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PART ONE
TRENDS IN INTERNATIONAL PRODUCTION

Chapter IV
The Largest Transnational Corporations

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CHAPTER IV

THE LARGEST TRANSNATIONAL CORPORATIONS

This chapter looks at developments in the universe of the largest non-financial TNCs,[1] ranked by their foreign assets in 2000: the 100 largest worldwide (table IV.1), the largest 50 from developing countries (table IV.10) and the largest 25 from the economies in transition of Central and Eastern Europe (CEE) (table IV.17).

It should be noted that the data – and therefore the discussion – refer to the year 2000, at the height of the stock market boom and cross-border M&A activities. Things have changed considerably in 2001 and 2002 – as exemplified by events in the telecoms industry; these will be discussed in next year's *WIR*. The foreign assets, sales and employment of the top 100 TNCs in the year 2000 accounted for 11 per cent, 14 per cent and 14 per cent, respectively, of the estimated foreign assets, sales and employment[2] of some 65,000 TNCs now operating in the world (table I.1 and annex table A.I.3). The lion's share of their foreign operations is controlled by companies headquartered in a limited number of countries. Nonetheless, the role of the largest TNCs based in these countries is growing, despite the fact that the share of developing countries in total FDI outflows has declined over the past decade (see annex table A.I.1). The largest TNCs from Asia and Latin America – which dominate the list of the largest from developing countries – have recently been expanding abroad at a brisk pace. In addition, some TNCs from Africa, more specifically from South Africa, have, in recent years, opted for a strategy of international growth, partly through cross-border M&As. The degree of transnationalization of a number of the 25 largest TNCs from CEE is increasing as well.

A. The 100 largest TNCs worldwide

1. Highlights

In 2000, Vodafone (United Kingdom) climbed to the top position among the world's 100 largest non-financial TNCs (table IV.1). The company's ascent to the top was the result of a string of cross-border takeover deals concluded in that year and crowned by the acquisition of Mannesmann (Germany) – ranked eighteenth in 1999 – which, consequently, disappeared from the list. Vodafone's appearance in the list highlights two major factors that affected the ranking of the top 100 in 2000: first, the year marked the peak of an unprecedented wave of cross-border M&As that engulfed all major industries, most of all the telecommunications and other "new economy" industries; second, and somewhat related to the first, the year 2000 saw the peak of an almost uninterrupted 10-year-long stock-market rally in North America and Western Europe. This resulted in dramatically increased asset valuations for the companies listed in these markets and actively involved in M&As. Indeed, the top 100, as a group, expanded significantly in size, with two-digit growth rates in their assets and sales, both foreign and total (table IV.2). The ascent of another telecom company – Telefonica (Spain) – into the top 10 also testifies to these factors, as does the rise of Vivendi Universal (France) to the fourth spot after a series of acquisitions that turned what was originally a utility company into the largest media and telecom company by foreign assets. Even some of the regulars in the top 10 – such as the petroleum companies, ExxonMobil and BP – consolidated

Table IV.1. The world's top 100 non-financial TNCs, ranked by foreign assets, 2000

(Millions of dollars and number of employees)

Ranking in 2000: Foreign assets	TNI[a]	Ranking in 1999: Foreign assets	TNI[a]	Corporation	Home economy	Industry[b]	Assets: Foreign	Assets: Total	Sales: Foreign[c]	Sales: Total	Employment: Foreign	Employment: Total	TNI[a] (Per cent)
1	15	-	-	Vodafone	United Kingdom	Telecommunications	221 238	222 326	7 419	11 747	24 000	29 465	81.4
2	73	1	74	General Electric	United States	Electrical & electronic equipment	159 188	437 006	49 528	129 853	145 000	313 000	40.3
3	30	2	22	ExxonMobil	United States	Petroleum expl./ref./distr.	101 728	149 000	143 044	206 083	64 000	97 900	67.7
4	42	47	79	Vivendi Universal	France	Diversified	93 260	141 935	19 420	39 357	210 084	327 380	59.7
5	84	4	82	General Motors	United States	Motor vehicles	75 150	303 100	48 233	184 632	165 300	386 000	31.2
6	46	3	43	Royal Dutch/Shell	United Kingdom/ Netherlands	Petroleum expl./ref./distr.	74 807	122 498	81 086	149 146	54 337	95 365	57.5
7	24	10	18	BP	United Kingdom	Petroleum expl./ref./distr.	57 451	75 173	105 626	148 062	88 300	107 200	76.7
8	80	6	81	Toyota Motor	Japan	Motor vehicles	55 974	154 091	62 245	125 575	..	210 709	35.1
9	55	30	73	Telefónica	Spain	Telecommunications	55 968	87 084	12 929	26 278	71 292	148 707	53.8
10	47	50	80	Fiat	Italy	Motor vehicles	52 803	95 755	35 854	53 554	112 224	223 953	57.4
11	57	9	49	IBM	United States	Electrical & electronic equipment	43 139	88 349	51 180	88 396	170 000	316 303	53.5
12	44	12	45	Volkswagen	Germany	Motor vehicles	42 725	75 922	57 787	79 609	160 274	324 402	59.4
13	64	-	-	ChevronTexaco	United States	Petroleum expl./ref./distr.	42 576	77 621	65 016	117 095	21 693	69 265	47.2
14	52	48	53	Hutchison Whampoa	Hong Kong, China	Diversified	41 881	56 610	2 840	7 311	27 165	49 570	55.9
15	23	19	57	Suez	France	Electricity, gas and water	38 521	43 460	24 145	32 211	117 280	173 200	77.1
16	93	7	50	DaimlerChrysler	Germany/ United States	Motor vehicles	..	187 087	48 717	152 446	83 464	416 501	24.0
17	11	31	14	News Corporation	Australia	Media	36 108	39 279	12 777	14 151	24 500	33 800	84.9
18	4	11	2	Nestlé	Switzerland	Food & beverages	35 289	39 954	48 928	49 648	218 112	224 541	94.7
19	62	-	-	TotalFinaElf	France	Petroleum expl./ref./distr.	33 119	81 700	82 534	105 828	30 020	123 303	47.6
20	87	16	54	Repsol YPF	Spain	Petroleum expl./ref./distr.	31 944	487 763	15 891	42 563	16 455	37 387	29.3
21	51	20	32	BMW	Germany	Motor vehicles	31 184	45 910	26 147	34 639	23 759	93 624	56.3
22	48	22	42	Sony	Japan	Electrical & electronic equipment	30 214	68 129	42 768	63 664	109 080	181 800	57.2
23	77	-	-	E.On	Germany	Electricity, gas and water	..	114 951	41 843	86 882	83 338	186 788	39.4
24	3	21	3	ABB	Switzerland	Machinery and equipment	28 619	30 962	22 528	22 967	151 340	160 818	94.9
25	10	33	35	Philips Electronics	Netherlands	Electrical & electronic equipment	27 885	35 885	33 308	34 870	184 200	219 429	85.7
26	8	-	-	Anglo American	United Kingdom	Mining & quarrying	26 000	30 616	18 100	20 570	230 000	249 000	88.4
27	19	17	13	Diageo	United Kingdom	Food & beverages	25 980	37 550	15 880	18 470	59 587	72 474	79.1
28	91	15	89	Wal-Mart Stores	United States	Retail	25 742	78 130	32 100	191 329	300 000	1300 000	24.3
29	43	29	27	Honda Motor	Japan	Motor vehicles	25 576	46 146	41 909	57 454	56 200	112 400	59.5
30	26	43	25	Alcatel	France	Machinery and equipment	24 461	39 524	25 269	29 487	..	131 598	72.8
31	5	35	7	British American Tobacco	United Kingdom	Tobacco	23 860	25 076	16 374	17 603	82 583	86 805	94.4
32	66	34	68	Nissan Motor	Japan	Motor vehicles	23 347	51 610	28 680	48 717	39 698	133 833	44.6
33	37	46	36	BASF	Germany	Chemicals	23 208	36 197	26 332	33 746	48 917	103 273	63.2
34	18	27	6	Roche	Switzerland	Pharmaceuticals	22 960	42 469	17 232	17 537	56 099	64 758	79.7
35	31	41	33	Bayer	Germany	Pharmaceuticals	21 288	33 917	24 875	28 818	65 900	122 100	67.7
36	74	36	67	Eni	Italy	Petroleum expl./ref./distr.	20 788	45 688	19 311	44 606	21 279	69 969	39.7
37	49	24	8	Unilever	United Kingdom/ Netherlands	Diversified	20 382	52 587	26 067	44 254	215 000	295 000	56.8
38	85	5	76	Ford Motor	United States	Motor vehicles	19 874	283 390	51 691	170 058	185 264	350 117	30.1
39	1	86	34	Rio Tinto	United Kingdom/ Australia	Mining & quarrying	19 405	19 443	9 735	9 972	33 415	34 399	98.2
40	56	25	48	Aventis	France	Pharmaceuticals	19 264	38 142	14 088	20 940	44 477[d]	102 489	53.7

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Table IV.1. The world's top 100 non-financial TNCs, ranked by foreign assets, 2000 (continued)

(Millions of dollars and number of employees)

Ranking in 2000: Foreign assets	Ranking in 2000: TNI[a]	Ranking in 1999: Foreign assets	Ranking in 1999: TNI[a]	Corporation	Home economy	Industry[b]	Assets: Foreign	Assets: Total	Sales: Foreign[c]	Sales: Total	Employment: Foreign	Employment: Total	TNI[a] (Per cent)
41	79	44	69	Texas Utilities Company (TXU)	United States	Electricity, gas and water	19 224	43 420	7 761	22 009	4 677	16 540	35.9
42	89	45	85	Mitsui & Company	Japan	Wholesale trade	19 118	64 071	45 901	128 162	5 659	39 344	26.7
43	59	-	-	Pfizer	United States	Pharmaceuticals	19 100	33 500	10 000	29 400	56 000	90 000	51.1
44	58	39	51	Hewlett-Packard	United States	Electrical & electronic equipment	..	34 009	27 505	48 871	..	87 944	53.4
45	41	61	77	Carrefour	France	Retail	17 137	24 065	28 664	60 298	209 542	330 247	60.7
46	60	67	70	Procter & Gamble	United States	Diversified	16 967	34 194	19 913	39 951	..	..	48.3
47	27	42	26	Coca-Cola	United States	Food & beverages	16 560	20 830	12 740	20 460	28 200	37 000	72.7
48	68	48	62	Peugeot	France	Motor vehicles	16 334	46 963	28 466	42 978	54 500	172 400	44.2
49	2	56	1	Thomson	Canada	Media	15 522	15 699	6 094	6 514	33 600	36 000	95.3
50	61	57	60	Dow Chemical	United States	Chemicals	15 500	35 991	16 747	29 534	24 000	53 289	48.3
51	71	14	41	Siemens	Germany	Electrical & electronic equipment	..	75 229	31 301	71 388	..	448 000	41.2
52	9	90	20	Astrazeneca	United Kingdom	Pharmaceuticals	15 000	18 000	15 009	15 804	47 000	57 000	86.9
53	14	75	52	Royal Ahold	Netherlands	Retail	14 827	23 990	33 653	48 000	..	248 053	82.5
54	22	70	19	Stora Enso Oys	Finland	Paper	14 727	19 841	11 348	12 112	26 697	41 785	77.3
55	69	32	44	Motorola	United States	Telecommunications	14 713	42 343	21 796	37 580	58 000	147 000	44.1
56	95	54	95	Hitachi	Japan	Electrical & electronic equipment	14 650	92 804	22 110	75 483	67 819	337 911	21.7
57	33	-	-	Compagnie De Saint-Gobain	France	Non-metallic mineral products	14 487	29 222	19 829	26 798	125 130	171 125	65.6
58	100	-	-	Verizon Communications	United States	Telecommunications	14 466	164 735	1 976	63 423	..	263 552	4.0
59	70	38	47	Johnson & Johnson	United States	Pharmaceuticals	14 436	34 245	12 139	29 846	49 338	101 901	43.7
60	99	73	100	SBC Communications	United States	Telecommunications	14 300	98 651	6 900	51 374	..	220 089	9.3
61	86	65	93	RWE	Germany	Electricity, gas and water	13 800	60 000	16 400	44 600	45 513	152 132	29.9
62	78	55	71	Matsushita Electric Industrial	Japan	Electrical & electronic equipment	13 745	72 518	33 974	68 862	143 773	290 448	39.3
63	50	71	61	AES	United States	Electricity, gas and water	13 659	31 033	4 185	6 691	..	26 606	56.5
64	96	-	-	Deutsche Post	Germany	Transport and storage	13 495	139 380	8 965	30 707	51 613	278 705	19.1
65	16	63	17	Michelin	France	Rubber tyres	12 900	15 950	12 557	14 326	96 504	128 122	81.3
66	38	68	31	Ericsson	Sweden	Telecommunications	12 640	26 352	23 261	29 828	62 698	105 129	61.9
67	39	62	24	McDonald's	United States	Restaurants	12 475	21 685	8 420	14 245	250 000	364 000	61.8
68	21	-	-	WPP Group	United Kingdom	Business services	12 145	13 372	3 657	4 453	..	51 195	78.5
69	28	87	30	Volvo	Sweden	Motor vehicles	12 133	21 053	16 237	17 489	47 565	72 031	72.2
70	53	-	-	GlaxoSmithKline	United Kingdom	Pharmaceuticals	11 953	27 447	18 528	27 006	58 000	107 517	55.4
71	72	61	40	Canon	Japan	Electrical & electronic equipment	11 737	24 627	4 997	24 185	47 177	86 673	40.9
72	92	52	96	Sumitomo	Japan	Wholesale trade	11 672	39 286	10 135	80 000	9 153	30 715	24.1
73	81	78	86	Merck & Co	United States	Pharmaceuticals	11 648	40 155	7 292	40 363	26 200	49 300	33.4
74	45	69	46	Robert Bosch	Germany	Machinery and equipment	11 079	22 800	21 140	29 360	108 761	198 666	58.4
75	17	77	23	Danone	France	Food & beverages	10 949	16 179	9 910	13 413	88 285	86 657	81.1
76	40	100	47	Cemex	Mexico	Non-metallic mineral products	10 887	15 759	3 028	5 621	15 448	25 884	60.9
77	75	80	97	Nissho Iwai	Japan	Wholesale trade	10 672	29 145	19 496	52 213	1 951	4 313	39.7
78	36	-	-	Cable & Wireless	United Kingdom	Telecommunications	10 622	34 321	10 253	14 678	48 833	54 919	63.2
79	97	-	-	Japan Tobacco	Japan	Tobacco	9 959	29 159	3 760	41 180	..	41 703	18.7
80	98	59	99	Itochu	Japan	Wholesale trade	9 894	41 626	18 736	97 944	..	38 867	15.2
81	32	98	37	Bridgestone	Japan	Rubber/tyres	9 756	18 884	10 894	18 591	89 754	102 615	65.9

