of labor. **Table 3** compares the total worldwide stock of outgoing FDI for Japan and the other regional countries from 1980 to 1995.²² This shows that the total stock of Japanese FDI was almost twelve times that of the ANICs and ASEAN-4 in 1980 but only about two times that of the latter groups by 1995. It also shows that while the total stock of Japanese FDI increased only 1.5 times between 1990 and 1995, that of the other countries increased between 1.9 and 6.6 times during the same years.

In each case, much or most of the ANIC and ASEAN-4 investment, particularly in manufacturing, is elsewhere in East Asia. Table 4 gives a partial picture of the increased complexity of the pattern of intra-regional investment by showing ANIC, ASEAN-4, Japanese, and U.S. FDI flows in the ASEAN-4 states and Vietnam during a recent three year period. In 1991-93, ANIC investment outpaced Japanese FDI in Indonesia (21% to 12%), Malaysia (27% to 20%), and Vietnam (48% to 10%). While ANIC investment was only a bit less than half Japanese FDI in Thailand (16% to 33%) and the Philippines (14% to 25%), it was about the same as US investment. While still small, ASEAN-4

²² There are many problems in comparing investments originating in different countries. FDI figures published by investing and host states often differ significantly. Host countries usually publish FDI approvals, but there are often big differences among both host and investing countries in the extent to which approvals actually become investments. In some countries, a portion of capital outflow, often quite large, is not reported to the government. FDI figures are also frequently not strictly comparable across countries as there are a number of different ways in which FDI may be reckoned. Figures presented here should be considered with these cautions in mind.

FDI contributed 5% of the total in Malaysia, 7% in Thailand, and 10% in Vietnam. Two points need to be borne in mind in considering this data. First, as the brief discussion of Japanese TNCs' use of Hong Kong and Singapore affiliates in their 'multilayering' strategies makes clear, counting all capital outflow from these countries as nationally based is misleading. Moreover, apropos Tokunaga's previously cited point, to the extent that non-Japanese affiliated NIC or ASEAN-4 firms are technologically dependent on and/or largely suppliers to Japanese firms, they are effectively "...overseas production facilities of Japanese corporations" (1992: 14).

Table 3: Total Stock Outward FDI: Japan, Asian NICs, ASEAN-4 FDI
(US\$ billion)

Outward Stock of	1980	1985	1990	1995	90 : 95
Japan	18.8	44.3	204.7	305.5	1.5
NICs					
Hong Kong	.1	2.3	13.2	85.2	6.5
Taiwan	.1	.2	12.9	24.3	1.9
Singapore	.7	1.3	4.7	13.8	2.9
South Korea	.1	.5	2.1	11.1	5.3
ASEAN-4					
Malaysia	.4	.7	2.3	8.9	3.9
Thailand	-	-	.4	2.3	5.8
Philippines	.2	.2	.2	.2	-
Indonesia	-	-	-	.1	-
Total NICs & ASEAN-4	1.6	5.2	35.8	145.9	4.1
Total : Japan	11.8	8.5	5.7	2.1	

Source: UNCTAD/DTCI, 1996: Annex Table 4. Definitions & Sources of Data for Tables are given on: 219-226.

Two important regional factors and several factors common to most or all of the NICs and leading ASEAN-4 investors account for their increasing FDI

in East Asia. On the pull-side, the facts that the ASEAN-4 states, China, and Vietnam have all in recent years liberalized their policies on inward investment and that most of them have been experiencing very high rates of growth have made them particularly attractive to investors. Hong Kong and Singapore investors were free to respond to these trends from the outset, while the governments of Taiwan and South Korea only began relaxing restriction on capital outflows in 1986. On the push-side, increased FDI reflects increasing wages and other costs of manufacturing in all of these countries that drive them to seek cheaper labor. In most of them, currency appreciation was also a problem for competitiveness. In the case of the NICs, it also reflects their mounting capital surpluses. To sort out some of the country specific investment patterns and factors driving increasing FDI, a brief survey of the individual countries is in order. Of the ASEAN-4 countries, only the largest overseas investor, Malaysia, will be considered here.

Singapore firms have long been investing elsewhere in East Asia. About 70 per cent of Singapore FDI went just to Malaysia and Hong Kong until 1984. As the first upsurge progressed later in the decade, its overseas investment became more diversified, and by 1990, only about half of it was going to other East Asian countries. Of Singapore's total stock of outgoing FDI in 1994, 53 percent was in the financial sector, mostly in investment holding companies, while only 20 percent was in manufacturing. Of the stock of manufacturing investment, however, 91 per cent was in Asia. Malaysia accounted for about 49 percent, followed by China with 11 percent and Indonesia, Thailand, and Hong Kong, with 8 per cent each (Singapore, DoS/MTI, 1996: Annex Table 3). Although electrical and electronics firms have been particularly visible in this movement, firms across the industrial spectrum are represented. Singaporean private and state enterprises have also been active in construction and industrial

Table 4: Origin of FDI in ASEAN-4 (91-93) , Vietnam (88-95)
(US\$ billion / %)

Destination/ Origin	Indonesia		Malaysia		Thailand		Philippines		Vietnam	
NICs	5.754	21	4.200	27	3.119	16	.245	14	7.210	48
Taiwan	.718		2.316		1.071		.028		2.590	
Singapore	2.272		.795		1.336		.050		1.420	
Hong Kong	1.456		.300		.603		.031		1.890	
Korea	1.308		.789		.109		.136		1.310	
ASEAN-4	.150	-	.756	5	1.241	7	.012	1	1.439	10
Indonesia	-		.738		.347		.001		.288	
Malaysia	.082		-		.592		.009		.842	
Thailand	.060		.009		-		.002		.181	
Philippines	.008		.009		.302		-		.128	
Japan	3.276	12	3.054	20	6.407	33	.425	25	1.480	10
US	1.640	6	2.603	17	2.787	14	.253	15	.270	-
Other	16.415	60	5.075	32	5.683	30	.785	46	4.501	30
TOTAL	27.235	100	15.688	100	19.237	100	1.720	100	14.900	100

Sources: ASEAN-4, 1991-93—MITI Malaysia, 1994: 324-327

Vietnam, 1988-95 (to Jul)—NICs, Japan, US: SCCI, in *Agence France Presse*, 9 Jul 1995.

Vietnam, 1988-95 (to Nov)—ASEAN-4: SCCI, in *Business Times* (Malaysia), 22 Dec 1995.

Figures all come from official institutions in host countries—approval basis.

park development throughout the region. The Singapore government is strongly committed to growing an 'external wing,' and national policy now actively encourages and supports overseas investment and 'regionalization' of the economy (Singapore MoF, 1993 & 1993a). This meshes very well with

Japanese corporate 'multilayering' strategy. A notable portion of Singapore's FDI, particularly the higher technology investments in ASEAN-4 states, originates with Japanese and other foreign TNCs based there. Fifty one percent of the outgoing stock of FDI and 27 per cent of the firms that have gone abroad are wholly or majority foreign owned (Singapore DoS, MTI, 1995: 44-47). These investments can only be understood as part of Japanese and other TNCs' strategies.

