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Chapter III

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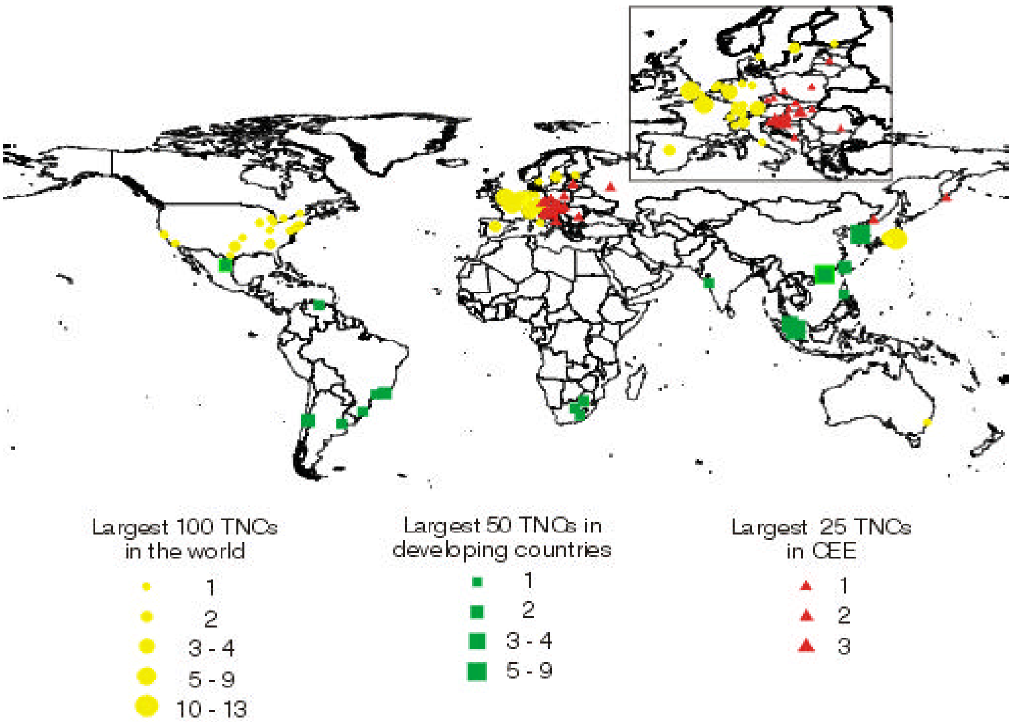
CHAPTER III. THE LARGEST TRANSNATIONAL CORPORATIONS

As in earlier years, this report reviews recent developments in the universe of the largest non-financial TNCs[1] ranked by their foreign assets: the 100 largest worldwide (table III.1), the largest 50 TNCs from developing countries (table III.9) and the largest 25 TNCs from the economies in transition of Central and Eastern Europe (table III.16). The role of the top 100 is illustrated by the fact that their foreign assets, sales and employment in 1999 accounted for roughly 12 per cent, 16 per cent and 15 per cent of the estimated foreign assets, sales and employment of the total number of the TNCs in the world,[2] which now comprises more than 60,000 companies. And most of their foreign operations are controlled by TNCs headquartered in a handful of countries (figure III.1 and chapter II). Similarly, the location of TNCs based in other groups of economies (developing countries and those of Central and Eastern Europe) is geographically limited (figure III.1). However, the role of the largest TNCs from developing countries is increasing: as noted in chapter I, the share of the developing economies in outward FDI has risen from some 3 per cent at the beginning of the 1980s to some 9 per cent in 2000. The third group of TNCs, the 25 largest TNCs from Central and Eastern Europe, underlines some interesting developments in what used to be centrally planned economies. A number of companies of these countries are becoming increasingly transnational. They are about to establish themselves as prominent players of their own with international production networks.

Figure III.1. Location of the largest 100 TNCs in the world, the largest 50 TNCs in developing countries and the largest 25 TNCs based in Central and Eastern Europe,[a] 1999



Source: UNCTAD.

a On the basis of the largest 100 TNCs in the world, the largest 50 TNCs in developing countries, and the largest 25 TNCs in Central and Eastern Europe (including the countries of the former Yugoslavia) in this report (Chapter III).

Table III.1. The world's 100 largest TNCs, ranked by foreign assets, 1999

(Billions of dollars and number of employees)

Ranking 1999 by: Foreign assets	Ranking 1999 by: TNI [a]	Ranked in 1998 by: Foreign assets	Ranked in 1998 by: TNI [a]	Corporation	Country	Industry [b]	Assets: Foreign	Assets: Total	Sales: Foreign	Sales: Total	Employment: Foreign	Employment: Total	TNI [a] (Per cent)
1	75	1	75	General Electric	United States	Electronics	141.1	405.2	32.7	111.6	143 000	310 000	36.7
2	22	5	19	ExxonMobil Corporation	United States	Petroleum expl./ref./distr.	99.4	144.5	115.5	160.9	68 000	107 000	68.0
3	43	3	45	Royal Dutch/Shell Group [c]	The Netherlands/ United Kingdom	Petroleum expl./ref./distr.	68.7	113.9	53.5	105.4	57 367	99 310	56.3
4	83	2	85	General Motors	United States	Motor vehicles	68.5	274.7	46.5	176.6	162 300	398 000	30.7
5	77	4	76	Ford Motor Company	United States	Motor vehicles	..	273.4	50.1	162.6	191 486	364 550	36.1
6	82	6	60	Toyota Motor Corporation	Japan	Motor vehicles	56.3	154.9	60.0	119.7	13 500	214 631	30.9
7	51	9	59	DaimlerChrysler AG	Germany	Motor vehicles	55.7	175.9	122.4	151.0	225 705	466 938	53.7
8	21	32	27	TotalFina SA	France	Petroleum expl./ref./distr.	..	77.6	31.6	39.6	50 538	74 437	70.3
9	50	7	54	IBM	United States	Computers	44.7	87.5	50.4	87.6	161 612	307 401	53.7
10	18	8	21	BP	United Kingdom	Petroleum expl./ref./distr.	39.3	52.6	57.7	83.5	62 150	80 400	73.7
11	2	10	3	Nestlé SA	Switzerland	Food/beverages	33.1	36.8	45.9	46.7	224 554	230 929	95.2
12	45	11	51	Volkswagen Group	Germany	Motor vehicles	..	64.3	47.8	70.6	147 959	306 275	55.7
13	11	-	-	Nippon Mitsubishi Oil Corporation (Nippon Oil Co. Ltd.)	Japan	Petroleum expl./ref./distr.	31.5	35.5	28.4	33.9	11 900	15 964	82.4
14	41	19	52	Siemens AG	Germany	Electronics	..	76.6	53.2	72.2	251 000	443 000	56.8
15	90	14	73	Wal-Mart Stores	United States	Retailing	30.2	50.0	19.4	137.6	..	1 140 000	25.8
16	55	-	-	Repsol-YPF SA	Spain	Petroleum expl./ref./distr.	29.6	42.1	9.1	26.3	..	29 262	51.6
17	13	17	17	Diageo Plc	United Kingdom	Beverages	28.0	40.4	16.4	19.0	59 852	72 479	79.4
18	59	87	84	Mannesmann AG	Germany	Telecommunications/engineering	..	57.7	11.8	21.8	58 694	130 860	48.9
19	58	13	63	Suez Lyonnaise des Eaux	France	Diversified/utility	..	71.6	9.7	23.5	150 000	220 000	49.1
20	32	23	40	BMW AG	Germany	Motor vehicles	27.1	39.2	26.8	36.7	46 104	114 952	60.9
21	3	15	8	ABB	Switzerland	Electrical equipment	27.0	30.6	23.8	24.4	155 427	161 430	94.1
22	42	20	41	Sony Corporation	Japan	Electronics	..	64.2	43.1	63.1	115 717	189 700	56.7
23	9	34	1	Seagram Company	Canada	Beverages/media	25.6	35.0	12.3	11.8	..	..	88.6
24	8	12	7	Unilever	United Kingdom/ The Netherlands	Food/beverages	25.3	28.0	38.4	44.0	222 614	246 033	89.3
25	49	-	-	Aventis	France	Pharmaceuticals/chemicals	..	39.0	4.7	19.2	..	92 446	54.0
26	85	24	81	Mitsubishi Corporation	Japan	Diversified	24.6	78.6	15.8	127.3	3 437	7 556	29.7
27	6	27	13	Roche Group	Switzerland	Pharmaceuticals	24.5	27.1	18.1	18.4	57 970	67 695	91.5
28	38	21	34	Renault SA	France	Motor vehicles	..	46.4	23.9	37.6	..	159 608	58.2
29	27	18	38	Honda Motor Co Ltd.	Japan	Motor vehicles	24.4	41.8	38.7	51.7	..	112 200	64.7
30	73	52	86	Telefónica SA	Spain	Telecommunications	24.2	64.1	9.5	23.0	..	127 193	38.0
31	14	22	12	News Corporation [d]	Australia	Media/publishing	23.5	38.4	12.9	14.3	24 500	33 800	78.3
32	44	51	62	Motorola Inc	United States	Electronics	23.5	40.5	18.3	33.1	70 800	128 000	56.2
33	35	33	14	Philips Electronics	The Netherlands	Electronics	22.7	29.8	31.8	33.5	..	226 874	59.9
34	68	25	67	Nissan Motor Co. Ltd.	Japan	Motor vehicles	..	59.7	..	58.1	..	136 397	40.7
35	7	69	5	British American Tobacco Plc	United Kingdom	Food/tobacco	22.0	26.2	16.5	18.1	104 223	107 620	90.7
36	67	38	80	ENI Group	Italy	Petroleum expl./ref./distr.	20.9	44.3	11.4	29.1	..	72 023	40.9
37	79	39	91	Chevron Corporation	United States	Petroleum expl./ref./distr.	20.1	40.7	9.7	35.4	9 426	36 490	34.2
38	48	74	66	Johnson & Johnson	United States	Pharmaceuticals	19.8	29.2	12.1	27.5	49 571	97 806	54.2
39	52	36	53	Hewlett-Packard	United States	Electronics/computers	..	35.3	23.4	42.4	41 400	84 400	53.1
40	54	29	56	Elf Aquitaine SA	France	Petroleum expl./ref./distr.	18.8	43.2	25.7	35.8	..	57 400	51.7

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Table III.1. The world's 100 largest TNCs, ranked by foreign assets, 1999 (continued)

(Billions of dollars and number of employees)

Ranking 1999 by: Foreign assets	Ranking 1999 by: TNI [a]	Ranked in 1998 by: Foreign assets	Ranked in 1998 by: TNI [a]	Corporation	Country	Industry [b]	Assets Foreign	Assets Total	Sales Foreign	Sales Total	Employment Foreign	Employment Total	TNI [a] (Per cent)
41	33	26	33	Bayer AG	Germany	Pharmaceuticals/chemicals	18.2	31.4	20.3	29.2	64 100	120 400	60.2
42	26	47	25	Coca-Cola Company	United States	Beverages	18.0	21.6	12.4	19.8	..	37 000	65.2
43	25	42	42	Alcatel	France	Electronics	17.7	34.0	16.4	23.2	85 712	115 712	65.6
44	69	44	77	Texas Utilities Company	United States	Utility	17.3	40.7	6.8	17.1	8 590	21 934	40.4
45	86	37	78	Mitsui & Co Ltd.	Japan	Diversified	17.3	56.5	57.8	118.5	..	31 250	29.1
46	36	40	46	BASF AG	Germany	Chemicals	17.1	30.0	22.5	29.5	46 455	104 628	59.2
47	80	53	83	Vivendi SA	France	Utility/media	..	79.3	16.7	39.1	..	275 591	34.0
48	74	-	-	Hutchison Whampoa Ltd.	Hong Kong, China	Diversified	..	48.5	2.1	7.1	21 652	42 510	38.0
49	62	43	65	Peugeot SA	France	Motor vehicles	15.6	39.8	24.4	37.8	50 300	165 800	44.7
50	72	56	79	Fujitsu Ltd.	Japan	Electronics	15.3	42.3	17.5	43.3	72 851	188 573	38.4
51	81	50	82	Fiat Spa [c]	Italy	Motor vehicles	15.2	80.4	16.5	45.2	98 589	221 319	33.4
52	65	65	88	Veba Group	Germany	Diversified	15.1	55.8	24.5	39.1	49 590	131 602	42.4
53	97	46	89	Sumitomo Corporation	Japan	Trading/machinery	15.0	47.6	12.6	103.5	..	33 057	16.1
54	66	41	69	Du Pont (E.I.) de Nemours	United States	Chemicals	14.8	40.8	13.3	26.9	36 000	94 000	41.3
55	96	58	97	Hitachi Ltd.	Japan	Electrical equipment/electronics	14.6	91.5	15.4	77.7	..	323 827	17.9
56	71	55	72	Matsushita Electric Industrial Co. Ltd.	Japan	Electronics	13.9	72.5	34.0	68.9	143 773	290 448	39.3
57	1	57	2	Thomson Corporation	Canada	Media/publishing	13.6	13.8	5.5	5.8	37 000	40 000	95.4
58	60	70	57	Dow Chemical Company	United States	Chemicals	13.3	33.5	14.5	25.9	21 850	51 012	46.2
59	5	62	6	Holcim (ex Holderbank)	Switzerland	Construction materials	12.5	13.6	7.3	8.1	36 719	39 327	91.8
60	99	45	96	Itochu Corporation	Japan	Trading	12.4	55.9	18.4	115.3	..	40 683	13.7
61	40	92	55	Canon Electronics	Japan	Electronics/office equipment	12.3	25.4	18.0	25.7	42 787	81 009	57.1
62	78	73	49	Carrefour SA	France	Retailing	12.3	33.7	14.3	37.7	..	297 290	34.7
63	24	59	36	McDonald's Corporation	United States	Eating places	12.1	21.0	8.1	13.3	260 000	314 000	67.1
64	17	64	18	Michelin	France	Rubber/tires	..	17.3	11.9	13.8	..	130 434	73.8
65	16	67	20	Glaxo Wellcome Plc	United Kingdom	Pharmaceuticals	11.8	16.8	11.8	13.8	44 976	60 726	76.6
66	94	66	95	RWE Group	Germany	Utility/diversified	10.9	57.4	7.9	35.1	..	155 576	22.9
67	88	68	90	Marubeni Corporation	Japan	Trading	10.8	54.2	31.9	99.3	..	8 618	26.0
68	70	78	71	Procter & Gamble [e]	United States	Chemicals/cosmetics	10.7	32.1	18.4	38.1	..	110 000	40.3
69	31	80	37	Ericsson LM	Sweden	Electronics/telecommunications	10.6	23.8	20.4	25.3	59 250	103 290	60.9
70	46	60	48	Robert Bosch GmbH	Germany	Motor vehicle parts	..	20.9	18.5	28.0	96 970	194 889	55.3
71	19	63	22	Stora Enso OYS	Finland	Paper	..	16.2	10.0	10.7	..	40 226	72.5
72	61	-	-	AES Corporation	United States	Utility	10.2	20.9	2.1	3.3	..	14 500	45.5
73	28	75	30	Compart Spa	Italy	Food	..	18.6	8.0	11.8	25 177	36 916	63.8
74	100	76	100	SBC Communications	United States	Telecommunications	..	83.2	..	49.5	..	204 530	12.9
75	10	77	16	Akzo Nobel NV	The Netherlands	Chemicals	10.2	12.0	12.6	15.4	55 100	68 000	82.6
76	53	84	32	Royal Ahold NV	The Netherlands	Retailing	10.0	14.3	23.3	33.8	59 428	308 793	52.7
77	95	81	98	Southern Company	United States	Utility	9.6	38.4	1.5	11.6	6 928	32 949	19.8
78	23	72	29	Danone Groupe SA	France	Food/beverages	9.5	15.1	8.9	13.4	..	75 965	67.8
79	87	85	84	Merck & Co	United States	Pharmaceuticals	9.1	35.6	7.0	32.7	23 824	62 300	28.4
80	4	82	4	Electrolux AB	Sweden	Electrical equipment/electronics	9.1	9.8	13.9	14.5	84 035	92 916	93.2
81	98	49	92	Nissho Iwai	Japan	Trading	9.1	38.5	12.9	68.7	..	18 446	15.8
82	15	86	15	L'Air Liquide Groupe	France	Chemicals	..	10.5	4.6	6.1	..	29 000	76.9

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Table III.1. The world's 100 largest TNCs, ranked by foreign assets, 1999 (concluded)
(Billions of dollars and number of employees)

Ranking 1999 by: Foreign assets	Ranking 1999 by: TNI [a]	Ranked in 1998 by: Foreign assets	Ranked in 1998 by: TNI [a]	Corporation	Country	Industry [b]	Assets: Foreign	Assets: Total	Sales: Foreign	Sales: Total	Employment: Foreign	Employment: Total	TNI [a] (Per cent)
83	91	-	-	Edison International	United States	Electronics	8.1	35.0	1.0	9.2	..	19 570	24.3
84	84	91	87	Petróleos de Venezuela SA	Venezuela	Petroleum expl./ref./distr.	8.0	47.3	13.3	32.6	..	47 760	29.8
85	29	79	31	Montedison Group	Italy	Chemicals/agriindustry	..	16.7	7.9	11.5	21 181	29 550	62.2
86	64	30	50	Viag AG	Germany	Diversified	..	34.2	11.1	19.6	41 723	81 809	43.3
87	34	54	11	Rio Tinto Plc [f]	Australia/ United Kingdom	Mining	7.4	12.1	5.3	9.3	16 829	26 938	60.2
88	30	83	47	Volvo AB	Sweden	Motor vehicles	..	17.7	13.4	15.1	28 630	53 600	61.4
89	63	-	-	Usinor	France	Steel manufacturing	7.4	15.6	7.0	14.5	22 395	64 118	43.5
90	93	95	94	Atlantic Richfield	United States	Petroleum expl./ref./distr.	..	26.3	2.0	12.5	..	16 600	23.3
91	20	-	-	AstraZeneca Plc	United States	Pharmaceuticals	7.2	19.3	14.3	15.1	48 300	58 000	71.6
92	89	-	-	Lucent Technologies Inc.	United States	Electronics	7.2	32.1	12.2	38.3	36 000	153 000	25.9
93	39	90	35	Crown Cork & Seal	United States	Packaging	7.2	11.5	3.9	7.7	..	35 959	57.5
94	76	-	-	Metro AG	Germany	Retailing	7.2	19.1	17.3	44.1	55 571	171 440	36.4
95	56	-	-	Texaco Inc.	United States	Petroleum expl./ref./distr.	..	29.0	25.2	35.0	..	18 443	51.2
96	12	-	-	Cadbury - Schweppes Plc	United Kingdom	Food/beverages	7.1	8.0	5.3	6.8	29 835	37 425	81.9
97	92	100	93	Toshiba Corporation	Japan	Electronics	7.1	53.8	17.5	54.2	46 500	190 870	23.3
98	57	88	58	Mitsubishi Motors Corporation	Japan	Motor vehicles	7.0	25.4	16.8	29.1	..	26 749	51.2
99	37	93	44	Bridgestone	Japan	Rubber/tires	7.0	15.7	11.6	18.3	70 000	101 489	58.9
100	47	-	-	Cemex SA	Mexico	Construction material	7.0	11.9	2.5	4.8	..	20 902	54.6

Source: UNCTAD/Erasmus University database.

