

PART ONE

TRENDS IN INTERNATIONAL PRODUCTION

CHAPTER I

GLOBAL TRENDS

Introduction

Global foreign direct investment (FDI) flows declined sharply in 2001. Inflows fell by 51 per cent and outflows by 55 per cent. This reversal – after steady growth since 1991 and very large rises in 1999 and 2000 – reflects two factors: the slowing of economic activity in major industrial economies and a sharp decrease in their stock market activity. These combined to slow down new international investment, particularly the cross-border mergers and acquisitions (M&As) that have driven recent FDI. Developed countries have borne the brunt of declining FDI (59 per cent) but developing countries have also suffered (although only by a relatively small 14 per cent). The economies in transition of Central and Eastern Europe (CEE) are the only ones to have remained immune to this general downturn (a 2 per cent increase).¹

The fall in FDI in 2001 is likely to continue for most countries in 2002. However, over the longer term, international production – production under the common governance of transnational corporations (TNCs) – seems set to raise its share of global economic activity. Part One of *WRO2* deals with trends in FDI flows and the role of TNCs in host economies in terms of such aspects as FDI stock and flows, sales, value added, employment, profits, and research and development (R&D). It also benchmarks the FDI performance and potential of host countries and looks at the largest TNCs.

The growth of international production is driven by economic and technological forces. It is also driven by the ongoing liberalization of FDI and trade policies. National policy regimes are converging towards a more welcoming stance on FDI, as competition for investment intensifies. The competition is particularly marked for export-oriented investment, as countries try to boost export competitiveness in a setting of

accelerating technological change and freer, closer-knit markets. Part Two analyses the role of TNCs in the export competitiveness of developing countries. Part Three then looks at policies that can be pursued to attract export-oriented FDI and increase benefits from it.

A. Trends in FDI flows

World FDI inflows and outflows in 2001 amounted to \$735 billion and \$621 billion, respectively (table I.1), a drop of 51 per cent in the former and 55 per cent in the latter.² This was the first drop in inflows since 1991 and in outflows since 1992, and the largest over three decades in both.³ FDI inflows to developed countries fell by about half, from \$1 trillion in 2000 to \$503 billion in 2001. Inflows to developing countries decreased by much less – 14 per cent – from \$238 billion to \$205 billion. Trends in FDI outflows were very similar: outward investment from developed countries declined from \$1.4 trillion in 2000 to \$0.6 trillion, while that from developing countries also declined but by much less (annex table B.2).

Preliminary data for such major developed countries as Germany, France, Japan and the United States do not provide any clear indication for the future. For some countries, they suggest that both outflows⁴ and inflows⁵ may decline further in 2002, while for others the data suggest that either outflows or inflows may decline. The picture is similar for developing countries. FDI flows to China will probably rise in 2002, while those to Argentina, Brazil and Indonesia are likely to remain well below the peak of the 1990s.

The decline in FDI in 2001 reflects a slowdown in the world economy. More than a dozen countries – including the world's three largest economies – fell into recession

in 2001 (United Nations Department of Economic and Social Affairs and UNCTAD, 2002; UNCTAD, 2002a). To the extent that the events of 11 September 2001 exacerbated this slowdown, they may also have contributed to the further decline in FDI. Still, the impact of these events on overseas investment plans of TNCs was modest according to various surveys (box I.1). FDI in 2001 was higher than that in 1998 (\$696 billion), after which dramatic increases in cross-border M&As led to record flows in 1999 and 2000.

The decline in FDI flows in 2001 followed rapid increases during the late 1990s. There was a similar pattern during the late 1980s and early 1990s, and in 1982-1983.

Thus, this is the third downward cycle in FDI, each punctuating a long upward trend in FDI every ten years or so. These swings reflect changes in several factors. The main ones are business cycles, stock market sentiment and M&As. These short-term factors work in tandem with longer-term factors, sometimes offsetting and at other times reinforcing them.

There is, on the other hand, a stable and positive relationship between global FDI flows and the level and growth of world GDP.⁶ Technological change, shrinking economic distance and new management methods favour international production. Their impact is, however, countered by cyclical

Table I.1. Selected indicators of FDI and international production, 1982-2001
(Billions of dollars and percentage)

Item	Value at current prices (Billions of dollars)			Annual growth rate (Per cent)					
	1982	1990	2001	1986-1990	1991-1995	1996-2000	1999	2000	2001
FDI inflows	59	203	735	23.6	20.0	40.1	56.3	37.1	-50.7
FDI outflows	28	233	621	24.3	15.8	36.7	52.3	32.4	-55.0
FDI inward stock	734	1 874	6 846	15.6	9.1	17.9	20.0	22.2	9.4
FDI outward stock	552	1 721	6 582	19.8	10.4	17.8	17.4	25.1	7.6
Cross border M&As ^a	..	151	601	26.4 ^b	23.3	49.8	44.1	49.3	-47.5
Sales of foreign affiliates	2 541	5 479	18 517 ^c	16.9	10.5	14.5	34.1	15.1 ^c	9.2 ^c
Gross product of foreign affiliates	594	1 423	3 495 ^d	18.8	6.7	12.9	15.2	32.9 ^d	8.3 ^d
Total assets of foreign affiliates	1 959	5 759	24 952 ^e	19.8	13.4	19.0	21.4	24.7 ^e	9.9 ^e
Exports of foreign affiliates	670	1 169	2 600 ^f	14.9	7.4	9.7	1.9	11.7 ^f	0.3 ^f
Employment of foreign affiliates (thousands)	17 987	23 858	53 581 ^g	6.8	5.1	11.7	20.6	10.2 ^g	7.1 ^g
<i>Memorandum</i>									
GDP (in current prices)	10 805	21 672	31 900	11.5	6.5	1.2	3.5	2.5	2.0
Gross fixed capital formation	2 285	4 841	6 680 ^h	13.9	5.0	1.3	4.0	3.3	..
Royalties and licence fee receipts	9	27	73 ^h	22.1	14.3	5.3	5.4	5.5	..
Exports of goods and non-factor services	2 081	4 375	7 430 ⁱ	15.8	8.7	4.2	3.4	11.7	-5.4

Source: UNCTAD, based on its FDI/TNC database and UNCTAD estimates.

^a Data are only available from 1987 onwards.

^b 1987-1990 only.

^c Based on the following regression result of sales against FDI inward stock (in millions dollars) for the period 1982-1999: sales=323+2.6577*FDI inward stock.

^d Based on the following regression result of gross product against FDI inward stock (in millions dollars) for the period 1982-1999: gross product=364+0.4573*FDI inward stock.

^e Based on the following regression result of assets against FDI inward stock (in millions dollars) for the period 1982-1999: Assets= -1 153+3.8134*FDI inward stock.

^f For 1995-1998, based on the regression result of exports of foreign affiliates against FDI inward stock (in millions dollars) for the period 1982-1994: Export=254+0.474*FDI inward stock. For 1999-2001, the share of exports of foreign affiliates in world export in 1998 (34 per cent) was applied to obtain the values.

^g Based on the following regression result of employment (in thousands) against FDI inward stock (in millions dollars) for the period 1982-1999: employment=12 138+6.0539*FDI inward stock.

^h Data are for 2000.

ⁱ WTO estimates.