Hong Kong overseas investment began in the early 1960s, but it only started growing significantly in the late 1970s. Initially most of this investment went to the ASEAN countries and Taiwan, but in the mid-1980s, FDI in China began to accelerate rapidly. Hong Kong began to relocate manufacturing facilities, particularly in textiles and garment making and other light industries, in China. Well over half of all FDI and an even bigger share of investment in manufacturing in China appears in the records as Hong Kong investment. Hong Kong based companies in such sectors as electronics, textiles and food production have also moved to the ASEAN countries. As in the case of Singapore, however, these figures are misleading. About 30 percent of Hong Kong outgoing FDI originates with foreign firms based there (UNCTAD/DTCI, 1996: 69). Taiwanese and Southeast Asian Chinese firms have established subsidiaries there to act as conduits for their investment in China. Hong Kong firms are also used for 'round-tripping' (channeling capital through an overseas firm back into its country of origin as FDI in order to take advantage of investment incentives—e.g., tax holidays) by both overseas Chinese and People's Republic of China firms. Much of the manufacturing investment, particularly in adjacent Guangdong, results in so called 'front shop, back factory' arrangements. That is, management, design, and marketing functions remain in Hong Kong; capital, machinery and technology come from Hong Kong; while manufacturing or assembly are carried out in China. Hong Kong

affiliates of Japanese and other TNCs also invest throughout the region, but particularly in China (R. Taylor, 1995). Again, these cases have to be understood in terms of the TNCs' strategies.

Taiwan investment went predominantly to the US through the 1980s, but from 1990, investment in Southeast Asia and China accelerated rapidly. Larger firms (particularly in electronics) invest in the US primarily for market access reasons and to acquire new technologies. Labor-intensive, lower technology SMIs (e.g., textiles, apparel and footwear, plastics, electrical equipment) going first to Thailand and Malaysia and then China and Vietnam were responsible for much of the late 1980s and early 1990s investment upsurge. Taiwan's FDI figures greatly underestimate their actual amounts. Many firms failed to report their investments to avoid double taxation, as Taiwan had few tax treaties with Southeast Asian countries until quite recently. Much Taiwanese investment in China appears as Hong Kong investment for political reasons. Of Taiwan's estimated US\$ 25 billion FDI flow in 1987-1992, \$ 12 billion is estimated to have gone to Southeast Asia and \$ 6 billion to China the latter (FEER, 1993: 44). This is over 70 per cent of the estimated total for those years. Taiwan has become home to a few large TNCs with widespread production networks (e.g., Acer Computer), and recently, Taiwan has invested in more capital-intensive and higher technology industries (e.g., steel, petrochemicals, computer components and peripherals, electronics) in Malaysia and Thailand. Several government and Kuomintang owned enterprises have also undertaken or planned sizable investment in Southeast Asia in such areas as sugar refining, petroleum refining, and industrial estate development (*Business Taiwan*, 1995). Nonetheless, the bulk of Taiwanese FDI continues to be a product of SMI investment. Taiwan's 'Southward Policy,' which aims to expand its economic ties with Southeast Asia, is also politically inspired. It hopes to improve its

position relative to China by becoming a political participant in regional organizations and activities (Ku, 1995).

Korea began investing overseas in 1968, but as recently as 1987, more than half its FDI was still in forestry and fishing industries. In the early 1980's, Korean firms began investing in manufacturing facilities in the U.S. to circumvent trade barriers. Starting in the late 1980's, however, high technology firms began investing in research facilities and buying existing companies in the US (e.g., electronics, steel, semiconductors, machinery, HDTV and multimedia) in order to acquire expertise and technology needed to support production in Korea. These investment activities have been actively supported by the Korean government. At the same time, Korean firms began relocating and setting up elsewhere in Asia to take advantage of cheaper labor and land. Both lower and higher technology industries (e.g. textiles, plastics, automobile parts, television picture tubes, computer chips and color monitors, washing machines, and microwave ovens) have been located in ASEAN. Lower technology, labor intensive industries (e.g. textiles, apparel and footwear, toys, plastics) have been set up in Vietnam and China. By the end of 1995, 44 per cent of aggregate Korean FDI was in Asia and 34 per cent in North America (*Korea Economic Daily*, 1996). By far the largest share in Asia was in China, followed by Indonesia, Malaysian and Vietnam. About three quarters of the investment in Asia was in manufacturing, and a very large portion of this was devoted to export production.

The largest of the Korean TNCs have, like their Japanese counterparts, been creating global and regional networks as they extend abroad. Samsung, Korea's leading *chaebol*, has an overseas network of 314 facilities (35 are production facilities and 11 R&D centers) in 65 countries. Of these, 142 are in the Asia/Pacific region, including 32 in Japan, 48 in ASEAN countries, and 44

in China (Samsung, 1996). Its electronics network is the most comprehensive. Samsung Electronics has 15 overseas facilities and is building five large-scale electronics complexes around the world. Overseas production of Samsung Electronics along with that of Goldstar and Daewoo Electronics, currently constitutes 10 per cent of their combined overall production, but this is slated to reach 30 per cent by 2000. Daewoo and Kia Motors are both extending production facilities all over the world, and it is expected that by early in the next century, about 40 per cent of the total production of Korean automakers take place outside the country (Sohn, 1994: 30-32). A comparison of Korean firms procurement sources and sales destinations, shows that they have yet to develop the extensive network of local suppliers that Japanese firms have and thus they import a larger share of their capital equipment and raw materials from Korea than the latter do from Japan. They also sell less locally and export more to third countries than do Japanese firms (Lee, 1995: 42-43).

Malaysia began promoting what it calls 'reverse investment' in 1990. Like the NICs, Malaysia was feeling the pressure of rising domestic labor costs and competition from its lower wage neighbors, China and Vietnam. 'Reverse investment' is also seen as a way to overcome the limitations of its small domestic market and accelerate economic growth. Malaysia expects such FDI to assist the country in securing technology as well as technical, financial, managerial and marketing skills. It has accordingly dropped a long-standing requirement that each investment be approved by the Ministry of International Trade and Industry and put policies in place actively to encourage outgoing FDI. During the first half of the 1980s, 77 per cent of Malaysian FDI was in Singapore, Hong Kong, Australia, and the UK. While it remained concentrated in those countries during the first four years of the 1990s, the portion dropped to 65%, while it increased in China, the Philippines, Thailand, Vietnam, and India (*Business Times*, 1995). A sizable portion of Malaysia's earlier overseas

investment was in real estate, but a much larger share of its more recent FDI, particularly in Asia, has been in manufacturing and construction. Both locally owned and joint-venture Malaysian firms are active in a number of industries (e.g., textiles, mattress making, motor vehicle—bus, auto and motorcycle—assembly, telecommunications) as well as road and industrial estate building, power generation and banking. Malaysia is now clearly a participant in the extension of regional production networks beyond its borders.