[a] TNI is the abbreviation for 'transnationality index'. The transnationality index is calculated as the average of three ratios: foreign assets to total assets, foreign sales to total sales and foreign employment to total employment.
[b] Industry classification for companies follows the United States Standard Industrial Classification as used by the United States Securities and Exchange Commission (SEC).
[c] Foreign assets, sales and employment are outside Europe.
[d] Foreign assets, sales and employment are outside Australia and Asia.
[e] Foreign assets, sales and employment are outside North-America.
[f] Foreign employment is outside Europe, Australia and New Zealand.
.. Data on foreign assets, foreign sales and foreign employment were not made available for the purpose of this study. In case of non-availability, they are estimated using secondary sources of information or on the basis of the ratios of foreign to total assets, foreign to total sales and foreign to total employment.
Note: The list includes non-financial TNCs only. In some companies, foreign investors may hold a minority share of more than 10 per cent.

A. The 100 largest TNCs worldwide

1. Highlights

In 1999, General Electric maintained its top position among the world's 100 largest non-financial TNCs (table III.1) ranked by foreign assets. General Motors moved back to fourth position, with ExxonMobil replacing it in second place and Royal Dutch Shell remaining in third place. Overall, the ranking remained fairly stable. Only a few changes occurred among the top 10 TNCs: TotalFina moved up from thirty-second to the eighth rank and Nestlé moved down to the eleventh rank.

Thirteen new entries and exits were registered in 1999 (tables III.2 and III.3). Three departures were caused by M&As (Hoechst, Mobil and Rhone-Poulenc). Repsol (Spain) appeared for the first time in the list of the top 100, as a result of the acquisition of YPF (Argentina). For the first time since this listing has been established, three firms among the top 100 TNCs, Hutchison Whampoa, Petróleos de Venezuela (PDVSA) and Cemex, were headquartered in a developing country. PDVSA, which was also placed in the top 100 TNCs in previous years, rose seven places to take eighty-fourth position in the top 100 list. Since 1997, no TNC from the Republic of Korea has had sufficiently large foreign assets to enter the top 100 listing.

Foreign assets. Growth in the total amount of foreign assets held by the 100 largest TNCs continued in 1999. Total foreign assets increased by 10 per cent in 1999, to $2.1 trillion (table III.4). The TNCs that had the three most important increases in foreign assets were all petroleum companies (ExxonMobil, TotalFina and Repsol). Other companies that experienced significant increases in their foreign assets had a diversified industrial and geographical background. The same observation applies to the 10 TNCs with the largest decreases in foreign assets.

TNCs from the United States raised their share of the overall total of the foreign assets held by the world's 100 largest TNCs by about 6 per cent (table III.5). The share of EU TNCs has remained fairly stable since 1990. However, in general the larger countries of the EU (Germany, France and Spain) increased considerably their relative share within this regional group at the expense of the smaller country members. Japan, too, saw its share in ownership of foreign assets rise in the top 100 TNC listing, by about 28 per cent during the past decade, testifying to the sustained outward orientation of Japanese companies.

Table III.2. Newcomers to the world's 100 largest TNCs, ranked by foreign assets, 1999

Ranked by: Foreign assets	Ranked by: TNI [a]	Corporation	Country	Industry	TNI [a] (Per cent)
13	11	Nippon Mitsubishi Oil Corporation	Japan	Petroleum expl./ref./distr.	82.4
16	54	Repsol-YPF SA	Spain	Petroleum expl./ref./distr.	51.6
25	48	Aventis	France	Pharmaceuticals/chemical	54.0
48	74	Hutchison Whampoa	Hong Kong, China	Diversified	38.0
71	61	AES Corporation	United States	Utility	45.5
82	90	Edison International	United States	Electronics	24.3
88	63	Usinor	France	Steel manufacturing	43.5
90	20	AstraZeneca Plc	United States	Pharmaceuticals	71.6
91	88	Lucent Technologies Inc.	United States	Electronics	25.9
93	75	Metro AG	Germany	Retailing	36.4
94	55	Texaco Inc.	United States	Petroleum expl./ref./distr.	51.2
95	12	Cadbury - Schweppes Plc	United Kingdom	Food/beverages	81.9
100	47	Cemex SA	Mexico	Construction	54.6

Source: UNCTAD/Erasmus University database.

[a] TNI is the abbreviation for "transnationality index", which is calculated as the average of three ratios: foreign assets to total assets, foreign sales to total sales and foreign employment to total employment.

Table III.3. Departures from the world's 100 largest TNCs, ranked by foreign assets, 1999[a]

Ranked in 1998 by Foreign assets	TNI [b]	Corporation	Country	Industry	TNI [b] (Per cent)
16	43	Mobil Corporation [d]	United States	Petroleum expl./ref./distr.	58.6
28	23	Hoechst AG [c]	Germany	Pharmaceuticals/chemicals	71.6
31	26	Rhone-Poulenc SA [c]	France	Pharmaceuticals/chemicals	69.1
35	28	Cable And Wireless Plc	United Kingdom	Telecommunications	67.5
48	24	Nortel Networks	Canada	Telecommunications	70.8
61	74	RJR Nabisco Holdings	United States	Food/tobacco	36.9
71	9	SmithKline Beecham Plc	United Kingdom	Pharmaceuticals	82.3
89	61	Broken Hill Proprietary	Australia	Steel manufacturing	49.3
94	99	GTE Corporation	United States	Telecommunications	16.0
96	39	Imperial Chemical Industries	United Kingdom	Chemicals	60.2
97	68	Compaq Computer Corporation	United States	Computers	42.6
98	10	SCA	Sweden	Paper	80.8
99	70	ALCOA	United States	Aluminium manufacturing	41.7

Source: UNCTAD/Erasmus University database.

[a] This also includes companies that could not be considered in 1998 because of the late arrival of the response to the UNCTAD questionnaire and for which estimates could not be derived.
[b] TNI is the abbreviation for "transnationality index", which is calculated as the average of three ratios: foreign assets to total assets, foreign sales to total sales and foreign employment to total employment.
[c] Formed Aventis in 1999.
[d] Acquired by Exxon in 1999.

Foreign sales. Total foreign sales of the world's largest 100 TNCs amounted to slightly more than $2.1 trillion in 1999 (table III.4), increasing by 3 per cent. TNCs from the petroleum industry captured four of the ten largest increases in foreign sales, in the range of 20 - 50 per cent. As for the 10 largest decreases in foreign sales, no clear pattern can be discerned: TNCs experiencing declines came from various countries and industries.

Over the past decade, the share of the TNCs from the United States in the total foreign sales of the world's 100 largest TNCs decreased by about 5 percentage points, to around 25 per cent of the total. EU TNCs increased their relative share of foreign sales by about 5 percentage points, to almost 46 per cent. As with foreign assets, the share of TNCs headquartered in smaller European countries decreased (the only exception being The Netherlands). The overall relative share of the EU increased, mainly due to a large, increase in the German TNCs' share in the foreign sales of the top 100 TNCs: an increase of about 7 percentage points, to almost 18 per cent of the total. The Japanese relative share increased slightly to 22 per cent.

Foreign employment. For the first time, total foreign employment by the largest TNCs decreased by about 8 per cent, whereas their total employment rose by 4 per cent (table III.4). This is a reversal of the previously observed trend of declining overall employment with rising foreign employment (figure III.2). However, diverging from the overall trend, a number of TNCs – led by McDonalds, General Motors and Siemens – added considerably to their foreign employment. Despite the large increases in foreign assets and foreign sales by a number of petroleum companies,

Table III.4. Snapshot of the world's 100 largest TNCs, 1999
(Billions of dollars, number of employees and percentage)

Variable	1999	1998	Change 1999 vs. 1998 (Per cent)
Assets			
Foreign	2 124	1 922	10.5
Total	5 092	4 610	10.5
Sales			
Foreign	2 123	2 063	3.0
Total	4 318	4 099	5.3
Employment			
Foreign	6 050 283	6 547 719	-7.6
Total	13 279 327	12 741 173	4.2
Average index of transnationality	52.6	53.9	-1.3 [a]

Source: UNCTAD/Erasmus University database.
[a] The change between 1998 and 1999 is expressed in percentage points.

only one petroleum company, TotalFina, is among the TNCs showing the ten largest increases in terms of foreign employment. No Japanese company saw its foreign employment rise.

The 10 TNCs accounting for the largest declines in foreign employment differed from the 10 with the largest declines in foreign sales. One company (Bayer) is also among those recording the largest declines in foreign assets. This suggests that foreign employment, as much as total employment, evolves somewhat independently from the overall transnationalization strategy of a company.

National origin. The national origin composition of the top 100 TNCs continued to be fairly stable. Perhaps not surprisingly, 91 of the top 100 are headquartered in the Triad (EU, Japan and the United States) (table III.5). The share of the Triad among the top 100 TNC listings has risen gradually over the past decade, mostly in favour of Japan and at the expense of some smaller industrialized countries like Belgium, Norway and New Zealand. Increasingly, TNCs from the developing economies (Hong Kong (China), Mexico and Venezuela) are emerging and rising in the list of the world's 100 largest TNCs.

Industries. In 1999, the top 100 TNCs were dominated by the same four industries as in previous years: electronics and electrical equipment, motor vehicles, petroleum exploration and distribution, and food and beverages (table III.6). Of the top 100 TNCs, 55 were in one of these industries, and 32 in the first two industries. The growth of TNCs in these industries, as represented by Ford, Siemens and Unilever, shows the dramatic geographic expansion and increased number of foreign affiliates, especially since the mid-1980s (figures III.3-

Table III.5. Country composition of the world's largest 100 TNCs by transnationality index and foreign assets, 1990, 1995 and 1999

(Percentage)

	Average TNI [a]			Share in total of foreign assets of top 100			Number of entries		
Economy	**1990**	**1995**	**1999**	**1990**	**1995**	**1999**	**1990**	**1995**	**1999**
European Union	**56.7**	**66.0**	**58.7**	**45.5**	**43.8**	**43.0**	**48**	**39**	**46**
France	50.9	57.6	55.7	10.4	8.9	11.6	14	11	13
Germany	44.4	56.0	49.6	8.9	12.2	12.3	9	9	12
United Kingdom [b]	44.4	56.0	49.6	8.9	12.2	12.3	12	10	8
The Netherlands [b]	68.5	79.0	68.2	8.9	8.2	5.3	4	4	5
Italy	38.7	35.8	50.1	3.5	2.3	2.6	4	2	4
Sweden	71.7	80.6	71.8	2.7	1.7	1.3	5	3	3
Finland	-	-	72.5	-	-	0.5	-	-	1
Spain	-	-	44.8	-	-	2.5	-	-	2
Belgium	60.4	70.4	-	1	0.9	-	1	2	-
North America	**41.2**	**46.0**	**46.2**	**32.5**	**35.9**	**35.2**	**30**	**34**	**28**
United States	38.5	41.9	42.7	31.5	33.3	33.3	28	30	26
Canada	79.2	76.5	92.0	1	2.7	1.9	2	4	2
Japan	**35.5**	**31.9**	**38.4**	**12**	**15.1**	**15.4**	**12**	**17**	**18**
Remaining countries	**73.0**	**66.9**	**70.4**	**10**	**9.0**	**7.5**	**10**	**10**	**9**
Switzerland	84.3	83.6	93.1	7.5	6.6	4.6	6	5	4
Australia [b]	51.8	-	69.3	1.6	-	1.5	2	3	2
Hong Kong, China	-	-	38.5	-	-	0.3			1
Mexico	-	-	54.6	-	-	0.8			1
Venezuela	-	44.4	29.8	-	0.4	0.4	-	1	1
New Zealand	62.2	-	-	0.5	-	-	1	-	-
Norway	58.1	-	-	0.4	-	-	1	-	-
Republic of Korea	-	47.7	-	-	0.7	-	-	1	-
Total of all listed TNCs	**51.1**	**51.5**	**52.6**	**100**	**100**	**100**	**100**	**100**	**100**

Source: UNCTAD, 1993 and Erasmus University database.

[a] TNI is the abbreviation for "transnationality index", which is calculated as the average of three ratios: foreign assets to total assets, foreign sales to total sales and foreign employment to total employment.

[b] Due to dual nationality, Royal Dutch Shell and Unilever are counted as an entry for both the United Kingdom and The Netherlands. In the aggregate for the European Union and the total of all listed TNCs they are counted once. Rio Tinto Plc is counted as an entry for both the United Kingdom and Australia. In the aggregate for the total of all 100 listed TNCs it is counted once.

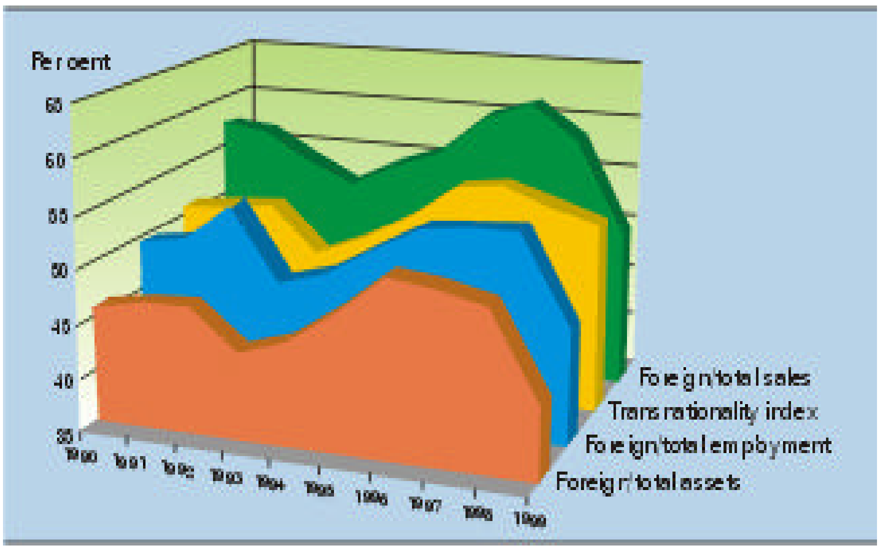
III.5). The relative decline of chemical firms during the past decade, from 12 in 1990 to 7 in 1999, is noteworthy. This is partly the result of substantial restructuring in the chemicals and pharmaceuticals industries. Traditionally, chemicals and pharmaceuticals were organized within the structure of individual companies. Such a combined structure was seen to yield synergies. Since the second half of the 1990s, companies switched increasingly to separating chemicals from pharmaceuticals and vice versa, into distinct corporate structures emphasizing synergies in areas other than production and research. A significant decline in the transnationality index was recorded in trading, which (together with diversified) is essentially represented by Japanese *Sogo Shoshas*. They have been restructuring for some time, but their geographical spread established in the past is already extensive, as shown by the mapping of foreign affiliates of Marubeni Corporation (figure III.6).

2. Transnationality

The “transnationality index” is the average of three ratios: foreign assets/total assets, foreign sales/total sales and foreign employment/total employment. It captures the foreign dimension of the overall activities of a firm. Between 1990 and 1999, the average transnationality index of the world's top 100 TNCs rose from 51 per cent in 1990 to 55 per cent in 1997 but declined to 53 per cent in 1999 (figure III.7).[3] The gradual emergence in the listings of top 100 TNCs of large transnational utility, retailing and telecommunication companies with their traditionally large portfolio of domestic assets has contributed to the decline of the list's average transnationality index. Most of these companies entered the list of the largest 100 TNCs during the latter half of the 1990s, with an average transnationality index far below the overall average in 1999 (table III.6). If these three industries were excluded, the index in 1999 would stand at 56 per cent. Given the increasing liberal policy environment in which such companies operate, their transnationality can be expected to increase over the next decade, following the example of the motor vehicle industry (see below).

In 1999, as in earlier years, the index was led by firms from countries with small domestic markets. For example, all four Swiss TNCs among the world's 100 largest TNCs feature in the listing of the top 10 companies as measured by their transationality (table III.7). Meanwhile, only two were headquartered in a relatively large economy (United Kingdom), whose TNCs for historical reasons have always maintained an above-average level of transnationality (table III.5). Of course, TNCs from smaller home countries have to go abroad if they want to overcome the constraints of their domestic market size, and to reach the economies of scale needed to make optimal use of their ownership advantages and to stay competitive. Interestingly, however, among the companies with largest increases and decreases of the transnationality index, only four are from

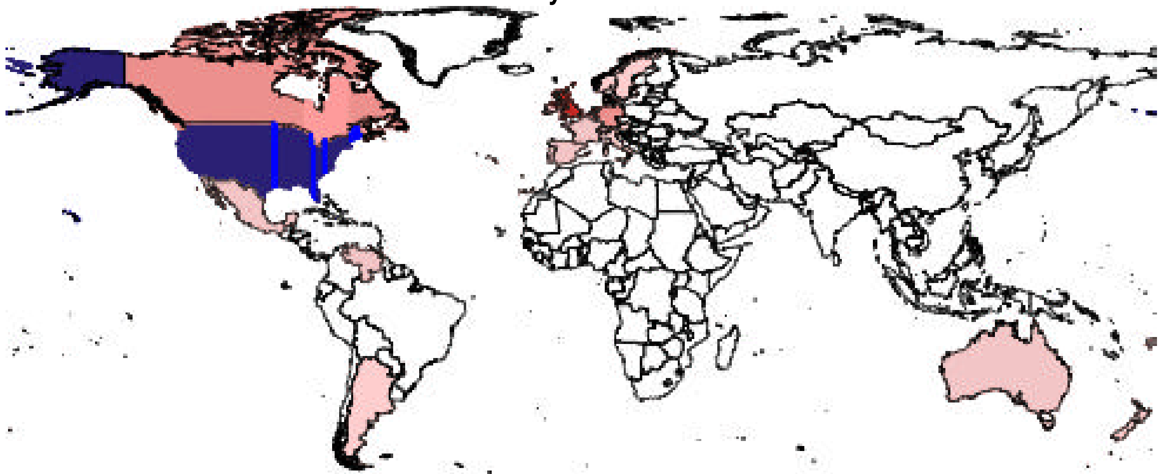
Figure III.2. Snapshot of the world's 100 largest TNCs, 1990-1999



Source: UNCTAD/Erasmus University database.

