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A NEW INTERNATIONAL INDUSTRIAL ORDER II: *

Incorporation or marginality for developing countries?

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The increased international competition in global economic relations has resulted in the fact that developing countries now receive fewer preferences from and, at the same time, have to compete on harsher terms with the OECD countries. Only a relatively small group of developing countries are in a position to do so. They could be incorporated into the new international industrial order.

Experience has shown that the few developing countries which are in the process of incorporation have done so through a combination of <u>design</u> and <u>good fortune</u>. The incorporation of developing countries into the new international industrial order requires the coincidence of at least three factors. First, the economic policies of the developing country must be clear and coherent and provide a stable environment for all concerned. Second, the comparative advantages of the developing country in terms of natural resources, wage levels or human capital must coincide with the corporate strategies of major transnational corporations. Third, the framework of the new international industrial order, as manifest in the rules of the game drawn up by the Triad members of the OECD (IMF orthodoxy, GATT membership, etc.), must facilitate the entry of the developing country. The coincidence of these three factors requires not only a well thought out plan by aspiring new entrants and good will by the major players, it also must be accompanied by a significant degree of good luck. In this context, it would appear that the vast majority of developing countries face further marginality.

This paper will focus on the great contrast of the post war period in terms of the incorporation of developing countries, that is, the very distinct experiences of the developing Asia and Latin American regions. Many Asian countries, such as the newly industrializing countries (Hong Kong, Singapore, Taiwan and South Korea) the ASIAN 4 (Thailand, Malaysia, Indonesia, and the Philippines) and even, to an extent, China, are often viewed as examples of successful adaptation to changing circumstances. The nature of their industrialization processes, as manifest in accelerated growth of output, trade and, more recently, foreign investment, demonstrates central aspects of their incorporation into the new international industrial order. As a point of departure, well-designed and practical export-oriented growth and industrial policies in these countries proved convenient to labour-seeking TNCs, especially Japanese ones, and this coincided with the explosion of world trade facilitated by the GATT framework during the 1960s and 70s. Many of these countries came to be considered developing country copies of the successful Japanese experience.

The industrialization processes of Latin American countries were viewed as less successful, even though they started earlier, especially since the debt crisis produced the 'lost decade' of the 1980s when growth and investment nosedived. Generally, economic and industrial policy in the region had been centered on the substitution of industrial imports and was accompanied by low levels of exports of manufactures and

plagued by problems of relative inefficiency. These policies historically were attractive to some TNCs, especially US ones1/, which sought to maintain former export sales in what became very protected markets; however, this did not facilitate the incorporation of these countries into the existing industrial order. The Latin American operations of TNCs generally served local markets and did not form an important part of any regional sourcing network or export platform for any of the principal OECD countries. Foreign exchange shortfall was a constant constraint on this industrialization process and most governments as a result developed a defensive stance in respect of foreign investment during the 1970s. This situation changed radically due to of the debt crisis and, following the implementation of stabilization policies, more liberal approaches to trade and investment became prevalent. None the less, the international trade and investment framework was no longer as supportive for prospective new entrants.2/ Any major alteration in the nature and degree of the incorporation of Latin America into the new international industrial order is not as yet readily apparent.

The Asian experience can be interpreted in a conceptual framework very similar to that of Porter/Ozawa discussed elsewhere.3/ The "flying wild geese" scheme envisions growth and technological progress in Asia in terms of the arrow shaped pattern of migrating waterfowl. The idea in essence is that there exists a lead-goose which is more advanced and gives direction to the flock. That role is played by Japanese industry which is more technologically-sophisticated and which, during the innovation-driven stage of competitive development, to use Porter's terminology, spins off investment-driven industries, such as some intermediate and capital goods, to the more advanced developing countries of the region in similar fashion as it did previously with labour-intensive manufacturing as it left the factor-driven stage of competitive development. In this sense, the Asian newly industrialized countries (NICs) take up positions in the flying geese pattern immediately behind Japan. The ASIAN 4 follow and enter the labour-intensive manufacturing activities spun off in turn by the Asian NICs. China might be considered to be further back in the pack picking up the most labour-intensive and least technologically-demanding of assembly operations left behind by more advanced members of the flock. As can be appreciated the operational element of this scheme is the process of learning associated with technological development, which begins with the original technology transfer and passes through several progressive stages (assimilation, absorption, difussion, adaptation, institutionalization, generation and innovation) until the original technology is again transferred, this time by the recipient to a relatively less technologically-advanced country. Several countries of developing Asia have been particular astute at using export processing zones to access foreign technologies. This kind of scheme produces useful insights into the changes taking place in global trade and investment flows and, thereby, throws light on the nature of developing country incorporation into the new international industrial order.

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i) Tendencies in International Trade: gains for Asian NICs

It would appear that developing countries, as a group, have been making headway in terms of breaking into international trade flows of manufactures. As Table 1 indicates, developing countries as a group have raised their share of world trade of manufactures

from under 13 percent in 1966 to over 19 percent in 1989. A closer examination of those figures demonstrates that the gains are highly concentrated in <u>a handful of Asian NICs</u>. Exports of manufactures from Africa have declined so severely that they are now marginal to world trade. Exports of manufactures from Latin America have fallen from 5 percent of world trade in 1966 (then, higher than the developing countries of Asia) to less than 4 percent in 1989. At the same time, the exports of manufactures from Asia have shot from under 4 percent in 1966 to over 12 percent in 1989. The gains are concentrated in just four Asian 'tigers'--Republic of Korea and the Chinese exporters: Taiwan, Hong Kong and Singapore--while two other Asian countries (Malaysia and Thailand) have also registered major advances. Much less dramatic gains were compiled in Latin America by Mexico and Brazil. All in all, the advances in the export of manufactures from developing countries is highly concentrated in a small group of fortunate ones, while the majority seem to have become progressively more marginalized from international trade in manufactures. The export gains of these Asian developing countries were concentrated primarily in the US and the developing Asian markets, although gains were also attained in the European and Japanese markets.

Tables 2 through 4 assist in highlighting differences in the nature and dimension of the industrialization processes in the two regions, at least in so far as their external projection via exports is concerned. Table 2 indicates that one of the few industries that developing countries have been able to penetrate to an important degree is that of electrical machinery and electronic equipment (hereafter, shortened to electrical equipment). The developing country share of this rapidly expanding market exploded from 3 to over 23 percent between 1966 and 1989, demonstrating what developing countries are capable of, if given the opportunity. In this case, they took advantage of the microelectronics revolution to break into the international market. A close examination of the data contained in Table 2 indicates, never the less, that this success was almost completely centered on the Asian region especially the Asian NICs. Effectively, this all-important explosion of foreign trade

Table 1

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EXPORTS OF ALL MANUFACTURES, BY AREA, SELECTED YEARS, 1966-89

		Millions	Millions of dollars				Percentage	tage		
	1966	1977	1982	1986	1989	1966	1977	1982	1986	1989
I. All available reporters	136 931	804 694	1 262 265	1 545 436	2 310 440	100.0	100.0	100.0	100.0	100.0
a) Industrial economies	117 841	625 626	988 602	1 275 930	1 848 410	86.1	77.8	78.3	82.6	80.0
b) Developing countries economies	17 339	133 012	209 324	260 667	443 606	12.7	16.5	16.6	16.9	19.2
i) Asia	4 839	50 035	107 547	147 843	294 385	3.5	6.2	8.5	9.6	12.7
Taiwan	328	8 887	21 469	38 051	64 274	0.2	1.1	1.7	2.5	2.8
Korea	183	9 027	20 807	33 272	60 182	0.1	1.3	1.6	2.2	2.6
Hong Kong	988	7 383	13 412	19 260	28 063	0.7	0.9	1.1	1.3	1.2
Singapore	677	6 284	17 282	19 675	41 856	0.5	0.8	1.4	1.3	1.9
Malaysia	495	3 399	7 413	9 130	18 906	0.4	0.4	0.6	9.0	0.8
Thailand	322	2 124	4 391	6 258	16 096	0.2	0.3	0.3	0.4	0.7
Philippines	345	1 987	2 897	2 876	л.а.	0.3	0.2	0.2	0.2	n.a.
ii) Latin America	078 9	35 004	20 174	61 291	80 440	5.0	4.4	4.0		
Brazil	1 256	9 100	16 317	19 986	28 797	0.9	1.1	1.3	1.3	1.2
Mexico	538	2 701	11 196	14 129	16 665	0.4	0.3	0.9	0.9	0.7
Argentina	904	3 374	4 600	4 331	2 469	0.7	0.4	7.0	0.3	0.3
Colombia	435	2 144	2 569	4 213	4 084	0.3	0.3	0.2	0.3	0.2
Chile	718	1 812	2 800	2 931	6 138	0.5	0.2	0.2	0.2	0.2
iii) Africa	1 750	16 954	10 462	6 204	1 463	1.3	2.1	0.8	0.4	0.1
iv) All Other	1 750	46 056	64 339	8 839	18 424	1.3	5.7	5.1	0.6	0.8

Source: United Nations Statistical Office, COMTRADE, data retrieved on 10 August 1992.