3.4 *East Asian Investment in Malaysia*

Examination of the changing pattern of East Asian FDI in Malaysia provides an illustration of the trends outlined above. **Table 5** shows sources of the stock of investment (equity plus fixed assets) in Malaysian manufacturing companies in 1986 and 1993 and sources of flows of investment (approved equity plus loans) from 1987 to 1995. Between 1987 and 1993, the aggregate investment approvals from ANIC firms very substantially exceeded those from Japanese firms (about 34% of total approvals vice 23%), and they exceeded them even more in 1994-95. Aggregate ANIC investment exceeded Japanese investment in six of the nine years between 1987 and 1995, and was very close to it in one of the others. The biggest share of ANIC investment during these years came from Taiwan. Indeed, Taiwanese investment alone exceeded Japanese investment in two of those years and nearly matched it in a third. Because loans typically constitute close to two thirds of amounts of approved investment, this flow has not translated into such a sharp increase in the stock of ANIC investment. Between 1986 and 1993, the stock of East Asian investment increased from about 55 percent to 65 per cent. This increase was matched by a corresponding decline in European investment (about 29% to 18%), while the portion of aggregate investment from the ANICs increased only

slightly. The composition of ANIC investment, however, shifted, as Taiwanese and Korean shares of stock went up and Singapore and Hong Kong stock went down. As will be seen this, in turn, translates into more ANIC investment in wholly or majority owned firms at higher levels of technology.

Table 5: Foreign Investment (Equity + Fixed Assets) in Companies in Production as at 31-12-1986 & 1993 and in Approved Projects, 1987-1993 and 1994-1995 (RM mil/%)

Region/Country	Equity + Fixed Assets				Approvals			
	1993		1986		1994-95		1987-93	
	RM mil	%	RM mil	%	RM mil	%	RM mil	%
East Asia	24,930.3	64.8	6,257.3	54.7	na		45,731.7	61.5
Japan	12,631.8	32.8	2,680.1	23.4	3,861.5	18.9	16,891.5	22.7
ANICs	11,947.1	31.0	3,257.8	28.5	8,451.0	41.3	24,940.2	33.6
Singapore	6,610.3	17.2	2,509.1	21.9	2,072.2	10.1	4,566.7	6.1
Taiwan	3,125.0	8.1	54.3	.5	4,316.5	21.1	15,572.2	20.9
Hong Kong	1,789.7	4.6	686.6	6.0	1,049.1	5.1	1,887.4	2.5
S. Korea	422.1	1.1	7.8	.1	1,013.2	4.9	2,913.9	3.9
ASEAN-4	336.9	.9	319.4	2.7	na		3,346.4	4.5
China	14.5	-	-	-	na		553.7	.7
Europe	7,135.2	18.5	3,292.9	28.8	na		12,522.4	16.8
North America	3,513.9	9.1	1,139.4	10.0	3,063.4	15.0	8,685.0	11.7
Other	2,936.6	7.6	745.6	6.6	na		7,394.7	9.9
Total	38,516.2	100.0	11,435.3	100.0	20,482.6	100.0	74,334.4	100.0

Source: 1986-1994: Malaysian Industrial Development Authority, *Statistics on the Manufacturing Sector*, Selected Years.

1995: Malaysia, Ministry of Finance, *Economic Report 1996/97*, 1996.

- = negligible; na = not available

Tables 6, 7, and 8 portray the current pattern of this investment in the manufacturing sector³. The first shows numbers of cases of investment by

³ These tables are based on the MIDA survey of Companies in Production as at 31 December 1994, conducted in early 1995. The survey is estimated to represent about 80% of the total cases. Because special efforts are made to get responses from larger companies, which are in any case administratively best equipped to respond, the survey results tend to over represent larger companies.

interests from other East Asian countries by ownership share. The second shows number of cases and equity plus fixed assets by level of technology. It needs to be noted that multiple cases of investment are found in 18 per cent of the Malaysian companies in the survey. So the number of cases (1950) is larger than the number of companies (1591) in which the investments have been made.

Table 6: Ownership Shares by Interests from Other East Asian Countries in Malaysian Manufacturing Companies, 1995

Country	No.	% Wholly Majority Owned	Percentage Equity Number and (%)					
			100.00	99.99-50.01	50.00-30.01	30.00-10.01	10.00-1.01	1.00 or less
Japan	477	61	185 (39)	106 (22)	65 (14)	68 (14)	37 (8)	16 (3)
Taiwan	316	61	119 (38)	72 (23)	43 (14)	53 (17)	17 (5)	12 (4)
Korea	32	53	10 (31)	7 (22)	7 (22)	8 (25)	-	-
Singapore	794	28	115 (14)	115 (14)	114 (14)	186 (23)	219 (28)	45 (6)
Hong Kong	252	21	29 (12)	23 (9)	29 (12)	36 (14)	58 (23)	77 (31)
Indonesia	35	15	2 (6)	3 (9)	3 (9)	7 (20)	3 (9)	17 (49)
Thailand	32	-	-	-	6 (19)	7 (22)	3 (9)	16 (50)
Philippines	4	-	-	-	-	-	2 (50)	2 (50)
China	8	12	-	1 (12)	3 (37)	2 (25)	2 (25)	-

Source: Malaysian Industrial Development Authority, *Survey of Companies in Production as at 31 December 1994*.

Table 6 shows sharp differences with respect to ownership shares between Japanese, Taiwanese, and Korean interests on the one hand and Singapore, Hong Kong, ASEAN-4, and the very few Chinese interests on the other. Between 53 per cent and 61 percent of the former have invested in wholly or majority owned companies. These investors are presumably all firms

based in those countries. A much smaller portion of the latter (12% to 28%) have majority shares. Particularly notable, is the large portion of interests in the latter group that hold shares of less than ten per cent. This is the case for over a third of Singapore interests and well over half of Hong Kong and ASEAN-4 interests, and in the latter cases, a very big portion hold shares of one per cent or less. In some instances these small shares appear to be held by firms tied to firms from other countries also investing in the Malaysian company. In others they appear to be individuals, and in the case of listed Malaysian companies, some are institutional investors as well. Hence, some cases, albeit representing a very small portion of equity, are not FDI at all.