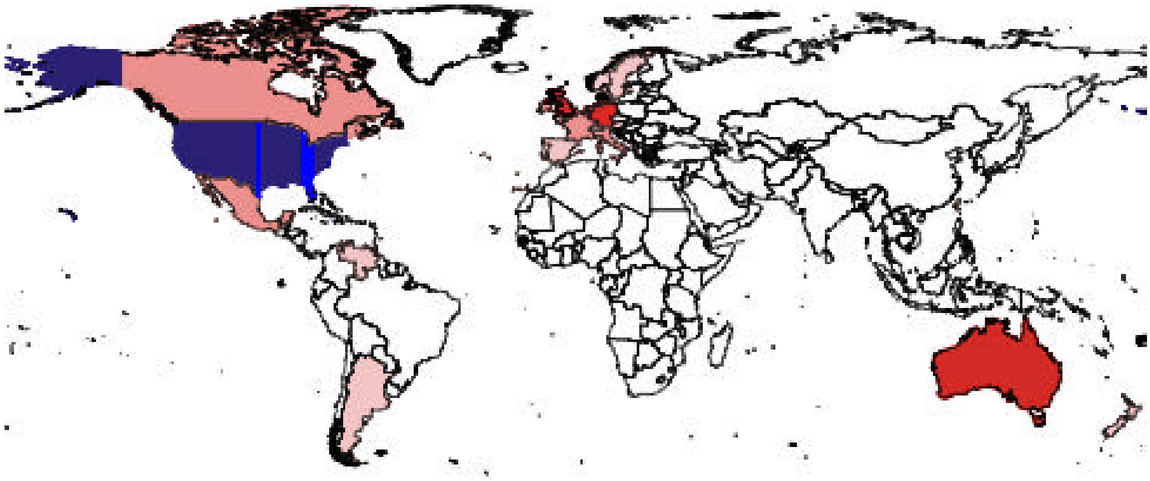
Figure III.3. Global expansion of Ford Motor Company

By 1970



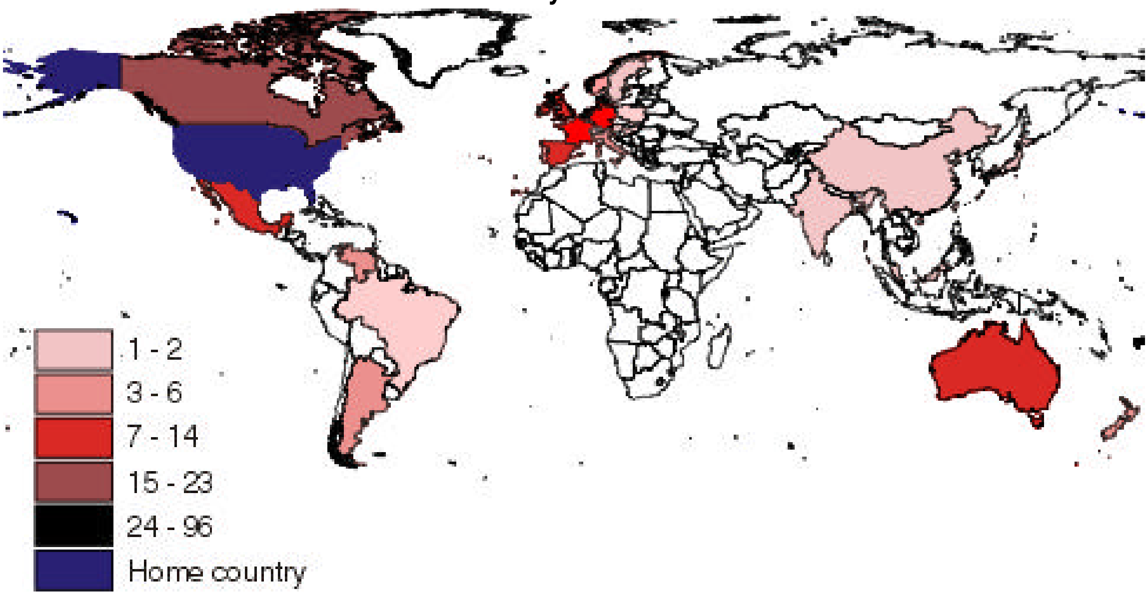
Note: Based on 65 majority-owned foreign affiliates identified.

By 1985



Note: Based on 140 majority-owned foreign affiliates identified.

By 2000

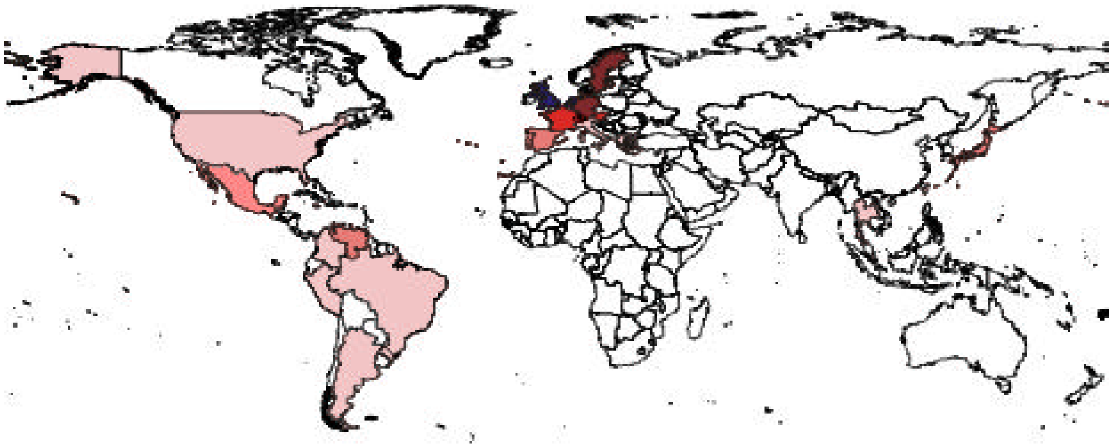


Note: Based on 270 majority-owned foreign affiliates identified.

Source: UNCTAD, FDI/TNC database, on the basis of *Who Owns Whom CD-ROM 2000* (Dun and Bradstreet).

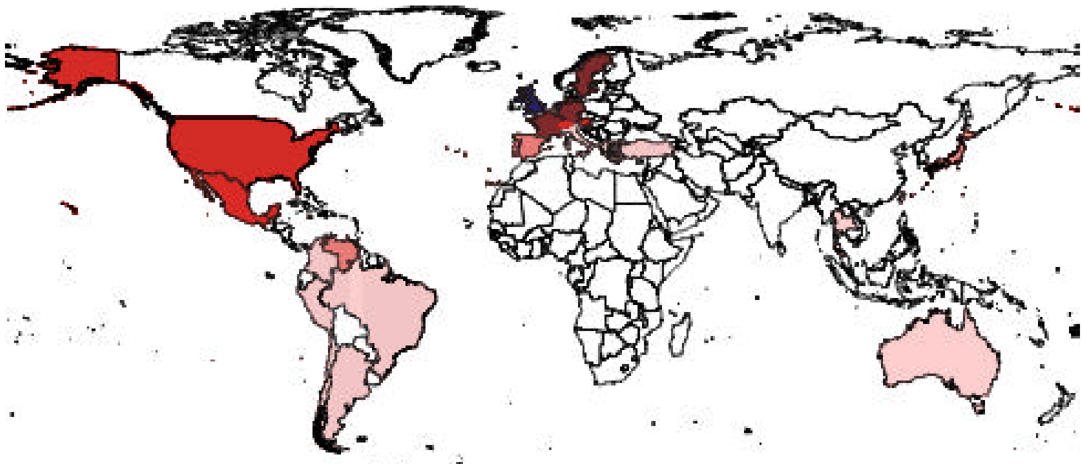
Figure III.4. Global expansion of Unilever N.V.

By 1970



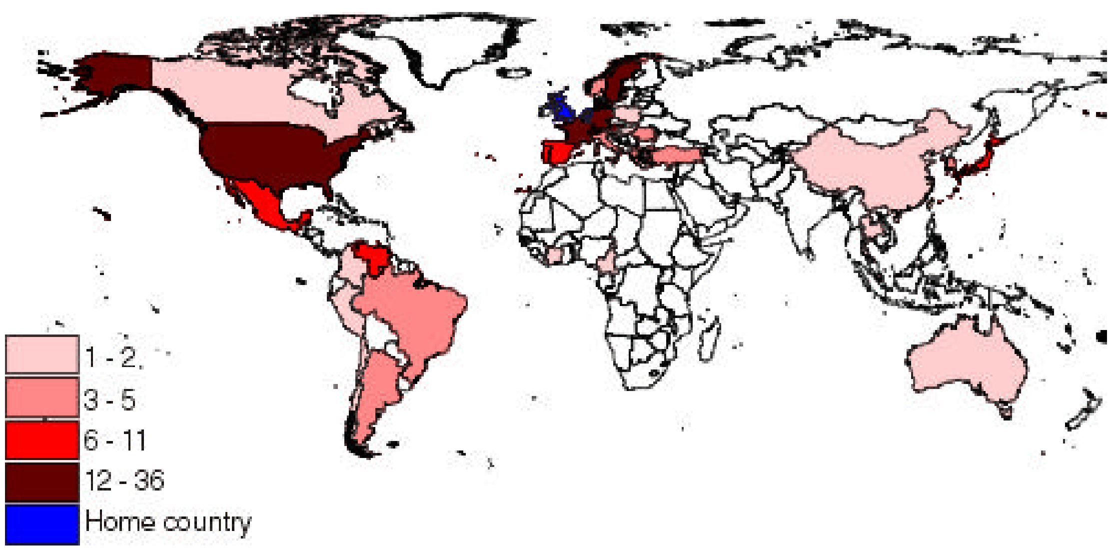
Note: Based on 94 majority-owned foreign affiliates identified.

By 1985



Note: Based on 146 majority-owned foreign affiliates identified.

By 2000

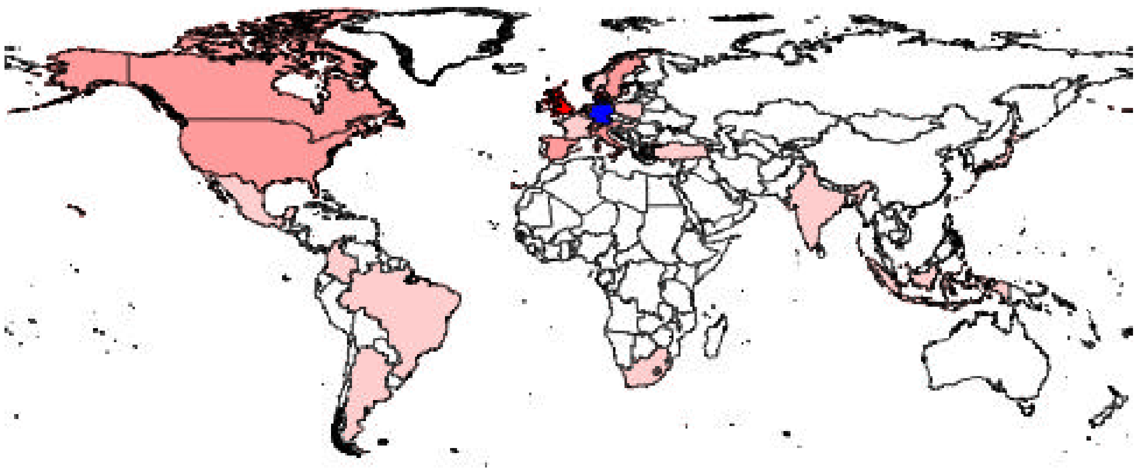


Note: Based on 244 majority-owned foreign affiliates identified.

Source: UNCTAD, FDI/TNC database, on the basis of *Who Owns Whom CD-ROM 2000* (Dun and Bradstreet).

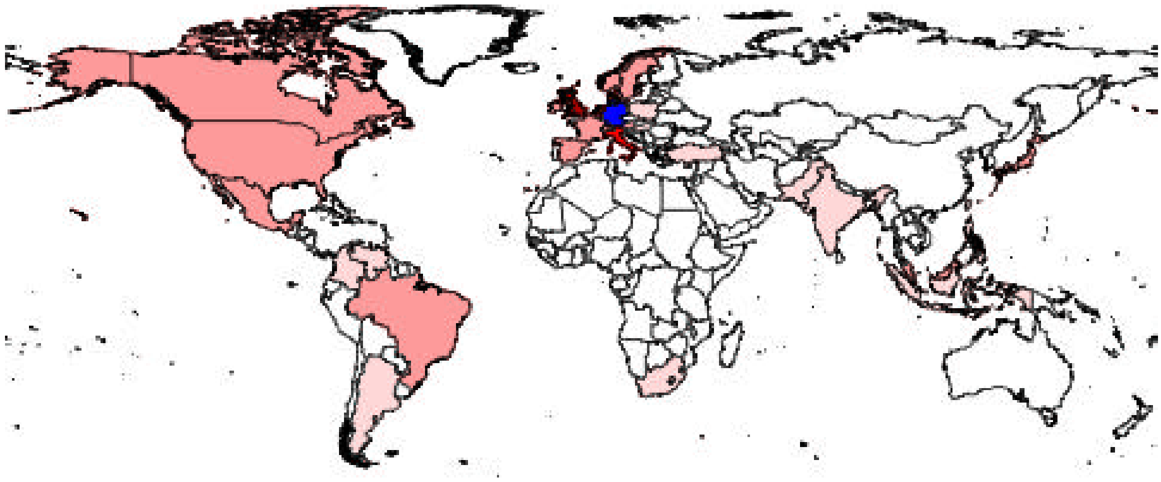
Figure III.5. Global expansion of Siemens A.G.

By 1970



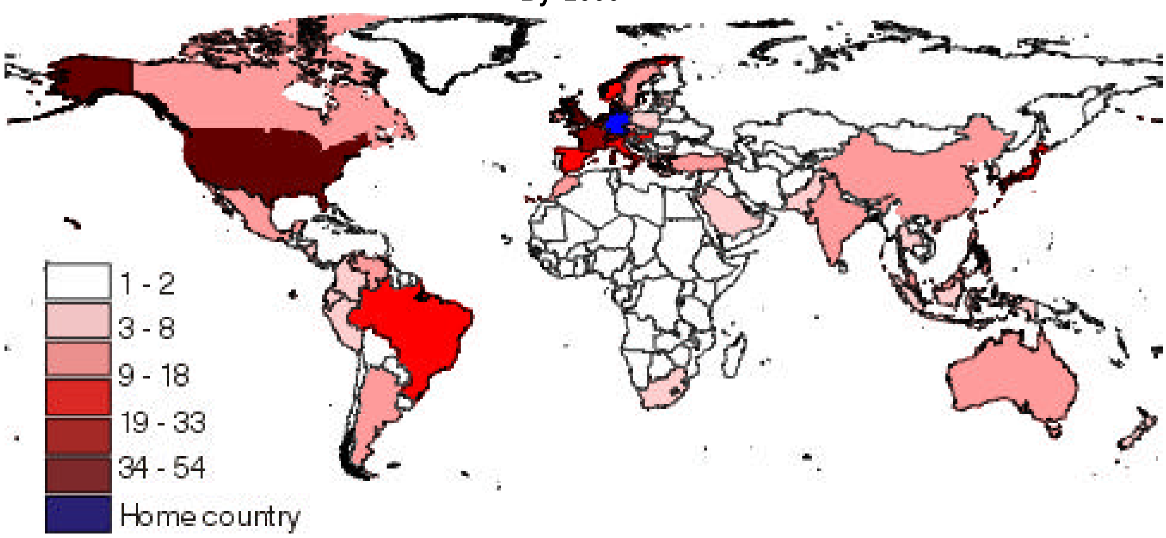
Note: Based on 84 majority-owned foreign affiliates identified.

By 1985



Note: Based on 165 majority-owned foreign affiliates identified.

By 2000

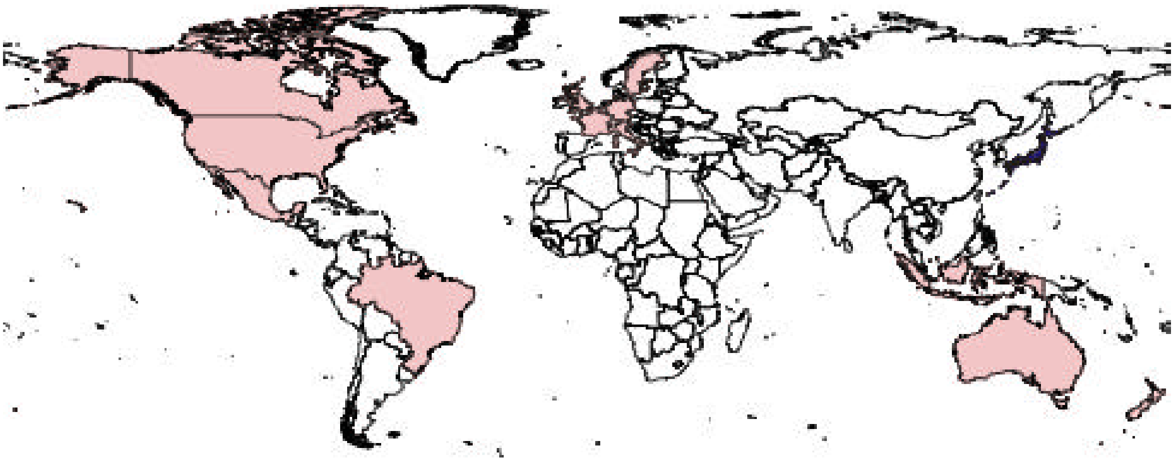


Note: Based on 416 majority-owned foreign affiliates identified.