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Table IV.1. The world's top 100 non-financial TNCs, ranked by foreign assets, 2000 (concluded)

(Millions of dollars and number of employees)

Ranking in 2000: Foreign assets	TNI[a]	Ranking in 1999: Foreign assets	TNI[a]	Corporation	Home economy	Industry[b]	Assets: Foreign	Assets: Total	Sales: Foreign[c]	Sales: Total	Employment: Foreign	Employment: Total	TNI[a] (Per cent)
82	20	81	15	L'Air Liquide	France	Chemicals	9 643	10 700	5 760	7 480	20 900	30 300	78.7
83	25	-	-	Pearson	United Kingdom	Media	9 556	13 062	4 580	5 787	18 817	24 688	76.2
84	83	49	72	Fujitsu	Japan	Electrical & electronic equipment	9 476	41 936	15 275	44 229	71 000	187 399	31.7
85	35	-	-	Norsk Hydro Asa	Norway	Diversified	9 378	22 191	16 118	17 727	21 901	38 166	63.5
86	7	-	-	Interbrew	Belgium	Food & beverages	9 274	10 383	6 704	7 384	33 000	36 463	90.2
87	34	-	-	Carnival	United States	Tourism	9 200	9 800	598	3 779	27 000	32 000	64.7
88	29	-	-	Alcan	Canada	Metal and metal products	9 030	18 407	8 523	9 244	26 000	37 000	70.5
89	88	66	87	Marubeni	Japan	Wholesale trade	9 000	52 682	40 000	96 438	..	31 342	28.3
90	13	95	12	Cadbury - Schweppes	United Kingdom	Food & beverages	8 845	9 651	5 412	6 834	29 648	36 460	84.1
91	6	79	4	Electrolux	Sweden	Electrical & electronic equipment	8 810	9 519	13 089	13 576	78 969	87 128	93.2
92	63	-	-	LG Electronics	Korea, Republic of	Electrical & electronic equipment	8 750	17 709	9 331	18 558	20 072	46 912	47.5
93	12	74	10	AkzoNobel	Netherlands	Pharmaceuticals	8 600	10 900	11 900	12 600	55 600	68 400	84.9
94	65	88	63	Usinor	France	Metal and metal products	8 541	14 297	5 190	14 771	24 180	60 521	44.9
95	67	-	-	Conoco	United States	Petroleum expl./ref./distr.	8 311	15 618	10 621	31 936	8 280	17 579	44.5
96	90	97	56	Mitsubishi Motors	Japan	Motor vehicles	8 169	28 732	15 084	37 905	2 091	24 360	25.6
97	76	83	83	Petróleos de Venezuela	Venezuela	Petroleum expl./ref./distr.	8 017	57 089	49 780	53 234	5 458	46 920	39.7
98	54	28	38	Renault	France	Motor vehicles	7 936	19 653	24 121	37 383	98 000	166 114	54.6
99	82	-	-	Petronas	Malaysia	Petroleum expl./ref./distr.	7 690	36 594	11 790	19 305	3 808	23 450	32.8
100	94	-	-	Philip Morris	United States	Diversified	7 425	79 067	32 051	63 276	..	178 000	22.4

Source: UNCTAD/Erasmus University database.

[a] The transnationality index (TNI) is calculated as the average of the following 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.

[c] In a number of cases companies reported only total foreign sales without distinguishing between export from the parent company and sales of their foreign affiliates. Some foreign sales figures might therefore also include parent company exports.

[d] Employment for outside Europe.

.. Data on foreign assets, foreign sales and foreign employment were not available. 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: In some companies, foreign investors may hold a minority share of more than 10 per cent.

Table IV.2. Snapshot of the world's top 100 TNCs, 2000

(Billions of dollars, number of employees and percentage)

Variable	2000	1999	Change 2000 vs. 1999
Assets			
Foreign	2 554	2 115	20.8
Total	6 293	5 101	23.4
Sales			
Foreign	2 441	2 129	14.6
Total	4 797	4 318	11.1
Employment			
Foreign	7 132 946	6 057 557	17.8
Total	14 257 204	13 385 861	6.5
Average index of transnationality	55.7	52.3	3.4[a]

Source: UNCTAD/Erasmus University database.

[a] The change between 1999 and 2000 is expressed in percentage points.

their positions through a number of cross-border M&As. Despite these changes, the composition of the top 10 remained fairly stable compared to previous years: the remaining places were filled with regulars on the list, including General Electric, last year's largest TNC by foreign assets, Royal Dutch/Shell, Toyota Motor and General Motors – which remain the largest automobile manufacturers on the list – and Fiat, which replaced DaimlerChrysler[3] in third place among the car manufacturers.

In general, the ranking of the top 100 is also related to the degree of their participation in cross-border M&As. The largest 20 companies most actively involved in cross-border M&As accounted for one-fifth of the total value of cross-border M&A deals during the past 15 years: 1987-2001 (table IV.3). Many of the largest TNCs also figure in this league. The recent boom in M&A activity has made large TNCs larger than ever. This is illustrated by the value and number of M&As in which some of the largest have been involved. For example, BP spent $94 billion for its 98 cross-border M&A transactions during 1987-2001, and General Electric concluded 228 cross-border M&As during the same period (table IV.3). Indeed, some of the largest TNCs are larger than many countries, if the size of both is measured by value added (box IV.1).

Table IV.3. The top 20 TNCs ranked by value of cross-border M&A activity,[a] 1987-2001

Rank	Name	Home country	Industry	Value[b] (bllions of dollars)	Number of deals
1	Vodafone	United Kingdom	Telecommunications	297.6	28
2	BP	United Kingdom	Petroleum	94.1	98
3	Daimler-Benz/DaimlerChrysler	Germany/United States	Motor vehicles	54.6	88
4	Deutsche Telekom	Germany	Telecommunications	52.8	24
5	Mannesmann	Germany	Telecommunications & engineering	44.7	47
6	AXA/AXA-UAP	France	Insurance	41.6	73
7	ZENECA Group	United Kingdom	Pharmaceuticals	35.8	16
8	BT	United Kingdom	Telecommunications	32.9	47
9	Aventis	France	Pharmaceuticals	31.7	38
10	Nestlé	Switzerland	Food and beverages	28.1	136
11	General Electric	United States	Electronic and electrical equipment	25.4	228
12	Roche Holding	Switzerland	Pharmaceuticals	24.7	23
13	Allianz/Allianz Holding	Germany	Insurance	23.9	101
14	Suez	France	Electric, gas and water distribution	23.3	106
15	Zurich Insurance	Switzerland	Insurance	22.7	37
16	News Corporation	Australia	Media	22.6	82
17	Citigroup	United States	Banking	21.5	52
18	Deutsche Bank	Germany	Banking	20.6	94
19	Seagram	Canada	Food and beverages	20.2	24
20	Aegon	Netherlands	Insurance	18.8	28
Top 10				713.9	595
Top 20				937.7	1 370
Total				4 605.2	59 273

Source: UNCTAD cross-border M&A database, based on data from Thomson Financial Securities Data Company.

[a] Includes cross-border M&As concluded by their affiliates.
[b] Includes only the deals for which information on transaction values is available.

Box IV.1. Are some TNCs bigger than countries?

There is no doubt that TNCs have been growing in size at rates exceeding those of many economies. The sales of the 500 largest firms in the world nearly tripled between 1990 and 2001,[a] while world GDP in current prices increased 1.5 times between these two years. UNCTAD's 100 TNCs also increased their total sales, from $3.2 trillion to almost $4.8 trillion between 1990 and 2000.

The size of large TNCs is sometimes compared to that of countries' economies, as an indicator of the influence that the former have in the world economy. According to one comparison of the sales volume of firms with the GDP of countries, the sales of the top 200 firms accounted for 27.5 per cent of world GDP in 1999 (Anderson and Cavanagh, 2000). Of the 50 largest "economies", 14 were TNCs and 36 were countries.

However, a comparison of the sales of firms with the GDP of countries is conceptually flawed, as GDP is a value-added measure and sales are not. A comparable yardstick requires that sales be recalculated as value added. For firms, value added can be estimated as the sum of salaries and benefits, depreciation and amortization, and pre-tax income (De Grauwe and Camerman, 2002). Based on this measure, the world's largest TNC was ExxonMobil, with an estimated $63 billion in value added in 2000; it ranked 45th in a combined list of countries and non-financial companies (box table IV.1.1). The size of this company equals the size of the economies of Chile or Pakistan in terms of value added. In the top 100 of a combined country-company list for 2000, there were 29 TNCs; half of the largest value-added entities ranked between 51 and 100 were individual firms (box table IV.1.1).

Box table IV.1.1. How large are the top TNCs vis-à-vis economies in 2000?

(Billions of dollars)

Rank	Name of TNC/economy	Value[a] added	Rank	Name of TNC/economy	Value[a] added	Rank	Name of TNC/economy	Value[a] added
1	United States	9 810	34	Greece	113	67	Libyan Arab Jamahiriya	31
2	Japan	4 765	35	Israel	110	68	BP	30
3	Germany	1 866	36	Portugal	106	69	Wal-Mart Stores	30[c]
4	United Kingdom	1 427	37	Iran, Islamic Republic of	105	70	IBM	27[b]
5	France	1 294	38	Egypt	99	71	Volkswagen	24
6	China	1 080	39	Ireland	95	72	Cuba	24
7	Italy	1 074	40	Singapore	92	73	Hitachi	24[b]
8	Canada	701	41	Malaysia	90	74	TotalFinaElf	23
9	Brazil	595	42	Colombia	81	75	Verizon Communications	23[d]
10	Mexico	575	43	Philippines	75	76	Matsushita Electric Industrial	22[b]
11	Spain	561	44	Chile	71	77	Mitsui & Company	20[c]
12	Korea, Republic of	457	45	ExxonMobil	63[b]	78	E.On	20
13	India	457	46	Pakistan	62	79	Oman	20
14	Australia	388	47	General Motors	56[b]	80	Sony	20[b]
15	Netherlands	370	48	Peru	53	81	Mitsubishi	20[c]
16	Taiwan Province of China	309	49	Algeria	53	82	Uruguay	20
17	Argentina	285	50	New Zealand	51	83	Dominican Republic	20
18	Russian Federation	251	51	Czech Republic	51	84	Tunisia	19
19	Switzerland	239	52	United Arab Emirates	48	85	Philip Morris	19[b]
20	Sweden	229	53	Bangladesh	47	86	Slovakia	19
21	Belgium	229	54	Hungary	46	87	Croatia	19
22	Turkey	200	55	Ford Motor	44	88	Guatemala	19
23	Austria	189	56	DaimlerChrysler	42	89	Luxembourg	19
24	Saudi Arabia	173	57	Nigeria	41	90	SBC Communications	19[d]
25	Denmark	163	58	General Electric	39[b]	91	Itochu	18[c]
26	Hong Kong, China	163	59	Toyota Motor	38[b]	92	Kazakhstan	18
27	Norway	162	60	Kuwait	38	93	Slovenia	18
28	Poland	158	61	Romania	37	94	Honda Motor	18[b]
29	Indonesia	153	62	Royal Dutch/Shell	36	95	Eni	18
30	South Africa	126	63	Morocco	33	96	Nissan Motor	18[b]
31	Thailand	122	64	Ukraine	32	97	Toshiba	17[b]
32	Finland	121	65	Siemens	32	98	Syrian Arab Republic	17
33	Venezuela	120	66	Viet Nam	31	99	GlaxoSmithKline	17
						100	BT	17

Source: UNCTAD.

[a] GDP for countries and value added for TNCs. Value added is defined as the sum of salaries, pre-tax profits and depreciation and amortisation.

[b] Value added is estimated by applying the 30 per-cent share of value added in the total sales, 2000, of 66 manufacturers for which the data were available.

[c] Value added is estimated by applying the 16 per-cent share of value added in the total sales, 2000, of 7 trading companies for which the data on value added were available.

[d] Value added is estimated by applying the 37 per-cent share of value added in the total sales, 2000, of 22 other tertiary companies for which the data on value added were available.

/...

Box IV.1. Are some TNCs bigger than countries? (concluded)

The value-added activities of the largest TNCs have grown faster than those of countries in recent years. Those of the 100 largest TNCs accounted for 4.3 per cent of world GDP in 2000, compared with 3.5 per cent in 1990. This increase – amounting to some $600 billion – was almost equivalent to the GDP of Spain. The concentration of value added in the 10 to 50 largest TNCs, as measured by the share of their value added in GDP, however, has declined somewhat over the past decade (box table IV.1.2). It should be noted that the number of the largest TNCs that fell within the combined top 100 list of companies and countries was 24 in 1990, five less than in 2000. Increases in the share of value added of the largest 100 TNCs in world GDP confirm that their size has become even larger over the past decade.

Box table IV.1.2. The concentration ratio of the largest 100 TNCs in world GDP, 1990 and 2000

(Per cent)

Number of TNCs	Value added as a percentage of world GDP 1990	2000
Top 10 TNCs	1.0	0.9
Top 20 TNCs	1.8	1.5
Top 50 TNCs	2.9	2.8
Top 100 TNCs	3.5	4.3

Source: UNCTAD, database on the largest TNCs.

Source: UNCTAD.

[a] "The Fortune Global 500", *Fortune*, 22 April 1991 and 15 April 2002.

In total, 22 entries were registered in 2000 (tables IV.4 and IV.5). The newcomers have a number of interesting features:

- They come from a wide range of industries, although there seems to be a slight concentration in service industries, in particular in telecommunications and the media.
- Most of the newcomers are from Europe, especially from the United Kingdom, but also from smaller countries such as Belgium and Norway.
- Two of the newcomers are companies that ranked high on the list of top 50 TNCs from developing countries in 1999.