Table 7 gives a rough approximation of the levels of technology (see note* to table) of the Malaysian companies in which the other East Asian interests have invested. Japanese and Taiwanese investments are most numerous (43% & 42% of cases) and the largest (60% & 58% of equity + fixed assets) in high and medium-high technology companies in Malaysia. South Korean investments are also numerous (47%) but smaller (19%) in such companies. Not surprisingly, these are the same countries whose firms have the largest portion of controlling shares. Investing firms are most intent on having control of higher technology companies. Level of technology is also one of the factors considered by the Malaysian government in determining the permissible ownership shares of foreign investors. In any case, it also has to be noted that Japanese and Taiwanese firms have a greater propensity to establish wholly or majority owned companies (61% each) than they do to establish high and medium-high technology companies (43% and 42% respectively). By contrast, the overwhelming majority of cases of Singapore, Hong Kong, ASEAN-4, and Chinese investment are in medium-low and low technology companies. With the exception of ASEAN-4, this is consistent with the respective portions of

their investments in the same sectors. The apparently large discrepancy in ASEAN-4 investments (only 23% of cases but 76% of investment in high and medium high technology sectors) is accounted for by a few relatively large investments in chemicals.

Table 7: Interests from Other East Asian Countries in Malaysian Manufacturing Companies by Levels of Technology - 1994

Country	Total	Technology Level* Cases (number / %)						Equity+Fixed Assets (RM bil / %)					
		Hi/Med-Hi		Med-Lo		Lo		Hi/Med-Hi		Med-Lo		Lo	
		No.	%	No.	%	No.	%	RM bil.	%	RM bil.	%	RM bil.	%
Total	1950	629	32	415	21	906	46	12.520	50	3.768	15	8.646	35
Japan	477	207	43	107	22	163	34	7.603	60	1.908	15	3.125	25
South Korea	32	15	47	7	22	10	31	.081	19	.256	61	.085	20
Taiwan	316	132	42	52	16	132	42	1.829	58	.154	5	1.141	37
Singapore	794	197	25	172	22	425	54	2.035	31	1346	20	3.229	49
Hong Kong	252	61	24	53	21	138	55	.717	40	.084	5	.989	55
ASEAN-3	71	16	23	19	27	36	51	255	76	.007	2	.075	22
China	8	1	12	5	62	2	25	-		.013	87	.002	13

Sources: Cases: Malaysian Industrial Development Authority, *Survey of Companies in Production as at 31 December 1994*.

Equity + Fixed Assets: Malaysian Industrial Development Authority, *Statistics on the Manufacturing Sector, 1990-1994*: 18-20. These figures are as at 31 December 1993.

* Hi & Medium-Hi: Electrical/Electronic, Transport Equipment, Chemicals/Petroleum; Medium-Lo: Machinery, Non-Metal Minerals, Rubber/Plastic; Lo: Basic Metals, Fabricated Metals, Food/Beverages, Paper/Printing; Textiles/Garments; Wood/Furniture. This is a very rough classification. Greater refinement would be achieved by basing the classification on sub-sectors. This classification tends to overestimate investments in the Hi/Medium-Hi category and underestimate the rest. It is, however, adequate for showing roughly the differences among the East Asian countries.

Table 8: Investment by Interests from Other East Asian Countries in Malaysian Manufacturing Firms by Industrial Sector, 1995

	T o t a l	E l e c t r i c i t y	E n g i n e e r i n g	T r a n s p o r t	E q u i p m e n t	C h e m i c a l	P e t r o l e u m	M a c h i n e r y	N o n m e t a l	M e t a l	R u b b e r	P l a s t i c	B a s i c	M e t a l l u r g y	F e r r o u s	M e t a l l u r g y	B e r r y	P a p e r	P r i n t i n g	T e x t i l e	G a r m e n t	W o o l	F u r n i t u r e	O t h e r s	
Firms Wholly Owned by Companies from:																									
Japan	185	83	5	11	12	7	14	9	9	3	4	11	7	10											
Taiwan	120	54	1	2	4	1	4	2	13	-	1	12	23	3											
Singapore	115	34	1	4	7	-	9	4	9	12	5	17	5	8											
Hong Kong	29	7	-	2	3	-	5	-	-	1	1	7	2	1											
South Korea	10	5	-	-	1	1	-	-	-	-	-	-	-	-											
ASEAN-3	2	-	-	-	-	-	-	-	-	1	-	-	-	-											
Sub-Total	461	183	7	19	27	9	32	15	31	17	11	47	40	23											
Joint Ventures between Malaysian Companies and Interests from:																									
Singapore	442	41	12	38	8	35	59	8	51	77	22	44	38	9											
Japan	172	32	11	14	13	12	22	15	20	13	1	5	8	6											
Taiwan	125	34	4	6	4	5	22	4	10	4	4	9	16	4											
Hong Kong	67	6	2	5	1	-	7	2	4	8	4	18	8	2											
ASEAN-3	20	1	2	1	2	3	2	1	2	3	-	2	-	-											
South Korea	17	3	-	5	-	2	1	-	1	-	1	1	3	-											
China	4	1	-	-	1	-	1	-	-	1	-	-	-	-											
Sub-Total	847	118	32	69	29	57	114	30	88	106	32	79	73	21											

Joint Ventures between Interests from (and in some but not all cases Malaysian Companies):														
Jap-Tai	13	8	-	-	-	2	-	1	2	-	-	-	-	-
Jap-HK	12	1	1	4	-	2	1	-	1	-	-	-	2	-
Jap-Kor	3	1	-	1	-	-	-	-	-	-	1	-	-	-
Jap-Sin +	64	15	4	6	4	5	5	8	5	3	-	2	5	2
Jap-Sin-HK +	28	6	1	3	1	5	2	2	-	3	2	2	1	-
Sin-HK +	93	4	5	7	2	10	8	4	9	17	2	11	11	3
Sin-Tai +	27	8	2	1	1	3	1	-	2	-	1	2	4	2
Sin-HK-Tai +	7	-	1	1	-	2	1	1	-	-	1	-	-	-
Sin-ASE +	16	1	-	2	-	1	1	2	1	3	1	1	3	-
Sin-Kor	2	-	-	-	-	-	2	-	-	-	-	-	-	-
Tai-HK +	14	3	-	2	-	1	-	-	-	-	2	4	2	-
Tai or HK +	4	-	-	-	-	-	2	-	-	-	-	1	-	1
Sub-Total	283	47	14	27	8	31	23	18	20	26	10	23	28	8
Total E Asia	1591	348	52	115	64	97	169	63	139	149	53	149	141	52
All Firms	3671	511	146	247	140	222	426	116	284	468	164	335	501	111
% E Asia	43	68	36	47	46	44	40	54	49	32	32	44	28	47

Source: MIDA, *Survey of Companies in Production as at 31 December 1994*.

+ May also include investment from other East Asian countries.