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EXPORTS OF ELECTRICAL MACHINERY AND ELECTRONIC EQUIPMENT (ISIC 383), BY AREA, SELECTED YEARS, 1966-1989

Table 2

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(thousands of dollars and percentage)

Reporter	1966	1977	1982	1986	1989	1966	1977	1982	1986	1989
Industrial market economies	7 752 113	52 300 152	84 537 157	127 791 463	190 625 899	96.9	88.8	84.0	81.1	76.7
All developing countries	241 075	6 510 324	15 521 840	29 261 488	57 686 399	3.0	11.0	15.4	18.6	23.2
i) Asia	126 700	5 239 741	12 728 830	23 584 278	51 755 667	1.6	8.9	12.6	15.0	20.8
Tai⊭an	9 364	1 440 862	3 287 763	5 826 285	11 844 041	0.1	2.4	3.3	3.7	4.8
Korea	2 093	1 028 720	2 267 693	5 941 321	13 200 572	0.1	1.7	2.3	3.8	5.3
Hong Kong	81 228	1 050 573	1 761 484	2 853 126	4 407 157	1.0	1.8	1.7	1.8	1.8
Singapore	19 212	1 168 566	3 078 675	4 721 972	10 715 211	0.2	2.0	3.1	3.0	4.3
Malaysia	2 518	333 442	1 592 640	2 987 568	6 787 479	0.0	0.6	1.6	1.9	2.7
Thailand	577	63 594	316 284	703 275	1 812 498	0.0	0.1	0.3	0.5	0.7
Philippines	-	26 873	121 532	344 105	n.a.	0.0	0.0	0.1	0.2	n.a.
ii) Latin America	21 810	¢63 263	249 100	3 046 940	1 991 702	0.3	0.8	0.7	1.9	0.8
Brazil	5 099	289 259	427 731	761 328	1 049 994	0.1	0.5	0.4	0.5	9.0
Mexíco	9 001	65 660	74 413	2 014 545	717 873	0.1	0.1	0.1	1.2	0.3
Argentina	2 923	40 072	45 850	48 669	63 635	0.0	0.1	0.0	0.0	0.0
Col ombia	883	8 088	22 872	12 339	23 651	0.0	0.0	0.0	0.0	0.0
Chile	3 864	5 062	11 584	3 692	5 945	0.0	0.0	0.0	0.0	0.0
iii) Africa	2 152	69 512	71 246	41 023	13 247	0.0	0 . 1	0.1	0.0	0.0
All other	3 600	117 870	646 523	593 013	687 789	0.0	0.2	0.6	0.4	0.0
Available reporters	7 996 788	58 928 415	100 705 520	157 646 193	248 428 483	100.0	100.0	100.0	100.0	100.0
Source: United Nations Statistical Of	Statistical Off	ice, COMTRADE,	fice, COMTRADE, data retrieved 10 August 1992	10 August 1992						

Table 3

EXPORTS OF NON ELECTRICAL MACHINERY (ISIC 382), BY AREA, SELECTED YEARS, 1966-1989 (thousands of dollars and percentage)

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Reporter	1966	1977	1982	1986	1989	1966	1977	1982	1986	1989
Industrial market economies	18 670 788	96 275 322	152 183 185	205 961 278	310 022 477	98.8	96.7	93.6	91.5	88.8
All developing countries	221 510	3 171 238	8 253 004	16 372 605	38 790 347	1.2	3.2	5.1	7.2	11.1
i) Asia	77 116	1 384 857	4 651 702	11 615 588	31 579 047	0.4	1.4	2.9	5.2	0.0
Taiwan	8 735	424 027	1 450 749	4 083 872	9 629 743	0.0	0.4	0.9	1.8	2.8
Korea	3 989	147 306	544 366	2 005 775	5 162 716	0.0	0.1	0.3	0.9	1.5
Hong Kong	13 002	190 549	758 332	1 530 157	2 706 116	0.1	0.2	0.5	0.7	0.8
Singapore	32 513	410 188	1 474 409	3 199 604	9 522 379	0.2	0.4	0.9	1.4	2.7
Malaysia	6 325	42 297	125 655	231 364	780 502	0.0	0.0	0.1	0.1	0.2
Thailand	52	17 654	29 246	192 785	1 506 187	0.0	0.0	0.0	0.1	0.4
Philippines	20	10 447	27 909	20 973	D.a.	0.0	0.0	0.0	0.0	n.a.
ii) Latin America	ts 447	842 286	1 694 148	2 413 255	3 845 090	0.2	0.8	•••	-	1.1
Brazil	22 877	452 915	1 073 111	1 164 376	2 066 184	0.1	0.5	0.7	0.5	0.6
Mexico	6 355	101 975	217 983	918 976	1 323 823	0.0	0.1	0.1	0.4	0.4
Argentina	13 156	201 955	244 997	232 677	315 945	0.1	0.2	0.2	0.1	0.1
Colombia	1 957	25 807	34 260	22 239	19 332	0.0	0.0	0.0	0.0	0.0
Chile	537	10 198	10 096	9 239	14 409	0.0	0.0	0.0	0.0	0.0
iii) Africa	3 935	203 070	224 408	37 421	28 710	0.0	0.2	0.1	0.0	0.0
All other	8 264	120 138	2 179 981	2 811 198	91 100	0.0	0.1	1.3	1.3	0-0
Available reporters	18 900 562	99 566 736	162 616 170	225 145 120	348 982 393	100.0	100.0	100.0	100.0	100.0
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Source: United Nations Statistical Office, COMTRADE, data retrieved 10 August 1992.

| |-|which provided a dramatic boost in dynamism for certain Asian developing countries passed by Latin America. Asian developing countries saw their share of world exports of electrical equipment rocket from 1.6 to 21 percent while that of Latin America, with the partial exception of Mexico, remained stagnant as of 1977. Several developing countries in Asia were able to use their ability to cheaply manufacture products stemming from the microelectronics revolution (and the accompanying explosion of foreign trade) as a springboard to integrate themselves more closely into the new international industrial order. 4/ Continual technological upgrading helped them sustain it.

Developing countries were also fortunate, although to a lesser extent, in other of the more technologically-sophisticated industries. Table 3 points out that their share of non-electrical machinery exports rose considerably from 1.2 to 11 percent over the 1966-89 period; in similar though less spectacular fashion to that of the gains registered in the electrical equipment industry. Again, the principal beneficiaries were developing countries from Asia, whose share grew from less than 1 to 9 percent of the world total while that of the Latin American region, excepting Mexico, barely changed after 1977. It was the Asian NICs which led the way again as had been the case for the electrical equipment industry.

Export gains by developing countries in the transport equipment industry was also significant, rising from 1.7 percent of world exports in 1966 to 7 percent in 1989, although the principal increase took place previous to the 1980s. Table 4 demonstrates that benefits, as measured by the volume and increase of exports, were again concentrated in the Asian NICs although less so than in the other mentioned industries. Furthermore, it is noteworthy that non-Asians in the form of two Latin American countries, Mexico and Brazil, registered very significant increases in, or recuperation of, their exports of transport equipment toward the end of the 1980s.

Information similar to that for the OECD countries reviewed in elsewhere <u>5</u>/ clarifies which of the developing country can be considered 'winners' and 'losers' in international trade and its relation to technological aspects of the industrialization process. Table 5 provides an example of how winners can be defined in terms of their trade gains between 1979 and 1988. From this perspective, the principal winners are all Asian--Republic of Korea, Singapore, China, Thailand and Turkey--while Mexico and, to a lesser extent, Brazil and Chile, made minor progress. The losers, excepting the case of the Philippines, were all Latin American countries.

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Table 4 T Environment (1911, 2021, 2020, 2016, 2020)

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EXPORTS OF TRANSPORT EQUIPMENT (ISIC 384), BY AREA, SELECTED YEARS, 1966-1989 (thousands of dollars and percentage)

Reporter	1966	1977	1982	1986	1989	1966	1977	1982	1986	1989
Industrial market economies	17 536 186	118 047 084	179 143 487	253 028 469	353 252 122	98.2	96.4	93.1	94.0	92.4
All developing countries	311 251	4 113 777	11 513 879	14 765 481	27 008 610	1.7	3.4	6-0	5.5	7.0
i) Asia	99 526	1 929 739	6 421 175	7 849 881	15 806 564	0.6	1.6	3.3	2.9	4.2
Taiwan	1 822	391 592	1 261 706	1 945 478	3 357 819	0.0	0.3	0.7	0.7	0.9
Korea	2 056	713 000	3 459 182	4 227 628	6 054 578	0.0	0.6	1.8	1.6	1.6
Hong Kong	21 381	147 568	337 454	334 271	236 888	0.1	0.1	0.2	0.1	0.1
Singapore	51 106	443 801	852 399	769 427	1 775 235	0.3	0.4	0.4	0.3	0.5
Malaysia	12 365	35 190	127 967	270 521	568 123	0.1	0.0	0.1	0.1	0.2
Thailand	101	3 517	14 455	44 115	257 883	0.0	0.0	0.0	0.0	0.1
Philippines	20	14 551	26 677	34 486	n.a.	0.0	0.0	0.0	0-0	n.a.
Latin America	17 555	1 013 694	2 736 471	4 475 143	7 580 436	0.1	0.8	1.4	1.7	2.0
Brazil	5 862	636 502	1 909 145	1 927 100	3 606 700	0.0	0.5	1.0	0.7	0.9
Mexico	4 778	24 968	472 436	1 127 635	3 604 417	0.0	0.1	0.2	0.4	0.9
Argentina	4 129	220 444	203 619	202 541	225 478	0.0	0.2	0.1	0.1	0.1
Colombia	152	18 612	18 630	26 998	9 580	0.0	0.0	0.0	0.0	0-0
Chile	1 526	9 933	31 246	52 493	37 295	0.0	0.0	0.0	0.0	0.0
iii) Africa	5 246	141 110	219 557	54 407	56 136	0.0	0.1	0.1	0.0	0.0
All other	18 140	261 814	1 795 670	1 507 560	174 006	0.1	0.2	0.9	0.6	0.0
Available reporters	17 865 577	122 422 676	192 453 036	269 301 700	380 436 741	100.0	100.0	100.0	100.0	100.0

Source: United Nations Statistical Office, COMTRADE, data retrieved 10 August 1992.