Source: UNCTAD, FDI/TNC database, on the basis of *Who Owns Whom CD-ROM 2000* (Dun and Bradstreet).

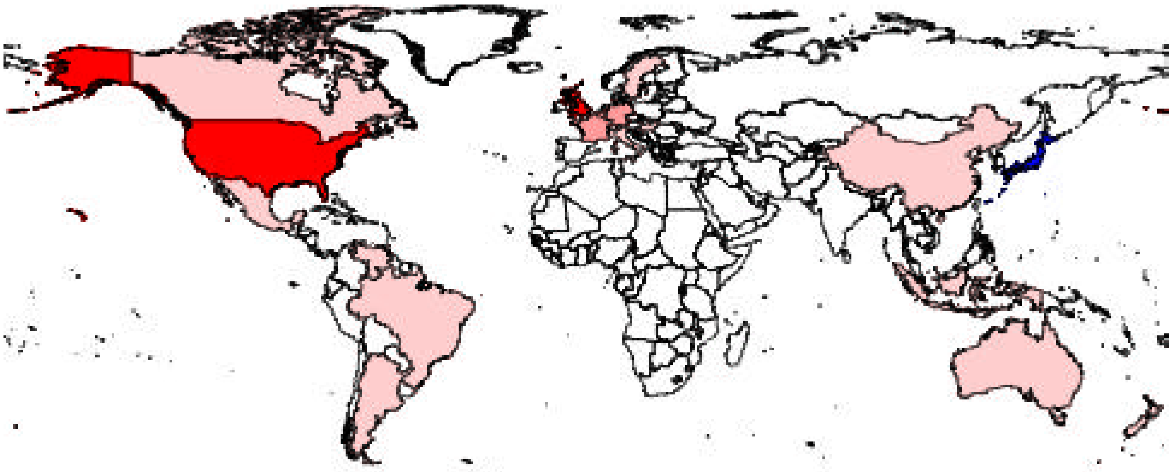
Figure III.6. Global expansion of Marubeni Corporation

By 1970



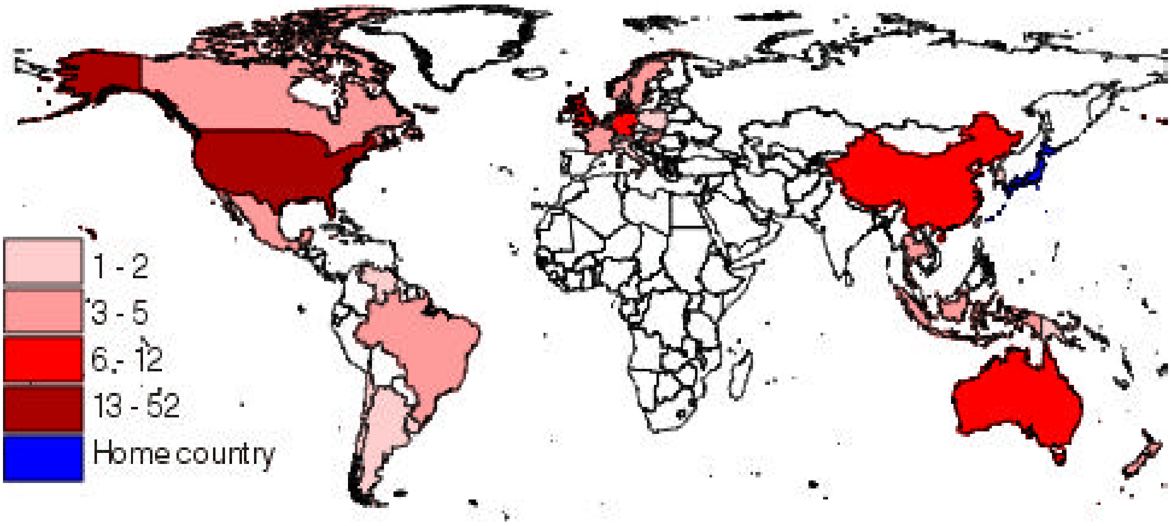
Note: Based on 16 majority-owned foreign affiliates identified.

By 1985



Note: Based on 44 majority-owned foreign affiliates identified.

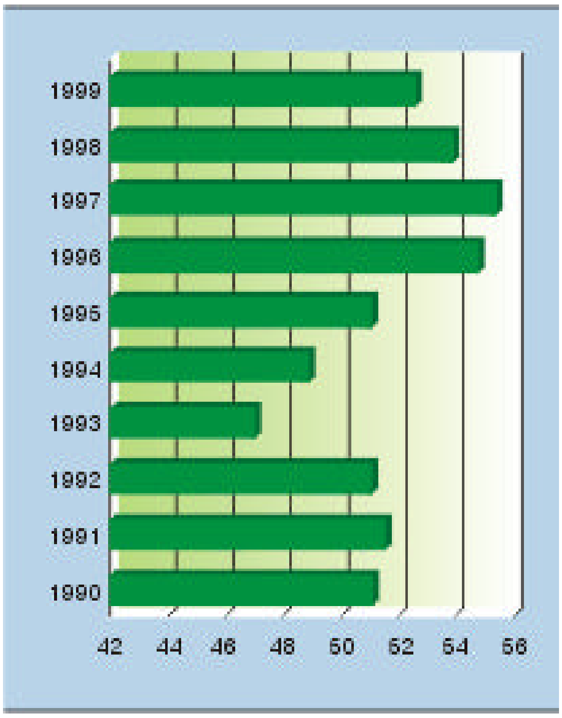
By 2000



Note: Based on 170 majority-owned foreign affiliates identified.

Source: UNCTAD, FDI/TNC database, on the basis of *Who Owns Whom CD-ROM 2000* (Dun and Bradstreet).

Figure III.7. Average transnationality index of the world's 100 largest TNCs, 1990-1999



Source: UNCTAD/Erasmus University database.

Table III.6. Industry composition of the largest 100 TNCs, 1990, 1995 and 1999

Industry	Number of entries 1990	1995	1999	Average TNI [a] per industry (Per cent) 1990	1995	1999
Media	2	2	2	82.6	83.4	86.9
Food/beverages/tobacco	9	12	10	59.0	61.0	78.9
Construction	4	3	2	58.8	67.8	73.2
Pharmaceuticals	6	6	7	66.1	63.1	62.4
Chemicals	12	11	7	60.1	63.3	58.4
Petroleum exploration/refining/ distribution and mining	13	14	13	47.3	50.3	53.3
Electronics/electrical equipment/computers	14	18	18	47.4	49.3	50.7
Motor vehicle and parts	13	14	14	35.8	42.3	48.4
Metals	6	2	1	55.1	27.9	43.5
Diversified	2	2	6	29.7	43.6	38.7
Retailing	-	-	4	-	-	37.4
Utilities	-	-	5	-	-	32.5
Telecommunications	2	5	3	46.2	46.3	33.3
Trading	7	5	4	32.4	30.5	17.9
Machinery/engineering	3	1	-	54.5	37.9	-
Other	7	5	4	57.6	59.4	65.7
Total/average	100	100	100	51.1	51.5	52.6

Source: UNCTAD, 1993 and Erasmus University database.

[a] TNI is the abbreviation for "transnationality index", which is calculated as the average of three ratios: foreign assets to total assets, foreign sales to total sales and foreign employment to total employment.

smaller countries, suggesting that companies from large home markets are more often involved in transnational expansion and retreat (figures III.8 and III.9).

Transnationality by industry varies to a great extent (table III.6). The media industry topped the list with 87 per cent, while trading was at the bottom with 18 per cent. The transnationality index of the top five firms in all industries that have at least five entries in the lists of both 1990 and 1999 increased substantially over the period 1990-1999 (table III.8). Food and beverages firms exhibited the largest gains (28 percentage points), and chemical firms the

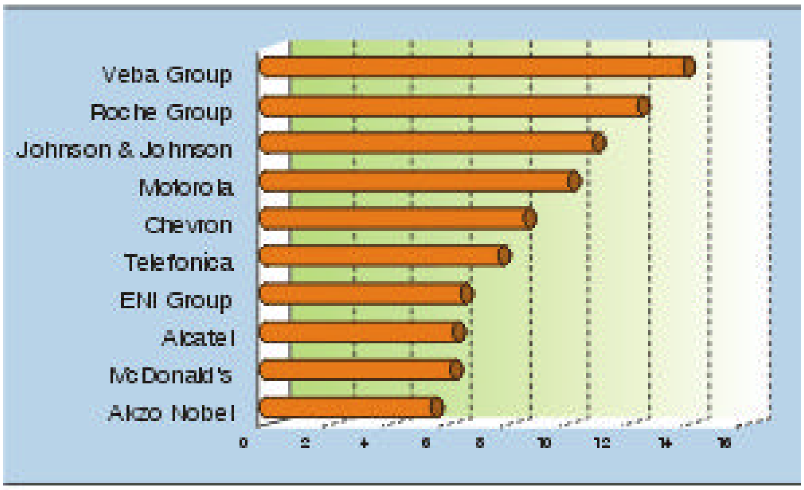
Table III.7. The world's largest 10 TNCs in terms of transnationality, 1999

Ranking 1999 by Foreign assets	TNI [a]	Ranked in 1998 by Foreign assets	TNI [a]	Corporation	Country	Industry	TNI [a]
57	1	57	2	Thomson Corporation	Canada	Media/publishing	95.4
11	2	10	3	Nestlé SA	Switzerland	Food/beverages	95.2
21	3	15	8	ABB	Switzerland	Electrical equipment	94.1
80	4	82	4	Electrolux AB	Sweden	Electrical equipment/electronics	93.2
59	5	62	6	Holcim (ex Holderbank)	Switzerland	Construction materials	91.8
27	6	27	13	Roche Group	Switzerland	Pharmaceuticals	91.5
35	7	69	5	British American Tobacco Plc	United Kingdom	Food/tobacco	90.7
24	8	12	7	Unilever	United Kingdom/ The Netherlands	Food/beverages	89.3
23	9	34	1	Seagram Company	Canada	Beverages/media	88.6
75	10	77	16	Akzo Nobel NV	Netherlands	Chemicals	82.6

Source: UNCTAD/Erasmus University database.

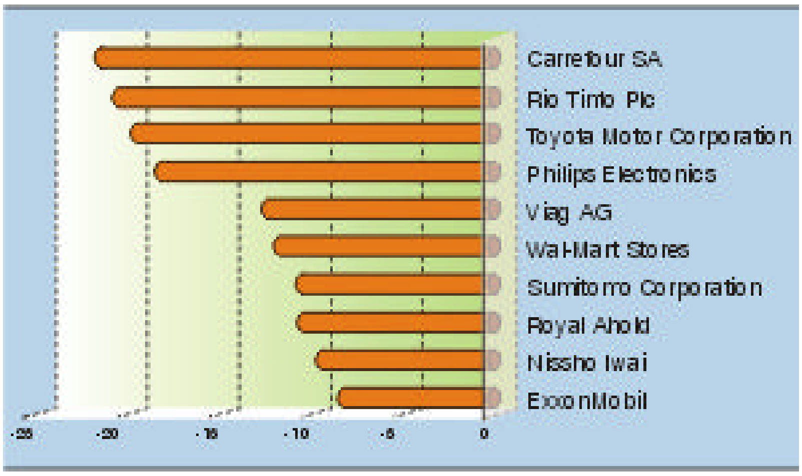
[a] TNI is the abbreviation for "transnationality index", which is calculated as the average of three ratios: foreign assets to total assets, foreign sales to total sales and foreign employment to total employment.

Figure III.8. The top 10 increases in transnationality among the world's 100 largest TNCs, 1998-1999
(in percentage points)



Source: UNCTAD/Erasmus University database.

Figure III.9. The top 10 decreases in transnationality among the world's 100 largest TNCs, 1998-1999
(in percentage points)



Source: UNCTAD/Erasmus University database.

Table III. 8. Averages in transnationality index, assets, sales and employment of the largest 5 TNCs in each industry, [a] 1990, 1995 and 1999
(Percentage points, and per cent of top 100 total)

Industry	Year	Transnationality index	Assets Foreign	Assets Total	Sales Foreign	Sales Total	Employment Foreign	Employment Total
Petroleum	1990	57.7	15.1	10.6	15.8	11.9	5.5	4.2
	1995	64.8	12.9	8.0	13.6	10.0	4.0	3.1
	1999	70.1	13.6	8.3	13.5	9.8	4.1	2.8
Motor vehicles	1990	34.7	11.9	15.3	10.4	11.8	9.7	14.2
	1995	38.6	14.0	17.3	9.6	13.4	9.7	13.5
	1999	41.4	13.3	18.5	15.4	15.8	12.2	13.1
Electronics/electrical equipment	1990	36.1	6.4	7.4	4.7	6.3	6.5	9.6
	1995	61.1	11.1	10.4	7.8	6.9	13.2	10.7
	1999	59.6	12.7	13.0	9.5	8.3	13.6	10.5
Pharmaceuticals	1990	47.1	1.5	1.3	1.6	1.4	2.4	2.3
	1995	68.0	3.8	2.5	2.4	1.7	3.4	2.5
	1999	67.3	4.7	2.8	3.1	2.5	4.7	3.3
Chemicals	1990	51.6	5.3	4.2	5.9	4.5	4.8	5.4
	1995	61.1	6.2	3.9	5.0	4.0	5.5	4.9
	1999	53.9	3.1	2.9	3.8	3.1	3.3	3.2
Food/beverages	1990	60.8	7.2	5.6	5.8	5.0	11.7	7.6
	1995	76.9	6.7	4.8	7.4	5.2	12.9	7.1
	1999	88.7	6.3	3.3	6.1	3.2	10.5	5.1

Source: UNCTAD, 1993 and Erasmus University database.

[a] Only industries that have at least five entries in the lists of the top 100 TNCs of 1990, 1995 and 1999.

smallest (about 2 percentage points). The top five motor vehicle companies remained among the least transnationalized during the whole past decade, whereas the top five food and beverages firms, closely followed by pharmaceutical and electronic firms, became more transnationalized over the same period. Only motor vehicle companies maintained a transnationality index of below 50 per cent at the end of the 1990s. All other manufacturing industries saw their industry-specific transnationality indices rise substantially above 50 per cent. However, the trend towards global consolidation in the motor vehicle industry during the past years has made that industry the frontrunner of transnationality in terms of its dynamic evolution: its index grew by 35 per cent between 1990 and 1999.

The findings based on the analysis of the transnationality index are mirrored in the analysis of the Network Spread Index (NSI) of the world's largest TNCs (box III.1). TNCs from small home countries are generally spread over more countries than TNCs from large home countries. TNCs from industries with a consumer orientation have a higher spread than TNCs from other industries.

Box III.1. Assessing the international spread of the world's largest TNCs

The transnationality index presented in *WIR* since 1995 assesses the degree to which companies gear their activities outside of their home countries. *WIR98* (pp. 43-44) introduced a complementary concept of measuring the transnationalization of companies, the Network Spread Index (NSI).[a] This index focuses on the extent to which companies locate their activities in foreign countries, and thus the extent to which they follow strategies of cross-border geographical diversification. The index is calculated as a ratio of the number of foreign countries in which a TNC locates its activities (N) as a percentage of the number of foreign countries in which it could, potentially, have located (N*). The latter is taken as the number of countries that have inward stocks of FDI (minus 1, excluding the home country of the TNC) in the particular year to which the calculations refer. In this case the year 1999 was the most recent year for which the data are available. Following the data from this report N* is 187. Using the Dun and Bradstreet (*Who Owns Whom)*

/...

Box III.1. Assessing the international spread of the world's largest TNCs (continued)

ownership tree structure, the NSI has been estimated for the top 100 TNCs listed in this report which are exclusively parent companies.

The results grouped by the country of origin of each TNCs and by industry are presented in box tables III.1.1 and III.1.2. The country-specific analysis shows TNCs from countries with a long history of FDI (Switzerland, Netherlands, United Kingdom and France) exhibiting an above average NSI. TNCs from the two largest economies in terms of GNP (United States and Japan) have a lower than average NSI, most likely because the size of their domestic economy allows their TNCs to concentrate more on home markets, in comparison with TNCs of similar size from smaller home countries.

TNCs in most of the industries included have NSIs ranging from 18 to 22 percentage points (box table III.1.2). Notable exceptions are found among TNCs operating in the utilities, media and construction industries, which have NSIs of below 10 per cent. TNCs in the automotive, metals/mining and telecommunications industries lie in between, with NSIs of around 13 per cent.

Industries in which the top TNCs have a higher NSI (like chemicals/pharmaceuticals, electronics and food and beverages) are to a large extent consumer-oriented industries, and TNCs operating in such industries follow primarily market-seeking strategies with regard to their transnationalization. TNCs from the utilities, media, construction/retailing/service and industries have a lower-than-average NSI, as they are industries that are more domestic-market oriented, partially due to market segmentation (utilities), and partially due to cultural boundaries (media). Greater liberalization is increasing the NSIs of TNCs in all industries mentioned above, and is likely to do so even more in the future.

Consistent with the industry analyses, the companies with the highest NSI (over 30 per cent) are Shell, Nestlé, Unilever, TotalFina, Aventis and ABB. At the other end of the spectrum, the lowest values for NSI (below 5 per cent) are found for Wal-Mart, Texas Utilities, Woodbridge Company, Southern Company, Royal Ahold NV, Mitsubishi, Petróleos de Venezuela and Hutchison Whampoa, AES Corporation, Cemax, Edison International and Nippon Oil.

/...

B. The largest 50 transnational corporations from developing countries

The list of the largest TNCs from developing economies in 1999 underlines the power of the transnationalization process, as reflected by the impressive increase in foreign assets and sales after a slowdown in 1998. What is even more remarkable is that three firms have joined the group of the world's largest 100 TNCs.

In 1999, Hutchison Whampoa Ltd. (Hong Kong, China) occupied the first position, sending Petróleos de Venezuela to the second rank, followed by Cemex SA from Mexico (table III.9). These three TNCs, ranked by the size of their foreign assets, were also among the world's 100 largest TNCs. In general, the top 50 TNCs from developing countries are of a smaller size than their counterparts in the top 100 list. The median foreign assets holdings for the top 50 increased slightly from $1.5 billion in 1998 to about $1.6 billion in 1999, still far below the corresponding figure of $15.2 billion for the top 100 group in 1999. The overall increase in foreign assets by the top 50 was largely accounted for by the growth in foreign assets within the group of the top ten companies on the list.