Note: Not included in this table are the value of worldwide sales by foreign affiliates associated with their parent firms through non-equity relationships and the sales of the parent firms themselves. Worldwide sales, gross product, total assets, exports and employment of foreign affiliates are estimated by extrapolating the worldwide data of foreign affiliates of TNCs from France, Germany, Italy, Japan and the United States (for sales and employment) and those from Japan and the United States (for exports), those from the United States (for gross product), and those from Germany and the United States (for assets) on the basis of the shares of those countries in the worldwide outward FDI stock.

fluctuations in income and growth. On the supply side, FDI is affected by the availability of investible funds from corporate profits or loans, which is in turn affected by domestic economic conditions (WIR93, p. 92). On the demand side, growing overseas markets lead TNCs to invest, while depressed markets inhibit them. The more interdependent host and home economies become, and the more widely a recession or upswing spreads, the greater are the corresponding movements in global FDI (WIR93, p. 94).

Data for 1980-2001 show that a bulge in global FDI accompanies high economic growth, and a trough accompanies low growth

(figure I.1). However, the relationship between GDP growth and FDI is not uniform across groups of economies. They go together in developed (figure I.2) but not in developing countries (figure I.3). In CEE, FDI inflows have continued to grow since liberalization began in the early 1990s, and this region has not seen an FDI downturn during the current decline (figure I.4). One explanation for the different patterns of FDI flows is that business cycles spread much faster across developed countries than others. A supplementary explanation may be that some countries (as in CEE) had been cut off from substantial FDI flows for so long that they have a lot of “catching up” to do – short-term cycles do not affect their attractiveness.

Box I.1. Impact of the September 11 events on FDI flows

The effects of the terrorist attacks of 11 September 2001 on FDI flows are difficult to gauge. Company surveys suggest that they were limited. In October/November 2001, a survey by UNCTAD, the *Agence Française pour les Investissements Internationaux* and Andersen Consulting revisited a number of the firms they had surveyed before 11 September (UNCTAD, 2001a). The finding was that few expected to change their investment plans in the light of the attacks. Similarly, a survey by the Japan External Trade Organization (JETRO) found in October 2001 that nearly half the Japanese firms surveyed did not expect to change their FDI plans (box figure I.1.1).^a These findings are consistent with a survey by A.T. Kearney in September/October 2001: two-thirds of corporate executives of the world’s 1,000 largest firms said that they intended to invest abroad at more or less the levels already planned, 16 per cent said that their FDI in 2001 would increase, and 20 per cent that it would decline.^b A survey of 643 firms by the Multilateral Investment Guarantee Agency (MIGA) in October 2001 found that there was no effect on the expansion plans of 64 per cent of respondents (MIGA, 2002). Virtually none of the respondents intended to cancel their FDI projects.^c

On the other hand, the higher level of uncertainty created by the September 11 events, including higher perceived political risk (associated with war and terrorism), may have

Source: UNCTAD.

^a The survey was conducted by JETRO in October 2001. The results are based on responses by 659 respondents out of 720 Japanese TNCs (both manufacturing and services). The results were made available to UNCTAD by the JETRO International Economic Research Division.

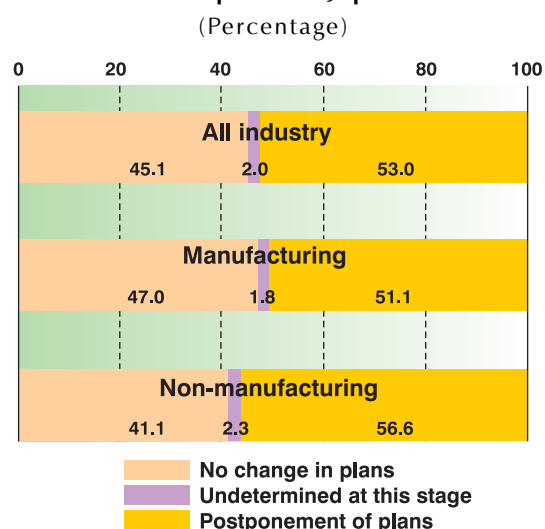
^b A.T. Kearney Press release, 8 October 2001.

^c Based on some 130 respondents.

^d *Business Latin America* (EIU), 24 September 2001.

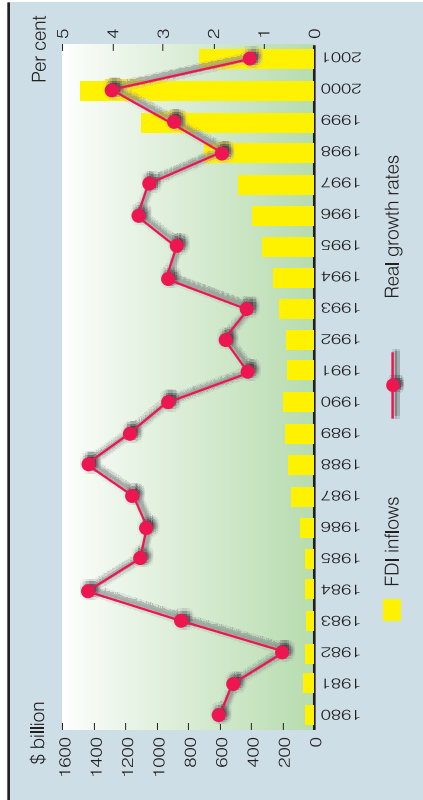
induced some companies to adopt a “wait-and-see” attitude. Firms may have placed planned investments on hold until they had a clearer picture of economic developments and the longer-term impact of the events on the United States. This was reflected in the JETRO survey, according to which more than half the respondents were unable to make an assessment. Some companies are reported to have cancelled planned investments after the September 11 events.^d

Box figure I.1.1. Effects of the September 11 events on FDI plans of Japanese TNCs



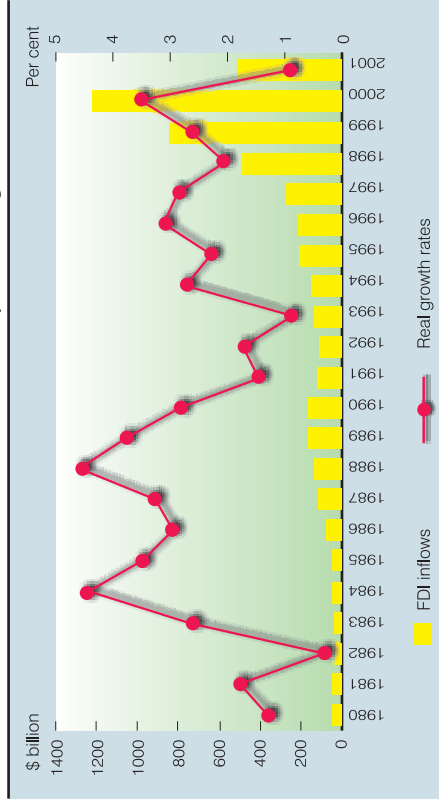
Source: UNCTAD, based on the data provided by the JETRO International Research Division.

Figure I.1. FDI inflows and real growth rates of GDP in the world, 1980-2001
(Billions of dollars and percentage)



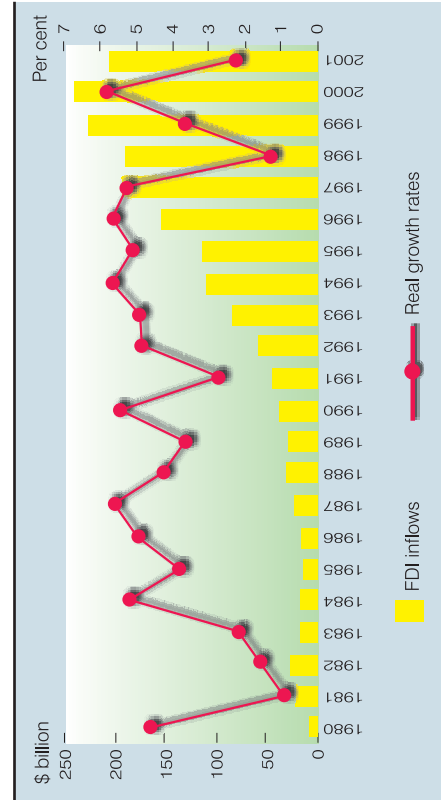
Source: UNCTAD, FDI/TNC database, data from UNCTAD secretariat and UNDESA.