Table 5

EXPORT MARKET DYNAMICS FOR PRINCIPAL DEVELOPING COUMIRIES, 1979 and 1988

	Sha	Share of OECD	OECD imports		Export cla	Export classification (%)	(%)		Struc	Structure of exports (%)	(%)
										Manufa	Manufactures
Exporting Country	1979	1988	Percentage change	opt imal a/	Vulner- able b/	Lost opportu- nities c/	Retreat d/	Natural resource	Energy	Natural resource based	Non natural resource based
I. "Hinners"											
Republic of Korea	0.92	2.10	128	83	10	¢	-	4	-	5	90
Singapore	0.46	0.78	20	69	.	15	- 11	m	10	5	82
China	0.56	1.44	157	\$\$	30	F	2	14	10	11	%
Thailand	0.30	0.52	£	65	23	10	ß	33	-	17	50
Turkey	0.15	0.36	140	56	33	-	11	22	12	8	58
Mexico	1.03	1.48	77	51	32	13	4	10	23	ø	57
Brazil	0.99	1.18	19	41	46	80	4	30	'n	59	38
Chile	0.24	0.25	4	14	ŝ	£	50	39	ı	54	m
<pre>II. "Losers"</pre>											
Philippines	0.39	0.32	-18	35	10	58	28	52	•	53	53
Argentina	0*0	0.25	-38	13	28	22	37	36	٣	43	18
Colombia	0.28	0.23	- 18	12	44	4	40	58	27	3	11
Venezuela	0.78	0.42	-46	11	50	1	38	Ŷ	81	80	ιn '
Source: Derived from F. Fajnzylber, "International insertion and institutional renewal", CEPAL Review No. 44, August 1991, Table 2, pp. 142-143.	viber. "Inte	ernational i	nsertion and i	nstitutiona	renewal #	CEPAL Revie	H No. 44. AU	oust 1001	Tahla 2 mm	142-54	

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a/ a favorable competitive position of products and a high relative efficiency of country. b/ an unfavorable competitive position of products and a high relative efficiency of country. c/ a favorable competitive position of products and a low relative efficiency of country. c/ a favorable competitive position of products and a low relative efficiency of country. d/ an unfavorable competitive position of products and a low relative efficiency of country. d/ an unfavorable competitive position of products and a low relative efficiency of country. d/ an unfavorable competitive position of products and a low relative efficiency of country. d/ an unfavorable competitive position of products and a low relative

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That same Table also makes manifest that the success of the principal winners stems from their concentration in optimal export situations, that is, increasing their exports of manufactures with products which are also gaining global market shares: Republic of Korea (83%), Singapore (69%), China (66%), and Thailand (65%) are all in this category. Moreover, their success stems primarily from <u>non</u> natural resource-based manufactures, that is, their comparative advantages tend to be dynamic not static ones. Generally, the reverse is true for the losers, that is, they face export situations of retreat (declining exports of products which themselves are losing global market shares), as is the case for Colombia (40%), Venezuela (38%), and Argentina (37%). They also tend to specialize in natural resource based manufactures, energy or natural resources not technology- or human resource- based manufactures.

Helleiner long ago suggested that it is revealing to distinguish at least four categories of exports of manufactures: 6/

i) local raw materials processing;

ii) import-substituting industry and its conversion to export-based activity;

iii) new labor-intensive final products; and

iv) labor-intensive processes and component specialization within vertically-integrated international industries.

These categories are not mutually exclusive, none the less, they do help to clarify the situation in respect of the export experience of Latin America and the Asian NICs. In general, it could be maintained that most Latin American exports of manufactures have come from the first and, more recently, the second categories, that is, local raw materials processing (i.e. foods and metals) and import-substituting industries, whereas the exports of manufactures from the Asian NICs have been more concentrated in the third and fourth categories, that is, new labor-intensive final products (i.e. clothes) and labor-intensive processes and component specialization within vertically-integrated international industries (i.e. consumer electronics). Thus, it would appear that Asia specialized more in globalizing industries than did Latin America.

Again, similar to the analysis of the competitive situation of the principal OECD countries mentioned previously, Table 6 gives an indication of the distinct aspects of the competitive situations of developing countries as manifest in the Asian NICs and Latin American members. According to this information between 1970-3 and 1988-9, the Asian NICs upped their share of world exports of

Table 6

MARKET SHARE OF ASIAN NICS AND LATIN AMERICA IN WORLD EXPORTS OF MANUFACTURES BY SECTOR, 1970-1973 AND 1988-1989

(In percentage)

		Asian NICs			Latin America	
	1970-1973	1988-1989	change	1970-1973	1988-1989	change
Science-based <u>a</u> /	1.4	9.2	7.7	0.6	1.6	0.9
(R&D intensive electronics)	(3.4)	(16.2)	(14.1)	n.d.	n.đ.	n.d.
Specialized suppliers	1.1	3.9	2.8	0.5	1.3	0.9
Scale intensive	1.2	5.5	4.3	1.3	2.5	1.2
Traditional	7.0	14.0	7.0	1.9	2.9	1.0
TOTAL	2.5	7.5	5.0	3.4	3.0	-0.4

Source: Guerrieri, P., "Technological and Trade Competition: a comparative analysis of the US, Japan and the European Community", mimeo, July, 1991.

a/ subsector of science-based which includes data processing equipment, electronic components and telecommunication equipment.

Most notable are their increases in the science-based (1.4 to 9.2 percent), especially research and development intensive electronics (3.4 to 16.2 percent), scale-intensive (1.2 to 5.5 percent) and specialized suppliers (1.1 to 3.9 percent) sectors. In other words, Asiam NICs have achieved a remarkable degree of international competitiveness via specialization in modern activities.

Thus, some developing countries have had an important amount of success in gaining access, in distinct degrees, to the new international industrial order by way of trade in manufactures, however, that success is very much concentrated in the Asian NICs and to the exclusion of the great majority of developing countries, which are increasingly marginalized from that system. It is noteworthy that these successful developing countries are concentrated in what has been referred to as Japan's backyard while those in what has been called the US backyard--Latin America--have experienced very limited success in this field. Could it be that the Japanese system of cooperative managerial capitalism has more positive consequences for many of its imitators and associates in the developing world? Japan's developing country imitators appear to have better prospects for manufactures from 2.5 to 7.5 percent whereas that of the Latin American countries fell from 3.4 to 3.0 percent. Although the Latin American countries did make some gains in terms of more 'modern' activities, that is, science-based (0.6 to 1.6 percent), specialized suppliers (0.5 to 1.3 percent) and scale intensive ones (1.3 to 2.5 percent), the principal advances were registered by the Asian NICs.incorporation into the new international industrial order. $\frac{7}{7}$

The 'flying wild geese' scheme as applied to Asia by Fukasaku, <u>8</u>/ among others, demonstrates that some developing countries are capable of consciously altering the structural nature of their exports of manufactures --increasing their human capital- and technology-intensive nature and diminishing their natural resource- and unskilled labour-intensive aspects-- such that their industrialization process becomes centered on **technological upgrading** which in turn provides both a more sustained basis to that process and increased access to the new international industrial order. In other words, if one must imitate others in order to gain access to the international trading system, it is of utmost importance to follow a successful example. In this regard, the Asian NICs and ASIAN 4 have demonstrated not only that they are astute imitators but that they are even becoming tough competitors for their mentor.<u>9</u>/

Finally, it must be mentioned that the eruption of Asian NIC exports toward the US market has produced significant frictions, similar to the previous case, of Japan's export penetration of that market. Their preferences (GSP) to that market have been rescinded and they have come under strong bilateral pressure to let their local currencies appreciate. Further advances toward the technology frontier in the electronic industry has become more difficult even for the Asian NICs.<u>10</u>/ This represents a new challenge to the success of these countries in maintaining access to the new international industrial order.

ii) Tendencies in foreign direct investment: developing Asia displaces Latin America?

The access of developing countries to the new international industrial order in the present context of globalization now depends as much on foreign direct investment as on trade. The recent conformation of a global Triad in which the three principal members-- North America, the European Community and Japan-- represent the cores for three distinct regional production networks has provoked a virtual **explosion** of foreign direct investment (FDI), especially <u>in</u> the United States, and has made FDI more dynamic than international trade in stimulating world growth.<u>11</u>/ In the course of the delineation of this Triad a limited number of developing countries can become associated with

particular 'clusters', or regional sourcing networks, which for all practical purposes defines their incorporation into the new order.

Blomstrom 12/ has suggested that FDI flows to the manufacturing sector of developing countries have traditionally coincided with the industrial and trade policies being implemented by those countries. In that sense, it can be said that Latin America originally opted for an inward-looking strategy and attracted foreign manufacturing investment (mainly US and European) into protected import-substituting activities and, in spite of efforts at export promotion, never really succeeded in convincing TNCs to export in significant volume from their local operations. The Asian NICs, which were relative latecomers in terms of their industrialization process, evidently progressed from import-substituting industrialization toward more outwardly-focussed policies which, combined with the judicious use of free export processing zones, have resulted in more export-oriented (mainly Japanese) TNC operations. Kojima 13/ even went so far as to suggest that FDI came in pro-trade and anti-trade variants. The similarities and differences in the Japanese and US TNC operations in these two regions represents the subject matter of this section.