Developing country TNCs have recovered from the setback of 1998 in the aftermath of the financial crisis in Asia. In 1999, their assets and sales (total as well as foreign) registered a significant increase, as compared with the levels reached in 1998 (table III.10). Total employment, however, declined further, by 26.6 per cent, while foreign employment decreased only by 4.3

Box III.1. Assessing the international spread of the world's largest TNCs (concluded)

Box table III.1.1. Network Spread Index of the world's largest 97 TNCs, by country of origin

Country of origin*	Network spread (mean) NSI (Per cent)	Rank
Switzerland	25.80	1
Netherlands	21.79	2
United Kingdom	19.59	3
France	19.93	4
Germany	18.89	5
Italy	17.16	6
Sweden	17.11	7
Japan	14.29	8
United States	13.18	9
Finland	12.30	10
Canada	8.56	11
Australia	6.42	12
Spain	5.88	13
Venezuela	2.67	14
Hong Kong, China	1.07	15
Mean NSI	15.63	

Source: Ietto-Gillies, 2001, based on this report.

* Companies having headquarters in more than one country are counted as nationals of both countries. These companies include: Rio Tinto (UK/Australia), Shell (Netherlands/UK) and Unilever (Netherlands/UK). This accounts for a total of 97 instead of 94.

Box table III.1.2. Network Spread Index of the world's largest 94 TNCs, by industry

Country of origin*	Network spread (mean) NSI (Per cent)	Rank
Chemical/Pharmaceutical	21.80	1
Food/Beverages/Tobacco	19.31	2
Electronics/Electronical Engineering	18.90	3
Oil/Petroleum	16.52	4
Diversified	16.44	5
Telecommunication	13.77	6
Metals/Mining	13.37	7
Other	12.83	8
Automotive	12.83	9
Retailing/Trading/Services	10.46	10
Construction/Construction Materials	8.02	11
Media/Printing/Paper	6.77	12
Utility	4.01	13
Mean NSI	15.63	

Source: Ietto-Gillies, 2001, based on this report.

Source: Unpublished research by Grazia Ietto-Gillies and Marion Frenz, South Bank University, London, May 2001.

[a] See Ietto-Gillies, 1998, The NSI for 1996 presented in *WIR98* is not fully comparable to the one presented here because the current one is calculated on the basis of majority-owned affiliates ("subsidiaries") and not all affiliates as in *WIR98*. This is due to changes in the type of information given by the Dun and Bradstreet database.

Table III.9. The largest 50 TNCs from developing economies, ranked by foreign assets, 1999
(Millions of dollars, number of employees)

Ranking by					Assets		Sales		Employment		TNI [a]
Foreign assets	TNI [a]	Corporation	Economy	Industry [b]	Foreign	Total	Foreign	Total	Foreign	Total	(Per cent)
1	24	Hutchison Whampoa Ltd.	Hong Kong, China	Diversified	..	48 157	2 096	7 108	..	42 510	38.0
2	30	Petróleos de Venezuela	Venezuela	Petroleum expl./ref./distr.	8 009	47 250	13 332	32 600	15 000	47 760	29.8
3	10	Cemex SA	Mexico	Construction	6 973	11 896	2 504	4 841	..	20 902	54.6
4	39	Petronas - Petroliam Nasional Berhad	Malaysia	Petroleum expl./ref./distr.	..	31 992	..	15 957	..	18 578	19.8
5	34	Samsung Corporation	Korea, Republic of	Diversified/Trade	5 127	21 581	6 339	37 180	1 911	4 600	27.4
6	13	Daewoo Corporation	Korea, Republic of	Diversified/Trade	..	16 460	..	18 618	..	12 021	49.4
7	22	Lg Electronics Inc.	Korea, Republic of	Electronics and electrical equipment	4 215	17 273	6 383	15 590	27 000	50 000	39.8
8	45	Sunkyong Group	Korea, Republic of	Energy/Trading/Chemicals	4 214	34 542	10 762	43 457	2 273	26 296	15.2
9	43	New World Development Co., Ltd.	Hong Kong, China	Construction	4 097	14 789	368	2 259	788	22 945	15.8
10	42	Samsung Electronics Co., Ltd.	Korea, Republic of	Electronics and electrical equipment	3 907	25 487	5 214	28 024	6 039	39 350	16.4
11	3	Neptune Orient Lines Ltd.	Singapore [c]	Transportation	3 870	4 184	4 101	4 276	6 843	8 611	89.3
12	6	Sappi Ltd.	South Africa	Pulp and Paper	3 643	5 428	3 425	4 422	9 427	20 245	63.7
13	8	First Pacific Company Ltd.	Hong Kong, China	Electronics and electrical equipment	3 482	6 797	965	1 232	12 901	22 210	62.5
14	49	Petroleo Brasileiro SA - Petrobras	Brazil	Petroleum expl./ref./distr.	3 293	33 733	1 542	16 358	993	39 979	7.2
15	19	Jardine Matheson Holdings Ltd.	Hong Kong, China [d]	Diversified	2 865	9 904	7 489	10 655	..	150 000	43.9
16	40	Keppel Corporation Ltd.	Singapore	Diversified	2 609	19 889	273	2 451	5 273	15 947	19.1
17	46	Hyundai Motor Co., Ltd.	Korea, Republic of	Motor vehicles	2 595	22 163	2 909	21 346	6 300	87 221	10.9
18	14	Hyundai Engineering & Construction Co.	Korea, Republic of	Construction	2 577	8 105	1 696	4 999	17 844	22 364	48.5
19	1	Tan Chong International Ltd.	Singapore	Diversified	2 181	2 388	1 783	1 837	..	649	93.3
20	44	Singapore Telecommunications Ltd.	Singapore	Telecommunication	2 078	8 129	10	2 842	..	12 637	15.8
21	20	Citic Pacific Ltd.	Hong Kong, China	Diversified	..	7 935	1 042	3 399	..	10 490	42.2
22	9	Acer Inc.	Taiwan Province of China	Electronics and electrical equipment	1 812	3 715	3 864	5 811	..	33 912	59.7
23	25	South African Breweries Plc.	South Africa [c]	Food and beverages	..	4 384	..	4 299	..	48 079	37.4
24	2	Orient Overseas International Ltd.	Hong Kong, China	Transportation	1 631	1 863	2 126	2 139	3 540	4 157	90.7
25	17	Barlow Ltd.	South Africa [c]	Diversified	1 587	2 335	1 769	3 502	..	22 148	44.3
26	27	Companhia Vale Do Rio Doce	Brazil	Mining/other	..	10 974	...	6 979	..	10 743	34.0
27	18	Gener SA	Chile	Electrical services (in 1997)	1 520	3 699	401	835	514	1 185	44.2
28	29	Metalurgica Gerdau SA	Brazil	Steel and iron	1 468	3 582	535	1 850	3 526	12 021	33.1
29	37	San Miguel Corporation	Philippines	Food and beverages	1 447	3 410	217	1 934	3 117	14 511	25.0
30	38	Pérez Companc SA	Argentina	Petroleum expl./ref./distr.	1 376	5 030	243	1 272	..	3 731	24.5
31	5	Guangdong Investment Ltd.	Hong Kong, China	Diversified	1 355	2 179	564	689	14 064	15 233	78.8
32	26	Savia SA de CV	Mexico	Diversified	1 297	6 658	823	2 843	11 599	19 015	36.5
33	33	Tatung Co. Ltd.	Taiwan Province of China	Electronics and electrical equipment	..	5 017	..	4 471	..	..	28.1

Table III.9. The largest 50 TNCs from developing economies, ranked by foreign assets, 1999 (concluded)

(Millions of dollars, number of employees)

Ranking by Foreign assets	Ranking by TNI [a]	Corporation	Economy	Industry [b]	Assets Foreign	Assets Total	Sales Foreign	Sales Total	Employment Foreign	Employment Total	TNI [a] (Per cent)
34	7	Fraser & Neave Limited	Singapore	Food and beverages	1 232	3 760	1 075	1 527	8 507	9 750	63.5
35	36	Samsung Sdi Co., Ltd.	Korea, Republic of	Electronics and electrical equipment	1 181	4 547	1 037	4 218	2 052	7 900	25.5
36	28	Singapore Airlines Limited	Singapore	Transportation	1 064	9 573	4 071	5 179	3 021	27 630	33.6
37	11	Gruma SA de CV	Mexico	Food and beverages	1 061	2 322	988	1 730	9 147	16 513	52.7
38	41	Pohang Iron And Steel Co., Ltd.	Korea, Republic of	Steel and iron	1 018	11 971	3 875	11 093	..	28 037	17.3
39	50	Clp Holdings - China Light & Power Company Limited	Hong Kong, China	Electric utilities or services	985	5 878	46	3 024	33	4 190	6.4
40	21	Sime Darby Berhad	Malaysia	Diversified	892	2 389	1 587	2 608	6 585	29 106	40.3
41	47	Reliance Industries Limited	India	Chemicals and pharmaceuticals	..	6 733	400	4 654	..	15 912	9.6
42	35	Copec - Compaña de Petróleos de Chile	Chile	Diversified	..	6 496	..	3 173	..	7 805	26.6
43	16	Companhia Cervejaria Brahma	Brazil	Food and beverages	841	2 874	208	1 776	9 029	9 192	46.4
44	32	Great Eagle Holdings Limited	Hong Kong, China	Hotel/Property	830	3 607	193	496	..	3 004	28.3
45	4	WBL Corporation Limited	Singapore	Electronics and electrical equipment	805	949	257	417	9 963	10 754	79.7
46	31	Berjaya Group Berhad	Malaysia	Diversified	739	3 290	792	1 914	..	21 066	28.8
47	23	De Beers Consolidated Mines	South Africa [c]	Mining/ other	646	5 053	4 854	5 344	..	12 520	38.8
48	15	Hong Kong And Shanghai Hotels Ltd.	Hong Kong, China	Tourism and hotel	632	2 472	271	463	3 583	6 166	47.4
49	48	Telekom Malaysia Berhad	Malaysia	Telecommunication	624	6 792	83	2 061	..	25 442	7.5
50	12	Natsteel Limited	Singapore	Steel and iron	585	1 280	251	822	14 018	17 363	52.3

Source: UNCTAD, FDI/TNC database.

a TNI is the abbreviation for "transnationality index", which is calculated as the average of three ratios: foreign assets to total assets, foreign sales to total sales and foreign employment to total employment.

b Industry classification for companies follows the United States Standard Industrial Classification which is used by the United States Securities and Exchange Commission (SEC).

c Within the context of this list, South Africa is treated as a developing country.

d The company is incorporated in Bermuda and the group is managed from Hong Kong (China).

.. Data on foreign assets, foreign sales or foreign employment were not made available for the purpose of this study. In case of non availability, they are estimated using secondary sources of information or on the basis of the ratios of foreign to total assets, foreign to total sales and foreign to total employment.

Table III.10. Snapshot of largest 50 TNCs from developing economies, 1999
(Billions of dollars, percentage and number of employees)

Variable	1999	1998	Change 1999 vs. 1998 (Per cent)
Assets			
Foreign	129	109	18.3
Total	531	449	18.4
Sales			
Foreign	122	109	12.0
Total	367	289	27.1
Employment			
Foreign	383 107	400 475	-4.3
Total	1 134 687	1 546 883	-26.6
Average index of transnationality	38.9	36.6	2.3 [a]

Source: UNCTAD, FDI/TNC database.

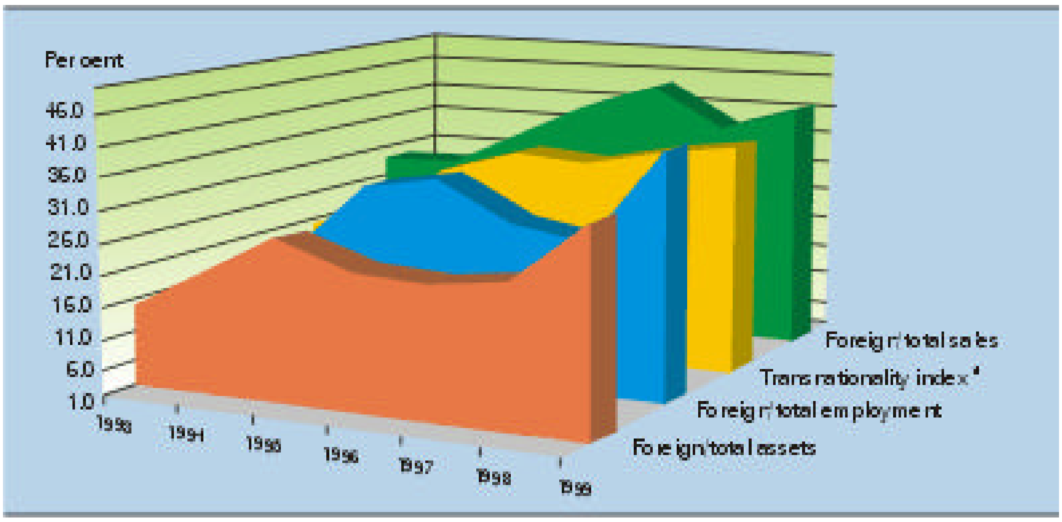
[a] The change between 1998 and 1999 is expressed in percentage points.

per cent reflecting, thus, a sharper drop in domestic employment. This reduction in employment is perhaps a result of a restructuring of industries after the crisis.

On the other indicators, the top 50 showed a more positive development. This was largely due to the recovery effect after the financial crisis.

The overall increase in the transnationality index (TNI) for the whole group as compared to last year confirms that the top 50 TNCs, in general, pursued their transnationalization process even during the crisis years. This increase should be interpreted with caution as it is largely driven by the increase in the ratio of foreign to total employment (figure III.10) which in turn was the result of the sharp drop in domestic employment in 1998 and 1999. Yet, as foreign assets and sales have also increased, the transnational expansion of the top 50 TNCs is noteworthy. TNCs from a wide range of economies and industries are continuing with their trans-nationalization push of recent years. Companies such as South African Breweries and Barlow of South Africa, Mexico's Cemex, San Miguel from the Philippines, Pérez Companc of Argentina, Singapore Telecommunications and LG Electronics from the Republic of Korea – to name only a few – all recorded increases in their TNI-index of 15 percentage points or more since 1995. The mapping of the global expansion of Cemex SA provides a good example of the rapid transnationalization process of these companies (figure III.11).

Figure III.10. Trends among the largest 50 TNCs from developing economies, 1993–1999

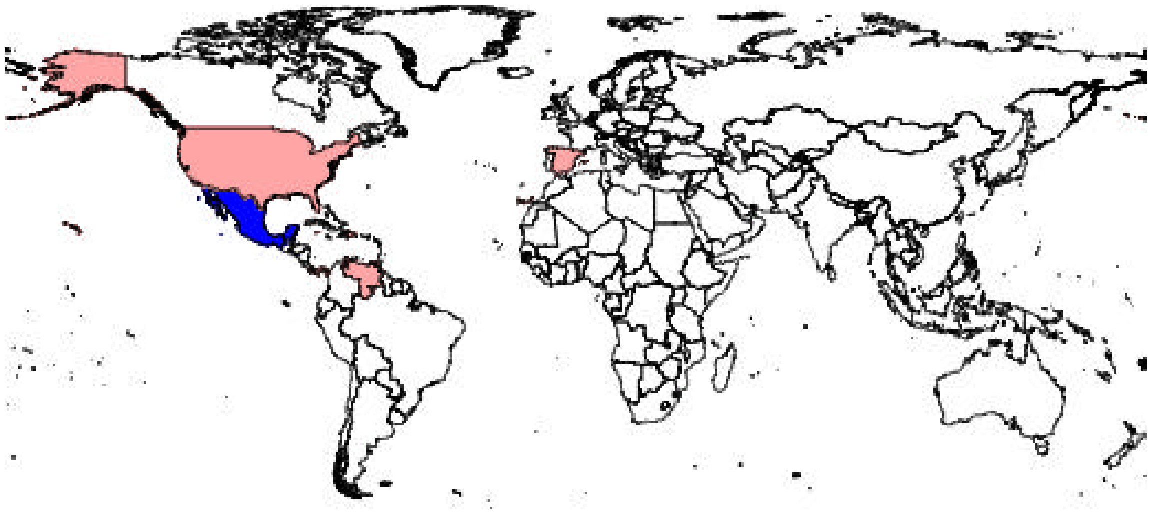


Source: UNCTAD, FDI/TNC database.

[a] The average transnationality index of the largest 50 TNCs is the average of the 50 individual company transnationality indices.

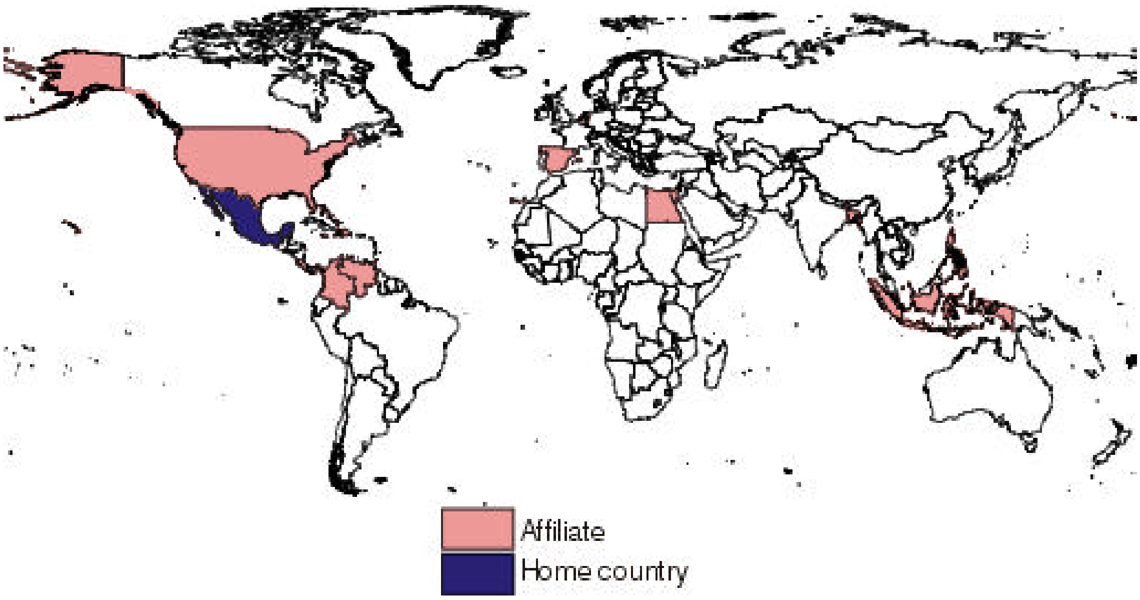
Figure III.11. Global expansion of Cemex SA

1995



Note: Based on 6 foreign affiliates identified. The first foreign affiliate was established in 1992 (Spain).