Figure I.2. FDI inflows and real growth rates of GDP in developed countries, 1980-2001
(Billions of dollars and percentage)



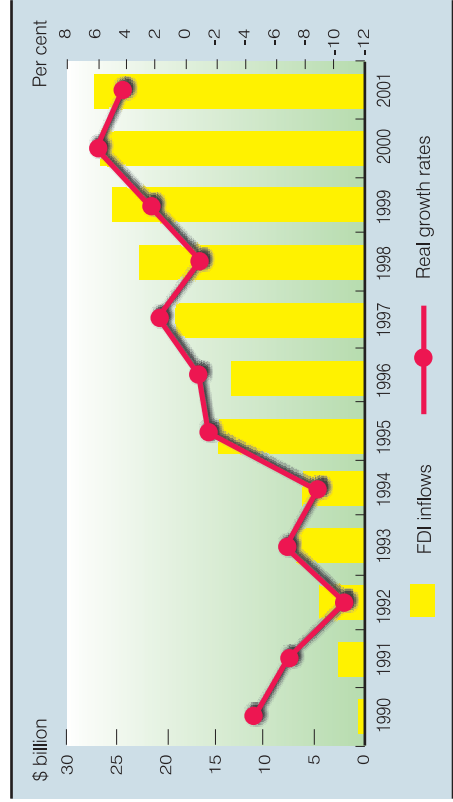
Source: UNCTAD, FDI/TNC database, data from UNCTAD secretariat and UNDESA.

Figure I.3. FDI inflows and real growth rates of GDP in developing countries, 1980-2001
(Billions of dollars and percentage)



Source: UNCTAD, FDI/TNC database, data from UNCTAD secretariat and UNDESA.

Figure I.4. FDI inflows and real growth rates of GDP in Central and Eastern European countries, 1990-2001
(Billions of dollars and percentage)



Source: UNCTAD, FDI/TNC database, data from UNCTAD secretariat and UNDESA.

The economic slowdown has intensified competitive pressures, forcing companies to search for cheaper locations. This may have resulted in increased FDI in activities that benefit from relocation to, or expansion in, low-wage economies. Outflows may also have risen from countries in which domestic markets have been growing slower than foreign markets. There are signs that both factors have contributed to the recent increase of Japanese FDI to China (chapter III.A.3) and the growth of flows to CEE. More generally, there has been a redistribution of FDI towards developing

countries and CEE, where growth has recently been higher than in developed countries. The shares of developing countries and CEE in global FDI inflows reached 28 per cent and 4 per cent respectively in 2001, compared to an average of 18 per cent and 2 per cent in the preceding two years (table I.2).⁷ The rise in developing countries' shares may also reflect the further liberalization of their FDI regimes⁸ – a trend that continued in 2001 (box I.2) and was reinforced by the growth in the number of bilateral investment treaties (BITs) and double taxation treaties (DTTs) (box I.3).

Table I.2. Distribution of world FDI inflows, 1986-2001
(Percentage)

Region	1986-1990	1991-1992	1993-1998	1999-2000 ^a	2001
Developed countries	82.4	66.5	61.2	80.0	68.4
Western Europe	38.4	46.0	33.7	51.9	45.7
European Union	36.2	45.3	32.1	50.2	43.9
Japan	0.2	1.2	0.3	0.8	0.8
United States	34.6	12.7	21.7	22.6	16.9
Developing countries	17.5	31.2	35.3	17.9	27.9
Africa	1.8	2.2	1.8	0.8	2.3
Latin America and the Caribbean	5.0	11.7	12.3	7.9	11.6
Asia and the Pacific	10.6	17.4	21.2	9.2	13.9
Central and Eastern Europe	0.1	2.2	3.5	2.0	3.7
<i>Memorandum</i>					
Least developed countries	0.4	1.1	0.6	0.4	0.5

Source: UNCTAD, FDI/TNC database.

^a Years characterized by exceptionally high cross-border M&A activity.

Note: The shaded years are FDI trough periods, while non-shaded years are FDI growth periods.

Box I.2. Changes in FDI regimes in 2001

In 2001, 208 changes in FDI laws were made by 71 countries, raising the total number of annual changes to its highest level since the *WIR* began reporting on them (box table I.2.1). Of the changes in 2001, 194 (93

per cent) created a more favourable investment climate (box figure I.2.1) in an effort to attract more FDI. The Asian and Pacific region introduced the largest number of such changes (43 per cent).

Box table I.2.1. National regulatory changes, 1991-2001

Item	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Number of countries that introduced changes in their investment regimes	35	43	57	49	64	65	76	60	63	69	71
Number of regulatory changes	82	79	102	110	112	114	151	145	140	150	208
of which:											
-more favourable to FDI ^a	80	79	101	108	106	98	135	136	131	147	194
-less favourable to FDI ^b	2	-	1	2	6	16	16	9	9	3	14

Source: UNCTAD, based on national sources.

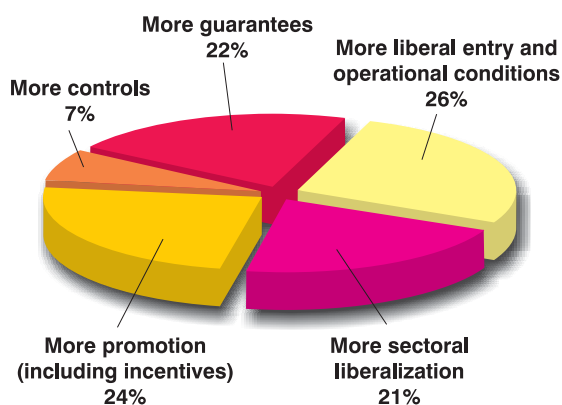
^a Including liberalizing changes or changes aimed at strengthening market functioning, as well as increased incentives.

^b Including changes aimed at increasing control as well as reducing incentives.

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Box I.2. Changes in FDI regimes in 2001 (concluded)

Box figure I.2.1. Types of changes in FDI laws and regulations, 2001



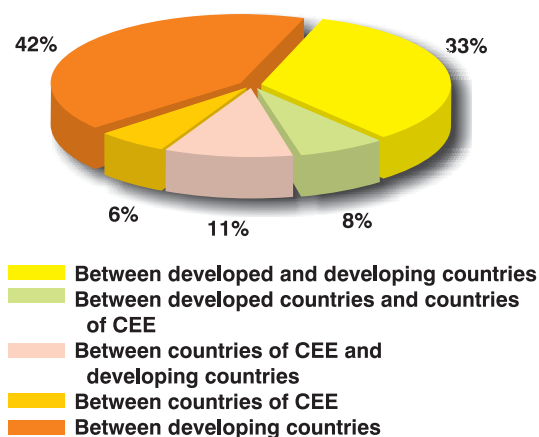
Source: UNCTAD, based on national sources.

Source: UNCTAD.

Box I.3. BITs and DTTs in 2001

In 2001 alone, a total of 97 countries (the largest number ever) were involved in the conclusion of 158 BITs, bringing the total from 1,941 at the end of 2000 to 2,099 by the end of 2001. Developing countries have intensified the practice of concluding BITs among themselves: 66 in 2001 (compared with 36 in 2000) (box figure I.3.1). Asian countries concluded 70 BITs (19 among themselves), followed by African countries with 58 BITs (29 among themselves), and Latin American countries 21 (5 among

Box figure I.3.1. BITs concluded in 2001, by country group



Source: UNCTAD, BITs and DTTs databases.