Table IV.4. Newcomers to the world's top 100 TNCs, 2000

Ranking by: Foreign assets	TNI[a]	Corporation	Home country	Industry	TNI[a] (Per cent)
1	15	Vodafone	United Kingdom	Telecommunications	81.4
13	64	ChevronTexaco	United States	Petroleum expl./ref./distr.	47.2
19	62	TotalFinaElf	France	Petroleum expl./ref./distr.	47.6
23	77	E.On	Germany	Electricity, gas and water	39.4
26	8	Anglo American	United Kingdom	Mining & quarrying	88.4
43	59	Pfizer	United States	Pharmaceuticals	51.1
57	33	Compagnie De Saint-Gobain	France	Non-metallic mineral products	65.6
58	100	Verizon Communications	United States	Telecommunications	4.0
64	96	Deutsche Post	Germany	Transport and storage	19.1
68	21	WPP Group	United Kingdom	Business services	78.5
70	53	GlaxoSmithKline	United Kingdom	Pharmaceuticals	55.4
78	36	Cable & Wireless	United Kingdom	Telecommunications	63.2
79	97	Japan Tobacco	Japan	Tobacco	18.7
83	25	Pearson	United Kingdom	Media	76.2
85	35	Norsk Hydro Asa	Norway	Diversified	63.5
86	7	Interbrew	Belgium	Food & beverages	90.2
87	34	Carnival	United States	Tourism	64.7
88	29	Alcan	Canada	Metal and metal products	70.5
92	63	LG Electronics	Korea, Republic of	Electrical & electronic equipment	47.5
95	67	Conoco	United States	Petroleum expl./ref./distr.	44.5
99	82	Petronas	Malaysia	Petroleum expl./ref./distr.	32.8
100	94	Philip Morris	United States	Diversified	22.4

Source: UNCTAD/Erasmus University database.

[a] The transnationlity index (TNI) is calculated as the average of the following three ratios: foreign assets to total assets, foreign sales to total sales and foreign employment to total employment.

Table IV.5. Departures from the world's top 100 TNCs, 2000[a]

Ranking in 1999 by: Foreign assets	TNI	Corporation	Home country	Industry	TNI (Per cent)
8	21	Total Fina	France	Petroleum expl./ref./distr.	70.3
13	11	Nippon Mitsubishi Oil	Japan	Petroleum expl./ref./distr.	82.4
18	58	Mannesmann	Germany	Telecommunications/engineering	48.9
23	9	Seagram	Canada	Beverages/media	88.6
26	84	Mitsubishi	Japan	Diversified	29.7
37	78	Chevron	United States	Petroleum expl./ref./distr.	34.2
40	53	Elf Aquitaine	France	Petroleum expl./ref./distr.	51.7
51	65	Veba Group	Germany	Diversified	42.4
53	66	Du Pont (E.I.) de Nemours	United States	Chemicals	41.3
58	5	Holcim (ex Holderbank)	Switzerland	Construction materials	91.8
64	16	Glaxo Wellcome	United Kingdom	Pharmaceuticals	76.6
72	28	Compart	Italy	Food & beverages	63.8
76	94	Southern Company	United States	Utility	19.8
82	90	Edison International	United States	Electronics	24.3
84	29	Montedison Group	Italy	Chemicals/agrindustry	62.2
85	64	Viag	Germany	Diversified	43.3
89	92	Atlantic Richfield	United States	Petroleum expl./ref./distr.	23.3
91	88	Lucent Technologies	United States	Electronics	25.9
92	39	Crown Cork & Seal	United States	Packaging	57.5
93	75	Metro	Germany	Retailing	36.4
94	55	Texaco	United States	Petroleum expl./ref./distr.	51.2
96	91	Toshiba	Japan	Electronics	23.3

Source: UNCTAD/Erasmus University database.

a This also includes companies that could not be considered because of their late responses to the UNCTAD questionnaire and for which estimates could not be derived.

- Almost all newcomers, with the exception of Verizon and, to a lesser degree, Deutsche Post, Petronas, Philip Morris, Japan Tobacco, E. ON and LG Electronics, are already in advanced stages of their transnationalization processes, as is evident from their above-average transnationality index figures.
- While most of the new entrants figure in the lower ranks of the top 100 list, three (led by Vodafone) made it immediately into the top quartile, reflecting the dynamic process characterized by M&As.

As for the companies exiting from the list, 11 of the 22 departures are explained by M&As. They include four German firms, eight from the United States and two from France. The industry most affected has been petroleum and mining (with six companies disappearing from the list or being absorbed into a newly formed company). One telecommunications company also dropped out. While these were cases of full acquisitions, the exit of other companies resulted from partial acquisitions: For instance, Southern Company, a United States-based utility, lost its place as the result of a sell-off of most of its overseas operations.

A record five firms among the top 100 TNCs – Petronas (Malaysia), Hutchison Whampoa (Hong Kong, China), Cemex (Mexico), Petroleos de Venezuela and LG Electronics (Republic of Korea) – are headquartered in a developing country. These companies are involved in a variety of industries, both traditional ones like oil and petroleum, and "new economy" ones like telecommunications and electronics, suggesting that firms from developing countries have the potential to become global players in a range of industries.

In the 1990s, developing-country firms gained more prominence on the top 100 list, and the composition of developed-country firms changed (table IV.6).

- Firms from the EU accounted for more than half of the total foreign assets of the top 100 firms, up from 45 per cent at the beginning of the 1990s. This is a direct consequence of a comprehensive restructuring in the course of the EU integration process. Thus, while the number of European firms on the list remained stable, firms grew larger by merging or taking over rivals inside and outside the EU. Firms from the United

Kingdom were at the forefront of this process: Their share in the foreign assets of the top 100 firms increased to more than a fifth, and their number grew to 14, the third largest after the United States and Japan. While a similar development could be observed for French firms, the trend there was less obvious.

- Although the United States is still the home country for the single largest number of companies on the list, its importance in this respect has declined somewhat over the past decade. This is because United States companies have focused more on M&As within the United States, while their European rivals often have had no alternative but to expand through foreign acquisitions. Liberal M&A legislation in the United States facilitates the takeover of firms in that country, while such deals have hurdles to pass in Europe.

- Japanese firms fell back in the top 100 list. Although their number has increased from 12 to 16 in the past 10 years, their share in foreign assets has remained stable or fallen. Thus, fewer Japanese firms are to be found at the top end of the list. While at the end of the 1980s and the beginning of the 1990s many Japanese firms were engaged in cross-border M&As, the burst of the stock market bubble in Japan at the beginning of the decade left many firms (with some exceptions)

Table IV.6. Home economies of the world's top 100 TNCs by transnationality index and foreign assets, 1990, 1995 and 2000

		Average TNI[a] (Per cent)			Share in total of foreign assets of top 100 (Per cent)			Number of entries		
Economy		2000	1995	1990	2000	1995	1990	2000	1995	1990
European Union		67.1	66.0	56.7	53.0	43.8	45.5	49	39	48
	France	63.2	57.6	50.9	12.0	8.9	10.4	13	11	14
	Germany	45.9	56.0	44.4	9.3	12.2	8.9	10	9	9
	United Kingdom[b]	76.9	64.8	68.5	21.0	12.2	8.9	14	10	12
	The Netherlands[b]	84.4	79.0	68.5	2.0	8.2	8.9	3	4	4
	Italy	48.6	35.8	38.7	2.9	2.3	3.5	2	2	4
	Sweden	75.7	80.6	71.7	1.3	1.7	2.7	3	3	5
	Finland	77.3	-	-	0.6	-	-	1	-	-
	Spain	41.6	-	-	3.4	-	-	2	-	-
	Belgium	90.2	70.4	60.4	0.4	0.9	1.0	1	2	1
North America		62.9	46.0	41.2	28.1	35.9	32.5	25	34	30
	United States	43.0	41.9	38.5	27.2	33.3	31.5	23	30	28
	Canada	82.9	76.5	79.2	1.0	2.7	1.0	2	4	2
Japan		35.9	31.9	35.5	10.7	15.1	12.0	16	17	12
Other economies		48.9	66.9	73.0	7.6	9.0	10.0	10	10	10
	Switzerland	89.7	83.6	84.3	3.4	6.6	7.5	3	5	6
	Australia[b]	0.8	-	51.8	0.8	-	1.6	1	3	2
	Venezuela	39.7	44.4	-	0.3	0.4	-	1	1	-
	New Zealand	-	-	62.2	-	-	0.5	-	-	1
	Republic of Korea	47.5	47.7	-	0.3	0.7	-	1	1	-
	Norway	63.5	-	58.1	0.4	-	0.4	1	-	1
	Malaysia	32.8	-	-	0.3	-	-	1	-	-
	Mexico	60.9	-	-	0.4	-	-	1	-	-
	Hong Kong, China	55.9	-	-	1.6	-	-	1	-	-
Total/average for all economies		57.8	51.5	51.1	100	100	100	100	100	100

Source: UNCTAD and Erasmus University database.

[a] The transnationality index (TNI) is calculated as the average of the following 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.

without the means for larger M&As (see chapter III).

Foreign assets. Growth in foreign assets held by the 100 largest TNCs continued in 2000. Total foreign assets increased by more than 20 per cent, to $2.5 trillion (table IV.2). The TNCs that registered the three largest increases in foreign assets were Vivendi Universal, Pfizer and Rio Tinto, as a result of M&As. Some telecom firms also saw an impressive double-digit increase in their foreign assets. These included Telefonica, Verizon, Cable&Wireless and Hutchinson Whampoa (which is diversified, but has a considerable interest in telecoms abroad). All these companies too were involved in major M&As. Other companies that experienced significant increases had a diversified industrial and geographic background. All in all, the fact that 45 of the companies saw a double-digit rate of increase in their foreign assets as a result of M&As underlines the importance of these activities during 1999-2000. On the other hand, an unprecedented number of TNCs (20) in the top 100 suffered declines. These companies were in a wide range of industries, with the exception of "new economy" ones such as telecommunications. Firms from three industries – electrical and electronic equipment, motor vehicles and pharmaceuticals – accounted for more than half of all the cases experiencing reduced foreign assets in 2000. In addition to technical reasons related to the definition of foreign assets and operations (see footnote 3 for an example), there are several other reasons for this:

- Some companies reduced their foreign assets (in the context of changed corporate strategies) through spin-offs of certain segments of their businesses following restructuring or M&As, as was the case with Siemens and Infineon.

- The fact that a quarter of the companies that experienced a reduction of their foreign assets in 2000 were from the electrical and electronic equipment industries suggests that these firms were among the first to be hit by the economic slowdown, and responded with cost-savings strategies that included the sale of manufacturing operations abroad to contract manufacturing (chapter V).

- Finally, given that an economic slowdown had begun in 2000 in at least some industries, some of the declines in foreign assets might have been a corporate response to dimmer economic prospects.

In sum, the variation in the fortunes of the top 100 with respect to foreign assets underlines the importance of the dynamic developments in M&A activities during 2000.

Foreign sales.[4] Total foreign sales of the world's 100 largest TNCs amounted to slightly more than $2.4 trillion in 2000 (table IV.2), up by more than 14 per cent from 1999. This expansion exceeded that of total sales (11 per cent), pointing to the increasing importance of foreign sales. As with foreign assets, TNCs from the petroleum industry feature prominently in the list of the largest TNCs ranked by foreign sales, with ExxonMobil ($143 billion), BP ($106 billion), TotalFinaElf ($83 billion), Royal Dutch/Shell ($81 billion) and ChevronTexaco ($65 billion) leading in the list. The top 10 by foreign sales include a number of automobile manufacturers (Toyota, Volkswagen and Ford, in that order). The only company in an industry other than petroleum and automobiles among the top 10 by foreign sales is IBM, which ranks ninth, with just over $51 billion in foreign sales. Interestingly, many telecom companies that rank high on the list by foreign assets can be found at the bottom when it comes to ranking by foreign sales, suggesting that share price developments, particularly in these industries, had little to do with the operational fundamentals of the companies in that year. The most dynamic increases in foreign sales were recorded for two petroleum companies from developing countries, Petroleos de Venezuela and Petronas of Malaysia, followed by Aventis of France. In general, almost half (48) of the top 100 companies experienced double-digit growth rates in foreign sales. However, as with foreign assets, 20 per cent recorded lower sales. The reasons for this are the same as those explaining the reduction in foreign assets. As for the 10 steepest declines in foreign sales, no clear pattern can be discerned: TNCs experiencing declines came from various countries and industries. DaimlerChrysler (-60 per cent) heads this list, followed by Siemens (-41 per cent) and Unilever. However, contrary to foreign sales, most declines in foreign assets were no bigger than 5 per cent.

As for the distribution of foreign sales of the largest 100 TNCs by country of origin, it closely resembles the distribution of foreign assets (table IV.6).

Foreign employment. There was a major reversal in foreign employment by the top 100. While the companies on the list had reduced their foreign employment by almost 8 per cent in 1999, this trend was reversed in 2000. Foreign employment by the top 100 firms rose by more than 17 per cent, to an unprecedented 7 million out of a total of more than 14 million employees. This is particularly remarkable since the trend in total employment did not change. As in the previous year, total employment increased at a steady rate of about 6 per cent (table IV.2). Again, as with the other parameters for the firms making up the list of top 100, performance varied considerably: but some 20 companies increased their foreign employment by 10 per cent or more, but another 35 actually reduced their workforce abroad. The companies significantly expanding their foreign employment in 2000 were spread across the top 100 list and over all industries, including companies such as Vivendi Universal (100 per cent), BP (42 per cent) and Telefonica (75 per cent). However, there was some concentration mainly in the industries in which most of the M&A action took place during that year (i.e. telecommunications, oil and petroleum, mining and retail). The large number of companies that reduced their foreign workforce suggests that, despite the ongoing wave of cross-border M&As, most companies remained highly cost-sensitive in the aftermath of the Asian crisis and in response to the first signs of the global slowdown already looming on the horizon.

The 10 TNCs accounting for the largest reductions in foreign employment largely overlapped with the 10 that experienced the largest declines in foreign sales. Many TNCs among those that experienced the largest declines in foreign assets were companies going through a post-merger restructuring phase, such as DaimlerChrysler and Aventis.

National origin. The national-origin composition of the top 100 TNCs continued to be fairly stable, although the number of EU companies has increased since 1995 and they have regained the position they had held at the beginning of the 1990s. The number of Japanese companies on the list has stabilized at a considerably higher level than at the beginning of the 1990s (1990: 12, 2000: 16), although their share in foreign assets and sales has remained constant. Japanese companies now mostly occupy the lower end of the list. The increase in the number of European and Japanese companies on the list has been at the expense of companies from the United States, which now form little more than a quarter of the top 100, as against a third 10 years ago. Another interesting feature of the home-country distribution is that, although the number of companies from non-Triad countries has been stable, at around 10, these companies now come from a larger pool of countries, including five developing countries. The prominence of Switzerland as a home country for non-Triad-TNCs on the list has been drastically reduced. After a number of M&A deals between Swiss firms as well as between Swiss and non-Swiss firms in the first half of the 1990s, the subsequent absence of such deals led to the gradual departure of several Swiss firms from the list, as they were overtaken by other firms that continued to be more active in terms of M&A deals.