Hi / Medium Hi Tech	Medium Lo Tech	Lo Tech
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Table 8 shows investments in firms in three categories: 1/ firms wholly owned by companies from other East Asian countries; 2/ firms that are joint ventures between interests in other East Asian countries (mostly companies, but in some cases individuals) and Malaysian interests (companies, government bodies, nominees, individuals); and 3/ firms that are joint ventures between other East Asian interests (in some cases wholly owned; in others, including Malaysian interests as well). Several things stand out in this table. First, the electrical and electronic sector is unique in two notable regards. About two thirds of all of the firms in that sector have investment from interests in other East Asian countries, while the comparable figures for other sectors range from around one third to one half. Over half of the electrical and electronic firms

with East Asian investment are also shown to be wholly owned by the foreign companies. As will be seen in another context, however, the portion is actually higher than indicated owing to a number of joint ventures that are wholly owned by Japanese companies and their regional affiliates. In any case, wholly owned companies do not constitute anywhere near this large a share in any other sector. Again, this reflects the relationship between technology level and the imperative for control. A number of the joint ventures between Japanese companies and ANICs, especially Singapore, and some joint ventures between ANICs reflect Japanese TNCs' 'multilayering' strategy. Some joint ventures that bring together combinations of Singapore, Hong Kong, Taiwan and/or ASEAN-4 interests also no doubt reflect Sino-Capitalist networks.

As ANIC firms have become larger investors in Malaysia, they have entered into relatively more formal technology transfer agreements in the country. **Table 9** shows technology agreements by source from 1975 through July 1996, and it can be seen those involving ANIC firms have increased since 1990. Since that time, the number of ANIC and ASEAN-3 agreements have exceeded those entered into by U.S. based firms and have been catching up with those by European firms. Their number is, however, only about a quarter of the number by Japanese firms. To some extent these portions reflect relative propensity to enter into joint ventures (that of the U.S. being lower than that of Japan or the ANICs). In any case, referring back to **Table 5**, it is clear that the portion of Japanese agreements in the most recent period well exceeds the portion of Japanese investment stock (54% & 33% respectively), and that the reverse is true for the ANIC plus ASEAN-3 agreements (15% & 31%). The foregoing difference between Japanese and ANIC firms reflects several things. One is the already noted proportionally larger number of Japanese firms in higher technology sectors, where such agreements are more prevalent. Another is the generally lower level of technology of many ANIC firms relative to

Japanese firms even in the latter sectors. Still another is the difference in the extent to which Japanese and ANIC firms are central to expanding production networks, because technology agreements are very much part of such networking. A great many agreements are actually between TNCs and their local affiliates rather than with Malaysian companies, though the portion varies greatly from sector to sector (e.g., about 90% in electronics and only 10% in motor vehicles). And, as noted, licensing technology is one on the ways in which otherwise independent local firms are integrated into production networks. As many as 50 per cent of the technology agreements in the motor vehicle sector are, for example, between foreign and wholly owned Malaysian companies supplying the sector (the remaining 40% are in joint ventures between foreign and Malaysian companies). The small but still notable difference between the number of agreements entered into by Korean and the other ANIC firms also probably reflect some of these same kind of differences.

Table 9: Malaysian Technology Agreements by Source, 1975 - 7/1996

Country	1975-1979	%	1980-1984	%	1985-1989	%	1990-1994	%	1995-7/96	%
East Asia	124	39.7	247	41.9	305	45.1	495	60.5	123	69.1
Japan	103	32.9	185	31.4	249	6.8	403	49.3	97	54.5
South Korea	2	.6	12	2.0	8	1.2	31	3.8	11	6.2
Taiwan*	-	-	-	-	-	-	21	2.6	3	1.7
Singapore	10	3.2	27	4.6	16	.4	20	2.4	6	3.4
Hong Kong	9	2.9	23	3.9	32	4.7	16	2.0	4	2.2
ASEAN-3*	-	-	-	-	-	-	4	.5	2	1.1
Europe	82	26.2	135	22.9	147	21.7	162	19.8	29	16.3
US	28	8.9	65	11.0	82	12.1	100	12.2	21	11.8
Other	79	25.2	142	24.1	143	21.1	61	7.5	5	2.8
Total	313	100.0	589	100.0	677	100.0	818	100.0	178	100.0

Source: 1975-89: Ministry of International Trade and Industry, Malaysia, cited in Anuwar Ali, *Malaysia's Industrialization: The Quest for Technology*, p. 85.
1990-96: Malaysian Industrial Development Authority.

* Figures for Taiwan and ASEAN-3 not available for 1975-89, and any agreements with either during those years would be included in Other.

4. Complexity and Hierarchy in the Regional Division of Labor

The foregoing developments raise far more questions than can be answered here. Are the advent of NIC and ASEAN-4 based FDI and the increasing numbers of local suppliers being incorporated into regional production networks creating a more diverse and decentralized regional division of labor? Is power becoming more broadly dispersed within the emergent structure of regionalism. Do the trends described tend to cut across the hierarchical relationships in existing production networks and/or to create more competition among proliferating production networks? If so, will a more pluralistic, balanced and competitive environment improve the industrialization prospects of some or all of the ASEAN states? Will it, for example, feature conditions more favorable to the improvement of technological capacities by local firms? Will a more diverse and more competitive region offer more alternative sources of capital and technology and more channels of access to markets, conditions that could improve the bargaining leverage of regional firms and states? Will ANIC based TNCs be any more likely than Japanese TNCs willingly to facilitate the industrial advance of firms and states in the tier behind them or will they form an additional line of resistance, and if so, will the latter firms and states have greater bargaining leverage with them?

The place to begin an inquiry into these issues is with the question of the extent to which the regional division of labor is in fact becoming more pluralistic and less hierarchical as it becomes more complex. The FDI figures do not give an accurate picture, because while some investment is autonomous, much is proxy for or dependent on investment by a firm based in a third, more advanced, country. Of concern here is Japan proxy of dependent investment. These distinctions rest on the origins of investment decisions and on various types of dependence (e.g., capital, technological, market). The three types of

local nodes. Japanese TNCs are, of course, not the only ones that organize their operations in this manner. Motorola Malaysia Sdn. Bhd. (semiconductor components) and Motorola (M) Sdn. Bhd. (semiconductors) appear on the record as 100 per cent Hong Kong owned. Clearly, this kind of investment has to be understood in terms of TNC strategies, and the Japanese TNCs are preeminent in this regard.

There is a large measure of personalism in inter-business, inter-governmental and business-government relationships in the ANICs and in Southeast Asia. While personalism is also prevalent in Japan, the highly bureaucratized nature of big Japanese corporations and the difficulties that many Japanese have in operating outside their own linguistic orbit can reduce the effectiveness of Japanese businesses elsewhere in the region. For these reasons, Japanese firms sometimes rely on local partners to take the lead in overseas investment in the region. For example, Ulbon Bhd. is Malaysia's leading producer of high tensile steel rods used in pre-stressed concrete (PC) construction piles and power transmission poles. Neturen, a Japanese firm, holds a minority interest in Ulbon and similar manufacturing firms in Korea and Taiwan and exclusive rights to the technology used in hardening the steel rods. Neturen, wanting to set up a PC plant in China last year that would use this technology, decided that Ulbon should take the lead in setting up the China venture. Ulbon's Japanese Managing Director explained to the Malaysian press: "For political reasons, the Taiwanese concern may not be able to play a vital role while Malaysia has the advantage over South Korea and Japan in terms of language. For this reason, the venture into the Chinese market will be led by the Malaysian party" (*New Straits Times*, 1996). Following a similar strategy, Mitsubishi Motors Corp (MMC) has formed a joint venture with its Taiwan affiliate, China Motor Corp, and a Chinese automaker to assemble vans in

Fujian, with the engines, transmissions and other key parts coming from Mitsubishi. MMC's stated aim is to take advantage of China Motors' "cultural familiarity with Fujian." (*The Nikkei Weekly*, 1996a). Additional Japanese TNCs are expected to follow the same practice.