Relative FDI flows to Latin America boomed during the 1970s and it appeared that the region was being progressively incorporated into the global productive structure, although with hindsight it is clear that Latin American trade flows, especially exports, did not keep pace with FDI inflows. The import-substituting nature of the industrialization process which depended for its dynamism on the local market was sent reeling by the debt crisis. The Asian NICs, on the other hand, saw their export-oriented industrialization process dovetail well, first, during the 1960s and 70s with the expanding multilateral trade framework and the establishment of a regional supply network by Japanese TNCs, later in the 1980s with surging US imports and an explosion of intraregional FDI primarily associated with the offshore Chinese network.14/ Thus, FDI flows to Asia boomed in the 1980s 15/ and the Asian NICs were progressively incorporated into the global structure of production. As Table 7 illustrates, a feature shared with the trade situation has been that the principal gains were registered by the Asian region, in general, and the Asian NICs, in particular; however, in this case it was not simply that Asian gains were superior to those of Latin America, rather increasing relative incorporation for the Asian region coincided with an increasingly more marginalized Latin America, especially as of 1985. From the point of view of FDI inflows as a percentage of world totals, Latin America and developing Asia exchanged positions over the 1970-89 period. Developing countries became further marginalized from global foreign direct investment flows--their share dropped from 25 to 19 percent during the course of the 1980s; however, the Asian

			Table	7		
FD I	INFLOW	IS, BY AI	REA AND	PERIOD,	1970-1989	
AVERAGE	ANNUAL	INFLOWS	IN MIL	LIONS OF	DOLLARS AND	PERCENTAGE

	1970-74	1975-79	1980-84	1985-89	1970-74	1975-79	1980-84	1985-89
All market economies	14 691	27 534	52 841	117 047	100.0	100.0	100.0	100.0
a) Industrial economies	12 682	21 022	37 326	100 081	86.3	76.3	74.8	81.4
b) Developing country economies	2 009	6 512	15 515	16 966	13.7	23.7	25.2	18.6
i) Asia	673	1 422	4 907	12 449	4.6	5.2	9.3	10.6
Taiwan (including China) <u>a</u> /	n.d.	n.d.	530	2 487	n.d.	n.đ.	1.0	2.1
Korea	77	71	71	580	0.5	0.3	0.1	0.5
Hong Kong	n.d.	n.d.	680	1 650	n.d.	n.d.	1.4	1.4
Singapore	213	390	1 387	2 690	1.4	1.4	2.6	2.3
Malaysia	210	442	1 131	799	1.4	1.6	2.1	0.7
Thailand	83	64	285	732	0.6	0.2	0.5	0.6
Philippines	4	110	39	389	0.0	0.4	0.1	0.3
ii) Latin America	1 588	3 574	5 434	5 655	10.8	13.0	10.3	4.8
Brazil	852	1 823	2 100	1 426	5.8	6.6	4.0	1.2
Mexico	413	790	1 499	2 178	2.8	2.9	2.8	1.9
Argentina	10	120	439	730	0.1	0.4	0.8	0.6
Colombia	34	72	398	559	0.2	0.3	0.8	0.5
Chile	-142	99	242	125	-1.0	0.4	0.5	0.1
Venezuela	- 140	-64	120	81	-1.0	-0.2	0.2	0.1
iii) Africa	537	918	1 096	2 602	3.7	3.3	2.1	2.2
iv) Middle East	- 19	275	323	547	-0.1	1.0	0.6	0.5
Turkey	58	52	65	271	0.4	0.2	0.1	0.2

Source: International Monetary Fund, Balance of Payments Tape. UNCTC estimates for Taiwan/China and Hong Kong. \underline{a} / As this figure combines Taiwan and China it is not comparable to the trade statistics.

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region actually increased its share from 5 to 11 percent over the 1970-89 period and those gains were concentrated mainly in the Asian NICs. The Latin American region saw its share contract from 11 to less than 5 percent during the same decade after reaching a high of 13 percent in 1975-79 and it represented the most rapidly marginalized of all the developing areas.

Another factor which needs to be explicitly taken into account is the mationality of the principal foreign investors in each case. Detailed information on the operations of European TNCs does not exist, therefore the analysis will be limited to the operations of US and Japanese TNCs. It is usually asserted that, historically, US (and European) TNCs have dominated foreign direct investment flows to Latin America and Japanese TNCs have more recently come to dominate those to the Asian NICs. Given that the US subsidiaries were designed primarily to service the importsubstituting industrial needs of the local economy or, to a lesser extent, the processed raw material needs of the US TNC, exports of manufactures were not a principal feature of such operations. While it is true that US TNCs were responsible for a growing share of the exports of manufactures from Latin America, in general, export propensities were low due to the concentration on local sales and the relative inefficiency of those operations. US TNCs dominated wide areas of the Latin American manufacturing sector 16/, especially chemicals and machinery, and the characteristics of their operations generally prevented them from serving as significant competitive stimuli for national enterprises, especially from an export perspective.17/ While Latin American governments tended to cede the more technologically-sophisticated industries to TNCs (machinery and chemicals) believing that these companies would provide the necessary technology, they often obliged TNCs to take on local partners in certain specific activities (i.e. petrochemicals, autoparts, computer equipment, etc.). The conversion of import-substituting industries to export activities has only become an urgent need for US TNCs operating in Latin America since the debt crisis exploded in the 1980s and the degree of their success attained is not as yet well-known, aside from the fact that trade liberalization policies have been found to be much slower than expected in provoking structural adjustment at the firm level.18/

The impact of Japanese TNCs on the Asian NIC manufacturing sector appears to have been considerably distinct. The Japanese TNCs seem to have selected their foreign investment targets primarily in terms of factors related to international competitiveness rather than simply the size of the national market. To a significant extent Japanese TNCs were transferring abroad Japanese operations which had lost competitiveness to lower wage areas as well as establishing low-cost sourcing centers for components for vertically integrated international industries. Given the small size

of most Asian NIC local markets, an export orientation was central to the investment decisionmaking process. Incentives in the form of free export processing zones stimulated this transition. Majority-owned Japanese operations in the zones usually generated a significant amount of subcontracting activities for local enterprises.19/ To the extent that the national market came to interest these Japanese investors joint ventures with local partners often proliferated. Japanese foreign direct investment was clearly an important element in relocating production within the region in response to shifts in competitive advantage 20/, however, the most important effect was that <u>national</u> companies were driving those economies 21/, especially local companies contracted as suppliers to Japanese TNCs. Where Japanese TNCs lost competitive advantage the Asian NICs were able to meet the cost and quality requirements demanded by Japanese TNCs, and that served as a strong stimulus to consolidate a solid export-oriented process of industrialization. Behind the Asian NICs stood the four members of the Association of South East Asian Nations (ASIAN) searching for opportunities not only in labor-intensive industries but also in others in which their advances in technological upgrading became a factor in improving their international competitiveness. 22/

Rather than a simple comparison of the Latin American operations of US TNCs to the Asian operations of Japanese TNCs, it was considered more relevant to concentrate on the more technologically-advanced industries (machinery and transport equipment) of <u>both</u> US and Japanese TNCs, especially those in the Latin American and Asian regions. It was felt that this would provide a clearer picture of the nature of the international competition <u>at the frontier</u> in so far as it involved developing countries. Table 8 provides a first approximation.

The information contained in Table 8 provides a snapshot of the changes which took place during the 1980s in the more technologically-complex activities of the manufacturing sector. It can be appreciated that while the 1982 stock of US FDI in the manufacturing sector in general and in the machinery and transport equipment industries in particular was larger in volume (\$77 billion compared to \$20 billion) than the Japanese FDI, the more technologically-complex industries were of similar relative importance (around 38 percent of the total for the manufacturing sector) in terms of the structure of FDI stocks. The US FDI was more centered on general machinery (13.4%) and the Japanese FDI more focussed on electric equipment (14.4%). A similar concentration (around 14%) was encountered in the transport equipment industry. By 1989, great changes had taken place. The stock of US FDI (\$156 billion) was still very superior that of Japan (\$66 billion), however, the Japanese FDI was expanding faster. The composition of US FDI was not altered in any major way during this period (flows were small compared to the large stock) whereas Japanese FDI

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Table	

COMPARISON OF THE GROWTH AND REGIONAL DISTRIBUTION OF US AND JAPANESE FOREIGN DIRECT INVESTMENT IN THE MANUFACTURING SECTOR DURING THE 1980s