Industries. The list of the top 100 TNCs in 2000 was dominated by the same industries as in previous years: electronics and electrical equipment, motor vehicles and parts, petroleum exploration and distribution, and food and beverages (table IV.7). Together they account for 47 of the 100 companies on the list. At first sight, this stability is remarkable, given the M&A activity in some of these industries. The explanation is that, while M&As led to the disappearance of some companies in these industries, they also brought new entrants. In some industries, most notably petroleum, these entrants included companies from developing countries. The industries with the most remarkable increase in the number of firms on the list were telecommunications and utilities. Deregulation and privatization of these industries in the past decade, especially in Europe, explain this trend.

2. Transnationality

The Transnationality Index applied to host countries in chapter I can also be used to capture the foreign dimension of the activities of the top TNCs. It is the average of three ratios for a firm: foreign assets/total assets, foreign sales/total sales and foreign employment/total employment. Between 1991 and 2000, the average Transnationality Index

Table IV.7. Industry composition of the top 100 TNCs, 1990, 1995 and 2000

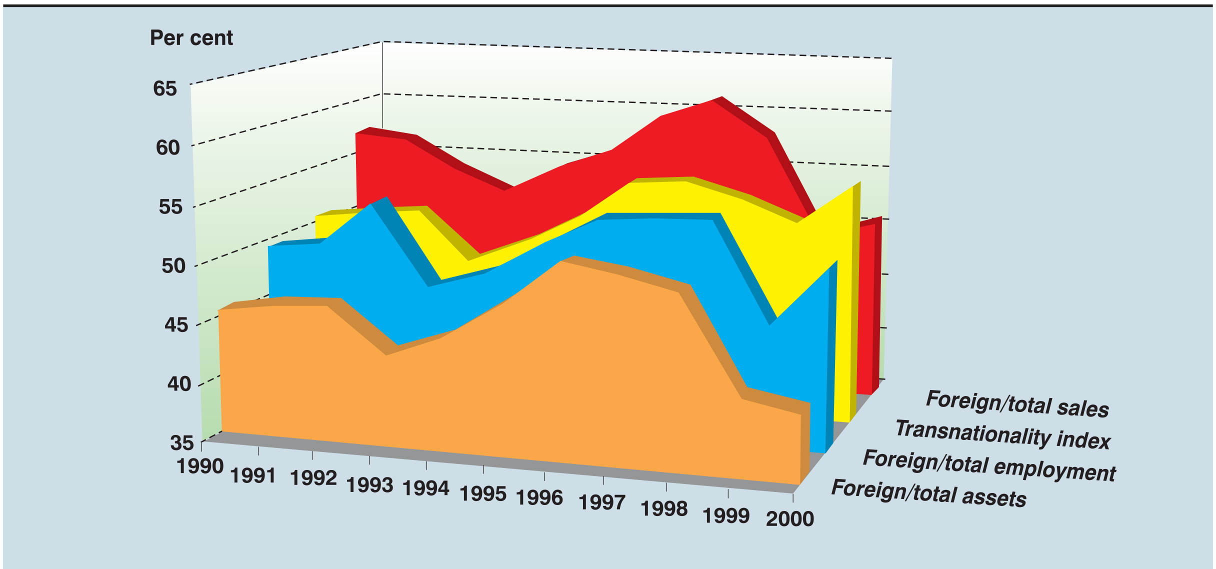
Industry	Number of entries 2000	1995	1990	Average TNI [a] per industry (Per cent) 2000	1995	1990
Motor vehicle and parts	59.7	42.3	35.8	15	14	13
Electronics/electrical equipment/computers	50.5	49.3	47.4	12	18	14
Petroleum exploration/refining/distribution and mining	70.8	50.3	47.3	12	14	13
Pharmaceuticals	61.8	63.1	66.1	9	6	6
Food/beverages/tobacco	70.1	61.0	59.0	8	12	9
Telecommunications	45.4	46.3	46.2	7	5	2
Diversified	51.1	43.6	29.7	6	2	2
Other	60.6	59.4	57.6	6	5	7
Trading	26.8	30.5	32.4	5	5	7
Utilities	47.8	-	-	5	-	-
Retailing	57.3	-	-	4	-	-
Chemicals	63.4	63.3	60.1	3	11	12
Machinery/engineering	75.4	37.9	54.5	3	1	3
Media	85.4	83.4	82.6	3	2	2
Metals	57.7	27.9	55.1	2	2	6
Construction	-	67.8	58.8	-	3	4
Total/average	58.9	51.5	51.1	100	100	100

Source: UNCTAD and Erasmus University database.

[a] The transnationality index (TNI) is calculated as the average of the following three ratios: foreign assets to total assets, foreign sales to total sales and foreign employment to total employment.

value of the world's top 100 TNCs rose – with some interruptions – from 51 per cent in 1991 to almost 56 per cent in 2000 (figure IV.I).[5] This means that the companies on the list have become more transnationalized. In recent years, the upward trend of this Index has been driven mainly by the sales and employment components. This was also the case in 2000, when foreign sales and employment grew faster than sales and employment generally, while total assets expanded more rapidly than foreign assets. Both the sales and the employment components of the Index have increased

Figure IV.1. The transnationalization of the world's top 100 TNCs, 1990-2000



Source: UNCTAD/Erasmus University database.

Note: The ratios represent the averages of the individual ratios of foreign assets/total assets, foreign sales/total sales, foreign employment/total employment of the top 100 expressed in percentages. The average transnationality index (TNI) of the top 100 TNCs is the average of their individual transnationality indices. As a result, it is possible that the average TNI in some instances could be higher than any of the foreign/total ratios.

significantly, while the foreign assets/total assets ratio actually fell slightly between 1990 and 2000. As already mentioned, the valuation of TNCs' assets was subject to changes in the stock market at the end of the 1990s and the beginning of this decade. Thus, at least in the so-called "new economy", the expansion of the value of total assets counterbalanced the increase in foreign assets. The increase in the Transnationality Index for the entire list was driven by a larger number of companies with very high transnationality indices: in 2000 a quarter (25) of the companies on the list had an index value of 75 per cent or higher, while in 1999 there were only 16.

In 2000, as in earlier years, a number of the largest firms in the top 10 in terms of transnationality were from countries with small domestic markets (table IV.8). They include ABB and Nestlé of Switzerland, Electrolux of Sweden, Interbrew of Belgium and Philips of the Netherlands. More remarkable, however, is the fact that almost half of the companies on the top 10 list are from the United Kingdom. All these companies have pursued a strategy of consolidating their market position by acquisitions of competitors in Europe, North America or other strategically important markets. Companies from the United States and Japan are not on the list. Even though they have expanded internationally, the importance of their relatively large home markets results in relatively low foreign-to-total ratios. As for the industry composition on the list, a third of the companies in the top 10 come from the food and beverages industry, including British American Tobacco, which is predominantly a tobacco firm but has a considerable interests in food and beverages operations, too. Another fifth are mining companies.

This largely mirrors the transnationality of the top 100 in general. Taking the average of the five largest companies by foreign assets for each of the major industrial groups on the list, TNCs in food and beverages, together with TNCs from the pharmaceutical industry, have, on average, the highest transnationality index value (table IV.9). Petroleum has a lower average rank, in part because a number of the petroleum companies are based in the United States with many of their activities still taking place at home. While the top companies in electronics/electrical equipment and pharmaceutical industries were transnationalized much less, on average, than those in food and beverage, they made strides in international expansion during the 1990s. In the first of the two industries, many companies pursued a rigorous regionalization strategy, locating manufacturing and distribution centres in key regions. Efforts were also made to cut costs by reducing the number of parts and components produced in the home country and decentralizing their production to low-cost locations in (or close to) key markets. At the same time, the drive towards more efficient production also inspired cross-border M&As with foreign competitors. This was particularly true for the pharmaceutical industry, in which ever-increasing fixed costs for R&D drove companies to realize economies of scale through M&As.

Table IV.8. The world's top 10 TNCs in terms of transnationality, 2000

Ranking in 2000		Ranking in 1999					
Foreign assets	TNI	Foreign assets	TNI	Corporation	Home country	Industry	TNI[a] (Per cent)
39	1	86	34	Rio Tinto	United Kingdom	Mining & quarrying	98.2
49	2	56	1	Thomson	Canada	Media	95.3
24	3	21	3	ABB	Switzerland	Machinery and equipment	94.9
18	4	11	2	Nestlé	Switzerland	Food & beverages	94.7
31	5	35	7	British American Tobacco	United Kingdom	Tobacco	94.4
91	6	79	4	Electrolux	Sweden	Electrical & electronic equipment	93.2
86	7	-	-	Interbrew	Belgium	Food & beverages	90.2
26	8	-	-	Anglo American	United Kingdom	Mining & quarrying	88.4
52	9	90	20	Astrazeneca	United Kingdom	Pharmaceuticals	86.9
25	10	33	35	Philips Electronics	Netherlands	Electrical & electronic equipment	85.7

Source: UNCTAD/Erasmus University database.

[a] The transnationality index (TNI) is calculated as the average of the following three ratios: foreign assets to total assets, foreign sales to total sales and foreign employment to total employment.

Table IV.9. Average transnationality index of the top 5 TNCs in each industry,[a] and their shares in the assets, sales and employment of the top 100, 1990, 1995 and 2000
(Percentage)

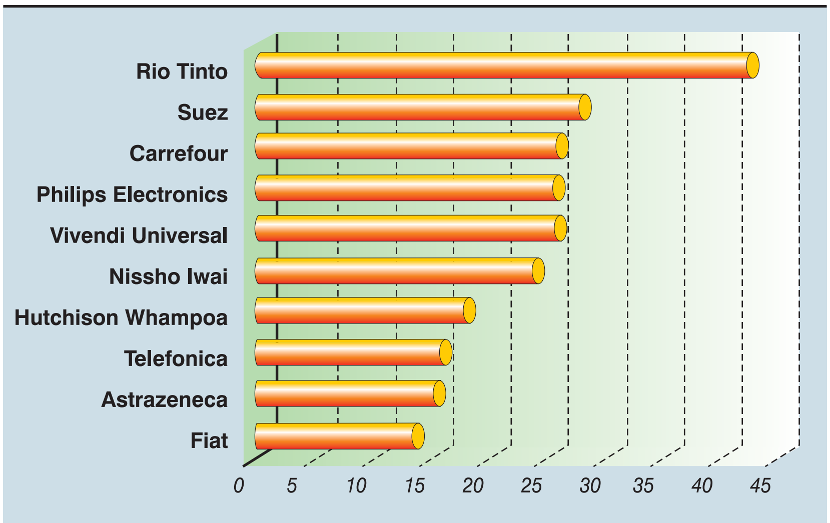
Industry	Year	TNI	Assets		Sales		Employment	
			Foreign	Total	Foreign	Total	Foreign	Total
Petroleum								
	2000	59.8	12.1	8.0	19.6	15.1	3.6	3.5
	1995	64.8	12.9	8.0	13.6	10.0	4.0	3.1
	1990	57.7	15.1	10.6	15.8	11.9	5.5	4.2
Motor vehicles								
	2000	36.9	10.2	12.9	10.4	12.4	7.8	11.0
	1995	38.6	14.0	17.3	9.6	13.4	9.7	13.5
	1990	34.7	11.9	15.3	10.4	11.8	9.7	14.2
Electronics & electrical equipment								
	2000	52.1	10.9	10.6	8.4	7.6	9.1	7.8
	1995	61.1	11.1	10.4	7.8	6.9	13.2	10.7
	1990	36.1	6.4	7.4	4.7	6.3	6.5	9.6
Pharmaceuticals								
	2000	64.2	3.8	2.6	3.3	2.3	3.8	3.1
	1995	68.0	3.8	2.5	2.4	1.7	3.4	2.5
	1990	47.1	1.5	1.3	1.6	1.4	2.4	2.3
Chemicals								
	2000	60.7	2.6	1.8	2.9	2.1	2.5	2.3
	1995	61.1	6.2	3.9	5.0	4.0	5.5	4.9
	1990	51.6	5.3	4.2	5.9	4.5	4.8	5.4
Food/beverages								
	2000	86.0	3.8	2.0	3.9	2.3	6.0	3.2
	1995	76.9	6.7	4.8	7.4	5.2	12.9	7.1
	1990	60.8	7.2	5.6	5.8	5.0	11.7	7.6

Source: UNCTAD 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 2000.

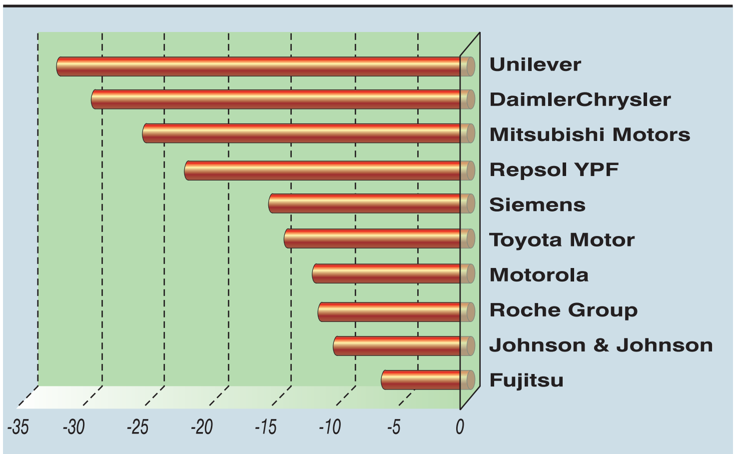
All in all, the list of companies with the largest rises in the Transnationality Index is composed of TNCs from a greater variety of industries in 2000 (figure IV.2). Many of these companies are also newcomers (table IV.4). The increases in the Index values at the top are much larger than for companies that topped the Index in 1999. Again, this mirrors the leaps in transnationalization as a result of cross-border M&As. As with the ranking of the top TNCs in the Index, the companies with the largest increases in transnationality come from Europe and, in particular, from France and Germany. For some companies, values declined considerably. Toyota Motor and Mitsubishi Motors were among those that experienced the biggest decline (figure IV.3). There are also individual examples of firms on this list, such as Unilever or Roche, for which the values developed differently from the average for their industries. This highlights the importance of individual firm strategies for transnationalization, which can differ significantly from those of their competitors.