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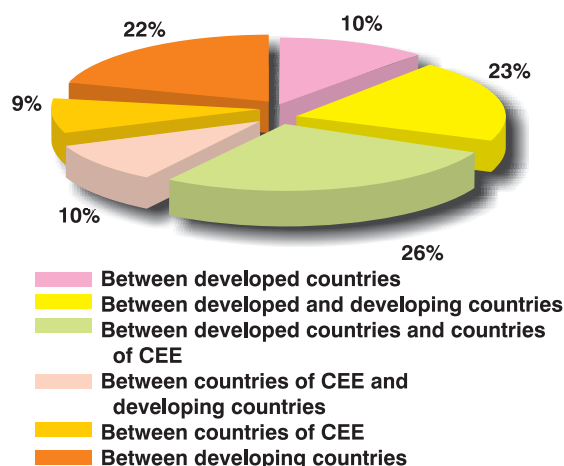
Box I.3. BITs and DTTs in 2001 (concluded)

themselves). CEE countries signed 18 BITs with developing countries, 12 with the developed ones and 10 among themselves.

The least developed countries (LDCs) have shown a keen interest in entering into BITs (see chapter II.D). A total of 23 LDCs were involved in the conclusion of 51 BITs in 2001. Of these, 13 were signed among the LDCs themselves, 24 with the rest of the developing world, 12 with developed countries and two with economies in transition.

The total number of DTTs grew from 2,118 at the end of 2000 to 2,185 by the end of 2001. A total of 63 countries were involved (19 from the developed world, 30 from developing countries and 14 from CEE) in 67 DTTs (15 among countries of the developing world, six between countries of CEE) (box figure I.3.2).

Box figure I.3.2. DTTs concluded in 2001, by country group



Source: UNCTAD, BITs and DTTs databases.

As part of its work programme on international investment agreements, UNCTAD has organized several BIT and DTT negotiation facilitation events since 1998 that resulted in the conclusion of a number of these treaties. These events have provided a platform for developing countries to negotiate BITs with other interested countries, and among themselves. For that purpose, UNCTAD has provided the facilities and technical support, including the services of a resource person, but has not participated in the negotiations themselves. Such events have considerably reduced the cost and time involved in negotiating and finalizing BITs among the countries involved, and they have been highly successful.

Source: UNCTAD.

At the multilateral level, member countries of the World Trade Organization (WTO) have addressed investment issues since the Organization's first Ministerial Conference in Singapore in 1996. Since then, WTO members have been engaged in an analysis of the relationships between international trade and investment and their implications for economic growth and development (box 1.4). The issue of investment figured prominently in the preparatory phase for the Fourth WTO Ministerial Conference, which was held in Doha, Qatar, from 9 to 14 November 2001. It was debated until the final hours of the conference and resulted in an agreement that gave further direction to the WTO's work (box 1.5). Part of this work involves a substantial technical assistance effort aimed at helping developing countries to evaluate the implications of closer multilateral cooperation for their development

process. Relevant international organizations, including UNCTAD, are called upon to provide such assistance (box 1.6).

In spite of the substantial liberalizing measures of the past decade, developing countries still attract less than a third of world FDI flows, and these flows remain highly concentrated. In 2001, the five largest host countries in the developing world received 62 per cent of total inflows and the 10 largest received three-quarters (figure 1.5). The level of concentration of FDI in developing countries has in fact risen in recent years (figure 1.5). Flows to the 49 LDCs, in particular, remain marginal; in 2001, they received only 2 per cent of total FDI flows to developing countries and 0.5 per cent of world FDI (table 1.2).

However, absolute values tell only half the story. A different picture emerges once

Box 1.4. Issues discussed in the WTO Working Group on the Relationship between Trade and Investment

The agenda of the Working Group has been as follows:

"Implications of the relationship between trade and investment for development and economic growth, including: economic parameters relating to macroeconomic stability, such as domestic savings, fiscal position and the balance of payments; industrialization, privatization, employment, income and wealth distribution, competitiveness, transfer of technology and managerial skills; domestic conditions of competition and market structures.

The economic relationship between trade and investment: the degree of correlation between trade and investment flows; the determinants of the relationship between trade and investment; the impact of business strategies, practices and decision-making on trade and investment, including through case studies; the relationship between the mobility of capital and the mobility of labour; the impact of trade policies and measures on investment flows, including the effect of the growing number of bilateral and regional arrangements; the impact of investment policies and measures on trade; country experiences regarding national investment policies, including investment incentives and disincentives; the relationship between foreign investment and competition policy.

Stocktaking and analysis of existing international instruments and activities regarding trade and investment: existing WTO provisions;

bilateral, regional, plurilateral and multilateral agreements and initiatives; implications for trade and investment flows of existing international instruments.

On the basis of the work above: identification of common features and differences, including overlaps and possible conflicts, as well as possible gaps in existing international instruments; advantages and disadvantages of entering into bilateral, regional and multilateral rules on investment, including from a development perspective; the rights and obligations of home and host countries and of investors and host countries; the relationship between existing and possible future international cooperation on investment policy and existing and possible future international cooperation on competition policy" (WTO, 1998, annex 1: checklist of issues suggested for study).

The WTO already addresses certain aspects of foreign investment. In particular, the Agreement on Trade-related Investment Measures (TRIMs) elaborates on existing GATT provisions by prohibiting certain performance requirements. The General Agreement on Trade in Services (GATS) contains rules relating to the establishment by a service supplier of a "commercial presence" abroad. And the Agreement on Subsidies and Countervailing Measures bears on certain aspects of incentives, especially as regards export-oriented FDI.

Source: UNCTAD, based on WTO, 1998.

FDI inflows are adjusted for the size of the economy. In relation to the size of their markets, the performance of developing countries improves relative to developed countries (annex table A.I.1). This is true overall and for many subregions and countries that receive small amounts of FDI; in particular, regions and subregions such as Central Asia, South, East and South-East Asia and Latin America and the Caribbean performed better than most of the others in the 1990s.

In terms of FDI per capita (annex table A.I.1), developing countries in general, and South, East and South-East Asia in particular, receive less than developed countries, reflecting their larger populations. Latin America and the Caribbean receives more FDI per capita than Asia. The share of non-EU countries in Western Europe in FDI inflows and outflows improves once flows are normalized by GDP or population. The position of CEE also improves if FDI is assessed by economic size or in absolute values.

Box I.5. The Doha WTO Ministerial Conference on investment

After difficult negotiations, the Doha WTO Ministerial Conference agreed on the following text with respect to investment (paras. 20-22):

20. "Recognizing the case for a multilateral framework to secure transparent, stable and predictable conditions for long-term cross-border investment, particularly foreign direct investment, that will contribute to the expansion of trade, and the need for enhanced technical assistance and capacity-building in this area as referred to in paragraph 21, we agree that negotiations will take place after the Fifth Session of the Ministerial Conference on the basis of a decision to be taken, by explicit consensus, at that Session on modalities of negotiations.

21. We recognize the needs of developing and least-developed countries for enhanced support for technical assistance and capacity building in this area, including policy analysis and development so that they may better evaluate the implications of closer multilateral cooperation for their development policies and objectives, and human and institutional development. To this end, we shall work in cooperation with other relevant intergovernmental organisations, including UNCTAD, and through appropriate regional and bilateral channels, to provide strengthened and adequately resourced assistance to respond to these needs.