	European (1982	an Community 1989	North America <u>a</u> / 1982 1989	erica <u>a</u> / 1989	Jв 1982	Japan 1989	Latin 1982	Latin America 1982 1989	Devel (1982	Developing Asia 1982 1989	AII C 1982	All Countries 1982 1989
1) US FDI (US Billions)	33.3	74.9	18.3	32.3	1.8	10.0	13.8	21.3	2.1	6.7	76.7	155.7
General Machinery (non electric)	7.4	16.4	1.9	3.3	D	2.6	1.7	2.8	0.2	0.8	13.4	27.1
Electric Equipment	2.5	4.1	1.3	2.2	0.1	1.2	1.0	1.1	0.9	2.7	6.7	11.9
Transport Equipment	3.4	9.2	3.8	7.7	:	2.3	1.7	3.2	۵	0.3	10.1	23.5
2) US f01 (Percentage)	43.4	48.1	23.9	20.7	2.3	6.4	18.0	13.7	2.7	4.3	100	100
General Machinery (non electric)	9.6	10.5	2.5	2.1	٩	1.7	2.2	1.8	0.3	0.1	17.4	17.4
Electric Equipment	3.3	2.6	1.2	1.4	0.1	0.8	1.3	0.7	1.1	1.8	8.8	. 7.6
Transport Equipment	4.4	5.9	5.0	4.9	:	1.5	2.2	1.4	٩	0.2	13.2	15.1
3) JAPANESE PDI (US BILLIONS)D/	1.4	7.9	5.2	33.5	-	-	3.9	5.6	6.5	15.6	19.5	66.1
General Machinery (non electric)	0.2	1.8	0.5	4.0	•	•	0.3	0.4	0.4	1.6	1.4	7.9
Electric Equipment	0.3	2.0	1.5	8.7	-	•	0.3	0.5	2.0	3.3	2.8	14.7
Transport Equipment	0.2	1.3	0.8	4.5	•		0.6	1.1	0.5	1.3	2.9	9.0
4) JAPANESE FDI (Percentage)	7.2	12.0	26.7	50.7	,		20.0	8.5	33.3	23.6	10	100
General Machinery (non electric)	1.0	2.7	2.6	6.1	-	•	1.5	0.6	2.1	2.4	7.2	12.0
Electric Equipment	1.5	3.0	7.7	13.2	•	•	1.5	0.8	3.6	5.0	14.4	22.2
Transport Equipment	1.0	2.0	4.1	6.8		•	3.0	1.7	2.6	2.0	14.9	13.6

<u>a</u>/ In the case of US FDI North America signifies Canada. <u>b</u>/ The dates of the Japanese figures are March, 1984 and March 1990. D= Information not disclosed

Sources: US data - US Department of Commerce, <u>US Direct Investment Abroad: 1982 Benchmark Survey Data</u>, Hashington, D.C., December, 1985 and <u>Survey of Current Business</u>, August, 1990. Japanese Data - Kerai Koho Center, <u>Japan 1992: An International Comparison</u>, Tokyo 1992, <u>Japan 1984: An</u> <u>International Comparison</u>, Tokyo, 1984.

demonstrated an accelerated specialization in the machinery and transport equipment sectors, considerably outpacing the US FDI in relative terms. In other words, the **Japanese FDI** over this period was considerably **more dynamic** with regard to its **expansion** (assisted by a strongly appreciating yen) and its **specialization** in technologically-sophisticated sectors (rising from 36.5 to 48% of their total stock of FDI in the manufacturing sector).

Of special interest is the regional orientation of US and Japanese FDI during the 1980s in these same industries. Here it can be appreciated that the stock of US FDI, historically centered on the European Community (43.4% in 1982), Canada (24%) and Latin America (18%), was somewhat altered by 1989. Relative increases occurred in the European Community (to 48%), Japan (2.4 to 6.4%) and developing Asia (2.7 to 4.3) whereas a minor relative decline took place in Canada and a dramatic decline occurred in Latin America (from 18 to 13.7%). The stock of US FDI remained focussed on the European Community and Canada, however, the Asian region (Japan plus developing Asia) apparently was about to displace the Latin American region as a target of FDI from US TNCs operating in the manufacturing industry. In terms of industrial specialization in the machinery and transport equipment sectors, the major changes concerned the new FDI in the transport equipment sector in Europe and Japan and the electrical equipment industry in developing Asia. Thus, even though relatively small inflows were impacting a large stock of FDI in the case of the United States TNCs, some alterations in its geographical distribution could be perceived during the 1980s.

The Japanese TNCs were much more dynamic with their FDI in the manufacturing sector during the 1983-89 period and their regional focus was concentrated almost exclusively on the North American market, where it rose from 27 to 51 percent of total Japanese stock of FDI in the manufacturing sector. Developing Asia, which was previously the center of the FDI network with one-third of the total for manufacturing suffered a relative decline, falling to24 percent. The Latin American region saw its share of the stock of FDI nosedive from 20 to 8.5 percent. Aside from the tremendous expansion in the North American market, only the European Community enjoyed an important relative increase (from 7 to 12 percent). With respect to the industrialspecialization in the machinery and transport equipment areas, the major increases were registered in the electrical equipment industry in North America (7.7 to 13.2%), developing Asia (3.6 to 5%) and the European Community (1.5 to 3%); the general machinery sector in North America (2.6 to 6.1%) and Europe (1 to 2.7%); and the transport equipment industry in North America (4.1 to 6.8%) and the European Community (1 to 2%). Thus, Japanese FDI in the

manufacturing sector was considerably more dynamic than that of the United States and as well as specializing increasingly in technologically more complex activities, it focussed progressively on the principal developed country markets of the Triad during the 1980s.

A common feature to the regional specialization of both the US and the Japanese FDI during the 1982-89 period was the increased marginality of Latin America and its progressive displacement by developing Asia in respect of the electrical equipment industry. More detailed information on the international aspects of US and Japanese TNC affiliates operating in these regions and their significance within the framework of the TNC networks is contained in Table 9.

Before analyzing the information contained in the mentioned table it is noteworthy that while relatively good and consistent data has become available on the nature and structure of US and Japanese TNC activities; nevertheless, that statistical information is far from perfect.23/ The information is collected by national authorities for distinct purposes. The most detailed US data deals only with majority-owned foreign affiliates while the Japanese information includes all associates with more than 10 percent shareholding by the headquarters company or subsidiaries. Fortunately, the Japanese TNC network is more prone than the US one to employ joint ventures and minority holdings.24/ A consequence of such, however, is that the US minority shareholdings in important areas, such as the Japanese automotive industry, are not included in the tables on sales. Also, the coverage of the Japanese survey is not near as complete as that for the US. The 1989 version incorporated less than 65 percent of overall sales of manufactures. Reporting by the TNCs producing transport equipment was particularly low (42% of sales). Furthermore, the US data provide information only for imports from the US itself, while the Japanese figures provide information on imports both from Japan and from other sources. In spite of the statistical problems involved the 'benchmark surveys' of the US Department of Commerce and the Japanese Ministry of International Trade and Industry represent the most comprehensive sources of comparative information on this subject.

Referring to the manufacturing sector as a whole, the information contained in Table 9 indicates, first and foremost, that Latin America <u>never</u> represented an important element of Japanese TNC operations (only 8 percent of local sales and exports in 1983) whereas the developing Asia region did (representing 35 percent of local sales, over half of all exports and almost 40 percent of all imports). Second, during the 1980s Latin America became even less important to Japanese TNCs (3 percent of overall sales) while the developing Asia region retained a very significant role (29 percent of overall sales, over one-half of exports and one-

Table 9

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COMPARATIVE ANALYSIS OF INTERNATIONAL ASPECTS OF JAPANESE AND US TWC AFFILIATES IN THE MANUFACTURING SECTOR, BY REGION, 1977, 1982 AND 1989

		JAPANESE AFFILIATES	FFILIATES			N SN	AJORITY-OWNED	US MAJORITY-OWNED FOREIGN AFFILIATES	ATES	
	-	1982	19	1989	19	1977	19	1982	51	1989
	US Millions	% Ind. Total	US Millions	% Ind. Total	US Millions	X Ind. Total	US Millions	% Ind. Total	US Millions	% Ind. Total
I. All Manufacturing										
Latin America Total	2011	8	3081	3	24217	12	39506	15	47539	6
1. Local Sales	1480	8	2154	3	21876	16	34814	19	37363	12
 Exports to home country to others 	531 (229) (302)	8 (8) (8)	927 (335) (592)	4 (4) (5)	2341 (874) (167)	4 (5 (2	4692 (1855) (2837)	5 (1) (4)	10176 (6412) (3764)	∘6)£)
3. Imports from home country from others	203 (187) (16)	ء 33ع	295 (119) (176)	ن ع: ()	(2644)	(11)	(4379)	(13)	(8577)	(13)
Developing Asia Total	9920	07	29533	29	5125	3	9933	4	24647	5
1. Local Sales	6585	35	18877	23	2204	2	2550	-	10787	3
 Exports to home country to others 	3335 (1107) (2227)	51 (39) (61)	10654 (4669) (5987)	51 (57) (47)	2921 (0) (0)	5 (0) (0)	D (4060) (1894)	0 (15) (3)	13861 (8535) (5326)	8 (13) (5)
3. Imports from home country from others	2655 (1845) (1810)	38 (31) (70)	8246 (6381) (1865)	25 (23) (36)	(935)	(7)	(2771)	(8)	(4524)	2
II. Non Electrical Machinery										
Latin America Total	84	4 1	241	4	1899	7	3315	8	5768	9
1. Local Sales	70	18	230	5	1649	6	1705	11	4102	7
 Exports to home country to others 	14 (9) (4)	13 (16) (8)	01 (1) (0[)		250 (28) (222)	(5 (5 (5 (5 (5))	611 (104) (507)	4 (3) (4)	1666 (819) (847)	(4) (4)
 Imports from home country from others 	14 (14) ()	11 (11) ()	14 (6) (8)	1 () (6)	(195)	(9)	(354)	(1)	(784)	(2)
Developing Asia Total	311	63	1396	25	243	-	82	2	٥	D
1. Local Sales	224	59	794	19	7	:	٩	٥	•	•
 Exports to home country to others 	87 (47) (40)	81 (82) (78)	602 (254) (348)	42 (88) (30)	57 (8) (5)	2 (8) (1)	0 (312) 24	۵ (10) (2)	°€€	<u>∘</u> êê