Figure IV.2. The 10 biggest increases in transnationality among the world's top 100 TNCs, 1999-2000
(In percentage points)



Source: UNCTAD/Erasmus University database.

Figure IV.3. The 10 biggest decreases in transnationality among the world's top 100 TNCs, 1999-2000
(In percentage points)



Source: UNCTAD/Erasmus University database.

3. Developments in 2001

Preliminary data suggest that some of the trends observed for 2000 continued through the following year. Thus, the combined foreign assets of approximately half of the firms on the top 100 list, for which figures are already reported for 2001, rose by almost $50 billion in 2001. At the same time, the total assets of this group increased by some $88 billion. This meant that total sales expanded – in relative terms – more modestly than foreign sales as most companies continued with their investments abroad, even though the M&A wave slowed considerably in 2001 as a result of the global economic slowdown and the stock market decline (see chapter I).

The economic slowdown that started in 2000 and continued throughout 2001 also led to a decline in sales and employment figures for the reporting companies. In 2001, total sales fell by $63 billion as compared to 2000. Foreign sales accounted for slightly less than 20 per cent of that line. Foreign employment continued to grow by 3.7 per cent or 102,000, although total employment virtually stagnated, with an increase of only 0.8 per cent or 43,000. Since all the foreign components grew faster or decreased less than the totals, the greater transnationalization of operations of the top 100 seemed set to continue. It is however, clear that the global economic downturn took its toll and has led to a considerable slowing down of this process.

B. The 50 largest TNCs from developing countries

1. Highlights

The trend towards increased transnationalization of the 50 largest TNCs from developing countries continued in 2000 (table IV.10). Foreign assets grew by 21 per cent and foreign sales by an impressive 56 per cent. Foreign employment, on the other hand, increased more modestly by 5 per cent. While the top 50 were less affected by the wave of cross-border M&As in 2000 than the top 100, many among the top 50 benefited from the still positive economic climate in developed-country markets and the recovery of developing economies from the effects of the Asian financial crisis of the late 1990s. The increased transnationalization was not, however, spread evenly among the 50. It was driven largely by a handful of dominant companies.

In 2000, Hutchison Whampoa (Hong Kong, China) consolidated its top position (table IV.10), won in 1999 in the aftermath of the sale of its interest in the telecom company, Orange, to Mannesmann (in turn acquired by Vodafone a few months later).[6] It was one of the few companies from a developing country to be directly affected by the M&A battles in developed countries, resulting in an increase in its foreign interests. Together with Cemex, LG Electronics, Petroleos de Venezuela and Petronas, it accounted for just under half of all foreign assets of the top 50. These five companies also made it to the list of the top 100 companies worldwide in 2000. This is a record number of developing-country TNCs on the top 100 list, and stands out particularly because, for years, only Petroleos de Venezuela (which now ranks fourth in the top 50) was large enough to make it to the top 100. Not only has the growth and economic importance of these companies been impressive, they have also significantly influenced the aggregate figures for the whole group (table IV.11). If these top five were to be excluded, the aggregate figures would actually drop for the remaining TNCs on the list from developing countries to levels lower than those in 1999.

Table IV.10. The top 50 non-financial TNCs from developing economies, ranked by foreign assets, 2000

(Millions of dollars and number of employees)

Ranking by					Assets		Sales		Employment		
Foreign assets	TNI[a]	Corporation	Home economy	Industry [b]	Foreign	Total	Foreign [c]	Total	Foreign	Total	TNI [a] (Per cent)
1	11	Hutchison Whampoa	Hong Kong, China	Diversified	41 881	56 610	2 840	7 311	27 165	49 570	50.3
2	8	Cemex	Mexico	Non-metallic mineral products	10 887	15 759	3 028	5 621	15 448	25 884	54.8
3	15	LG Electronics	Korea, Republic of	Electrical & electronic equipment	8 750	17 709	9 331	18 558	20 072	46 912	42.7
4	20	Petróleos de Venezuela	Venezuela	Petroleum expl./ref./distr.	8 017	57 089	49 780	53 234	5 458	46 920	35.8
5	27	Petronas	Malaysia	Petroleum expl./ref./distr.	7 690	36 594	11 790	19 305	3 808	23 450	29.5
6	43	New World Development	Hong Kong, China	Diversified	4 578	16 412	565	2 633	800	23 530	15.8
7	39	Samsung Corporation	Korea, Republic of	Diversified/trade	3 900	10 400	8 300	40 700	175	4 740	18.5
8	21	Samsung Electronics	Korea, Republic of	Electrical & electronic equipment	3 898	25 085	23 055	31 562	16 981	60 977	34.9
9	4	Neptune Orient Lines	Singapore	Transport and storage	3 812	4 360	4 498	4 673	6 840	8 734	78.6
10	29	Companhia Vale Do Rio Doce	Brazil	Mining & quarrying	3 660	10 269	758	4 904	6 285	17 634	28.9
11	7	Sappi	South Africa	Paper	3 239	4 768	3 601	4 718	9 399	19 276	57.9
12	26	COFCO	China	Food & beverages	2 867	4 543	4 767	12 517	350	26 000	30.8
13	1	Guangdong Investment	Hong Kong, China	Diversified	2 852	4 605	460	634	6 837	7 875	88.2
14	19	China National Chemicals, Imp. & Exp.	China	Chemicals	2 603	4 701	10 755	18 036	600	8 600	36.6
15	47	Hyundai Motor	Korea, Republic of	Motor vehicles	2 488	25 393	4 412	25 814	6 532	84 925	10.4
16	42	Keppel	Singapore	Diversified	2 293	22 180	338	3 657	5 910	16 389	16.7
17	2	First Pacific	Hong Kong, China	Electrical & electronic equipment	2 116	2 322	652	809	8 511	8 560	81.4
18	13	Citic Pacific	Hong Kong, China	Construction	2 076	4 022	981	2 058	7 118	11 354	48.6
19	34	Grupo Carso	Mexico	Diversified	2 043	8 827	4 000	9 315	19 542	89 954	26.3
20	24	South African Breweries	South Africa	Food & beverages	1 966	4 384	1 454	5 424	15 763	48 079	31.3
21	3	Orient Overseas International	Hong Kong, China	Transport and storage	1 819	2 155	2 382	2 395	3 792	4 414	80.9
22	46	Singtel	Singapore	Telecommunications	1 790	8 143	..	2 845	2 500	12 640	12.6
23	45	Posco	Korea, Republic of	Metal and metal products	1 777	15 901	2 311	10 873	2 741	26 261	12.9
24	30	San Miguel	Philippines	Food & beverages	1 738	3 061	300	1 861	3 091	14 864	28.1
25	17	Jardine Matheson	Hong Kong, China	Diversified	1 641	10 339	7 148	10 354	50 000	130 000	37.0
26	36	Perez Companc	Argentina	Petroleum expl./ref./distr.	1 614	5 493	420	1 546	625	3 301	22.6
27	49	Petrobras	Brazil	Petroleum expl./ref./distr.	1 535	39 136	3 756	26 955	627	38 908	5.8
28	25	Singapore Airlines	Singapore	Transport and storage	1 445	9 473	4 084	5 326	2 972	27 513	30.8
29	12	Fraser & Neave	Singapore	Food & beverages	1 318	4 211	944	1 551	7 826	10 750	49.5
30	23	Metalurgica Gerdau	Brazil	Metal and metal products	1 259	3 532	1 267	2 658	3 958	13 565	33.7
31	6	Savia	Mexico	Diversified	1 233	3 625	718	814	7 390	9 787	59.3
32	10	Gruma	Mexico	Food & beverages	1 169	2 280	1 253	1 901	8 959	16 897	51.1
33	14	Acer	Taiwan Province of China	Electrical & electronic equipment	1 143	3 956	1 447	4 760	3 554	12 300	26.5

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Table IV.10. The top 50 non-financial TNCs from developing economies, ranked by foreign assets, 2000 (concluded)

(Millions of dollars and number of employees)

Ranking by					Assets		Sales		Employment		
Foreign assets	TNI[a]	Corporation	Home economy	Industry[b]	Foreign	Total	Foreign[c]	Total	Foreign	Total	TNI[a] (Per cent)
34	33	Amsteel	Malaysia	Diversified	1 143	3 453	544	1 416	37 094	50 218	43.6
35	16	Barloworld	South Africa	Diversified	1 110	2 260	1 730	3 380	9 006	21 966	42.4
36	37	United Microelectronics	Taiwan Province of China	Electrical & electronic equipment	1 087	9 454	1 611	3 485	770	9 373	19.8
37	44	Copec	Chile	Petroleum expl./ref./distr.	1 076	7 121	1 102	3 611	610	8 856	15.8
38	41	Swire Pacific	Hong Kong, China	Business services	1 026	13 900	834	1 929	5 000	60 000	17.7
39	50	CLP Holdings - China Light & Power Company	Hong Kong, China	Electricity, gas and water	..	6 216	..	3 135	..	3 899	5.7
40	5	WBL	Singapore	Electrical & electronic equipment	879	1 106	338	534	12 467	13 374	70.8
41	18	Sime Darby	Malaysia	Diversified	878	2 417	1 751	2 887	6 856	27 126	36.7
42	31	Varig	Brazil	Transport and storage	863	1 872	1 175	2 915	1 168	16 710	28.0
43	28	Berjaya Group	Malaysia	Diversified	832	3 352	954	2 052	5 500	21 783	29.0
44	48	Hongkong Electric Holdings	Hong Kong, China	Electricity, gas and water	811	6 622	..	1 456	300	2 366	8.9
45	32	Great Eagle Holdings	Hong Kong, China	Business services	751	3 755	196	372	601	3 004	27.8
46	38	Sabic	Saudi Arabia	Petroleum expl./ref./distr.	702	23 769	4 206	7 110	314	14 404	19.3
47	40	China Metals And Minerals	China	Metal and metal products	645	2 375	984	3 830	580	7 524	18.2
48	22	Pepkor	South Africa	Retail	608	1 365	1 029	4 095	30 000	68 272	34.1
49	35	Panamerican Beverages	Mexico	Food & beverages	594	2 937	960	2 560	5 000	26 000	23.1
50	9	Hume Industries	Malaysia	Construction	593	1 178	931	1 341	6 536	12 545	51.6

Source: UNCTAD/Erasmus University database.

a The transnationlity index (TNI) is calculated as the average of the following 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.

c In a number of cases companies reported only total foreign sales without distinguishing between export from the parent company and sales of their foreign affiliates. Some foreign sales figures might therefore also include parent company exports.

.. Data on foreign assets, foreign sales and foreign employment were not made available. 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: In some companies, foreign investors may hold a minority share of more than 10 per cent.

Table IV.11. Snapshot of top 50 TNCs from developing economies, 2000
(Millions of dollars, percentage and number of employees)

Variable	2000	1999	Change [a] 2000 vs. 1999 (Per cent)
Assets			
Foreign	155 659	129 000	20.7
Total	540 489	531 000	1.8
Sales			
Foreign	189 897	122 000	55.7
Total	391 429	367 000	6.7
Employment			
Foreign	403 473	383 107	5.3
Total	1 317 983	1 134 687	16.2
Average TNI	34.6	38.9	-4.3

Source: UNCTAD, FDI/TNC database.
[a] Change is measured in percentage points.

The list of the 50 largest developing-country TNCs differs strikingly from the list of the 100 largest TNCs worldwide when it comes to the relative importance of the topmost companies in the two lists. In the top 100 list, the differences between the leading companies and the rest are smaller and more stable. The fact that the dynamic increases in the aggregate values of foreign assets, sales and employment of the top 50 occur in a few companies is also reflected in the stagnant median value for foreign assets. As in 1999, it stood at $1.6 billion. For the top 100, on the other hand, the median increased from $15.3 billion in 1999 to $16.6 billion in 2000. Another striking difference between the top 50 and the top 100 for the year 2000 is that the stronger presence of "new" service industries among the top 100, notably telecoms and the media, is not replicated among the top 50.

Despite the divergent growth trajectories of individual companies on the list, the top 50 developing-country TNCs continued their recovery in the aftermath of the 1997 financial crisis in Asia, although foreign employment increased much more modestly than the values for the other two variables. While the aggregate figures are significantly influenced by those of a handful of large firms, most firms saw an expansion of their foreign assets and sales, but mixed results in foreign employment.

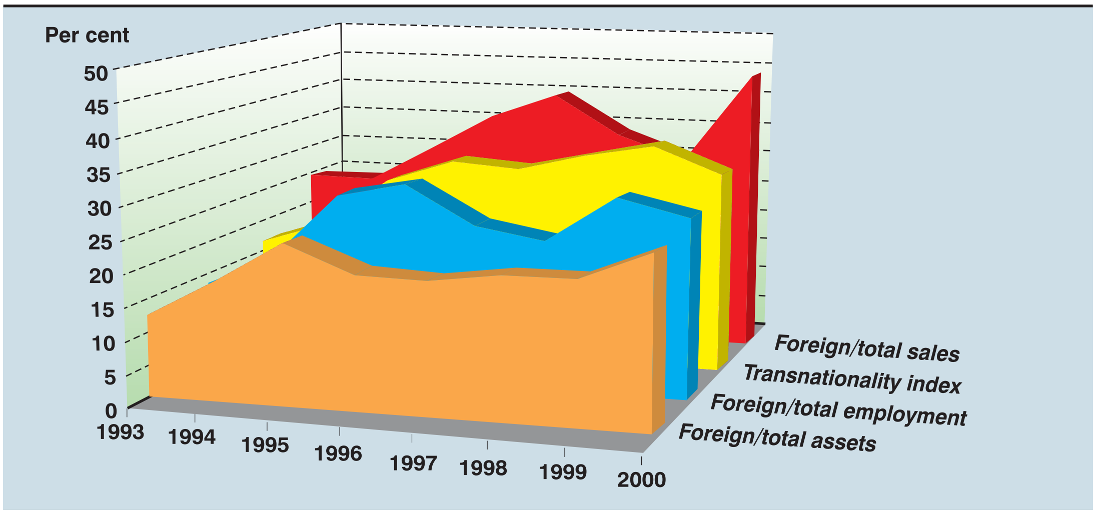
The average Transnationality Index value for the top 50 as a whole decreased by 4 percent in 2000 compared to that for the previous year. Overall, in 2000, 20 TNCs improved their position on the Transnationality Index, while 25 had a lower Index value than in 1999. The three increase in the foreign/total ratios and yet, the decrease in average TNI at the same time may seem paradoxical. However, these increases were mainly driven by a handful of large TNCs whose statistical weight tends to be mitigated when consolidated into the average TNI for the group (figure IV.4).