On similar logic but for somewhat different reasons, Mitsubishi Motors formed a joint venture (Vinastar) with a Vietnamese state firm and Proton, Malaysia's national car company, in 1994 to assemble small busses and trucks in Vietnam. MMC is part owner of and supplies parts and technology to Proton. While happy to be included in this project and to take a 25 per cent share, Proton was not involved in planning it. It was rather part of Mitsubishi Corporation's 1993 Comprehensive Master Plan for the Automotive Industry drawn up for presentation to the government of Vietnam. At the time, the Mitsubishi Managing Director said his firm was in "an advantageous position to enter the Vietnamese market compared with other Japanese automakers because of a decade-old cooperative tie with Proton...(W)e benefited from the close ties between Vietnam and Malaysia" (*The Japan Times*, 1994). Proton's input on its own experience with Mitsubishi was helpful to Mitsubishi in the Vietnamese government's licensing process. Presumably this is one of the reasons that Proton was included in Vinastar. In any case, the firm is assembling CKDs which contain many components that are either directly or indirectly of Japanese origin. The foregoing cases represent Malaysian and Taiwanese FDI, but are examples of proxy investment based on special characteristics of the local firms. While no doubt advantageous to the Malaysian and Taiwanese partners, one result is 'deepening' of the Japan centered regional division of labor.

4.2 *Dependent Investment: Some Examples*

Proxy investment is relatively easy to identify because it can be determined by the origin of the investment decision. It can, for example, simply be assumed in the many cases of investment by wholly owned subsidiaries. Dependent investment can be more difficult to identify, as there are different types and degrees of dependence. A firm may be dependent to various degrees on one or more other firms for capital, technology, a market, materials and supplies, or some combination of these. Moreover, the distinction between proxy and dependent investment may be blurred in cases where dependent firms are making their own investment decisions in response to being "asked" to relocate by a TNC they do subcontract work for or in a context where following such a TNC when it relocates is the only reasonable "choice." In any case, the most important distinction is between proxy and dependent investment on the one hand and autonomous investment on the other. ANIC and ASEAN-4 firm's Japanese proxy or dependent investment, to varying degrees, extends and consolidates Japanese corporate production networks in East Asia, while the bigger share of their autonomous investment, being primarily in smaller and lower technology undertakings, does little to disperse power within it.

In many cases, even the most advanced Korean and Taiwanese TNCs remain quite dependent on imported Japanese and, to a lesser extent, American technology. According to Bloom, Korean TNCs Samsung and Lucky Goldstar, which have several regional production facilities in Southeast Asia, became "global companies as a by-product of the role they came to play in the globalization of Japanese companies and in the counter-strategies of American companies in their own competition with the Japanese" (1993: 120). This process started when Samsung was involved in joint ventures with NEC and Sanyo and Goldstar with NEC and Alps Electric. When the Japanese partners

later withdrew from these joint ventures, they entered technology licensing and OEM agreements with the latter. Both companies are still "tied to a system in which they are either producing as a proxy for Japanese companies...or helping American companies compete against the Japanese. Even where overseas sales are on an own name basis, Japanese companies benefit from supplying the higher value-added components" (1993: 125).

Korean high technology industry also remains quite import dependent. Yu says that "the critical parts and components...as well as the manufacturing equipment and facilities necessary for the manufacture of...(high tech)...products are still imported, mostly from Japan. This is shown in trade statistics—the more high-tech products Korea exports, the more it has to import from Japan" (1995: 97). Indicative of the import dependence of Korean electronics firms, for example, is a 1993 Bank of Korea study showing that only 38 per cent of the value of semiconductors was added in Korea (cited by Bernard & Ravenhill, 1995: 191). Such import dependence on higher technology components, many of them from Japan, is also characteristic of Taiwanese firms. Indeed, 90 percent of Taiwan's imports from Japan, are parts and components for manufactured products and machinery to make them with. Bernard found that while Taiwanese firms accounted for 39 per cent of world computer monitor production in 1991, "...the key component, the cathode ray tube, is procured exclusively from Japanese suppliers, and these tubes represent between 30 and 35 per cent of the cost of a monitor" (Bernard & Ravenhill, 1995: 193). These are problems that the governments and leading firms of both countries are working very hard to overcome, but this remains a long term project. In any case, when such firms set up production facilities in Southeast Asia, which in turn must rely on Japanese parts and components or Korean components with substantial Japanese content, they also serve to extend Japan-centered production networks.

A 1993 study conducted by the Singapore Institute of Policy Studies of the overseas investments of 14 manufacturing companies that were wholly or majority owned by Singapore citizens or permanent residents also offers several good examples of dependent investment (Lee, 1994). In several cases based primarily on market dependence, companies that had been supplying Japanese TNCs in Singapore followed them to neighboring ASEAN countries. Amtek Engineering Ltd., a maker of precision metal parts, for example, had set up two subsidiaries in Selangor and near Penang and was planning to set up a third in Johor, all in Malaysia, primarily to sell to Japanese electronics firms now located here (1994: 12-16). In other cases, firms producing on an OEM basis for corporations in Japan, have relocated to Malaysia to take advantage of lower production costs here. Material Handling Engineering Ltd. has set up two factories in the Shah Alam, Malaysia industrial estate (1994: 57-61). One produces press bearings and press wheels, 80 per cent of which go directly to Japan on an OEM basis from Malaysia instead of Singapore. These investments originate with Singaporean firms and shows up in the statistics as Singaporean FDI, but it tends to extend and consolidate rather than cut across the Japan centered regional division of labor. This is all the more so in cases in which such firms are dependent on Japanese technology and supplies of intermediate goods in addition to their dependence on sales to Japanese TNCs.

In addition to its aforementioned involvement in truck and bus assembly in Vietnam, Malaysia's Proton entered into a joint auto assembly venture in the Philippines in 1994. Indicative of the importance of personal ties in Southeast Asian government and business affairs, the initial steps on this were taken by Malaysian Prime Minister, Dr. Mahathir, and Philippine President Ramos during exchanges of official visits. President Ramos ordered relaxation of his country's restrictive national car development program to make the project possible. The plant has been located in Pangasinan some 200 kilometers north of Manila,

Ramos' home province. Mitsubishi, which assembles cars on its own in the Philippines, was displeased with this move, as it has been with several previous independent initiatives taken by Proton (most notably exporting to Great Britain), but could not stop it. Mitsubishi has no capital stake in Proton Pilipinas, which is a joint venture between Proton and well-connected private firms in Malaysia and the Philippines. Nonetheless, it is assembling CKDs with significant Japanese content. This Proton venture is structurally different from the one in Vietnam and could possibly result in more long term benefits for Malaysia, but for the time being, owing to the dependence on Mitsubishi technology and components, this venture also extends the Japan centered division of labor in the motor vehicle sector.