3. Imports from home country from others	82 (81) (1)	31 (65) ()	396 (363) (33)	20 (20) (26)	(51)	(2)	(187)	(4)	(206)	(8)
[11. Etectrical Equipment										
Latin America Total	203	3	812	2	1991	11	2674	11	3598	10
1. Local Sales	200	4	771	3	1649	13	2065	14	2219	10
 Exports to home country to others 	3 () (3)	::;;;	406 () (400)	4 () (7)	341 (260) (81)	5 (12) (2)	608 (507) (101)	6 (11) (2)	1379 (1272) (107)	9 (18) (1)
3. Imports from home country from others	34 (34) ()	- (; ; ;	10 (68) (33)	100	(348)	(15)	(927)	(20)	(2054)	(27)
Developing Asia Total	2308	32	10390	27	2306	12	5099	20	9217	25
1. Local Sales	846	15	3888	14	Q	٥	621	4	2958	13
 Exports to home country to others 	1462 (519) (943)	86 (86) (86)	6502 (2798) (3704)	72 (89) (63)	q (0)	a (0) 0	4478 (3325) (1153)	44 (72) (20)	6259 (3847) (2412)	41 (55) (29)
 Imports from home country from others 	642 (537) (104)	21 (18) (74)	3120 (2412) (707)	20 (19) (26)	(669)	(29)	(2026)	({?)	(2767)	(36)
IV. Transport Equipment										
Latin America Total	574	11	201		5249		7558	13	9929	6
1. Local Sales	546	12	191	1	4867	16	6887	21	6677	11
 Exports to home country to others 	531 (229) (302)	8 (4) (11)	ہ (-) (9)	() ()	382 (D) (D)	2 (0) (D)	671 (432) (239)	3 (4) (2)	2839 (413) (3565)	ہ (10) (2)
 Imports from home country from others 	(110) (110) (1)	8 (9) (2)	20 (20) ()	1 () (3)	(2644)	(11)	(4379)	(13)	(8577)	(13)
Developing Asia Total	14.79	30	6008	28	0	D D	٥	D	1727	2
1. Local Sales	1282	28	5534	28	٩	۵	۵	۵	1608	ß
 Exports to home country to others 	198 (82) (116)	56 (57) (55)	474 (97) (377)	27 (17) (32)	<u>ہ 9</u>	۵ <u>9</u> 9	234 (155) (<i>7</i> 9)	-66	119 69 50	::;
 Imports from home country from others 	362 (328) (34)	28 (26) (68)	1554 (1537) (17)	18 (18) (25)	(11)	(1)	(57)	()	(95)	()
Sources: US Department of Commerce, <u>Benchmark Su</u> and October 1991.	of Commerce, B	enchmark Surveys	s on US Direct	rveys on US Direct Investment Abroad, 1977, 1982 and 1989, Hashington, D.C., April 1981, December 1985	oad, 1977, 19	32 and 1989, Ha	shington, D.C.	. April 1981,	December 1985	

Japan, Hinistry of International Trade and Industry, <u>Benchmark Surveys on Japanese Companies Foreign Activities: Compendium on Foreign Activity Data</u>, Tokyo, 1986 and 1991.

quarter of all imports in 1989) in spite of the fact that flows were concentrated on the North American market during that decade. Third, it can be appreciated from these figures that the Japanese TNCs established regional supply networks and export platforms in developing Asia. Foreign trade played a fundamental role in these operations and that was so not only for trade with Japan but also for exports to and imports from third parties. Developing Asia represented a core element of the international expansion of Japanese TNCs. Latin America played a marginal and declining role.

With regard to the operations of US majority-owned foreign affiliates in the manufacturing sector as a whole, it can be stated that both Latin America and developing Asia have played relatively minor roles in their overall operations, although that of Latin America historically has been considerably more important than that of developing Asia. Sales from their Latin American network were five times the value of those in developing Asia in 1977, and represented 16 percent of all local sales (but only 4 percent of all exports of manufactures). During the 1977-82 period the relative importance of the Latin American region and the local sales-centric nature of the operations of US TNCs in that region was accentuated, reaching 19 percent of all local manufacturing sales (but only 5 percent of all exports). Over the 1982-89 interim the Latin American operations of US TNCs became more marginal (dropping to only 12 percent of all local sales); however, they did change in nature by becoming somewhat more export-oriented than previously (providing 6 percent of all exports of manufactures) and by beginning to serve more as sourcing centers for US TNCs (supplying 9 percent of all exports of manufactures of these US TNCs to the US market) even though exports to third parties declined. Thus, in spite of the changes undertaken, the Latin American operations of majority-owned US TNCs did not come to represent a significant supply network nor an export platform of note.

The operations of US TNCs in developing Asia in 1977 were of marginal importance as they represented only 2 percent of all local sales and 5 percent of all exports of manufactures by US TNCs during that year. Even so, export sales of these US TNCs in developing Asia in 1977 already surpassed those generated by their Latin American operations. By 1989, overall sales had about quintupled in value (now equivalent to about one-half those from the Latin American operations) and export sales had jumped to 8 percent of all exports by these firms and 13 percent of all of their exports back to the United States. Thus, although the Latin American operations of the majority-owned US TNCs remained more important in terms of total sales they were losing ground within the global corporate framework. The operations in developing Asia were increasing

in importance, especially in respect of exports and particularly exports back to the North American market. Developing Asia was becoming a sourcing center for US TNCs. As shall become clear, the central activity of the US TNC network in developing Asia concerned the electrical equipment industry.

In other words, Latin American operations were of growing importance to US TNCs while those corporations valued local sales as their principal activity and their operations in that region declined in relative importance as export activities became increasingly prized by US TNCs, although some adjustments were visible by 1989 in terms of the increase in their export activities in Latin America. In developing Asia, US TNCs clearly focussed their operations on the sourcing and trading of electrical equipment.

This information on the international aspects of the operations of Japanese and US TNCs in the manufacturing sector of Latin America and developing Asia confirms that, as far as developing regions are concerned, the Japanese TNCs have very much focussed on developing Asia and that their operations involve high levels of foreign trade which is consistent with the view that their primary purpose is one of component assembly and sourcing. The US TNCs, which rely less in general on productive facilities in developing countries, had tended to concentrate their activities in the Latin American region and those activities were essentially based on serving the local market. This distinct characterization of the manufacturing operations of Japanese and US TNCs in developing regions began to lose some of its relevance in the 1980s as the Latin American activities of US TNCs lost importance within the corporate network and began to change in nature and as US TNC activities in developing Asia gathered steam. This becomes clearer by analyzing the situation of the more technologically-sophisticated industries, that is, the information from Table 9 on machinery and transport equipment.

It should be emphasized at the outset that the Latin American operations of Japanese TNCs in the machinery and transport equipment sector are of <u>no</u> global significance, even taking into account obvious under-reporting in the transport equipment sector. This observation translates into the fact that Japanese TNCs, the most dynamic foreign direct investors in globalizing industries during the 1980s, paid virtually no attention to Latin America. With regard to the manufacturing activities of Japanese TNCs in developing Asia, these were heavily concentrated in two areas of relative technological sophistication: electrical equipment (sales of U\$ 10.4 billion representing 27 percent of total sales by Japanese TNCs in that industry in 1989) and transport equipment (U\$ 6 billion in sales representing 28 percent of all sales by Japanese TNCs in the industry in the same year). The Japanese TNC operations in the non-electrical equipment sector in developing Asia might also be mentioned, although sales in 1989 only reached U\$ 1.4 billion, due to the significant FDI which has taken place there during the 1980s, as Table 8 suggested.

The operations of majority-owned US TNCs in these two regions were concentrated in only three activities of relative technological sophistication: transport equipment in Latin America (sales of U\$ 9.9 billion representing 9 percent of all sales by US TNCs in that industry in 1989), electrical equipment in developing Asia (sales of U\$ 9.2 billion corresponding to 25 percent of all sales of US TNCs in that industry in 1989) and non-electrical equipment in Latin America (sales of U\$ 5.8 billion equivalent to 6 percent of the total sales of US TNCs in that industry in 1989). Compared to the Japanese TNC operations in the same sectors in these two regions, two features stand out. First, the most important Latin American activities of majority-owned US TNCs-- transport equipment and non-electrical equipment-- are activities of relatively minor importance which are becoming more marginalized within the global corporate structure (6-9 percent of total sales by US TNCs operating in those sectors in 1989 down from 8-13 in 1982). At the same time, the electrical equipment activities of US TNCs in developing Asia are already of much significance within the global corporate framework (25 percent of all sales by US TNCs in that industry in 1989) and undergoing accelerated expansion (up from 12 percent of total sales in 1977).