2001



Note: Based on 21 foreign affiliates identified. There is only one affiliate in each country except in the Philippines (where there are two).

Source: UNCTAD, based on information from www.cemex.com.

Table III.11. The top five TNCs from developing economies in terms of transnationality, 1999

Ranking by: TNI [a]	Ranking by: Foreign assets	Company	Economy	Industry	TNI [a] (Per cent)
1	19	Tan Chong International Ltd.	Singapore	Diversified	93.3
2	24	Orient Overseas International Ltd.	Hong Kong, China	Transportation	90.7
3	11	Neptune Orient Lines Ltd.	Singapore	Transportation	89.3
4	45	WBL Corporation Ltd.	Singapore	Electronics and electrical equipment	79.7
5	31	Guangdong Investment Ltd.	Hong Kong, China	Diversified	78.8

Source: UNCTAD, FDI/TNC database.

[a] TNI is the abbreviation for "transnationality index", which is calculated as the average of three ratios: foreign assets to total assets, foreign sales to total sales and foreign employment to total employment.

As in previous years, the top companies in terms of transnationalization come from Asia (table III.11). In the case of Hong Kong (China) and Singapore, it is not surprising that the small size of their economies pushed companies to expand abroad. Industry-specific factors also contribute to the composition of the list. Shipping companies, such as Neptune Orient Lines as well as Orient Overseas International, have almost by definition most of their assets "overseas".[4] On the other hand, petroleum companies as well as TNCs in the utilities, tend to have lower values of TNI, as much of their business is either still concentrated on the exploration of domestic resources, or because expansion abroad had only recently been made possible by the deregulation of telecommunications.

This year's top 50 list features 12 new companies that were not on the list last year. This figure is rather high as compared to previous years, which recorded only five to seven new companies. The information for the list in this report is less complete, as data for TNCs from China were not available. On the other hand, improved and more complete data for companies from the Republic of Korea led to the insertion of four Korean companies that did not figure on the list in preceding years. Overall, the changes in the composition of the list remained in line with previous years. M&As had an impact on the list, as the take-over of Argentina's YPF and Chile's Enersis by Spanish companies resulted in the departure of these companies from the list. On the other hand, the merger with another domestic company helped Savia of Mexico to be included in the top 50 for the first time (tables III.12 and III.13).

The industry composition of the top 50 list has remained unchanged (figure III.12). Conglomerates with interests in a wide range of industries accounted for the lion's share in the combined foreign assets as well as foreign employment of the top 50 group. Foreign sales were largely concentrated on companies from "other industries" which are to a large extent Asian companies in the electronics industry. Companies whose business is more focused on any particular industry, such as construction, food and beverages, as well as petroleum exploration, refinery and distribution have declined in importance since 1993, as shown by their respective shares in foreign assets, sales and employment. In terms of absolute numbers, most companies on the top of the list – as in previous years – are diversified companies. Due to the inclusion of new firms, in particular from the Republic of Korea, the electronics and electrical equipment industry now accounts for the second largest group of companies, followed

Table III.12. Newcomers to the largest 50 TNCs from developing economies, 1999

Number	Ranking by: Foreign assets	Ranking by: TNI [a]	Corporation	Economy	Industry	TNI [a] (Per cent)
1	46	31	Berjaya Group Berhad	Malaysia	Diversified	28.8
2	47	23	De Beers Consolidated Mines	South Africa	Mining/ Other	38.8
3	44	32	Great Eagle Holdings Limited	Hong Kong, China	Hotel/Property	28.3
4	17	46	Hyundai Motor Co., Ltd.	Korea, Republic of	Automotive	10.9
5	11	3	Neptune Orient Lines Ltd.	Singapore	Transportation	89.3
6	24	2	Orient Overseas International Ltd.	Hong Kong, China	Transportation	90.7
7	38	41	Pohang Iron And Steel Co., Ltd.	Korea, Republic of	Iron and Steel	17.3
8	5	34	Samsung Corporation	Korea, Republic of	Diversified	27.4
9	32	26	Savia SA de CV	Mexico	Diversified	36.5
10	20	44	Singapore Telecommunications Ltd.	Singapore	Telecommunication	15.8
11	19	1	Tan Chong International Ltd.	Singapore	Automotive /Trading	93.3
12	49	48	Telekom Malaysia Berhad	Malaysia	Telecommunication	7.5

Source: UNCTAD, FDI/TNC database.

a TNI is the abbreviation for "transnationality index", which is calculated as the average of three ratios: foreign assets to total assets, foreign sales to total sales and foreign employment to total employment.

Table III.13. Departures from the largest 50 TNCs from developing economies, 1999

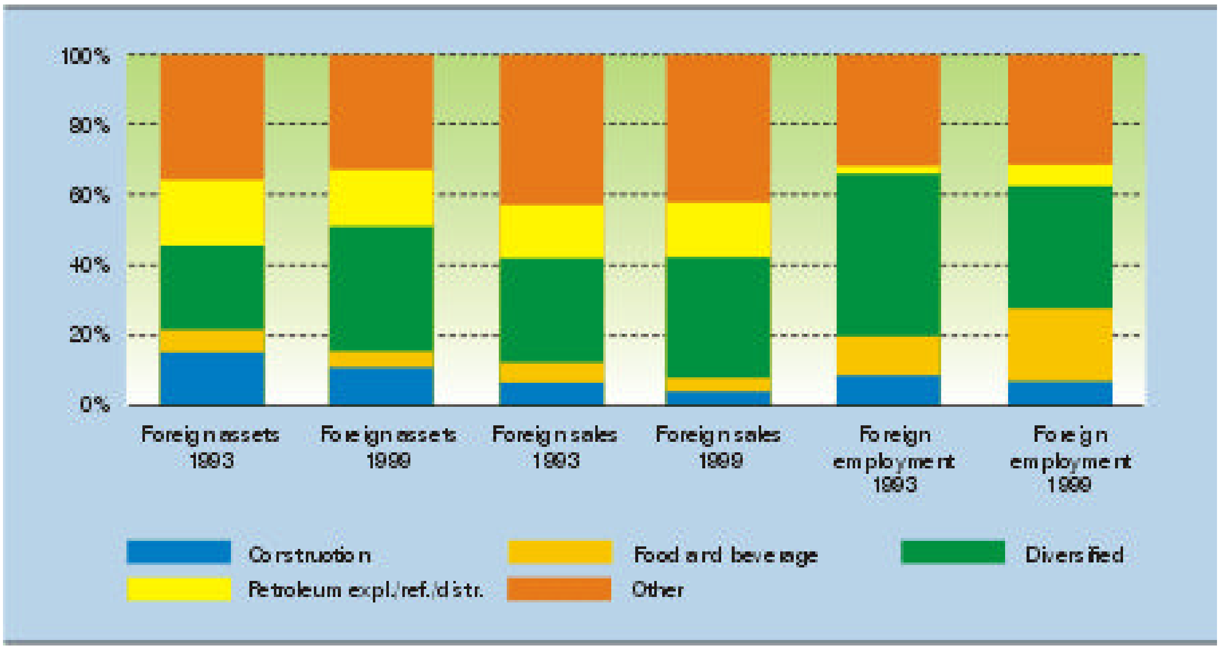
Number	Ranking by Foreign assets	Ranking by TNI [a]	Corporation	Economy	Industry	TNI [a] (Per cent)
1	47	5	Asia Pacific Breweries Ltd.	Singapore	Food and beverages	74.8
2	36	42	China Harbor Engineering Company	China	Construction	16.1
3	15	17	China National Chemicals Import & Export Corporation	China	Trade	41.4
4	37	32	China National Metals and Minerals Imp and Exp Corp.	China	Trade	25.1
5	12	31	China State Construction Engineering Corporation	China	Construction	26.8
6	35	23	Dong-Ah Construction Ind. Co., Ltd.	Korea, Republic of	Construction	34.8
7	20	28	Enersis, SA	Chile	Electric utilities or services	28.2
8	49	41	Sadia SA Industria e Comercio	Brazil	Food and beverages	16.2
9	24	44	Shougang Group	China	Steel and iron	14.4
10	45	33	Souza Cruz, SA	Brazil	Diversified	24.6
11	50	1	Want Want Holdings, Ltd.	Singapore	Food and beverages	97.9
12	13	36	YPF SA	Argentina	Petroleum expl./ref./distr.	19.8

Source: UNCTAD, FDI/TNC database.

a TNI is the abbreviation for "transnationality index", which is calculated as the average of three ratios: foreign assets to total assets, foreign sales to total sales and foreign employment to total employment.

by food and beverages as well as the petroleum industry (table III.14). A novelty in the list are two telecommunications companies, Singapore Telecommunications Ltd. and Telekom Malaysia Berhad. With top 50 leader Hutchison Whampoa also having significant interests in this industry, together with some of the other diversified conglomerates on the list, this demonstrates that TNCs from developing countries can also make substantial inroads into dynamic and highly competitive industries. Interestingly, most of the telecommunication companies expand their operations, as do

Figure III.12. Major industry groups as per cent of largest 50, 1993 and 1999



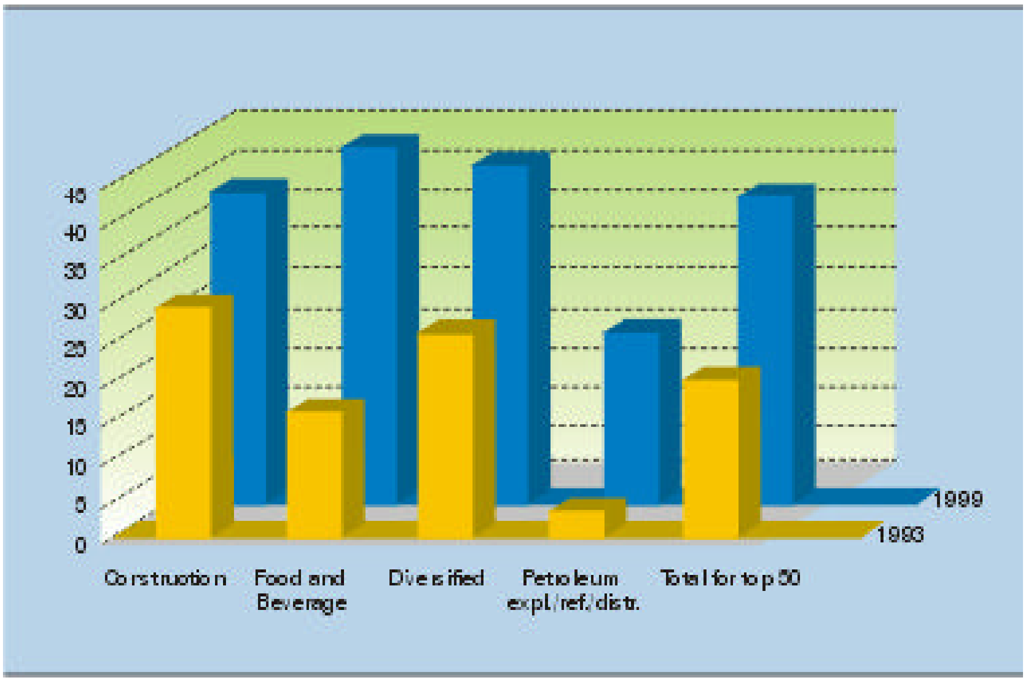
Source: UNCTAD, FDI/TNC database.

their developed countries' counterparts, in developed and developing markets simultaneously.

As for the most transnationalized industries (figure III.13 and table III.14), the picture has changed little. Among the industries most frequently represented on the list, food and beverages ranks highest, followed by diversified companies, electronics and electrical equipment and construction. This suggests that the trend towards transnationalization includes both companies that primarily invest abroad in search of foreign markets (such as food and beverages) as well as those where efficiency-seeking is the prime motive for FDI (as is the case of electronics and electrical equipment companies). The somewhat lower transnationality index for petroleum and mining companies on the top 50 list suggests, on the other hand, that companies for which natural-resource seeking is the principal reason for outward investment might find it more difficult or would have fewer incentives to transnationalize their operations. The increasing TNI for the petroleum companies (table III.14) demonstrates that over the years these companies have also transnationalized their business. A comparison with the petroleum companies on the top 100 list – which score much higher on the TNI index – also shows that in this industry there is (in principle) as much potential for developing-country TNCs to further transnationalize as there is in other industries.[5]

Despite the aforementioned increase of the transnationality index in general, and in the case of some companies in particular, the top 50 remain less transnationalized than the top 100. But the degree of transnationality differs widely by home country, with smaller Asian economies such as Hong Kong (China), Singapore and Taiwan Province of China showing much higher levels of TNI, than larger countries such as India or China. In Latin America, Mexican companies are on average the most transnationalized. The rapid increase in the TNI for Mexican TNCs in recent years may suggest that the opening up of the country (including its integration in the framework of NAFTA) has encouraged the transnationalization of Mexican companies. South African companies, too, have stepped up their transnationalization process. The

Figure III.13. Major industry groups of the largest 50 TNCs and their average transnationalization index, 1993 and 1999



Source: UNCTAD, FDI/TNC database.

Table III.14. Industry composition of the largest 50 TNCs from developing economies, 1993, 1996 and 1999

Industry	Number of entries			Average TNI [a] per industry (Per cent)		
	1993	1996	1999	1993	1996	1999
Diversified	12	11	14	25.6	32.3	44.3
Food and beverages	7	8	5	15.6	32.8	45.0
Construction	4	3	3	28.8	47.4	39.6
Petroleum expl./ref./distr.	3	6	5	3.1	19.4	21.6
Electronics and electrical equipment	7	5	6	28.1	35.6	41.5
Electric Utilities or Services	1	..	2	2.0	..	25.3
Steel and iron	5	1	3	11.6	37.6	34.2
Trade	..	4	..	..	44.6	..
Transportation	1	4	3	23.2	54.1	71.2
Chemicals and pharmaceuticals	1	1	1	17.0	7.7	9.6
Other	4	5	..	23.6	38.1	..
Pulp and paper	2	..	1	26.0	..	63.7
Tourism, hotel and property	3	2	2	33.1	33.2	37.9
Automotive	1	..	1	..	..	10.9
Media	1	..	..	..	..	..
Mining	..	..	2	..	..	36.4
Telecommunications	..	..	2	..	59.4	11.7
Average/total [b]	50	50	50	19.8	36.9	38.9

Source: UNCTAD, FDI/TNC database.

[a] TNI is the abbreviation for "transnationality index", which is calculated as the average of three ratios:foreign assets to total assets, foreign sales to total sales and foreign employment to total employment.

[b] Numbers may not add up exactly due to rounding.

Note: This list does not include countries from Central and Eastern Europe.

end of the apartheid era in 1994 opened for many South African firms (the only African companies on the list) new possibilities to invest abroad as well as increased international competition compelled them to do so.

The top 50 list shows a gradual shift towards Asian TNCs over time. The number of Asian companies has increased from 32 in 1996 and 1997, to 35 in 1999. This trend continued in 1999 as some Latin American companies departed from the list due to take-overs by firms from developed countries and due to relatively high increases of the foreign assets of TNCs from the Republic of Korea, Hong Kong (China), Singapore and Malaysia. Asia increased its share in the total foreign assets owned by the top 50 companies, from 66 per cent (1998) to more than 70 per cent in 1999. All Latin American countries registered declining shares (table III.15), while the share of African firms stabilized at the same low level as in previous years. While in Asia, foreign assets – on average – increased for TNCs from all major countries (except for China for which – as mentioned – data were not available this year), Mexican and Venezuelan TNCs were the only ones that (as a group) managed to increase their assets abroad (figure III.14). While the improvement of Asia's position is a reflection of the economic recovery in the region, the decline of foreign assets of most Latin American TNCs represented in the list might be explained by the industry composition of the two sets of firms involved and the aforementioned acquisitions of some firms by companies from developed countries.

Table III.15. Country composition of the largest 50 TNCs from developing economies, by transnationality index and foreign assets, 1993, 1996 and 1999

Region/economy	Average TNI [a] per country (Per cent)			Share in total foreign assets of the largest 50 (Per cent)		
	1993	1996	1999	1993	1996	1999
South, East and South-East Asia	21.8	31.8	39.1	70.6	65.7	72.1
China	..	30.0	..	..	8.2	..
Hong Kong, China	36.5	50.7	45.4	22.0	20.4	26.4
India	6.4	7.7	9.6	0.4	0.8	0.7
Korea, Republic of	20.2	45.6	27.8	24.8	24.4	23.2
Malaysia	20.0	34.4	24.1	4.7	3.2	7.0
Philippines	6.9	16.1	25.0	1.4	0.9	1.1
Singapore	43.0	38.1	58.9	5.3	3.7	11.2
Taiwan Province of China	19.6	32.1	43.9	12.3	4.2	2.4
Latin America	14.0	28.9	48.3	29.9	28.9	21.9
Argentina	..	19.5	24.5	..	2.6	1.1
Brazil	17.4	13.1	30.2	12.0	6.2	5.6
Chile	12.1	29.0	35.4	1.0	3.6	1.8
Mexico	12.5	48.7	48.0	16.9	7.5	7.3
Venezuela	..	44.9	29.8	..	8.6	6.2
Africa	..	40.2	46.0	..	5.4	5.9
Average/total [b]	19.8	35.1	38.9	100	100	100

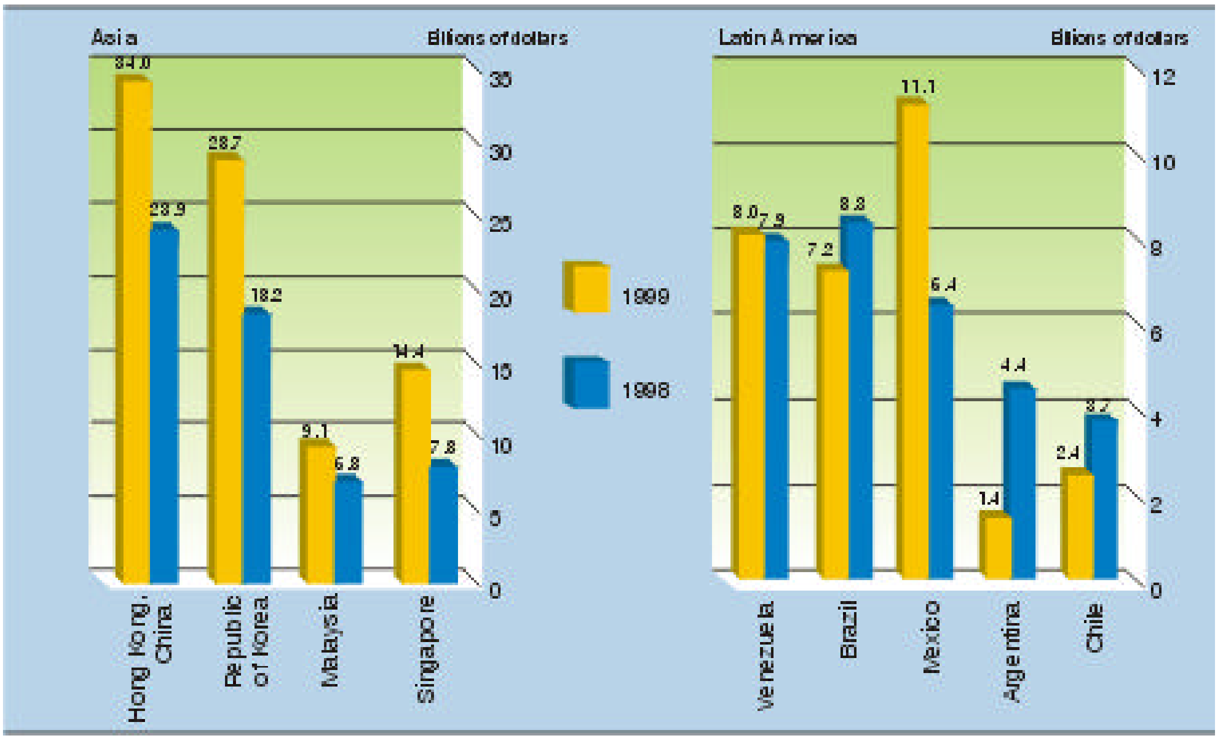
Source: UNCTAD, FDI/TNC database.