5. Conclusions: Hierarchy, Regionalism and Industrial Development

What do the developments outlined to this point promise for the evolution of East Asian regionalism and industrial advance for countries in lower tiers of the regional division of labor? As indicated earlier, these matters are closely related because global trends impact individual countries through regional structures. How this happens is related to the character of and prospects for specific countries' industrial and, more broadly, national development. At the same time, the evaluation within specific countries of the connections between involvement in regional structures and industrial and national development are related to whether a regional sense emerges and expands among or meets rejection by key actors and publics. Only if regionalizing tendencies come to be seen as advancing national aspirations will they foster positive regional sentiment.

5.1 *Hierarchy and Regionalism*

As shown, despite the advent of new regional sources of FDI, the division of labor remains largely hierarchical. This is inevitable in corporate organization, which is what makes Japanese TNCs unsuitable candidates to be the nearly exclusive instruments for advancing regionalism. It is often noted that Japan's regional leadership potential is limited by its lack of an attractive idea or vision. Despite some emphasis on cultural ties, Japan's regional approach has placed overwhelming emphasis on celebrating a Japanese corporation centered regional division of labor to its neighbors, and, even if described benignly as 'cooperation' in 'work sharing,' this cannot be such an idea. A durable regionalism requires significant elements of community. It may be objected that the growth of any form of regionalism means diminished autonomy for national actors. What ultimately determines the acceptability of this fact is whether autonomy is lost primarily as a result of being assigned a lower station in a hierarchy or whether it is bargained away in more balanced process of building a community. The kind of 'cooperation' that exists between corporations and their subsidiaries and suppliers does not contain the levels of voluntarism and give and take required to insure acceptable measures of community.

To the extent that the division of labor contains elements of community, they are based on very narrow economic interests. This is to be expected in the commercial realm, and it is apparently more widely acceptable under current conditions. These include high growth rates and relatively stable national politics across the region. In most cases, current growth rates and stability both depend, among other things, on regime containment or co-optation of sectors of labor directly participant in the emergent regional production networks. It is not farfetched to imagine such conditions changing. Additionally, regional

production networks are still in relatively early stages of development. As they expand and become more elaborate the ways in which they limit national autonomy and distribute costs and benefits are likely to become more apparent, and these are less likely to be palatable if the foregoing conditions change. In the long run then, a widely acceptable mix of hierarchy and community is unlikely to be found in an approach to regionalism that gives overwhelming emphasis to the division of labor as its centerpiece. Whether formalizing regional arrangements along EAEC or any other lines would be a step ahead would depend largely on whether or not such arrangements promised to reduce existing power symmetries in even small ways or simply to reinforce them. With or without formal arrangements, the advance of a widely acceptable East Asian regionalism would also, among other things, require a much more balanced approach by Japan to its neighbors.

5.2 *Hierarchy and Industrial Development*

Wide dispersal of production sites in an hierarchically organized production network does not translate into a commensurately wide dispersal of the economic benefits of production either between countries or within them. Such benefits are determined primarily by where value is added and how it is shared. These questions are continuously at issue between countries at different levels in the regional and global division of labour as those below seek to move up and those on top seek to stay there. They are regularly joined in negotiations over such matters as localization, technology transfer, exports, taxation, regulation, and market access. The enormous asymmetry of economic power between Japan and its neighbors means that the results of such negotiations for regional states are often acceptance of benefits that are largely concessions granted on Japanese corporate terms or extracted only after

extremely hard bargaining. This problem is compounded by the fact that the Japanese corporate system into which its neighbors are increasingly integrated is undergoing changes that work to the detriment of its less powerful participants. The seriousness of the long slump in Japan is altering corporate practices in ways that will be to the permanent disadvantage of small and medium sized industries that act as suppliers (and which have, in any case, normally taken the brunt of economic downturns) and many employees. This is reflected in Japanese corporate operations at home and overseas.

One of Japanese TNCs' purposes in building and extending global and regional production networks has been to enhance operational flexibility in order to protect themselves from unfavorable international economic currents, most recently, the high yen. Just as these firms shifted production to Southeast Asia in response to yen appreciation, they have recently shifted some of it home as the yen has weakened. For example, Kyushu Matsushita Electric Co. (KMEC) transferred production of one of its popular personal fax machines from Japan to Johor when the yen reached 90 to one US dollar in spring 1995 and then began moving it back to Japan in early 1996 when the yen fell to 110 to one US dollar. For the same reason, Hitachi Maxell has returned VC tape production from Melaka to Japan. A company manager explained, "it is our policy to determine how much to produce overseas and to buy imported parts according to foreign exchange rates and other conditions at the time" (*The Nikkei Weekly*, 1996b). Similarly, this kind of flexibility makes it possible readily to shift production facilities for other reasons. Aiwa, for example, which made 90 per cent of its mini-stereo systems in Malaysia until 1995, now makes 70 per cent of them in Japan. They made this shift because they needed new key parts, developed by Sony and Sharp, which were available only in Japan and it was more cost effective to produce near the source (FEER, 1996). While this repatriation to Japan of regional production facilities has yet to become

widespread, as the Nikkei put it, in giving evidence of this capacity "...the power of (the Japanese production) system is being demonstrated as the yen moves (down)" (*The Nikkei Weekly*, 1996b). This kind of flexibility clearly enhances the relative power of those who make the decisions about location of production facilities in relation to those who host them.

The boundaries within which much of the industrial development of East Asian states takes place, are carefully tended by Japanese TNCs. The extent to which this is so, of course, varies from country to country. The capacity of individual states and firms in the lower tiers of the regional division of labor to make effective use of technology has a major bearing on their prospects for industrial development (See Evans, 1995). It also varies from sector to sector. In any case, boundary maintenance is for the most part simply a consequence of the business strategies Japanese firms employ in expanding and deepening their regional production networks. Japanese firms may at times adjust boundaries for their own reasons, but when states or firms in lower tiers of the regional division of labor push or challenge them, Japanese firms are very likely to attempt to maintain them. This does not always work, as Proton's export program and move to the Philippines demonstrates. Nonetheless, Japanese control over the flow of technology and the conditions under which it is used by their neighbors is the central mechanism for maintaining these boundaries. This is why so many NIC and ASEAN firms are technologically dependent on Japan and, hence, one of the reasons that growing complexity in the regional division of labor has not translated directly into greater pluralization and erosion of hierarchy.