Second, the high foreign trade component to the electrical equipment activities of US TNCs in developing Asia, which correspond to over 40 percent of the exports of US TNCs in that industry in 1989, indicates that US TNCs are not necessarily bound to serve only the local market, as has been their traditional role in Latin America. Although the levels of foreign trade are considerably lower than the regional supply network in electrical equipment established by Japanese TNCs in developing Asia; evidently US TNCs have created a kind of supply network to feed the North American market and to a lesser extent, third countries. Moreover, a glance at the changes taking place in the Latin American operations of US TNCs in this sector indicates that while local sales have declined due to the recession in Latin America during the 1980s, the level of exports has increased substantially (from 6 to 9 percent of total exports of US TNCs operating in this industry between 1982 and 1989), especially exports to the US market (from 11 to 18 percent of total such exports by US TNCs in this industry over the same interim). It would appear that US TNCs are trying to adapt their Latin American operations to the new international

industrial order in which regional supply networks represent a important element in international competitiveness. This is an important advance for US TNCs; never the less, it should be pointed out that the exports of electrical equipment by their Latin American operations to the US market consist primarily of consumer electronics while the exports of electrical equipment by their developing Asian operations to the US market are mostly computers and associated products. Thus, there exist certain differences in terms of technological sophistication within the same industry between the US TNC operations in developing Asia and those in Latin America on top of the mentioned differences relating to dynamism and potential for better integrating the global corporate networks of these TNCs.

The manufacturing side of the microelectronics revolution was undisputedly centered on developing Asia and that region came to serve as a sourcing center and export platform for TNCs operating in the industry, both Japanese and US. This suggests that in equal conditions the more recent behavior of Japanese and US TNCs is convergent in terms of the nature of regional manufacturing operations in certain developing countries. Moreover, the Latin American operations of US TNCs active in this sector apparently are trying to adapt by converting to component and final product assembly for export to the US market.

It must be emphasized, however, that there do exist several critical differences in their behavior of US and Japanese TNCs in their respective regional networks and those differences heavily influence the benefits going to the developing countries incorporated into or associated with those distinct TNC regional networks. For example, the US TNC network is based more directly on majority ownership of local operations whereas the Japanese TNCs utilize a good deal of minority ownership options and, more particularly, licensing or subcontracting relationships. The licensing or subcontracting relationships used by Japanese TNC regional networks have been found to be of significance for national firms in the developing countries used for sourcing as it facilitates their technological upgrading within a national industrial strategy which pursues incorporation into the new international industrial order, particularly from the point of view of trade and investment flows.

With regard to this topic it should be mentioned that while the four Asian NICs can all be considered successes in further incorporating their economies into the new international industrial order by way of trade and investment flows, especially in the electronics industry, there are certain distinctions which should be made. Hong Kong and Singapore have followed what could be labelled a TNC-centric strategy while Korea and, to a lesser extent, Taiwan, have followed a

TNC-associated one. Both variants began as low cost assembly bases for export-oriented TNCs, often via export processing zones, however, the Korean/Taiwanese variant went further than the Hong Kong/Singapore one by using domestic demand to assist national suppliers to graduate to competitors with their own brand name products. 25/

In terms of the importance of TNCs for these two strategies, the Hong Kong/Singapore variant utilized foreign direct investment as a major element in domestic capital formation, reaching 15.2 and 25.5 percent, respectively, during 1985-7, while the level for Taiwan and Korea was considerably lower, at 3.3 and 1.4 percent, respectively.26/ While the proportion of the stock of FDI in the manufacturing sector which was channeled to the electronic sector was roughly similar for these NICs, at about one third of the total (except for Hong Kong with 46 percent), the nature and national origin of this FDI differed considerably. These differences held important consequences in terms of the national benefits from this foreign participation. In general, FDI in this sector in Hong Kong and Singapore came primarily from the United States and usually in the form of majority-owned foreign affiliates. In Korea and, to a lesser extent, Taiwan, FDI in this sector came principally from Japan and often in the form of minority participations and new forms of investment.27/ For that reason, the principal electronics firms, by sales, in Hong Kong (Digital, General Electric, Hewlett-Packard, Honeywell and IBM) and Singapore (Seagate, Philips and National Semiconductors) usually are subsidiaries of US TNCs. The most important electronics companies in Korea (Samsung and Goldstar) and Taiwan (Tatung, Sampo and Teco) now are national firms. It has been quite clearly demonstrated that the Korean/Taiwanese variant has been more successful in stimulating nascent industrial clusters which provide a firmer technological basis upon which national firms can sustain the catching up process.28/ This would appear to be a useful, if difficult, strategy for developing countries which possess sufficient domestic demand to help nuture national champions through associations with TNCs which provide them with the requisite technologies.

The Asian NICs success in the electrical equipment industry would appear to be the most pertinent example for developing countries in respect of their incorporation into the new international industrial order in formation because it is based on increased international competitiveness which has produced significant trade and investment flows. Notably, the Asian regional network centered on Japanese TNCs has provided some developing countries with significant opportunities to become <u>more integrated</u> into the international industrial system by taking advantage of the phase of Japanese foreign direct investment, <u>29</u>/ called "subcontracting-

dependent, assembly-based industrialization and the assembly-transplanting stage of multinationalism".30/

The regional core network strategies of Japanese transnational corporations in the electrical and electronic industry now appear to follow a pattern of strong upstream (supply) linkages from Japan to Asian affiliates, which then serve the dual function of, firstly, selling finished goods to local and regional markets (import-substituting investments), and secondly exporting to affiliates in the Triad to support their own operations with low cost inputs (rationalized investments). <u>31</u>/ This provides a relatively small group of developing countries with the opportunity to better integrate their productive structure for the electronic industry more fully into the structure of the more dynamic elements of the international industry. High sales volumes and larger export markets have enabled the development of regional supply networks, with integrated operations in several Asian countries supplying inputs to one another. Asian NIC FDI in this sector in the ASIAN 4 and other developing countries is gaining strength.<u>32</u>/ Thus, some NICs have graduated from local TNC supplier to authentic competitor in certain lines of production, as was suggested by the flying wild goose scheme. The Asian NIC experience in the electronic sector, in these terms, can be considered superior to the experiences in other regions of the developing world.

iii) Change in Latin America?

It is evident that the several countries in developing Asia, especially the Asian NICs, have been relatively successful in terms of increased integration into the new international industrial order, never the less, one should not neglect the important changes are currently taking place in other regions, particularly in Latin America. It is now clear that US TNCs are adapting to diminished international competitiveness <u>33</u>/ and the import penetration of their national market by undergoing major adjustments in important industrial sectors and those changes do offer opportunities for well-prepared developing countries, particularly those in Latin America. Tables 10 and 11 point out that US TNCs have accelerated their use of offshore component assembly and sourcing in the electrical equipment and transport equipment sectors during the 1980s. Exports or manufactures for further processing rose from less than \$9 billion in 1977 to almost \$48 billion in 1989. This process now extends well beyond Canada and Europe and, as well as Asian NICs, the small group of developing country beneficiaries includes non-Asians,

particularly Mexico, whose share tripled over the same period, from 4 to 12 percent of those exports. Imports of components and finished goods from affiliates by US TNCs almost tripled during the 1982-9 interim alone and Mexico's share, especially of transport and electrical equipment, rose appreciably.

The United States was a dynamic market for the importation of manufactures,<u>34</u>/ rising from \$257.5 to \$388.8 billion between 1985 and 1990, and developing countries saw their share of that market increase from 25.5 to 29.8 percent of the total. As well as the market share gains registered by the Asian NICs (from 14.7 to 15.3 percent) and the ASIAN 4 (from 1.9 to 3.4 percent), Latin America enjoyed an increase from 6.9 to 8.7 percent based primarily of Mexico's increase from 3.5 to 5.5 percent of the total. This recent success of Mexico in integrating its industry further into the US productive system, if not the new international industrial order, is one of the few existing examples of a sharp change in fortune for a Latin American country. Does it represent a means by which Latin American countries can become more integrated into the new international industrial order?

Unfortunately, rather than representing a first example of the incorporation of a Latin American country into the new international industrial order, Mexico more properly represents a special case. Mexico possesses an increasingly important advantage over other developing countries in respect of its exports of manufactures to the US market due to its privileged geographical proximity which facilitates the use special instruments, such as export processing zones (maquiladoras). Special tariff treatment has been given to US goods sent outside the country for further processing since the 1950s in the form of items 806.30 and 807.00 of the former tariff schedules, known since 1 January 1989 as subheadings 9802.00.60 and 9802.00.80 of the US Harmonized Tariff Schedules. The latter is the most important provision and allows for the importation of goods of US origin assembled abroad in which duty is applied only to the value added via foreign processing and no further processing in the US is required. Currently, 20 percent of US imports of manufactures enter the country via these tariff subheadings. The use of these two mechanisms is concentrated in only two industries: transport equipment (72 percent of the total for 9802.00.80 in 1989) and electronic equipment (15%); and only three countries: Canada (32 percent of the total in 1990), Japan (23%) and Mexico (17%). In 1990, 60 percent of Mexico's exports of manufactures to the US market entered via HTS subheading 9802.00.80 and

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		1977	77			191	1982			1989	6	
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Motor Vehicles & Eqpt.	9.4	2.3	24	26	11.1	7.5	68	35	23.6	16.2	69	3
Computer & Office Eqpt.	1.3	٥	٥	٥	2.3	1.6	70	7	7.7	7.5	26	1
Electronic Components	1.1	0.9	82	10	2.7	2.6	96	12	5.3	5.2	86	Ξ
Instruments, Etc.	1.0	0.5	50	ه	1.9	1.4	74	7	3.1	2.9	76	\$
Industrial Chemicals	2.6	1.5	58	17	1.6	1.2	55	7	3.5	2.6	71	5

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g/ Includes all industries (not only manufacturing) especially wholesale trade.