22. In the period until the Fifth Session, further work in the Working Group on the Relationship Between Trade and Investment will focus on the clarification of: scope and definition; transparency; non-discrimination; modalities for pre-establishment commitments based on a GATS-type, positive list approach;

development provisions; exceptions and balance-of-payments safeguards; consultation and the settlement of disputes between Members. Any framework should reflect in a balanced manner the interests of home and host countries, and take due account of the development policies and objectives of host governments as well as their right to regulate in the public interest. The special development, trade and financial needs of developing and least-developed countries should be taken into account as an integral part of any framework, which should enable Members to undertake obligations and commitments commensurate with their individual needs and circumstances. Due regard should be paid to other relevant WTO provisions. Account should be taken, as appropriate, of existing bilateral and regional arrangements on investment."

In the closing plenary session of the Doha Ministerial Conference, on 14 November 2001, the chair stated that, as far as paragraphs 20, 23, 26 and 27 of the Declaration were concerned: "with respect to the reference to an 'explicit consensus' being needed, in these paragraphs, for a decision to be taken at the Fifth Session of the Ministerial Conference, my understanding is that, at that session, a decision would indeed need to be taken by explicit consensus, before negotiations on trade and investment and trade and competition policy, transparency in government procurement, and trade facilitation could proceed. In my view, this would also give each member the right to take a position on modalities that would prevent negotiations from proceeding after the Fifth Session of the Ministerial Conference until that member is prepared to join in an explicit consensus."^a

Source: UNCTAD, based on "Ministerial declaration", Ministerial Conference, Fourth Session, Doha 9-14 November, WT/MIN(01)/DEC/W/1 (14 November 2001).

^a http://www.wto.org/english/thewto_e/minist_e/min01_e/min01_chair_speaking_e.htm.

Box I.6. UNCTAD's post-Doha technical assistance work programme in the area of investment

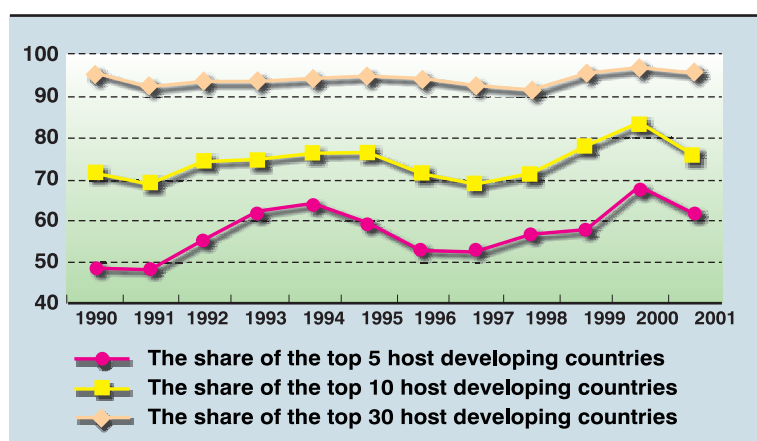
In response to the WTO Doha Ministerial, and after consultations with a wide range of delegations, UNCTAD developed a technical assistance programme that focuses on the three elements identified in paragraph 21 of the Doha Ministerial Declaration: policy analysis and development, human resources capacity-building and institutional capacity-building.

A number of these activities are undertaken jointly with the WTO.

As of June 2002, two intensive training workshops (in Pretoria and Alexandria), one regional seminar (in Singapore), and two national seminars (in China and Indonesia) had been held.

Source: UNCTAD.

Figure I.5. The share of the largest 5, 10 and 30 recipients in total FDI inflows to developing countries, 1990-2001
(Percentage)



Source: UNCTAD, FDI/TNC database.

The decline in FDI flows in 2001 largely reflects a fall in cross-border M&As – the principal vehicle since the mid-1990s for FDI in developed countries.⁹ The decline in cross-border M&As is, in turn, attributable to slower economic growth and prospects of reduced profit, particularly in developed markets. It may also be the result of a lull in the consolidation process of certain industries acquired through M&As,¹⁰ reflecting, for example, companies' need to digest the acquisitions made. Finally, the fall in share prices has played an important role because it has meant a reduction in the value of (assets acquired through) M&As. Moreover, the exchange of shares is an important means of financing M&As. In 2000, for instance, shares were used to finance some 44 per cent of all cross-border M&A deals.¹¹ In 2001, the market value of stocks listed in the six major stock exchanges fell by one-third (from \$29 trillion at the peak in 2000 to \$19 trillion at the trough in September 2001).¹² As a result, the value

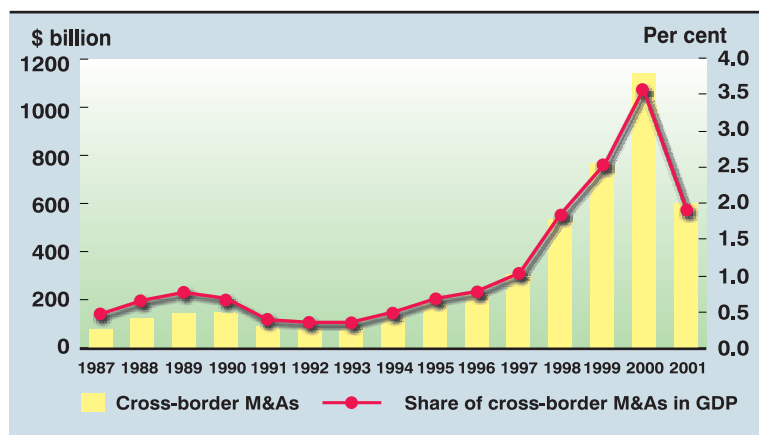
of cross-border M&As concluded through the exchange of shares fell to 24 per cent of the total in 2001. Lower share prices also made it difficult for companies to raise funds by issuing new stock, again with knock-on effects on FDI.¹³

As a result, the total value of cross-border M&As completed in 2001 (\$594 billion – see annex tables B.7 and B.8) was only half of what it had been in 2000.¹⁴ In relation to GDP also, the share of cross-border M&As almost halved to less than 2 per cent, a level comparable to that of 1998 (figure 1.6).¹⁵ The fall in M&As, particularly, reflected the decline in mega mergers. The value of all worldwide M&As in 2001, domestic and foreign (around \$1.6 trillion), was also half the value reported in 2000.¹⁶

The number of cross-border M&As also declined, from more than 7,800 in 2000 to some 6,000 in 2001. The number of cross-border deals worth over \$1 billion fell from 175 to 113, their total value falling from \$866 billion to \$378 billion (table 1.3). The earlier sharp increases in FDI in 1999 and 2000 – by some 56 per cent and 37 per cent, respectively – were driven mainly by these mega M&As.¹⁷

It could be argued that 2001 saw a return of FDI to "normal" levels after the hectic M&A activity (primarily in developed countries) of the previous two years. In developing countries and economies in transition, FDI in 2001 in fact proved fairly resilient despite the global economic downturn and the September 11 events. This resilience

Figure I.6. Values of cross-border M&As and their ratio to world GDP, 1987-2001



Source: UNCTAD, FDI/TNC and cross-border M&A databases.