Traditionally, the most transnationalized developing-country companies have been from Hong Kong (China) and Singapore (table IV.12). This was also the case in 2000. Industry-wise, the diversified Guangdong Investments and the electronics firm, First Pacific, followed by two shipping companies, Neptune Orient Lines and Orient Overseas International, occupy the top ranks on the Index. Another electronics firm, Singapore-based WBL, is also at the top of the list; much of its manufacturing is carried out in other low-cost locations across South-East Asia. At the other end of that ranking are the utilities companies, with scores of less than 10 per cent.

With 11 new firms on the list, the number of new entrants was in line with figures from 1999 (table IV.13). In 2000, a number of Chinese companies, for which data were not available in 1999, entered the list. Other than that, the newcomers come from a wide range of countries and industries. Over the past few years, there has been no clear trend in terms of either industry or geographic origin of the newcomers, except for the entry of a limited number of telecom companies, which faintly mirrors a trend among the top 100. It is remarkable that, with Sabic, there is now, for the first time, a Saudi Arabian company on the list. The Transnationality Index value for most of the newcomers is low, except for COFCO and China National Chemicals of China, Hume Industries of Malaysia and Pepkor of South Africa. This is no surprise as most newcomers are relatively small, making it only to the bottom ranks on the list by foreign assets. Most of the newcomers on the lower ranks of the list are not entirely new to the list, as most of them had been on and off the top 50 for several years.

As for departures from the list, four Korean companies had to be dropped (table IV.14) because of a lack of data.

Figure IV.4. The transnationalization of the top 50 TNCs from developing economies, 1993-2000



Source: UNCTAD, FDI/TNC database.

Note: Note: The ratios represent the averages of the individual ratios of foreign assets/total assets, foreign sales/total sales, foreign employment/total employment of the top 50 expressed in percentages. The average transnationality index of the top 50 TNCs is the average of the 50 individual company transnationality indices.

Table IV.12. The top 5 TNCs from developing economies in terms of transnationality, 2000

Ranking by TNI[a]	Ranking by Foreign assets	Company	Home economy	Industry	TNI[a] (Per cent)
1	12	Guangdong Investment	Hong Kong, China	Diversified	88.2
2	16	First Pacific	Hong Kong, China	Electrical & electronic equipment	81.4
3	20	Orient Overseas International	Hong Kong, China	Transport and storage	80.9
4	9	Neptune Orient Lines	Singapore	Transport and storage	78.6
5	39	WBL	Singapore	Electrical & electronic equipment	70.8

Source: UNCTAD, FDI/TNC database.

[a] The transnationality index (TNI) is calculated as the average of the following three ratios: foreign assets to total assets, foreign sales to total sales and foreign employment to total employment.

Table IV.13. Newcomers to the top 50 TNCs from developing economies, 2000

Ranking by Foreign Assets	Ranking by TNI	Corporation	Home economy	Industry	TNI (Per cent)
11	28	COFCO	China	Food & beverages	34.2
13	20	China National Chemicals, Imp. & Exp.	China	Chemicals	40.7
18	34	Grupo Carso	Mexico	Diversified	29.2
36	36	United Microelectronics	Taiwan Province of China	Electrical & electronic equipment	22.0
38	40	Swire Pacific Limited	Hong Kong, China	Real Estate	19.6
42	31	Varig	Brazil	Transportation	31.1
44	48	Hongkong Electric Holdings	Hong Kong, China	Electricity, gas and water	9.9
46	37	Sabic	Saudi Arabia	Oil & petroleum	21.4
47	39	China Metals And Minerals	China	Steel & metals	20.2
48	24	Pepkor	South Africa	Retail	37.9
50	9	Hume Industries	Malaysia	Construction	51.6

Source: UNCTAD, FDI/TNC database.

Table IV.14. Departures from the top 50 TNCs from developing economies, 2000

Ranking in 1999: Foreign assets	TNI	Corporation	Home economy	Industry	TNI in 1999 (Per cent)
6	13	Daewoo International	Korea, Republic of	Diversified	49.4
8	45	Sunkyong Group	Korea, Republic of	Oil & petroleum	15.2
18	14	Hyundai Engineering & Construction	Korea, Republic of	Industrial	48.5
19	1	Tan Chong International	Singapore	Automotive	93.3
33	33	Tatung	Taiwan Province of China	Electrical & electronic equipment	28.1
35	36	Samsung	Korea, Republic of	Electrical & electronic equipment	25.5
41	47	Reliance Industries	India	Chemicals	9.6
47	23	De Beers Consolidated Mines	South Africa	Steel & metals	38.8
48	15	Hong Kong And Shanghai Hotels	Hong Kong, China	Leisure & hospitality	47.4
49	48	Telekom Malaysia	Malaysia	Telecommunications	7.5

Source: UNCTAD, FDI/TNC database.

Many of the companies dropping off the list in 2000 had been on and off the list in previous years. The fact that Telekom Malaysia has departed from the list further indicates that the dynamic growth trend in the "new economy" industries in the developed world has not been fully replicated in developing countries. One reason for this could be that the liberalization of the telecom industry has advanced at a slower pace in developing countries. In those in which it has moved fast, domestic firms that began to transnationalize or possessed an attractive enough home market, like many Latin American telecom or other utility operators, were taken over by rival competitors from developed countries, thus disappearing from the list. Some companies spun off a number of foreign operations and business units, with their foreign assets consequently reduced so much that they could no longer make it to the top 50.

Overall, the industry composition of the top 50 list has remained unchanged (table IV.15). Firms classified as "diversified" represent 11 of the 50 companies. They account for 40 per cent of the combined foreign assets of the top 50, and 43 per cent of the combined foreign employment. In terms of their share in total foreign sales, however, they rank only fourth after the petroleum, electronics and industrial companies, following a drastic decline in their share from 17 per cent in 1999 to only 11 per cent in 2000 (figure IV.5). Seven of the 50 companies were in electronics, the industry that saw the largest increase in numbers. Its relative importance in the top 50 group is second highest in terms of its share in foreign assets and its share in foreign sales and the third highest in foreign employment. Overall, the top 50 are spread over a wide range of industries, just like the top 100.

However, there are some differences from the top 100. In recent years, the top 100 have been subject to more structural changes. In particular, since the mid-1990s, the top 100 list has seen numerous M&As leading to the absorption of many of the top 100 companies. This phenomenon has been almost absent in the case of the top

Table IV.15. Industry composition of the top 50 TNCs from developing economies, 1998 1999 and 2000

Industry	Number of entries 2000	1999	1998	Average TNI[a] per industry (Per cent) 2000	1999	1998
Diversified	11	14	11	40.5	44.3	40.1
Electronics	7	6	4	42.1	41.5	39.3
Food and beverages	6	5	8	35.6	45.0	47.0
Petroleum expl./ref./distr.	6	5	5	21.5	21.6	18.6
Other	6	6	5	32.8	28.7	45.8
Transportation	4	3	3	54.6	71.2	50.5
Steel and iron	3	3	3	21.6	34.2	27.2
Electric Utilities or Services	2	2	3	7.3	25.3	20.8
Construction	2	3	6	50.1	39.6	30.2
Chemicals and pharmaceuticals	1	1	1	36.6	9.6	7.7
Automotive	1	1	-	10.4	10.9	-
Pulp and paper	1	1	1	57.9	63.7	63.8
Average/total[b]	50	50	50	34.2	36.3	35.5

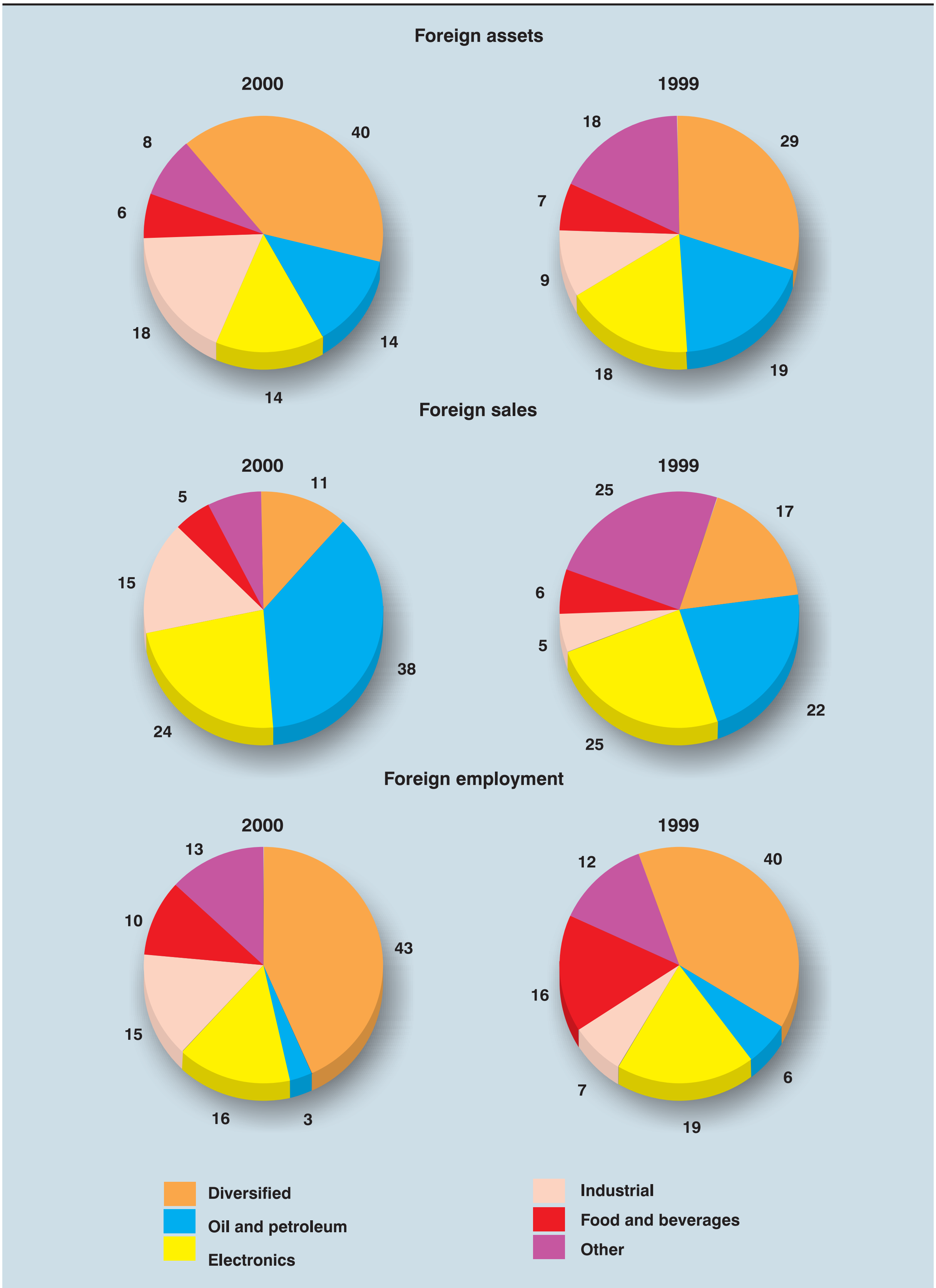
Source: UNCTAD, FDI/TNC database.

[a] The transnationality index (TNI) is calculated as the average of the following 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 IV.5. Shares of industry groups among the top 50, 1999 and 2000
(Percentage)



Source: UNCTAD, FDI/TNC database.

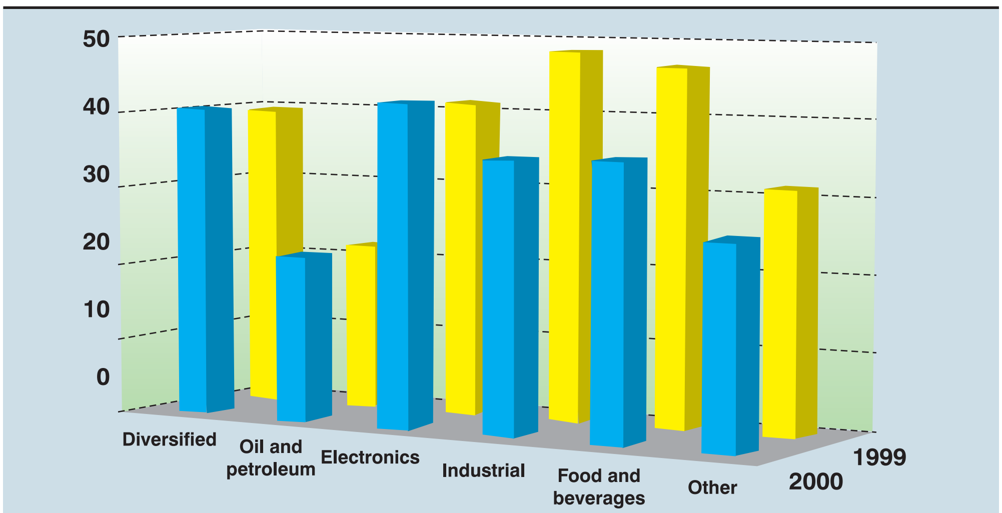
50. As noted earlier, only a few of the top 50 were affected by the M&A surge, such as Hutchison Whampoa, which had interests in telecom companies in Europe and the United States, and companies that eventually became takeover targets for developed-country competitors, such as Argentina's YPF that was taken over by the Spanish company, Repsol, in 1999.

Given the large increases in foreign assets, sales and (to a lesser extent) foreign employment in 2000, it is remarkable how little this has affected the distribution of the different aggregates among the main industry groups (figure IV.5). The most dramatic changes have occurred in the petroleum industry, which increased its share in total foreign sales of the top 50 from 22 to 38 per cent. This was mainly due to the expansion of Petronas and Petróleos de Venezuela.

As for transationalization trends by industry, in 6 out of 12 industries, the average Transnationalization Index value increased over the period 1998-2000. These were the diversified, electronics, transportation, construction, petroleum, and chemicals and pharmaceuticals industries. In some of them, these trends are the immediate result of changes in individual companies, such as Petronas in petroleum, and China National Chemicals in chemicals and pharmaceuticals. The most transnationalized industry was pulp and paper, followed by transport, with scores of 58 and 55 per cent (table IV.15 and figure IV.6). In the former, however, the high figure represents only one company – Sappi of South Africa. Electronics, diversified, and food and beverages have, on average, a lower level of transnationalization, though the value exceeds 40 per cent in all of them. It should be noted that there is not a single industry in which the Index average of developing-country firms surpasses that of their peers from developed countries. In other words, TNCs from developing countries have transnationalized their operations much less and still depend much more on their home-country business. There are, nonetheless, a few companies from developing countries that aspire to become "global players", such as South African Breweries (box IV.2).