[a] TNI is the abbreviation for "transnationality index", which is calculated as the average of three ratios:foreign assets to total assets, foreign sales to total sales and foreign employment to total employment.

[b] Numbers may not add up exactly due to rounding.

Note: This list does not include countries from Central and Eastern Europe.

Figure III.14. Foreign assets of the biggest investors from developing economies, 1998 and 1999



Source: UNCTAD, FDI/TNC database.

C. The largest 25 TNCs from Central and Eastern Europe

A successor to the lists of the top 25 non-financial TNCs based in Central Europe published in *WIR99* and *WIR00*, the ranking presented in this section (table III.16) shows, for the first time, the largest TNCs of the Russian Federation together with those from the rest of Central and Eastern Europe. It is based on 1999 data provided by the firms responding to the UNCTAD survey of the largest TNCs in Central and Eastern Europe.[6] With the exception of *Gazprom*, most of the leading outward investors of the Russian Federation are included in the list. With its annual sales above $10 billion[7] in 1999 and its extensive international network (table III.17), Gazprom is likely to be one of the top Central and Eastern European TNCs. However, consolidated information on its international activities could not be obtained.

Compared with the ranking of the top Central European TNCs presented in *WIR2000*, five firms exited from the top 25 list for the following reasons:

- *A take-over by other firms*. the core business of VSZ a.s. Kosice (Slovakia) was taken over by U.S. Steel, and Pilsner Urquell (Czech Republic) was acquired by South African Breweries; in other words, they became foreign affiliates.

- *Change in the declared nationality of the firm*. Graphisoft changed its declared nationality to the place where its holding company is registered (The Netherlands), instead of the place where top management is located (Hungary).

- *Displacement by others.* Moldova Steel Works (Republic of Moldova) and Budimex Capital Group (Poland) were displaced due to larger firms not previously on the list taking their place in the ranking.

The five newcomer firms are: Lukoil Oil Co., Primorsk Shipping Co. and Far Eastern Shipping Co. (Russian Federation); Petrom SA National Oil Co. (Romania); and Intereuropa d.d. (Slovenia).

For most firms on the list, the growth of foreign activities (assets, sales and employment) was faster in 1999 than that of the domestic activities. These developments are reflected in an increasing transnationality index (table III.16). Transportation (7 firms), petroleum and natural gas (5 firms) and pharmaceuticals (3) are the industries in which firms figure most frequently among the top 25. They are headquartered in nine countries: Croatia (5 firms), Slovenia (5) , Hungary (4), Russian Federation (3), Czech Republic (2), Poland (2), Slovakia (2), Latvia (1), and Romania (1) (figure III.1). Notably absent are firms from Estonia, despite increasingly important FDI outflows from that country (annex table B.2). This is due to the fact that more than 60 per cent of Estonia's outward FDI stock was in finance in 2000, i.e. undertaken by firms in an industry not covered in this survey (Kilvits and Purju, 2001, p. 248). Moreover, the leading outward investing Estonian banks are foreign owned (Hansapank is owned by Sweden's Swedbank and Ühispank by Sweden's SEB, *idem.*, p. 255).

The internationalization efforts of the top 25 firms of Central and Eastern Europe are fairly recent, and focus heavily on the European continent. In the case of Pliva Group, a pharmaceuticals company based in Croatia, the parent company (Pliva d.d.) did not expand outside its home base over the first 53 years of its existence (1921-1974). It established its first foreign affiliate in New York, and its first representative office in Moscow, both in 1974 (figure III.15). Then, after a pause of 18 years, it restarted international expansion, on a large scale and at a fast pace. By June 2001, the number of foreign affiliates and representative offices expanded to 14 each. With the exception of Pliva USA Inc., all the foreign affiliates are on the European continent. As for the representative offices, there are two non-European locations: Beijing (opened in 1998) and Mumbai (opened in 2000). A salient feature of the current expansions is the acquisition of production and R&D capacities in the Czech Republic, France, Germany and the United Kingdom.

Table III. 16. The largest 25 non-financial TNCs based in Central and Eastern Europe,[a] ranked by foreign assets, 1999

(Millions of dollars and number of employees)

Ranking by: Foreign assets	Ranking by: Transnationality index [b]	Corporation	Country	Industry	Assets: Foreign	Assets: Total	Sales: Foreign	Sales: Total	Employment: Foreign	Employment: Total	Transnationality index [b] (Per cent)
1	15	Lukoil Oil Co.	Russian Federation	Petroleum & natural gas	3 236.0	8 422.0	4 642.0 [d]	10 903.0	10 000	120 000	29.8
2	1	Latvian Shipping Co.	Latvia	Transportation	459.0	470.0	191.0	191.0	1 124	1 748	87.3
3	23	Hrvatska Elektroprivreda d.d.	Croatia	Energy	296.0	2 524.0	10.0	780.0	..	15 877	4.3
4	12	Podravka Group [c]	Croatia	Food & beverages/ pharmaceuticals	285.9	477.1	119.4	390.2	501	6 898	32.6
5	6	Primorsk Shipping Co.	Russian Federation	Transportation	256.4	444.1	85.3	116.5	1 308	2 777	59.4
6	11	Gorenje Group	Slovenia	Domestic appliances	236.3	618.1	593.3	1 120.6	590	6 691	33.3
7	8	Far Eastern Shipping Co.	Russian Federation	Transportation	236.0	585.0	134.0	183.0	263	8 873	38.8
8	7	Pliva Group	Croatia	Pharmaceuticals	181.8	915.9	384.7	587.6	2 645	7 857	39.7
9	10	TVK Ltd.	Hungary	Chemicals	175.4	553.2	248.9	394.3	927	5 225	37.5
10	2	Motokov a.s. [c]	Czech Republic	Trade	163.6	262.5	260.2	349.1	576	1 000	64.8
11	19	Skoda Group Plzen [c]	Czech Republic	Diversified	139.1	973.4	150.7	1 244.5	1 073	19 830	10.6
12	4	Atlantska Plovidba d.d.	Croatia	Transportation	138.0	154.0	46.0 [d]	46.0	..	509	63.2
13	21	MOL Hungarian Oil & Gas Plc.	Hungary	Petroleum & natural gas	126.3	3 131.0	582.4	3 129.6	833	20 684	8.9
14	9	Krka d.d.	Slovenia	Pharmaceuticals	120.7	447.0	209.0	283.0	429	3 218	38.1
15	3	Adria Airways d.d.	Slovenia	Transportation	116.3	129.2	103.4	104.6	19	597	64.0
16	20	Petrol d.d.	Slovenia	Petroleum & natural gas	90.4	574.9	105.7 [d]	924.4	75	235.6	10.1
17	16	Slovnaft a.s.	Slovakia	Petroleum & natural gas	82.8	1 367.1	627.5	1 035.7	119	7 540	22.7
18	5	Zalakerámia Rt.	Hungary	Clay product & refractory	69.0	125.0	39.0	64.0	2 022	3 066	60.7
19	18	Matador j.s.c. [c]	Slovakia	Rubber & plastics	51.9	305.0	34.0	203.4	5	3 878	11.3
20	13	Malev Hungarian Airlines Ltd.	Hungary	Transportation	43.3	206.3	274.1	367.5	49	3 162	32.4
21	22	KGHM Polska Miedz SA	Poland	Mining & quarrying	34.0	1 266.0	265.0	1 155.0	25	28 300	8.6
22	14	Croatia Airlines d.d.	Croatia	Transportation	29.9	288.6	60.2 [d]	77.9	39	842	30.8
23	25	Elektrim SA [c]	Poland	Diversified	21.0	1 228.0	42.0	874.0	62	26 475	2.2
24	24	Petrom SA National Oil Co.	Romania	Petroleum & natural gas	19.0	2 970.0	211.0	2 041.0	67	82 054	3.7
25	17	Intereuropa d.d.	Slovenia	Trade	16.0	168.0	17.0	136.0	511	2 103	15.4
		Averages			265.0	1 144.2	377.4	1 068.1	1 011	15 254	32.4 [e]
		Change (in per cent)			19.7	3.3	36.2	8.3	64.0	0.8	5.8

Source : UNCTAD survey of the largest TNCs in Central and Eastern Europe.

a Based on survey responses.
b The index of transnationality is calculated as the average of three ratios: foreign assets to total assets, foreign sales to total sales and foreign employment to total employment.
c 1998 data.
d Including export sales by parent firm.
e Unweighted average.

There are two reasons why the potential pool of enterprises that could be listed in the top 25 is small. First, in the case of Central and Eastern Europe, it is often foreign affiliates that undertake FDI abroad.[8] The second reason is that some of the top 25 firms become targets of acquisitions, as in the case of VSZ Kosice mentioned above or in the case of Slovnaft, taken over by MOL Hungarian Oil & Gas Plc. in 2000 (UNCTAD, 2000, pp. 92-93). In May 2001, MOL, which already owned 32.9 per cent of the shares of TVK, made an offer to take over all the remaining shares of that firm.

Some of the top 25 firms have been active in cross-border M&As. Between 1997 and May 2001, 6 firms carried out 21 transactions (table III.18). These transactions are not necessarily limited to neighbouring countries. In fact, Lukoil was the first Russian company to acquire in 2000 an oil company in the United States (box III.2).

Table III.17. Gazprom: selected equity investments outside the Russian Federation by 2001

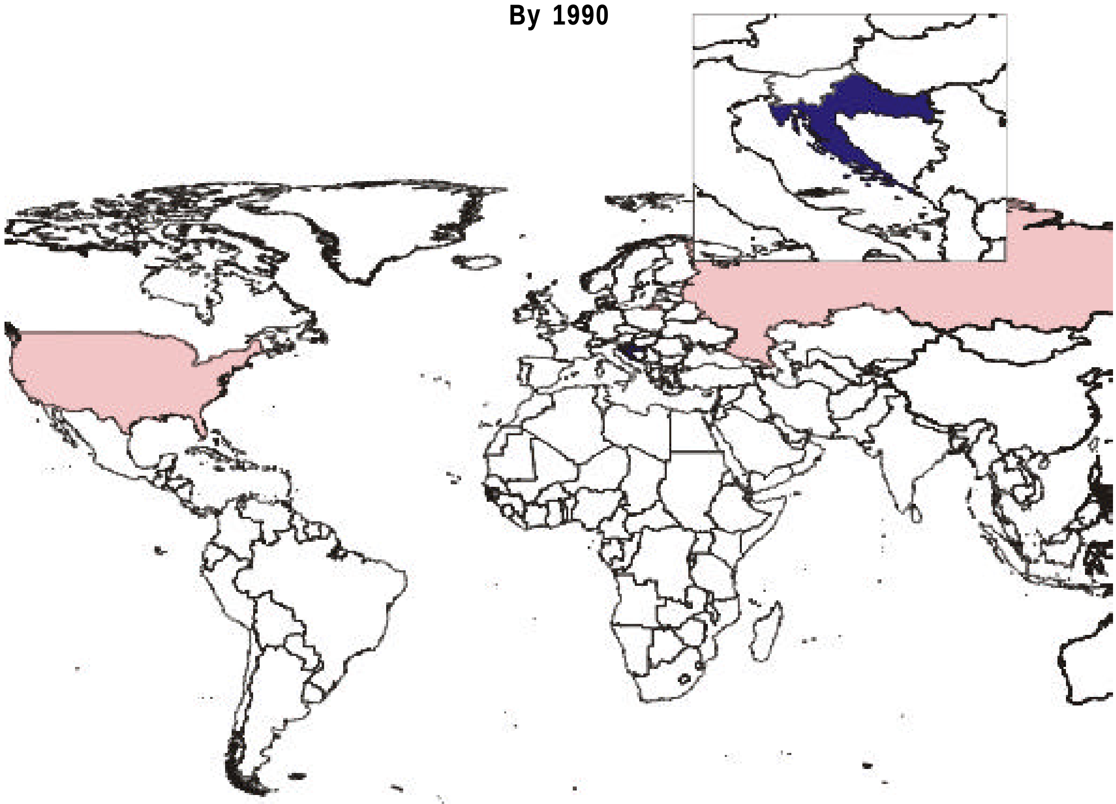
Target firm	Host country	Share (Per cent)	Activity
GHW	Austria	50	Gas trading
Belgazprombank	Belarus	34.99	Banking
Brestgazoapparat	Belarus	51	Gas equipment manufacturing
Topenergo	Bulgaria	50	Gas trading and transport
Eesti Gaas	Estonia	30.6	Gas trading and transport
Gasum Oy	Finland	25	Gas distribution and transportation
North Transgas Oy	Finland	50	Construction of a pipeline beneath the Baltic Sea
FRAgaz	France	50	Gas trading
Ditgaz	Germany	49	Gas trading
Verbundnetz Gas	Germany	5.3	Gas transportation and marketing
Wingas	Germany	35	Gas transportation and storage
Wintershall Erdgas Handelshaus	Germany	50	Exclusive trader until 2012 for all the gas exported by Gazeksport (Russian Federation)
Zarubezgas Erdgashandel	Germany	100	Gas trading
Prometheus Gaz	Greece	50	Marketing and construction
Borsodchem	Hungary	25 [a]	Petrochemicals
DKG-EAST Co. Inc.	Hungary	38.1	Oil and gas equipment manufacturing
General Banking and Trust Co. Ltd.	Hungary	25.5	Banking
Panrusgas	Hungary	40	Gas trading and transport
TVK	Hungary	13.5 [a]	Petrochemicals
Promgaz	Italy	50	Gas trading and marketing
Volta	Italy	49	Gas trading and transport
Latvijas Gaze	Latvia	16.25	Gas trading and transport
Stella-Vitae	Lithuania	30	Gas trading
Gazsnabtransit	Moldova, Republic	50	Gas trading and transport
Peter-Gaz	Netherlands	51	Gas trading
Europol Gaz	Poland	48	Gas transport
Gas Trading	Poland	35	Gas trading
WIROM	Romania	25 [b]	Gas trading
Slovrusgaz	Slovakia	50	Gas trading and transport
Tagdem	Slovenia	7.6	Gas trading
Gamma Gazprom	Turkey	45	Gas trading
Druzhkovskiy zavod gazovoi apparatury	Ukraine	51	Gas equipment manufacturing
Institut Yuzhniigiprogaz	Ukraine	40	..
Interconnector	United Kingdom	10	Bacton (United Kingdom)-Zeebrugge (Belgium) pipeline
JugoRosGaz	Yugoslavia	50	Gas trading and transport
Progress Gas Trading	Yugoslavia	50	Gas trading

Source: UNCTAD, based on Gazprom, 1999, pp. 86-102; Heinrich, 2001, p. 78; Liuhto, 2001, p. 27; and Westphal, 2000, pp. 61-63.

[a] Financial investment through Milford Holdings Ltd. (Ireland).
[b] Controlled through Wintershall Erdgas Handelshaus.

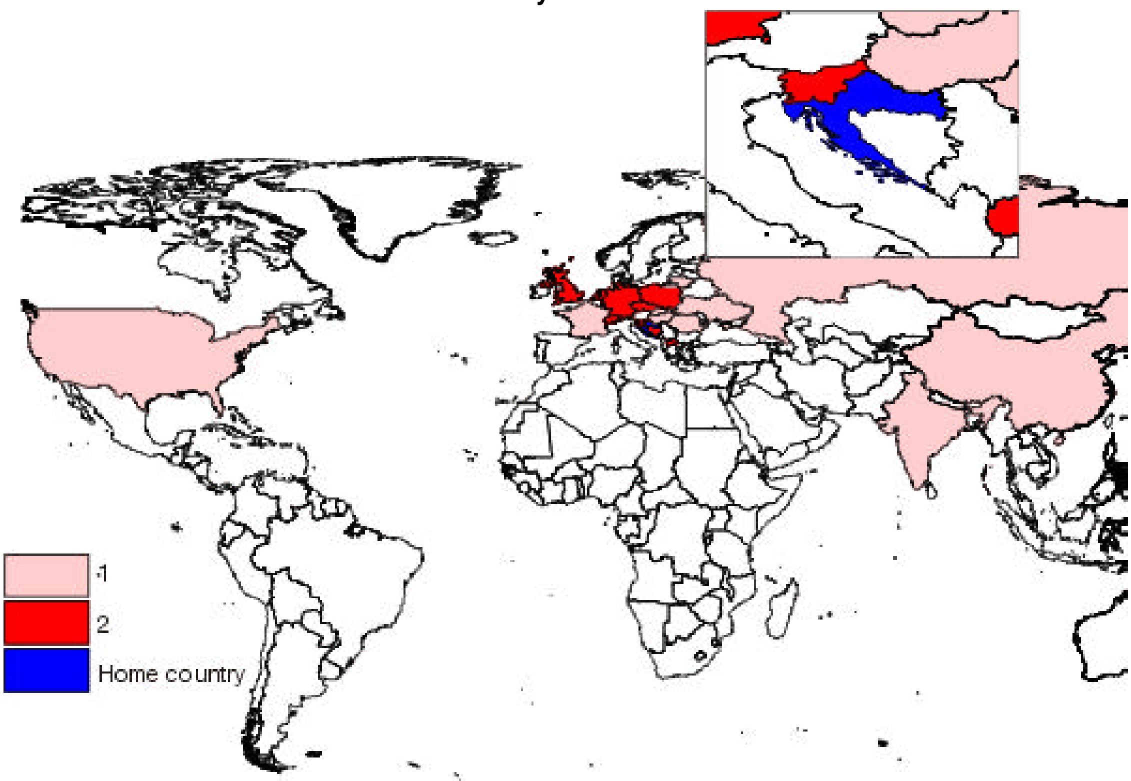
Figure III.15. Global expansion of Pliva d.d.