Table I.3. Cross-border M&As worth over \$1 billion, 1987-2001

Year	Number of deals	Percentage of total	Value (billion dollars)	Percentage of total
1987	14	1.6	30.0	40.3
1988	22	1.5	49.6	42.9
1989	26	1.2	59.5	42.4
1990	33	1.3	60.9	40.4
1991	7	0.2	20.4	25.2
1992	10	0.4	21.3	26.8
1993	14	0.5	23.5	28.3
1994	24	0.7	50.9	40.1
1995	36	0.8	80.4	43.1
1996	43	0.9	94.0	41.4
1997	64	1.3	129.2	42.4
1998	86	1.5	329.7	62.0
1999	114	1.6	522.0	68.1
2000	175	2.2	866.2	75.7
2001	113	1.9	378.1	63.7

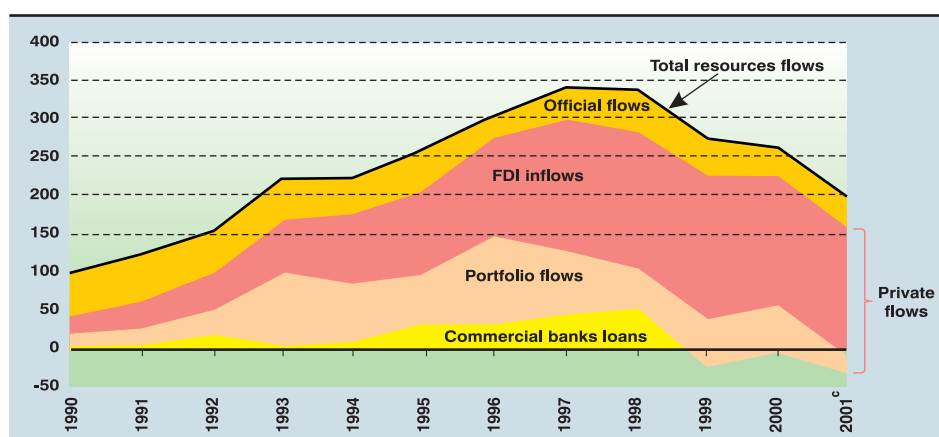
Source: UNCTAD, cross-border M&A database.

was more pronounced in comparison to inflows of portfolio investment and bank lending (figure 1.7). On a net basis (inflows less outflows), FDI flows were the only positive component of private capital flows to developing countries and economies in transition during 2000-2001. The total of net private capital flows was projected to be a low of \$31 billion in 2001 (IMF, 2002, p. 29).¹⁸

FDI in developing countries has been larger than official inflows for every year since 1993 (figure 1.7). It was 10 times larger than bilateral official development assistance (ODA) in 2000 (figure 1.8); this contrasts with the latter half of the 1980s, when the two were about equal. It needs to be stressed, however, that, for LDCs, ODA remains of paramount importance. But even for these countries, the ratio of FDI to bilateral ODA rose until 1999, reaching almost one, but it declined in 2000 (figure 1.8). Inflows of FDI accounted for 60 per cent of total resource flows to developing countries in 2000, compared to 6 per cent in 1980 and one quarter in 1990.

The ratio of FDI inflows to GDP in both developed and developing countries fell, from 5.1 per cent in 2000 to 2.1 per cent in 2001 in the former, and

Figure I.7. Total resource flows^a to developing countries,^b by type of flow, 1990-2001 (Billions of dollars)



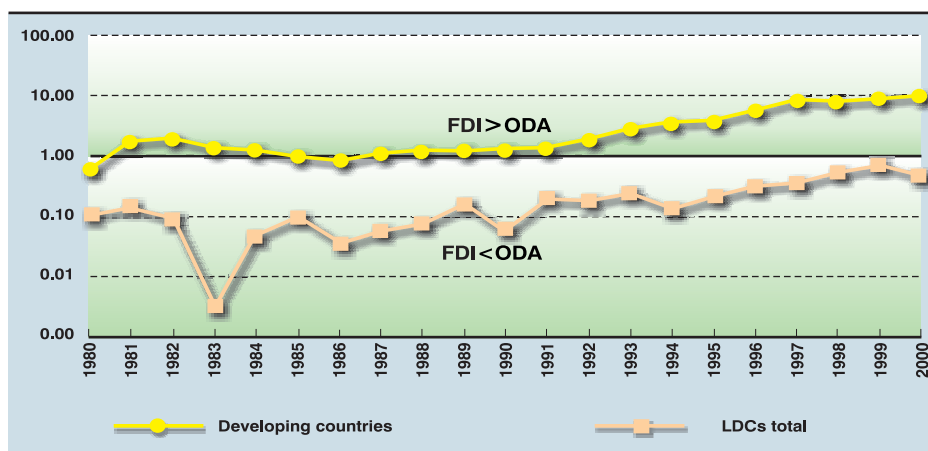
Source: UNCTAD, based on World Bank, 2002a.

^a Net liability transactions, of original maturity of longer than one year.

^b The World Bank classifies Central and Eastern European countries as developing countries and excludes some economies considered developing by UNCTAD (Hong Kong, China; Singapore; Taiwan Province of China; Kuwait; Cyprus; Qatar; United Arab Emirates).

^c Preliminary.

Figure I.8. The ratio of FDI inflows to bilateral ODA to developing countries, 1980-2000



Source: UNCTAD, FDI/TNC database and OECD International Development Statistics online database.

Note: The ratio of one (1) indicates FDI=ODA.

from 3.7 per cent to 3.0 per cent in the latter.¹⁹ Over the longer term, this ratio had risen from 0.5 per cent in 1980 and 0.9 per cent in 1990 for the world, and from 0.3 per cent in 1980 and 1 per cent in 1990 for developing countries. Most of the steepest declines in FDI inflows and FDI outflows in 2001 occurred in developed countries (table I.4).

What of the *prospects*? Despite the dampening impact of weak demand in the largest economies, the medium-term (three-year) prospects for FDI are promising. Major TNCs, according to the UNCTAD et al. survey, plan to continue their international expansion (UNCTAD, 2001a). This will focus on

production as well as distribution functions. The preferred mode of expansion will continue to be cross-border M&As in developed countries and greenfield investment in developing countries. More specifically, the survey suggests that the preferred destinations will be the United States among developed countries as a whole; Germany, the United Kingdom and France in Europe; China in Asia; Brazil in Latin America; Poland in Eastern Europe; and South Africa in Africa (table I.5). A survey by the Japan Bank for International Cooperation (JBIC) in July/August 2001 yielded similar results. As many as 72 per cent of the Japanese TNCs surveyed said that they would strengthen and expand their foreign operations, a jump of 55 per cent

Table I.4. Top 10 winners and losers in FDI flows in 2001

FDI inflows (Billions of dollars)				FDI outflows (Billions of dollars)			
Winner		Loser		Winner		Loser	
Economy	Increases in absolute value	Economy	Decreases in absolute value	Economy	Increases in absolute value	Economy	Decreases in absolute value
1 Mexico	10.0	Belgium and Luxembourg	-194.6	Italy	9.2	United Kingdom	-214.5
2 France	9.7	United States	-176.5	Japan	6.5	Belgium and Luxembourg	-174.7
3 China	6.1	Germany	-163.3	Australia	6.1	France	-92.7
4 South Africa	5.8	United Kingdom	-62.8	Singapore	5.2	United States	-51.0
5 Singapore	3.2	Canada	-39.2	Mexico	2.7	Hong Kong, China	-50.4
6 Morocco	2.5	Hong Kong, China	-39.1	Panama	1.8	Sweden	-33.4
7 Turkey	2.3	Denmark	-25.3	Ireland	1.4	Netherlands	-27.3
8 Saudi Arabia	1.9	Spain	-15.7	Cayman Islands	1.0	Spain	-26.9
9 Chile	1.8	Ireland	-14.3	China	0.9	Switzerland	-26.3
10 Italy	1.5	Sweden	-10.6	Kuwait	0.6	Finland	-16.8

Source: UNCTAD, FDI/TNC database.