M. Taylor argues that the "Japanese have long taken a strategic approach to technology transfer (and that their) firms now dominate (Southeast Asian) economies through strategic control of technology" (1995: 14) He reminds us that the edge Japan currently enjoys in some industries was to a large

extent created with technology purchased from American firms, and contends that Japan "is determined not to repeat American mistakes. Fearful of initiating a similar competitive backlash, Japanese firms currently investing in Southeast Asia focus on market penetration and the control of outward flows of technology" He says that "Japanese firms have been careful to retain control over their vital know-how when doing business in developing countries" and lists some of the methods they use for limiting technology flows in joint ventures. He says that such ventures' capital dependence and the fact that Japanese expatriates retain control of key managerial and technical positions keeps "decisions about technology in Japanese hands...(so that) decisions regarding the amount and type of technology transferred depend on the Japanese headquarters' global strategies, not on local interests." He maintains that because local employees are not trained for higher level positions, they do not develop the capacity to implement technology independently. He further argues that "Japan's relatively closed markets prevent Southeast Asian high-technology firms from earning the profits required for further technology transfer and from building the customer bases necessary for economies of scale" (15-17). Much more direct forms of resistance to the independent technological advance of other regional states—such as dumping products that others have finally succeeded in localizing, arbitrary application of standards, fragmentation of production processes, and manipulative pricing practices—should be added to this list.

The degree to which technology flows to the rest of Asia are shaped and limited by Japanese TNCs larger strategies is suggested by a 1994 Long Term Credit Bank of Japan (LTCB) survey. They asked whether increasing production overseas would weaken Japan's technological edge, and concluded that it would not. A survey of 101 major Japanese manufacturers, showed that most overseas operations mass produce "general-purpose products...(and that)

most companies continue to do prototype production and mass-production of newly developed products in Japan." Fifty five per cent of the respondents said they "expect to move their general-purpose product manufacturing abroad within three years." Asked what operations have to stay in Japan: 87 per cent said basic research; 72 per cent, applied research; 51 per cent, prototype production; and 48 percent, design and development. Firms in the general survey predicted that 22 per cent of their US and European operations but only six per cent of their Asian operations would take over basic design for more than half of their products within three years. With respect to planned development and improvement of production technology, respondents were asked to pick from three options: 1/ increase technological development in Japan and transfer know-how abroad; 2/ have Japanese engineers perform technological development at production sites abroad; c/ have local engineers perform technological development at production sites abroad. The response ratios in the order of the three options were 3:3:2 for US and European operations and 4:2:1 for Asian operations (*The Nikkei Weekly*, 1995b).

The LTCB analyst concluded that it "seems inevitable that some R&D work will be shifted abroad in the future, (b)ut the amount of research activity...(in Asia will)...be limited. Some design modification and development or improvement of production technologies that fall short of major technological innovation will probably be performed in Asia" (*The Nikkei Weekly*, 1995b). What is, however, being shifted to other East Asian countries is a share of the costs of the key R&D work that will remain in Japan and that will perpetuate the latter's technological dependence. It has been reported that "to fund domestic R&D, manufacturers have begun tapping overseas subsidiaries for greater dividend payments, raising transfer prices and taking other measures to bring profits back home" They are also said to be tapping

"royalty income from technology transfers to overseas bases" for the same purpose (*The Nikkei Weekly*, 1994).

Felker and Weiss (1995) offer an analysis of technological trajectories that helps in understanding the problem faced by countries in the lower tiers of the regional division of labor. They define technology development strategies by the relative weights assigned to three dimensions of technological development: 1/ deepening (moving from production capabilities to process or product innovation capabilities and eventually to research capabilities); 2/ indigenization (degree to which indigenous personnel have mastered technology); and 3/ proximity to the frontier (distance of a specific technology from the most productive or sophisticated one available). (1995: 386-389). They argue that progress along one dimension is likely to be at the expense of progress along another and that the "key strategic imperative facing developing-country governments...is to minimize the trade-offs between these dimensions over time" (1995: 394). It is progress in deepening and indigenization that builds the underpinnings for secure and self-sustaining industrial advance. Technologically dependent firms may, however, more easily approach the frontier in partnership with more advanced foreign firms than develop the capacities to get close to it on their own.

Morris-Suzuki (1992) argues that the specialization dictated by the requirements of transnational networked production limits the possibilities for modifying and adapting technology to local needs and does little to stimulate innovation, processes that facilitate deepening. Another consequence is "a widening gap between modern factories using imported technologies and small firms in traditional areas of manufacturing" (1992: 145). Hence the development of backward linkages is often based on tie-ups between local and Japanese firms or outright relocation of Japanese suppliers rather than

indigenization. This both perpetuates technological dependence and further extends the Japan centered regional division of labor. Some highly innovative studies in the electronics sector in Malaysia might appear to refute this argument, as they show technological advancement among Malaysian firms as a result of their subcontracting work for TNCs. Rashiah (1994) shows that local machine-tool makers advanced technologically as a result of working with the TNCs in his survey. The one Japanese TNC (six were North American) included in his study, however, used its own machine-tools and was thus an exception to his findings. In a more extensive survey, Ismail (1995) finds local suppliers to have benefited technologically from their ties to TNCs. While he does not systematically compare results for links with TNCs based in different countries, he makes a number of observations, that qualify his conclusions insofar as ties with Japanese TNCs are concerned. For example, he finds Japanese TNCs less inclined to procure locally than American and European firms. He thinks that this is because the American and European TNCs tend to have Malaysian-Chinese purchasing managers with personal ties to local suppliers, while Japanese TNCs tend to have Japanese expatriate purchasing managers (1995: 129-30). This explanation will not do. Japanese TNC personnel assignments and procurement practices are based on policies intended to maintain network boundaries. If Japanese firms were interested in local sourcing in these cases, they would also hire Chinese-Malaysian purchasing managers if they thought it advantageous.

To understand how hierarchy in the division of labor is maintained and how it is eroded, when it is, it is necessary to focus on the activities at this boundary. These are primarily interactions between Japanese TNCs and local firms and governments related to the expansion of production networks. The most important of these concern the terms and conditions under which wholly owned and joint venture firms are established and financed, the content of

technology agreements, and arrangements for sourcing and marketing. Of particular interest in assessing prospects for change are identification of cases in which challenges are made to established boundaries by local firms and governments and determination of conditions that shape the outcomes. Among the most important of these conditions is the bargaining leverage of local firms and governments with Japanese TNCs. Leaders of states and firms seeking to improve their position in the international division of labor need to be aware of these realities, to cooperate among themselves to devise common strategies for advancement, and to seek leverage wherever they can find it if they are to strike the best deal they can under such circumstances. In any case, it is partly because such leverage is likely to be enhanced when Japanese firms face strenuous competition that the question of dispersal of power in the regional division of labor will remain important for the foreseeable future.

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