The degree of transnationality differs widely by home country, with firms from smaller Asian economies, such as Hong Kong (China) and Singapore, unsurprisingly ranking much higher on the Index than firms from larger countries, such as Brazil or China (table IV.16 and figure IV.7). Given this, it is remarkable that Mexican TNCs have attained a transnationality level as high as those from Hong Kong (China). Although the Index value for firms from that country has declined since 1998, some Mexican companies remain in the small group on the list that has pursued a real globalization strategy. One such example is Cemex, a firm that successfully entered developed-country markets, notably the United States, facilitated by the North American Free Trade

Figure IV.6. The top 50: Industry groups and their average transnationality index, 1999-2000
(Percentage)



Source: UNCTAD, FDI/TNC database.

Box IV.2. A global player in brewing: South African Breweries

The evolution of South African Breweries (SAB) is an interesting example of the international expansion of a developing-country TNC, both because it highlights motives for transnationalization that are rarely seen in developed-country firms and because it illustrates the challenges latecomers from developing countries face when trying to establish themselves as global market leaders.

SAB owns and operates 108 breweries in 24 countries, employs over 31,000 people and has developed into the world's fourth largest brewer by volume, with high profit margins in some countries. Like other South African businesses during the apartheid years, SAB operated within what is best described as a "siege economy". Companies were virtually immune from foreign competition but, because of sanctions, unable to expand abroad. The company had created a virtual monopoly, not only in South Africa but also in much of southern Africa, acquiring privatized breweries in neighbouring countries. Given the limited per capita income in much of its home region, further growth could only be achieved by venturing into new markets. In a second step of its transnationalization process, the company started to expand into other developing-country markets, especially into countries with large markets but a low level of penetration by developed-country competitors. From the mid-1990s onwards, SAB invested heavily in countries such as China and bought a number of formerly State-owned breweries in Central and Eastern Europe. The firm's international expansion has been driven by its skill in coping with the demands of an abnormal market – requiring a high degree of flexibility to overcome problems such as deficiencies in basic infrastructure – and its efficient production, making it one of the most efficient competitors in the industry.

For one thing, every year for the past two decades, SAB has reduced its prices in real terms, thus avoiding charges of abusing its monopoly, and it has wooed poor, price-sensitive customers, which is to say most South Africans. The company was able to cut prices because it boosted productivity. Its new bottling plant on South Africa's eastern coast, opened in 2000 at a cost of $60 million. It uses computers to control the quantity of hops used to brew beer and robots to load bottles onto trucks, only 13 people run a plant that turns out 50,000 hectolitres of beer per week in the standard bottle of 750-mililitre bottle – twice the industry average. South Africa's patchy infrastructure also deters potential rivals. In poor and rural areas, the roads are rough and the power supply sporadic. SAB has long experience in getting crates to remote towns and villages along poor roads, and making sure that distributors have refrigerators and, if necessary, generators. It has ties with the truck drivers who deliver its beer: many are former employees, whom the company helped to start their own small trucking businesses.

Despite these strengths and achievements, SAB's expansion into other emerging markets, although helping to achieve output and revenue growth, did little to solve the problem of a shortage of hard currency. In the past, almost two-thirds of the company's profits were in South African rand, now floating freely and weakening steadily. (In 2001, for instance, the rand lost 37 per cent against the dollar.) This creates serious difficulties for a company operating and competing at the international level. While the lion's share of its revenues continued to be in the form of "weak" currencies, be it in rand or other currencies, the acquisition of inputs such as machinery or the refinancing of loans had to be in "hard" currencies like the dollar.

One solution was to list SAB on a major international stock market, which helped it to raise capital for its acquisitions and the refinancing of loans at lower rates. This would also improve SAB's financial viability and relieve the currency problem. It became apparent, moreover, that the company could use its brewing skills in developed-country markets. The company therefore began to consider acquisitions in Europe and the United States.

After considering a number of opportunities (such as Bass Brewery in the United Kingdom), SAB finally announced, in May 2002, its acquisition of the Miller Brewing Company in the United States, making it the world's second largest brewer after world leader Anheuser-Busch. The proposed SAB-Miller deal, worth some $5 billion, will cut reliance on earnings in rand from around 65 per cent to under 35 per cent. Since there is little geographic overlap between the two brewers, the benefits might add up to $75 million a year from cost-cutting and from synergies, such as SAB using Miller's distribution to market its Pilsner Urquell in the United States.

The company pursues a market-seeking, multi-domestic strategy. Some of its brands are virtually synonymous with the country in which they are sold, and Miller would be no exception. Since SAB and its affiliates already enjoy a low-cost structure, the pressure for cost reduction is not so great as to drive them to transfer core competencies in production and distribution from their high-technology South African breweries to their international acquisitions. Thus, for the moment, they can concentrate on market penetration and revenue growth. This is in contrast to TNCs from industrial countries, which look overseas to outsource production to reduce costs and increase distribution channels.

/...

Box IV.2. A global player in brewing: South African Breweries (concluded)

This case also illustrates the emergence of a second stage of competition between developing-country TNCs; those that survive the intense competition of developed-country markets find themselves in a world ruled by firms that are masters of branding and marketing.

Source: UNCTAD, based on "Big lion, small cage", *The Economist*, 10 August 2000; "A pilsner's Bohemian rhapsody", *Financial Times*, 24 September 2001; "A niche brewer is making waves", *The New York Times*, 4 December 2001; "It's Miller time in Johannesburg", *Business Week*, 22 April 2002; "SAB's bid to buy Miller raises eyebrows", *Financial Times*, 25 May 2002; "SAB aims to wrap up Miller deal next week", *Reuters*, May 23, 2002; "SAB seals deal to buy Miller stake for $5bn", *Financial Times*, 30 May 2002, and company site (http://www.sabplc.com).

Table IV.16. Home countries of the top 50 TNCs from developing economies, by transnationality index and foreign assets, 1998, 1999 and 2000

(Percentage and number)

	Average TNI[a] per country			Share in total foreign assets of the top 50			Number of entries		
Economy	2000	1999	1998	2000	1999	1998	2000	1999	1998
South, East and South-East Asia	**32.4**	**39.1**	**35.8**	**73.3**	**72.0**	**65.7**	**33**	**36**	**38**
China	28.5	-	24.8	3.9	-	8.8	3	-	3
Hong Kong, China	42.0	45.4	56.6	38.9	26.4	22.0	11	11	10
India	-	9.6	7.7	-	0.7	0.8	-	1	1
Korea, Republic of	23.9	27.8	31.9	13.4	23.2	16.7	5	9	6
Malaysia	38.1	24.1	32.3	7.2	7.0	6.3	5	5	6
Philippines	28.1	25.0	30.1	1.1	1.1	1.5	1	1	1
Singapore	43.2	58.9	58.9	7.4	11.2	7.2	6	7	9
Taiwan Province of China	23.1	43.9	44.2	1.4	2.4	2.4	2	2	2
Latin America	**28.2**	**48.3**	**27.3**	**21.8**	**22.0**	**28.3**	**12**	**10**	**9**
Argentina	22.6	24.5	19.8	1.0	1.1	4.1	1	1	1
Brazil	24.1	30.2	18.5	4.7	5.6	7.6	4	3	3
Chile	15.8	35.4	21.8	0.7	1.8	3.4	1	1	1
Mexico	42.9	48.0	52.6	10.2	7.3	5.9	5	4	3
Venezuela	35.8	29.8	23.7	5.2	6.2	7.3	1	1	1
West Asia	**19.3**	**-**	**-**	**0.5**	**-**	**-**	**1**	**-**	**-**
Africa	**41.4**	**46.0**	**45.0**	**4.4**	**5.9**	**6.3**	**4**	**4**	**3**
Average/total[b]	**31.3**	**34.5**	**33.4**	**100**	**100**	**100**	**50**	**50**	**50**

Source: UNCTAD, FDI/TNC database.

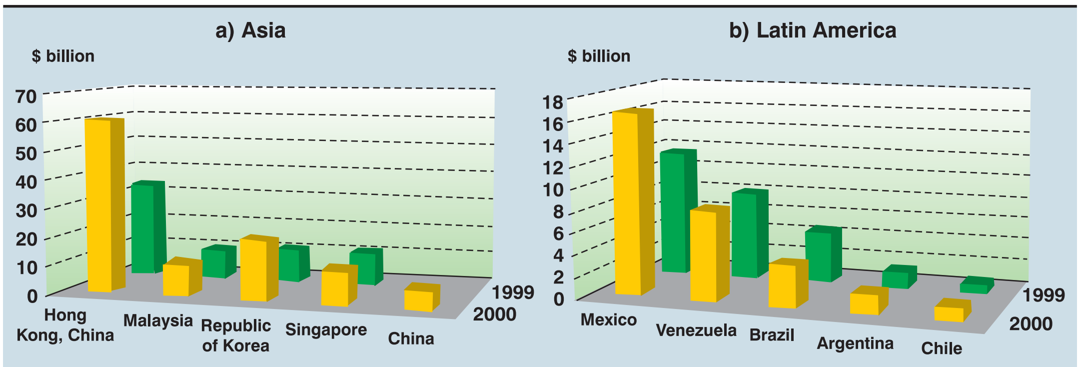
[a] The transnationality index (TNI) is calculated as the average of the following three ratios: foreign assets to total assets, foreign sales to total sales and foreign employment to total employment.

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

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

Figure IV.7. Foreign assets of the largest TNCs from developing countries, 1999 and 2000

(Billions of dollars)



Source: UNCTAD, FDI/TNC database.

Agreement (NAFTA) (*WIR01*). South African companies also have a high Index value. In various industries – retail (Pepkor), food and beverages (South African Breweries), pulp and paper (Sappi), diversified companies (Barloworld) – a handful of the long-isolated firms of South Africa undertook restructuring, in the face of increased competition and limited growth potential on the domestic market, spun off non-core business segments, and strategically invested abroad in core business areas.

Asian firms registered a slight decline in their values on the Transnationalization Index in 2000. Falling Index values for companies from Taiwan Province of China, Hong Kong (China) and Singapore accounted for much of this decline. Latin American firms also saw a decline in their Index values in 2000 as compared to 1999: except for Venezuela (Petróleos de Venezuela), firms from all other countries experienced a decline. The number of entries for Asia fell modestly in 2000, but was still high (33). The number of companies from Latin America rose from 10 to 12, including an increase in the number of Mexican companies. For the first time a company from West Asia was on the list, while the number of South African companies remained at four. As in previous years, no company from any other African country made it to the list.

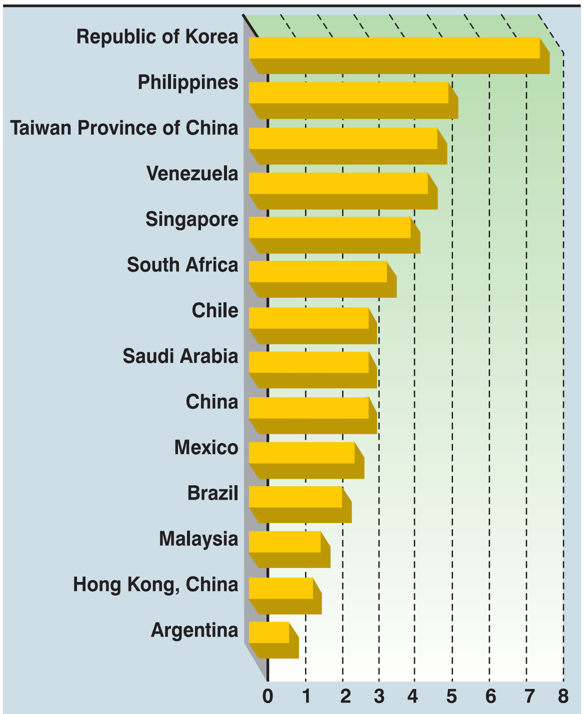
2. The Network Spread Index

For the first time this year, *WIR* has also calculated the Network Spread Index for the top 50 TNCs and compares it with that for the top 100. The Index measures the degree of transationalization of a company by measuring the number of countries in which it has foreign affiliates. It is calculated as the ratio of the number of foreign countries (N) in which a TNC operates wholly-owned affiliates to the number of foreign countries (N*) in which it could potentially operate. The latter number is calculated for the countries (excluding the home country) which had a positive FDI stock in 2001, defining them as potential locations for FDI. All in all, this covered 187 countries.

The analysis of these results reveals some interesting aspects of the transnationalization of the top 50 TNCs, complementing the findings regarding the Transnationality Index and the other ratios mentioned in the main text of this section. The main findings are:

- The aggregated Network Spread Index for the top 50, is in all cases, very low and trails the aggregated Network Spread Index for the top 100. TNCs from the Republic of Korea have, on average, the highest Index value (figure IV.8). The aggregated Index value for all other developing countries is considerably lower. On first sight, this result is surprising, given the high transnationality values of TNCs from smaller economies such as Singapore and Hong Kong (China). This, however, is no contradiction, since many of the companies from these economies have their foreign operations concentrated in a limited number of locations abroad, a number of them in China. With countries from the different developing regions being well represented on the list, the level of the Network Spread Index does not appear to be dependent on the region in which a company originates. The fact that the Index values for developing countries are well below those for developed countries is not surprising. For one, most

Figure IV.8. Average Network Spread Index of the top 50, by home economy, 2000
(Percentage points)



Source: UNCTAD, based on information from Dun & Bradstreet, *Who Owns Whom 2002 CD-ROM.*

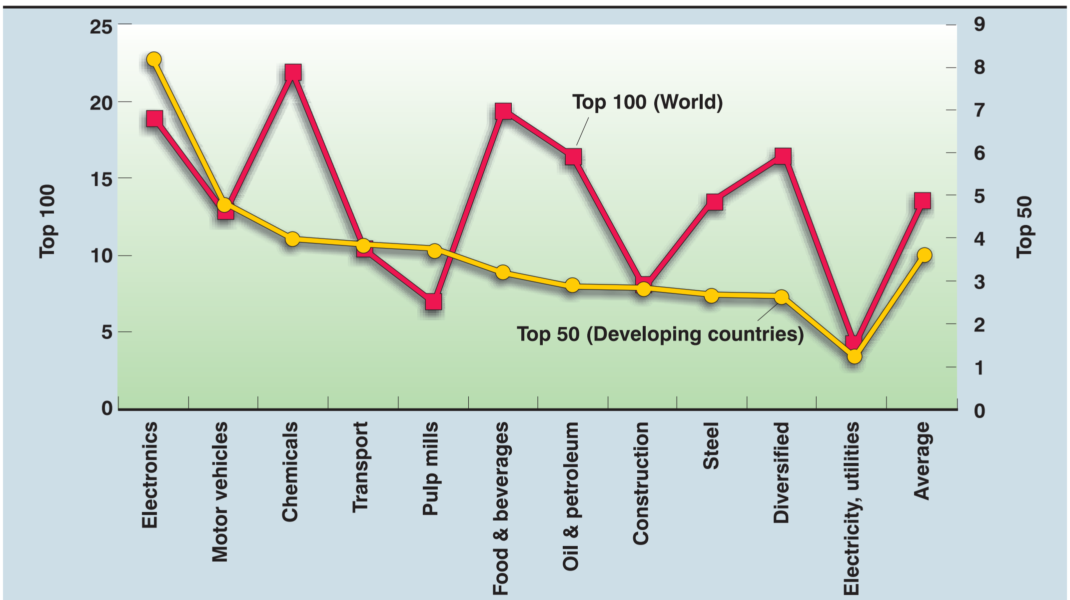
developed-country TNCs are simply much bigger in size, and therefore, often, also in geographical reach; they also have a longer history of international expansion; and, finally, while it is much easier for a developed-country TNC to explore developing-country markets, the reverse is much more difficult.