Table I.5. Most favoured host economies as a priority location in 2002-2005, by region, as a percentage of total responses by TNCs
(Percentage)

Developed countries	Developing Asia		Latin America		Central and Eastern Europe		Africa and West Asia		
United States	27	China	27	Brazil	31	Poland	33	South Africa	17
Germany	16	Indonesia	10	Mexico	20	Hungary	20	Egypt	12
United Kingdom	12	Thailand	10	Argentina	15	Czech Republic	18	Turkey	8
France	10	Malaysia	9	Chile	10	Russia	11	Morocco	8
Italy	6	India	9	Colombia	5	Romania	4	Nigeria	6
Japan	5	Korea, Republic of	7	Peru	4	Bulgaria	4	Saudi Arabia	6
Spain	5	Taiwan Province of China	7	Bolivia	3	Ukraine	2	United Arab Emirates	5
Sweden	3	Viet Nam	5	Venezuela	3	Other	7	Israel	2
Canada	3	Hong Kong, China	4	Other	8			Angola	2
Ireland	2	Philippines	4					Other	4
Other	13	Singapore	4						
		Other	4						

Source: UNCTAD, 2001a.

compared to the previous year (JBIC, 2002; see also section on Japan).²⁰ A MIGA 2001 survey shows similar trends: nearly 80 per cent of the respondents plan to expand FDI in both developed and developing countries in the next three years (MIGA, 2002).

The potential for FDI remains large in many developing countries. Many have just started to allow FDI in utilities and other service industries, and should see fresh inflows where conditions are conducive. Others that have already attracted such FDI may get sequential investments after the initial privatization. As the stock of FDI grows, the potential for reinvesting earnings rises, especially where profits are healthy. Though developing countries cannot de-link themselves entirely from global economic fluctuations, they retain considerable drawing power on their own.

For TNCs in tradable goods and services in particular, the issue is less whether to produce at home or abroad and more *where* to locate their production facilities (and other functions) for maximum efficiency. In an increasingly globalized world, the "F" in FDI is fading. This is particularly so for companies that have accumulated the experience and capabilities needed to operate internationally. Such firms increasingly regard the globe as a borderless whole, and make their location decisions mainly on economic and strategic grounds rather than nationality. Thus, from the supply side, the potential for FDI is limited only (or largely) by the potential for investment in general. It is up to the demand side to ensure that the conditions and policies investors need for efficient operation are in place.

B. Developments in international production

There are now some 65,000 TNCs (firms that control assets abroad) engaged in international production, with about 850,000 affiliates abroad (annex table A.1.3). The global FDI stock reached nearly \$7 trillion in 2001. Value added by TNCs is estimated at \$3.5 trillion and total sales at \$18.5 trillion, compared to world exports at \$7.4 trillion (table I.1). Foreign affiliates accounted for an estimated 11 per cent of world GDP in 2001 compared to 7 per cent in 1990. This section looks at various measures of TNC activity: investment, employment, sales, value added, profits and innovative activities. (The role of TNCs in exports is examined separately in Part Two.)

1. The significance of foreign affiliates in their host economies

The value of FDI flows is an obvious measure of the role of TNCs. It is, however, difficult to assess that role correctly from FDI flows alone: FDI figures may not show the true value of *investments* by TNCs, where affiliates raise funds in domestic or international markets. For example, affiliates of Japanese TNCs raised \$3 billion from local banks alone in 1998 (Japan, METI, 2001a, p. 160), equivalent to 13 per cent of Japanese FDI outflows. They also raised funds through bonds and stocks and via loans from local partners. Data for several large countries such as Japan, Germany and the United

States show that the value of FDI inward stock²¹ is considerably lower than that of the total assets of foreign affiliates. The ratio of FDI inward stock to assets of foreign affiliates is only one quarter to one fifth in these economies (annex table A.I.4).

In many host developing countries, the two magnitudes also differ but the differences are smaller, suggesting that affiliates rely more on parent firms. There are, however, exceptions. For example, Botswana, with a high domestic savings rate, has a ratio of assets to FDI resembling that of developed host countries (UNCTAD, forthcoming (a) and box I.7). In the aggregate, world assets of foreign affiliates are estimated to be three to four times higher than world FDI stock (table I.1). On the other hand, FDI may exceed the value of assets in host countries when it is used for operating costs or to repay

debt by foreign affiliates, or when it is invested in financial assets.

And what of *employment*? While assets held by foreign affiliates are a reasonable indicator of production capacity, they may not be a good measure of their employment capacity. The number of employees in foreign affiliates worldwide is estimated at 54 million in 2001 (table I.1), and this has grown dramatically in developing countries. (For earlier figures, see *WIR94*.) While the number may not be large in relation to total employment in the developing world, they are significant in countries that have attracted sustained FDI (for Asia, see table I.6). Foreign affiliates are major employers in Singapore, accounting for more than half of total employment in manufacturing.²² Hong Kong (China), Malaysia and Sri Lanka have seen increasing shares of affiliates in total

Box I.7. Financing international production locally

In the second half of the 1990s, “the biggest capital project ever seen in Botswana”^a took place. It involved a doubling of the production capacity of the largest diamond mine at Orapa, owned and operated by a foreign affiliate, Debswana Diamond Company, a 50-50 per cent joint venture between De Beers, a leading international diamond group, and the Government. The project involved a total investment of some \$320 million. Yet, Botswana’s total FDI inflows (involving FDI by all foreign affiliates) during its realization were only \$290 million during 1997-2000. This apparent paradox arises from the methodology used to report FDI inflows.

FDI inflows are a balance-of-payments measure, comprising reinvested earnings of foreign affiliates and the financing of these affiliates by *parent companies* in the form of loans or equity capital. They do not include financing through loans by affiliates from local or international capital markets and co-financing by local shareholders.

The Orapa expansion was financed largely by non-FDI means. Nearly one-fifth of the project was financed by a cash injection by the foreign shareholder, through a loan raised by the De Beers Group from local banks. The balance was provided by using reinvested profits, which would otherwise have been distributed to the owners. Only the foreign shareholder’s

part in this re-investment – that of De Beers – qualifies as FDI, and has been recorded as increased FDI inflows into Botswana. On the other hand, the financing of the part of the project by the local shareholder, the Government, is not recorded as FDI. Assuming that both shareholders contributed reinvested earnings in equal proportions, only 40 per cent of the total value of the project was financed through FDI. In addition, given that this 40 per cent represented profits earned in Botswana and reinvested there by the foreign partner, the project was undertaken without an infusion of fresh capital from abroad. Reinvested earnings are recorded in the balance of payments as FDI inflows, because the assumption is that the foreign parent firm could have repatriated the profits, but instead decided to reinvest them.^b

This points to limitations of FDI inflows as a measure of the growth of international production because, regardless of the sources of funds, that segment of Botswana’s economy that is part of international production has grown more than is indicated by FDI figures. These limitations come particularly into play in developing countries like Botswana that have no shortage of local savings, a liberalized capital account and high creditworthiness – and that also have large foreign affiliates participating in joint ventures.

Source: UNCTAD, forthcoming a.

^a “Debswana gearing up and up” *Sunday Times. Business Times*, <http://www.btimes.co.za/97/0824/world/world2.htm>; “Botswana lends De Beers R455m”, *Daily Mail and Guardian, Business*, 8 July 1999, <http://www.mg.co.za/mg/za/archive/99jul/08julpm-business.html>.

^b For more on this, see *WIR99*, pp. 160-161.

employment over the past decade. Latin America is different. Reflecting relatively low FDI inflows during the 1980s and the early 1990s, the share of employment in foreign affiliates declined in Brazil and Mexico during this period (table I.6), though it is not clear whether this trend has continued as no data are available for the subsequent period.

Other popular measures of foreign activity are *sales* and *value added*.²³ Data on these show similar trends (tables I.7-I.8). According to data on manufacturing sales, the developing countries with the highest shares of foreign affiliates are Singapore and Malaysia. The growth of sales by foreign affiliates in China is impressive (table I.7). These countries also have high shares of foreign affiliates in value added. As far as affiliates in developed countries are concerned, Ireland, the Netherlands and Sweden score high.