Source: US Department of Commerce, "Benchmark Surveys on US Direct Investment Abroad: April 1981, December, 1985 and October 1991.

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TOTAL

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Table 10

EXPORTS OF MANUFACTURES SHIPPED TO AFFILIATES BY US PARENTS, 1977, 1982 AND 1989 (Billions of US Dollars and Percentage)

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All Others

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TOTAL

COUNTRY

Canada Europe Mexico IMPORTS OF MANUFACTURES TO US SHIPPED BY AFFILIATES TO US PARENTS, 1977, 1982 AND 1989 (Billions of US Dollars and Percentage)

ī												 				7	-7				
	oth	7.1	3.8	0.6	٥	۵	۵	٩	0.1	۵	14.5	11	6	-	٩	۵	۵	٩	:	٥	23
	Elec	0.9	0.7	2.1	1.6	0.5	0.2	0.4	0.7	2.1	9.1	1	1	3	2	1	:	1	1	3	14
1989	Non- Elec	2.1	4.4	0.3	2.4	0.6	٥	0.2	0.6	٥	12.1	3	7		4	1	٥		1	D	19
	T ran Eqpt	23.8	1.2	3.2	٩	٥	:	٥	•	٥	28.6	37	2	5	٥	٥		٥	•	٩	44
	ALL	33.9	10.1	6.2	4.0	1.8	1.5	1.4	1.4	4.0	64.3	53	16	10	6	3	2	2	2	6	100
	oth	1.6	1.2	٥	•	0.1	0	٥	٥	٥	4.2										18
	Elec	0.2	0.3	٥	0.8	0.2		0.5	٩	٩	5.0	-	1		4	٦		2			22
1982	Non- Elec	0.7	0.9	:	0.3	٥	٥	٩	٥	Q	2.3	3	4		1						10
	Tran Eqpt	10.6	0.1	٥	:	0.1	•		•	٥	11.3	9 †									50
	ALL	13.1	2.5	1.5	1.1	0.4	0	٥	0.6	Q	22.8	 57	11	7	5	2			3		100
	oth	٩	D	٥	٥	D	٥	٥	٥	Q	2.7										19
	Elec	٥	0.2	٥	0.5	٥		D	٥	٥	2.3		٦		3						16
1977	Non- Elec	٥	0.6	:	:	:	٥	٥	:	٥	1.1		4								8
	Tran Eqpt	7.7	٥	٩	۵		-	•	-	٥	8.4	53									58
	Tota l	9.5	2.0	٥	٥	٥	٥	٥	0.5	٥	14.5	66	14						3		100
\ INDUSTRY	רא' ו	Canada	Europe	Mexico	Singapore	Brazil	Japan	Hong Kong	Taíwan	All Others	TOTAL	Canada	Europe	Mexico	Singapore	Brazil	Japan	Hong Kong	Taiwan	All Others	TOTAL
	COUNTRY	\$ 0										 *									

Sources: US Department of Commerce, "Benchmark Surveys on US Direct Investment Abroad", April, 1981, December, 1985 and October, 1991.

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Mexico was by far the principal beneficiary among developing countries, accounting for over half (56%) of the value of all US imports of manufactures from developing countries under this program. The principal items exported from Mexico to the US under this program were electrical equipment (37 percent of the total) and transport equipment (31%). Thus, Mexico has enjoyed special benefits from its proximity to the US that other Latin American countries have not shared to the same extent and it has employed special mechanisms in the form of export processing zones, that have not been available to the same extent to other Latin American countries. Mexico, then, appears to be a special case more than a model for Latin america. Furthermore, it must be added that the Mexican maquila program has not as yet demonstrated as positive results as the export processing zones of Asia in respect of technology transfer and adaptation via subcontracting.35/

It is evident that the North American Free Trade Agreement (NAFTA) already accorded in principle among the US, Canada and Mexico will provide, once approved by the US Congress, a direct and formal integration of Mexico into the US cluster within the Triad. The Enterprise of the Americas Initiative of the US Government might very well extend certain trade and investment adavantages to Latin American countries; however, one can legitimately question assumptions that the NAFTA will become a hemispheric institution in the near future, with Central American flying wild geese following Mexico's lead.<u>36</u>/ Thus, while that trilateral scheme will delineate the specifics of Mexico's integration into the North American segment of the new international industrial order, that alternative may not be available to many developing countries in Latin America, especially in the short term. The case of Mexico in this sense again represents a special rather than generalized effect of the adjustment and restructuring process undertaken by US TNCs. Other Latin American countries appear to have fewer opportunities than Mexico in this regard and no strategy.

In order to face up to the increased international competition associated with the new international industrial order, US TNCs are adjusting and restructuring their operations, particularly in the transport and electrical equipment sectors, and this has provided some opportunities for a few developing countries, such as Mexico. At the same time, it must be pointed out that these opportunities associated with the US TNC network appear considerably scarcer and significantly distinct from those associated with the Japanese network established in developing Asia. Unlike the case for the countries from developing Asia in which a decreasing share of their exports of manufactures to the US market took place by way of majority-owned

foreign affiliates of US TNCs during the 1982-89 interim (it dropped from an average of 15.6 to 13.3 percent), the share of Mexico's exports of manufactures to the US via US TNCs rose (from 30.3 in 1982 to 31.7 percent in 1989, when foreign investment regulations were **liberalized to allow for wider majority ownership by** TNCs). The relatively high and growing level of exports of manufactures to the US via US majority-owned TNCs contrasts sharply low level for Asian NICs, such as Korea (3.1%), Taiwan (5.9%) and Hong Kong (14.8%)- but not Singapore (46.7%)- and the declining levels of ASIAN members, such as Malaysia (from 68.9 to 32.5%) and the Philippines (from 21.5 to 7.2%)- but not Thailand (from 9 to 20.1%). Thus, one major difference between the recent Mexican success in placing exports of manufactures in the US market and the experience of most Asian success stories is the **more important role** played by majority-owned foreign affiliates of US TNCs **operating in Mexico**. This could directly impact, by blunting, the process of technology transfer, adaptation and upgrading in Latin American countries interested in pursuing the opportunities stemming from any possible further incorporation into the US TNC network.

Final Comments

In summary, information on international trade and foreign investment suggests the existence of simultaneous processes of increased marginality (for the majority of developing countries) and incorporation (for a few Asian NICs and perhaps a few others, such as Mexico) of developing countries into the new international industrial order in formation. One very important ingredient in the success of the Asian NICs has been the rapid growth of Japanese foreign direct investment and the expansion and consolidation of Japan-centric regional supply networks and export platforms, as the example of the electric and electronic equipment industry suggests. The Asian NICs proved very useful to the Japanese TNC regional supply network by becoming low cost and high quality manufacturers often linked more via joint ventures and the subcontracting nexus than straightforward majority foreign ownership. The international framework of the 1960s and 70s facilitated the accelerated expansion of the exports of manufactures (especially electric and electronic equipment) from these countries. In this context, and mainly by way of their individual efforts, the Asian NICs implemented an ongoing process of technological upgrading such that, in many lines of manufacturing activities (though not necessarily in technological innovation), these 'flying geese' began to challenge their mentor.

The adjustment and restructuring of the <u>US</u> TNC network, especially in the transport and electrical equipment industries, also opens up some opportunities for prepared developing countries seeking incorporation into the new order; however, it would appear that these opportunities differ from the ones enjoyed by Asian NICs in the context of the Japanese regional supply network and export platform in the sense that direct corporate control (majority ownership) could very well prove a limit on the process of technological upgrading for those countries. It is evident that TNCs heavily influence the adaptability of developing countries to the newly emerging international industrial order by way of their international strategies and action taken in the fields of international trade and foreign investment,<u>37</u>/ the question is: how can those few developing countries with opportunities to become partially or fully incorporated into the new international industrial order best take advantage of those opportunities?

Aside from promoting local labor-intensive production, developing countries <u>must</u> endeavor to design an industrial strategy and implement well thought out and consistent policies especially with regard to the forms of association with TNCs which will gain or maintain access to new and dynamic technologies in order to make more permanent any improved international competitiveness they might achieve in labor-intensive industries. Even the successful Asian NIC export-led industrialization strategies have been running up against escalating protectionism in the OECD countries.<u>38</u>/ The Asian NICs earned the possibility of incorporation into the new international industrial order by producing more cheaply other's products, however, in their transition to higher cost economies they must still succeed in developing and marketing their own products. In Latin America the goal <u>continues</u> to be to make more headway in low cost, high quality manufacturing, something that is presently taking place within the relatively more limited constraints of the less dynamic and recently emerging US TNC supply network.

Viewed historically, developing countries which today seek incorporation into the new international industrial order must achieve more with more limited policy alternatives, in a context of increased competition. As time goes on it is more not less difficult for the three mentioned factors to coincide, that is, clear and coherent economic policies on the part of developing country aspirants which will provide them a stable environment, TNC strategies which target the comparative advantages of developing countries with regard to natural resources, wage levels and the quality of human capital, and rules of the game established and implemented by the Triad members of the OECD which facilitate the incorporation of the few better-prepared developing

countries. The <u>role model</u> selected by the developing country aspirant could well be a <u>key factor</u> in the success that it meets.<u>39</u>/ The vast majority of developing countries could easily become further marginalized if they do not take clear cut decisions based on a consistent strategy in this regard.

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