- Electronics is the industry in which companies have, on average, the widest spread. All other industries, beginning with the automotive industry, have much smaller Index values. Unsurprisingly, the electrical and other utilities are the least transnationalized industries by this criterion. Investment in these industries is capital-intensive, and the creation of complex production networks to explore locational advantages is not necessary. The ranking of industries by the Network Spread Index closely resembles that of industries by the Transnationality Index. The Network Spread Index in almost all industries is higher for developed-country TNCs than for developing-country TNCs. Also, although there are similarities between the two groups when the same industry is in question, the differences in Index values for individual industries are much wider for the top 100 than for the top 50 (figure IV.9). This, of course, is partially explained by the fact that the individual industry Index values for developing-country TNCs are much lower, and therefore, almost by definition, oscillate in a much narrower corridor. However, it might be also related to the fact that some industries in developing countries are at a more advanced stage of transnationalization than others.

The Network Spread Index rankings for individual industries show some similarities for developed and developing countries, but they are by no means identical. The industries that rank high on both lists are electronics, chemicals and, to a lesser extent, food and beverages. There are also industries with a low Index ranking, among developed as well as developing countries. These include construction as well as electrical and other utilities. For most other industries, the picture is unclear: some industries that rank relatively high in the top 100 rank relatively low among the top 50 (e.g. oil and petroleum or diversified companies). On the other hand, there are industries that rank higher in developing than in developed countries, such as transport, and pulp and paper.

Figure IV.9. Comparison of the Network Spread Index by industry, between the top 100 and the top 50 TNCs

(Percentage points)



Source: UNCTAD, based on information from Dun & Bradstreet, *Who Owns Whom, 2002 CD-ROM.*

C. The 25 largest TNCs from Central and Eastern Europe

Most of the 25 largest non-financial TNCs based in CEE continued to grow in 2000, expanding more abroad than at home (table IV.17). They achieved double digit growth rates of their foreign assets, foreign sales and foreign employment. However, their domestic assets and domestic sales increased only moderately (confirming previous trends),[7] while their domestic employment contracted.

Data for the top 25 in 2000 confirm that Russian TNCs are much larger and more globally spread than their non-Russian counterparts. Lukoil Oil, the largest with foreign assets of more than $4 billion, compares with the largest 10 TNCs from developing countries. In foreign assets, foreign sales and foreign employment, the average for Russian firms on the list is more than 10 times higher than the average for other firms (figure IV.10). They are also more transnationalized and have a higher Network Spread Index. These large differences may partly be due to differences in the industry composition. All Russian firms in the sample are involved either in natural resources or in transport, activities that are more capital-intensive than most manufacturing activities.

However, not all top TNCs in the region are on a growth path. While most Russian and Slovene firms (box III.12), for example, are on an outward expansion path, some Czech, Slovak and Polish firms are undergoing major restructuring, which often involves withdrawal from foreign activities. As a result of these changes, four firms left this list in 2000: Motokov (Czech Republic), Slovnaft (Slovakia), Elektrim (Poland) and Croatian Airlines (Croatia).

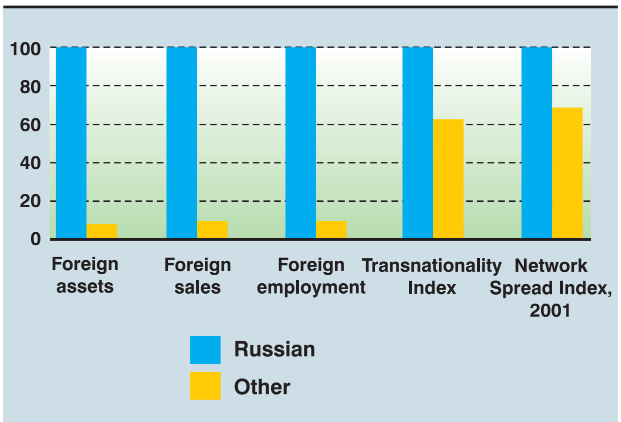
Of the four newcomers, Novoship is a fast expanding Russian transport firm. The other three – Mercator, Merkur and Iskraemeco – are all from Slovenia. From 1999 to 2000, Merkur more than tripled its foreign assets. Mercator grew even faster: with the opening of large supermarkets in Bosnia and Herzegovina and Croatia, it increased its foreign assets from less than one million to over $60 million in one year.

Preliminary data suggest that changes in the top 25 list will continue in 2001. For example, Tiszai Vegyi Kombinát (Hungary)[8] and KGHM Polska Miedz (Poland) substantially rolled back their foreign presence in 2001. In addition, Skoda Group Plzen (Czech Republic) underwent a bankruptcy procedure (Kirkland and Kuchar, 2002), resulting in a further shrinking of assets both at home and abroad. Their place may be taken by firms fast expanding abroad in 2001, such as the Russian oil firm, Yukos, and the Hungarian pharmaceutical firms, TNC Richter Gedeon (Csonka, 2002).

The industry composition of the list remained stable in 2000. Transport (7 firms), petroleum and natural gas (4 firms) and pharmaceuticals (3 firms) kept their prominence. Trade caught up with 3 companies on this list.

Compared with previous years, the country concentration of the top 25 rose in 2000. With eight firms, Slovenia is the most represented country on the list, followed by Croatia, Hungary and the Russian Federation (4 firms each). The remaining five entries are shared among five countries (Czech Republic, Latvia, Poland, Romania and Slovakia). This country composition reflects the fact that the outward FDI of the Russian Federation and Slovenia was carried out mainly by domestic firms – hence these firms are shown prominently on the list of the 25 largest TNCs. In other countries, however, an important part of outward FDI was carried out by foreign affiliates, which do not figure on the top 25 list.

Figure IV.10. The top 25 TNCs of CEE: comparison of Russian and other firms, 2000
(Russian firms = 100 per cent)



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

Table IV.17. The top 25 non-financial TNCs based in Central and Eastern Europe,[a] ranked by foreign assets, 2000

(Millions of dollars and number of employees)

Ranking by: Foreign assets	Ranking by: TNI[b]	Corporation	Country	Industry	Assets: Foreign	Assets: Total	Sales: Foreign	Sales: Total	Employment: Foreign	Employment: Total	TNI[b] (Per cent)
1	11	Lukoil Oil	Russian Federation	Petroleum and natural gas	4 189.0	12 008.0	7 778.0[d]	14 436.0	20 000	130 000	34.7
2	6	Novoship	Russian Federation	Transport	963.8	1 107.0	271.5	372.0	88	7 406	53.7
3	1	Latvian Shipping[c]	Latvia	Transport	459.0	470.0	191.0	191.0	1 124	1 748	87.3
4	5	Primorsk Shipping	Russian Federation	Transport	256.4	444.1	85.3	116.5	1 308	2 777	59.4
5	24	Hrvatska Elektroprivreda	Croatia	Energy	296.0	2 524.0	10.0	780.0	..	15 877	4.3
6	7	Gorenje Group	Slovenia	Domestic appliances	236.3	420.8	465.5	615.5	590	6 691	46.9
7	10	Far Eastern Shipping	Russian Federation	Transport	236.0	585.0	134.0	183.0	263	8 873	38.8
8	13	Podravka Group	Croatia	Food and beverages	..	440.1	139.8	316.5	516	6 827	31.6
9	9	Pliva Group	Croatia	Pharmaceuticals	181.9	915.9	384.7	587.6	2 645	7 857	39.7
10	3	Atlantska Plovidba[c]	Croatia	Transport	138.0	154.0	46.0[d]	46.0	..	509	63.2
11	8	Krka	Slovenia	Pharmaceuticals	129.2	462.4	212.0	273.0	483	3 322	40.0
12	20	MOL Hungarian Oil and Gas	Hungary	Petroleum and natural gas	102.7	3 281.6	758.8	3 632.2	870	18 016	9.6
13	14	Tiszai Vegyi Kombinát	Hungary	Chemicals	101.2	481.8	272.9	537.8	208	4548	25.4
14	2	Adria Airways[c]	Slovenia	Transport	116.3	129.2	103.4	104.6	19	597	64.0
15	19	Petrol Group	Slovenia	Petroleum and natural gas	98.8	536.1	129.0[d]	1 187.9	49	1 943	10.6
16	22	Mercator	Slovenia	Retail trade	65.1	777.9	16.2	1 055.7	487	13 208	4.5
17	4	Zalakerámia	Hungary	Clay product and refractory	60.0	112.0	39.0	62.0	1 958	2 966	60.8
18	15	Skoda Group Plzen	Czech Republic	Diversified	..	..	210.4[d]	358.6	..	10 628	26.2
19	12	Malév Hungarian Airlines	Hungary	Transport	41.4	187.0	299.0	383.4	49	2 952	33.9
20	18	Matador	Slovakia	Rubber and plastics	..	206.7	44.8	231.7	..	3 775	13.1
21	21	Merkur	Slovenia	Trade	37.3	400.6	45.3	449.8	89	2 944	7.5
22	25	KGHM Polska Miedz	Poland	Mining and quarrying	32.3	1 389.5	66.2	1 146.7	26	18 562	2.7
23	23	Petrom	Romania	Petroleum and natural gas	28.0	3 151.0	303.0	2 423.0	149	77 630	4.5
24	16	Iskraemeco	Slovenia	Electrical machinery	25.8	93.8	42.0	128.2	280	2 159	24.4
25	17	Intereuropa	Slovenia	Trade	23.0	173.0	19.0	144.0	513	2 168	16.7
		Average			323.8	1 230.8	482.7	1 190.5	1 400	14 159	32.2
		Change from 1999 (per cent)			22.2	7.6	27.9	11.5	38.4	-7.2	-0.3

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

[a] Based on survey responses.

[b] The transnationality index (TNI) is calculated as the average of the following three ratios: foreign assets to total assets, foreign sales to total sales and foreign employment to total employment.

[c] 1999 data.

[d] Including export sales by the parent firm.

.. Data on foreign assets, foreign sales and foreign employment were not available. 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.

The Network Spread Index of the 25 largest TNCs of Central and Eastern Europe is significantly lower than that of the world's largest TNCs. At the end of 2001, the Network Spread Index of the former stood at less than 4 per cent. Indeed, most of the leading TNCs in CEE are at an early stage of transnational expansion. Their investments abroad are undertaken either in neighbouring countries or, in the case of transport, in key maritime locations. There are, however, some differences by origin and industry. The Index of Russian, Croatian and Slovene firms, for example, is above average. In machinery and pharmaceuticals as well, the network spread is relatively wide.

Even for Russian TNCs, on average, the Index values are only a third of those for the top exporters of the country (table IV.18 and annex table A.IV.1). While the average Russian TNC is present in less than 10 foreign markets, the average lead exporter sells in 27 countries. In petroleum and natural gas, the spread of markets through exports is twice as frequent as the spread of firms through outward FDI.[9]

Table IV.18. The Network Spread Index of the top 50 Russian exporters, by industry, 2000

(Per cent)

Industry	NSI
Petroleum and natural gas	8.57
Non-ferrous metallurgy	8.24
Iron and steel	24.78
Machinery and equipment	9.59
Chemical and petrochemical	14.57
Wood, timber and pulp	28.47
Electrical power	4.08
Coal and coke	3.57

Source: UNCTAD, based on *Expert* (Moscow), No. 27 (287), 16 July 2001.

Notes

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

2 These figures are based on the estimates of the 1999 sales, assets and employment of foreign affiliates of TNCs, as shown in table I.1. However, 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, obtained mainly through a questionnaire completed by firms, may not necessarily correspond to the definition of foreign assets and sales used in table I.1.

3 The descent of this company from the seventh to the fourteenth place on the list is due to the fact that both Germany and the United States are now considered to be its home countries. This resulted in lower figures for foreign assets, sales and employment.

4 It should be noted that foreign sales include sales of foreign affiliates of TNCs as well as exports from parent firms. A small number of the TNCs surveyed – approximately 22 per cent – distinguish between the two categories in their reporting. As only total foreign sales figures are available for most companies, these figures have been used for all companies cited in this section. If this sample is representative, foreign sales figures, as given here, overestimate the actual sales of foreign affiliates of the top TNCs by some 10 per cent, especially in the primary and manufacturing sectors. For international production and exports from parent firms of Japanese TNCs, see table III.1.

5 The average Transnationality Index value of the world's top 100 TNCs is the average of the 100 individual transnationality indices of the companies on the list.

6 In 1999, the company sold its interest in Orange to Mannesmann and received Mannesmann shares in return. A few months later, in spring 2000, when Vodafone took over Mannesmann, Hutchison Whampoa was offered a 5 per cent stake in Vodafone in return for its Mannesmann shares.

7 See *WIR99*, p. 92; *WIR00*, p. 90; *WIR01*, p. 114.

8 In 2002, MOL Hungarian Oil & Gas Plc. took over Tiszai Vegyi Kombinát.

9 It should be noted that some of the top Russian oil and gas exporters are also leading outward investors. In such cases, the differences in the network spreads reflect corporate choices between serving markets through trade or through FDI.