By 1990



Note: There were 2 foreign affiliates established in 1974 (Russian Federation and United States).

By 2001



Note: Based on 28 foreign affiliates identified, 14 of which are representative offices.

Source: UNCTAD, based on data provided by Pliva d.d.

Table III.18. Selected publicly announced cross-border mergers and acquisitions involving the largest 25 firms, January 1997 to May 2001

Year	Acquirer	Country	Acquired firm	Country	Industry of acquired firm	Value of transaction (million $)	Share acquired (Per cent)
1997	MOL Hungarian Oil & Gas Plc.	Hungary	Amoco Romania Petroleum	Romania	Gasoline stations	..	100.0
1997	TVK Ltd.	Hungary	Plastico SA	Romania	Plastic Products	..	67.5
1997	Zalakerámia Rt.	Hungary	Cesarom	Romania	Clay product & refractory	9.0	62.0
1997	Zalakerámia Rt.	Hungary	Inker	Croatia	Clay product & refractory	6.5	85.8
1997-2000	Pliva Group	Croatia	Polfa Krakow [a]	Poland	Pharmaceuticals	167.8	89.2
1998	Lukoil Oil Co.	Russian Federation	Petrotel SA	Romania	Petroleum & natural gas	56.0	51.0
1998	Pliva Group	Croatia	Fermenta Trebisov [b]	Slovakia	Yeast	1.3	100.0
1998	TVK Ltd.	Hungary	Plastico SA	Romania	Plastic products	1.6	19.5
1998	Zalakerámia Rt.	Hungary	Keramika Horni Briza [c]	Czech Republic	Clay product & refractory	13.7	36.2
1999	Lukoil Oil Co.	Russian Federation	Neftokhim	Bulgaria	Petroleum & natural gas	101.0 [e]	58.0
1999	Lukoil Oil Co.	Russian Federation	Odessa Oil Refinery	Ukraine	Petroleum & natural gas	6.5	51.9
1999	Pliva Group	Croatia	Farmacom	Poland	Pharmaceuticals	4.8	100.0
1999	Pliva Group	Croatia	Mixis Genetics	France	Pharmaceuticals	3.3	100.0
1999	Podravka Group	Croatia	Podravka Kft (Cerere s.r.l. Italy's share)	Hungary	Food & beverages	..	50.0
1999	TVK Ltd.	Hungary	Hamburger Unterland [d]	Austria	Plastic products	27.2 [f]	74.0
1999-2000	Pliva Group	Croatia	Lachema a.s.	Czech Republic	Pharmaceuticals	32.2	95.9
2000	Lukoil Oil Co.	Russian Federation	Getty Oil Plc.	United States	Petroleum & natural gas	71.0	100.0
2000	MOL Hungarian Oil & Gas Plc.	Hungary	Slovnaft a.s.	Slovakia	Petroleum & natural gas	262.0	36.2
2000	Pliva Group	Croatia	Lachema a.s.	Czech Republic	Pharmaceuticals	4.9	26.0
2000	Pliva Group	Croatia	Pharmascience UK Ltd.	United Kingdom	Pharmaceuticals	5.0	100.0
2001	Pliva Group	Croatia	AWD	Germany	Pharmaceuticals	42.6	100.0

Source: UNCTAD, based on firm reports.

[a] Renamed Pliva Krakow in 1998.
[b] Resold in 2000.
[c] Subsequently reclassified as financial investment.
[d] Resold in 2001.
[e] Plus tax arrears of about $ 260 million.
[f] Estimate.

Box III.2. Lukoil's acquisition of Getty Petroleum

Lukoil purchased Getty Petroleum Marketing Inc. for $71 million at the end of 2000. The First Vice President of Lukoil stressed in this respect that "This is the first acquisition of a publicly held American company by a Russian corporation, and it is the first step in our expected expansion into the U.S. market. It is an excellent opportunity for LUKOIL because it gives us entree into the vast American market in partnership with a highly regarded brand. In the future, we may seek to supply the Getty stations with our own petroleum products" (Lukoil, 2000, p. 1).

The acquired firm owns a chain of 1,260 retail outlets in 13 states. It also markets heating oil and other petroleum products. The principal shareholders of Getty (which collectively owned approximately 40 per cent of Getty's common stock) agreed to the transaction, subject to certain conditions. First, Getty's headquarters were to remain in Jericho, Long Island, New York. Second, Lukoil had to make a best-effort promise to avoid laying off employees and to retain the majority (if not all) of the pre-acquisition management. Lukoil also intended to keep the Getty brand, considered as one of the premier and best-known retail brands of petroleum products in the United States.

The managers of both Lukoil and Getty argued that the transaction created major synergies. "The combination of Getty's strong presence in the American market with LUKOIL's capabilities as a world class integrated oil company is going to create a formidable new company," said the chairperson and chief executive officer of Getty Petroleum Marketing (Lukoil, 2000, p. 2).

Source: Lukoil, 2000.

Notes

1 Financial firms are not included because of the different economic functions of assets of financial and non-financial firms and the unavailability of relevant data for the former.

2 These estimates are based on the estimates of the 1999 sales, assets and employment of foreign affiliates of TNCs, as given in table I.1. These ratios, especially those relating to sales and assets, should be treated with caution, as the data on the foreign assets and sales of the top 100 TNCs, mostly obtained through a questionnaire completed by firms, may not necessarily correspond exactly to the definition of foreign assets and sales used in table I.1.

3 The average transnationality index of the world's top 100 TNCs is the average of the 100 individual transnationality indices.

4 It should also be noted that many shipping companies have registered their fleets (which often represents a substantial part of their total assets) in so-called "flag-of-convenience" countries for tax or other reasons.

5 The TNIs for the top 100 group were in 1999 higher in all industry categories shown in table III.14 than the corresponding figures for the top 50 group.

6 These data were collected through a questionnaire survey organized by UNCTAD that took place in February-June 2001 and covered close to 100 firms from 15 Central and Eastern European countries. The integration of Russian firms into this list has been made possible by improved reporting and improved response rate by firms from that country to the survey questionnaire.

7 As reported in the top 500 list of the Financial Times, http://specials.ft.com/ft500/may2001/eastern.html.

8 Apart from the Estonian cases already mentioned, the most salient example is the investment of Hungary's Matav, majority controlled by Deutsche Telekom, into Maktelekom (TFYR Macedonia), carried out at the end of 2000. Another case is an investment by German-Austrian controlled Dunapack (Hungary) into Romania. Similarly, the Czech affiliate of Germany's RWE Entsorgung has invested in Romania, and Swedish-owned Czech Pramet in Bulgaria, while United States-owned Europharm Brasov has invested from Romania in the Republic of Moldova.

CONCLUSION

World FDI flows are expanding unabated. Their pace of growth surpasses that of most other economic aggregates. As a result, the role of international production in the global economy is on the rise. FDI liberalization, too, proceeds with a multitude of favourable changes in national regulatory regimes and supporting treaty making at the international level. With the growing knowledge intensity of economic activity, TNCs play a key part in creating and applying advanced technologies and managerial practices across the globe. They also account for a large proportion of world trade; about a third of world trade is in the form of intra-firm trade. In addition, they influence international trade indirectly by setting up extensive networks of procurement and subcontracting relations with other firms.

The location of TNC operations and functions is changing in response to new technologies, more liberal policies and intensified competition. During the past two decades, the geographical spread of international production has expanded noticeably. Nevertheless, it is far from evenly distributed across the globe in absolute terms. Developed countries and, in particular, the Triad continue to dominate, receiving over three-fourths of global FDI inflows and originating over four-fifths of outward FDI flows in 1998-2000. Developing countries have increased their participation in international production – both as recipients of FDI and as outward investors – during much of the 1990s, but their share as recipients has fallen during the past two years. The world's top 30 host countries account for 93 per cent of inward FDI flows and 90 per cent of stocks; the top 30 home countries account for around 99 per cent of outward FDI flows and stocks. The latter are mainly industrialized economies and a few large or newly industrializing developing countries and transition economies. Within countries, FDI tends to be fairly concentrated geographically, responding to the same agglomeration economies that influence local firms. These economies relate to proximity to markets and factors of production, and the availability of specialized skills, innovatory capabilities, suppliers and institutions.

The geographical concentration of international production reflects the locational attractions of particular sites. These attractions arise from several factors: natural resources, larger markets and competitive complementary inputs for TNC activity. The even stronger concentration of outward FDI means that only a few home countries have so far created the competitive advantages needed for a significant number of their firms to invest abroad. Together, these are the regions, countries and sub-national areas that benefit more from, and exercise control over, international production.

The geographical concentration of FDI often reflects the size and economic strength of the recipient economies. Low absolute amounts of FDI inflows into small economies, like the least developed countries, may represent relatively high shares of their incomes or total investments. The Inward FDI Index provides a comparative picture of how host countries fare with respect to inward FDI after adjusting for their size, measured by GDP; labour force, measured by number of employed persons; and their competitive advantages as revealed in export performance. Ranking by the Index shows that, in 1998-2000, the top economies in this respect were Belgium and Luxembourg, Hong Kong, China, Ireland, Sweden, and The Netherlands. The value of the Index varies widely among individual countries. Although differences diminish to some extent when groups of countries are considered, there are also some noticeable differences among them: the Index shows that South America, Central Asia and the African LDCs receive FDI in line with or above their average shares of global GDP, employment and exports, but the majority of developing regions do not. The patterns suggest that there are economic factors other than those captured by the Index that influence a country's international position with respect to inward FDI. They also suggest that government policies can lead to much higher FDI inflows than those predicted by a country's economic size and strength.

Large TNCs dominate international production. Some 90 per cent of the world's largest 100 TNCs are headquartered in the Triad. The electrical and electronic equipment, motor vehicle, and petroleum exploration and distribution industries account for over a half of the world's top 100 TNCs. The top 50 TNCs from developing countries originate in 13 newly industrializing economies of Asia and Latin America (and South Africa) only. The largest of these TNCs from developing countries are as large as the smallest of the top 100 worldwide. They congregate in construction, food and beverages, and diversified industries. The largest TNCs from Central and Eastern Europe are more evenly distributed among home countries: nine countries of the region figure in the list of the region's top 25 TNCs. Transport, mining, petroleum and gas and chemicals and pharmaceuticals are the most frequently represented industries in the list of the top 25 TNCs based in that region.

The locational patterns of international production differ not only by country but also by industry, and they change over time, partly in response to the changing industrial composition of FDI. Within manufacturing, geographical concentration is related to the technological level of the activity: the more advanced a technology, the higher the level of concentration. In less technology-intensive activities and where proximity to customers matters – as with many service industries – FDI is more dispersed. In some industries, trade liberalization has allowed firms to reduce the number of production sites.

The geography of FDI can also be extended to the level of such corporate functions as R&D and financial management. Efficiency considerations, coupled with technological advances enabling real-time links across long distances and the liberalization of trade and FDI policies, encourage a greater spread of all corporate functions. In some industries, this has led to the growth of integrated international production systems spanning regions (as in automobiles) or continents (as in semiconductors). Within these complex systems, the functions transferred to different locations vary greatly. Less industrialized locations are assigned simpler tasks like assembly and packaging, while industrially advanced locations are assigned more skill- and technology-intensive functions.

International production tends to cluster in particular locations in home and host countries, often near other firms and institutions. Major reasons for clustering are proximity to innovative and dynamic firms and research centres and pools of knowledge and skills created by agglomerations. TNCs may also develop new clusters in host countries that are later joined by indigenous firms. As developing countries move up the value chains of international production, the role of clusters in attracting and retaining international production tends to increase.

The drivers of FDI location have important policy implications at the regional, national and local levels. Natural resources and unskilled labour – and perhaps even national markets – are decreasing in significance. The new drivers are skills, technological capabilities, supply networks, good logistics and strong support institutions to attract FDI. Their development becomes key to attracting international production.

This raises important policy challenges for the developing world. Many countries, in particular the poorer and least developed ones, are increasingly marginal to the dynamics of international production. Simply opening an economy is often no longer enough to attract sustained inflows of FDI and to upgrade its quality. Governments need to take a more active and targeted approach, especially if they seek to attract competitive and export-oriented FDI. And part of such an approach is that countries need to identify and develop, over time, distinct configurations of locational advantages.

Different configurations of locational advantages attract different corporate functions, and these may be either industry specific or cut across industries. They offer several efficiency benefits to firms located in them. In some high-technology industries like electronics it may be possible to attract final-stage assembly on the basis of cheap semi-skilled labour and efficient export-processing facilities. In other activities, production facilities may require developed supply chains within an economy, a wide range of skills, interacting with other firms and knowledge-producing institutions in close proximity. Some back-office activities may require specialized skills (e.g. in accounting). High value functions like R&D or regional headquarters are particularly demanding of advanced skills and institutions. This is why many activities (natural resource extraction apart) tend to agglomerate in specific locations, a process further helped when firms concentrate on core activities, outsourcing others.

Investors – domestic and foreign alike – seek to take advantage of such clusters. In joining a cluster, they often add to its strength. Where agglomeration economies are significant, the rest of the country might be of little relevance to their locational decisions. Hence, attracting FDI in these activities depends increasingly on the ability to provide efficient clusters. An international bank's location choice is not so much a choice between the United Kingdom and Germany as between London and Frankfurt.

In today's highly competitive world economy, successful firms differentiate themselves from their competitors by developing clearly identifiable products with recognizable brand names. The ability to attract FDI, especially high quality FDI, increasingly needs a similar "investment product": the world market for FDI is just as competitive as that for goods and services. One implication of this is that countries that want to attract high quality FDI and benefit from it need to develop differentiated and efficient clusters that offer real and identifiable locational advantages to international investors and eventually become brand names recognizable to any national or international investor seeking this particular configuration of advantages. Bangalore in India has such a "brand name" for the development of software, as do Singapore and Hong Kong, China for financial services and regional headquarters.

Using clusters to attract FDI calls for new promotion policies, going beyond the first and second generations of investment promotion policies. In the first generation of investment promotion policies, countries simply liberalize their FDI regimes: they reduce barriers to inward FDI, strengthen standards of treatment for foreign investors and enhance the functioning of markets (*WIR94*). Virtually all countries – to be sure, in varying degrees – have, over the past decade or so, undertaken steps in this direction. The assumption was that, once an enabling framework is in place, FDI inflows will increase. Many countries, especially those with weak institutions, can go a long way in attracting FDI in this manner, if the basic economic determinants for obtaining FDI are right (*WIR98*, ch. IV).

In the second generation of investment promotion policies, governments go further and actively seek to attract FDI by "marketing" their countries (Wells and Wint, 1990). This approach finds its typical expression in the establishment of national investment promotion agencies. In 2001, over 160 of such national agencies existed, of which over 100 were members of the World Association of Investment Promotion Agencies, established in 1995. Again, of course, the success of proactive efforts depends, in the end, on the quality of the basic economic FDI determinants.

The third generation of investment promotion policies takes the general enabling framework for FDI and a proactive approach towards attracting FDI as a starting point. It then proceeds to target foreign investors at the level of industries and firms and in light of a country's developmental priorities. The objective is to match the immobile locational advantages of a country with the mobile competitive advantages of firms, with a view towards upgrading the former. Such a strategy is greatly helped if a country can nurture specific clusters that build on the country's competitive advantages, that capitalize on the natural inclination of firms to agglomerate, and that eventually acquire a brand name.[1] Thus, investment promotion increasingly needs to improve – and market – particular (sub-national) clusters that appeal to potential investors in specific activities. Of course, a country's general economic, political and regulatory features also matter because they affect the efficiency of the clusters within it. But the key to the success of such new investment promotion strategies is that they actually address one of the basic economic FDI determinants.

It must be recognized, however, that such a targeted approach, and especially the development of locational brand names, is difficult, costly and takes time. Moreover, a more targeted and fine-tuned approach – which, in the end, seeks to match the specific functional needs of corporate investors with specific locational products – requires fairly sophisticated institutional capacities. It is, however, facilitated by the proliferation of sub-national agencies (of which a minimum of 240 exist today), and also even by municipal investment promotion agencies that as a rule, seek to market more specific investment products. But this gives rise to another challenge: the need to coordinate policies across various administrative levels in a country. If that is not done, there is a risk that competition among regions within a country leads to "fiscal wars" and results in waste as far as the welfare of the country as a whole is concerned.

Regardless of the level at which FDI is promoted – and regardless of the precise mix of the three basic investment-promotion strategies outlined above that is pursued – the competitiveness of the domestic enterprise sector (including a pool of skilled people) is the key to the "product". Strong local firms attract FDI; the entry of foreign affiliates, in turn, feeds into the competitiveness and dynamism of the domestic enterprise sector. The strongest channel for diffusing skills, knowledge and technology from foreign affiliates is the backward linkages they strike with local firms. This can contribute to the growth of a vibrant domestic enterprise sector, the bedrock of economic development. For developing countries, backward linkages are therefore particularly important. The challenge then is how to promote backward linkages – regardless of the type of investment promotion policies that a country pursues. This is the topic of Part Two of this report.

Note

1 Jamaica is considering a branding strategy for attracting FDI; see Bloom et al., 2001.