Foreign affiliates tend to have higher *labour productivity* (as measured by value added per employee) than domestic firms.²⁴ The ratio is two or higher in Ireland and the Netherlands among developed economies, and in China, Singapore and Taiwan Province of China among developing ones (annex table A.I.5). In the late 1990s, employees of foreign affiliates in manufacturing generated value added ranging from \$7,000 (China) to \$120,000 (Singapore) in developing countries, and from \$60,000 - \$70,000 (France, Finland, Japan Norway and Sweden) to \$270,000 (Ireland) in developed countries. In France and Sweden, labour productivity in manufacturing was lower in foreign affiliates than in local firms.

Profits, or net income of foreign affiliates, is another useful measure of the role of TNCs in host economies. Countries with a higher share of foreign profits or net income are not necessarily the same as those

Table I.6. Significance of employment^a in foreign affiliates in the manufacturing sector in selected host economies, 1985-1999
(Percentage)

Economy	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
<i>Developed countries:</i>																
Austria	32.0	33.5	35.3	35.1	37.7	39.7	36.0	39.9	37.1	41.9	28.9	29.6	28.9	27.9	27.6	..
Finland	..	..	..	..	..	..	..	..	..	8.8	9.0	11.8	10.7	12.8	..	..
France	..	..	..	..	..	..	..	..	..	..	..	..	..	22.7	..	..
Germany	..	..	..	..	..	..	14.2	15.6	16.3	16.5	..	..	..	..	..	..
Ireland	..	..	..	..	34.5	34.7	34.5	34.3	34.9	35.8	35.6	36.3	36.7	36.8	..	..
Italy	..	..	11.8	..	..	..	..	..	..	..	..	..	14.0	..	..	..
Japan	..	..	..	1.2	1.3	1.3	1.4	1.4	1.3	1.6	1.6	1.6	1.7	1.8	..	..
Netherlands	..	..	..	..	..	..	..	..	..	..	24.7	24.1	..	..	..	..
Norway	..	..	..	..	..	..	..	6.3	..	..	..	13.2	..	..	..	..
Portugal	..	..	..	..	..	..	..	..	..	..	..	7.3	7.9	7.9	..	..
Sweden	..	..	..	..	..	..	..	..	18.5	18.3	22.6	23.7	24.3	26.8	31.4	..
United Kingdom	..	..	..	..	..	..	..	..	15.9	15.8	14.2	19.5	18.0	..	..	..
United States	8.9	8.8	9.3	10.8	12.7	13.3	14.0	13.9	13.7	14.0	13.5	13.6	13.5	15.1	15.8	..
<i>Developing economies and countries in Central and Eastern Europe:</i>																
Brazil	..	..	24.3	..	..	..	..	..	..	..	13.4	..	..	..	..	..
Hong Kong, China	10.2	11.5	11.7	13.1	13.0	12.9	13.4	13.2	14.2	16.9	19.3	20.3	22.5	..	..	..
Indonesia	..	..	..	..	..	..	..	3.3	..	..	..	4.7	..	..	..	..
Madagascar	..	..	..	..	..	..	..	..	..	..	..	..	..	88.4	..	..
Malaysia	29.8	30.5	33.6	36.4	39.7	43.2	45.6	45.9	43.2	43.7	38.5	..	..	..	..	..
Mexico	42.7	..	..	..	..	..	..	..	17.9	..	..	..	..	..	..	..
Nepal	..	..	..	..	..	..	..	..	..	..	..	..	..	..	25.0	..
Singapore	55.0	56.4	58.0	59.5	59.8	59.7	58.1	56.8	55.1	55.1	54.8	53.4	52.3	49.9	48.5	..
Slovenia	..	..	..	..	..	..	..	..	..	..	..	..	..	..	13.1	14.9
Solomon Islands	..	..	..	..	..	..	..	..	..	..	5.1	..	..	..	..	..
Sri Lanka	19.2	19.0	24.2	25.7	26.9	26.8	32.6	41.8	28.2	30.9	34.3	..	..	..	..	..
Taiwan Province of China	10.7	10.1	9.2	9.6	11.7	12.8	11.9	9.9	10.6	..	..	..	..	..	..	..
Turkey	..	1.5	..	..	..	3.2	..	..	..	..	..	..	..	..	..	..
Viet Nam	..	..	..	..	..	..	..	..	..	..	..	22.6	..	..	..	..

Sources: UNCTAD, based on UNCTAD FDI/TNC database (employment of foreign affiliates) and UNIDO Industrial Statistics Database (employment of all firms).

^a Defined as the number of employees of foreign affiliates divided by the number of employees of all firms in the manufacturing sector.

Notes: Data for the Netherlands, Sweden and the United Kingdom refer to majority-owned foreign affiliates only. Data for foreign affiliates for Sri Lanka are approval data.

Table I.7. Significance of sales^a of foreign affiliates in manufacturing in selected host economies, 1985-2000
(Percentage)

Economy	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
<i>Developed countries:</i>																
Austria	..	..	..	..	..	..	..	..	..	..	25.4	25.2	26.3	26.2	25.8	..
Finland	..	..	..	..	..	..	..	..	..	9.1	8.6	13.4	11.5	12.8	..	..
Germany	..	..	..	..	..	..	25.3	25.5	26.1	26.1	..	..	..	..	..	..
Ireland	50.2	50.0	52.0	55.1	56.2	54.0	53.9	55.5	58.3	61.6	65.2	66.4	69.2	74.9	..	..
Italy	17.7	..	20.3	..	21.9	..	26.4	..	24.9	..	26.7	..	28.3	..	..	..
Japan	..	..	..	3.0	3.1	3.3	3.1	3.1	2.9	3.8	3.9	3.7	4.0	3.9	..	..
Netherlands	38.6	..	..	..	..	..	..	..	..	46.5	..	..	..	..	..	..
Portugal	..	..	..	..	..	..	..	..	..	..	..	16.1	16.3	16.3	..	..
Sweden	..	..	..	..	..	..	..	..	..	..	..	..	..	28.8	39.5	..
United Kingdom	..	..	..	..	..	..	..	..	25.8	25.8	25.1	35.0	34.1	..	..	..
United States	10.0	9.9	11.0	12.4	15.0	16.4	16.7	16.5	17.0	17.6	17.5	17.0	16.4	18.1	18.0	..
<i>Developing economies:</i>																
China	..	..	..	..	..	2.3	5.3	7.1	9.1	11.3	14.3	15.1	18.6	24.3	27.7	31.3
Hong Kong, China	20.1	19.3	19.1	24.3	20.2	22.6	26.0	27.0	30.8	35.7	43.5	44.6	44.8	..	..	..
India	..	..	6.4	6.4	5.8	5.4	5.5	..	6.1	5.5	3.1	..	..	..	..	..
Malaysia	34.0	36.1	37.8	38.0	40.8	44.1	45.4	47.6	48.6	52.6	50.1	..	..	..	..	..
Singapore	72.4	73.5	75.3	74.7	76.2	76.9	75.4	74.7	74.8	75.1	76.6	75.9	75.8	76.0	81.1	..
Taiwan Province of China	12.7	12.7	13.7	13.5	15.0	17.8	19.2	20.9	18.7	21.5	..	..	..	..	..	..
Turkey	..	6.8	..	..	..	2.7	..	..	..	..	..	..	..	..	..	..

Sources: UNCTAD, based on UNCTAD FDI/TNC database (employment of foreign affiliates) and UNIDO Industrial Statistics Database (employment of all firms).

^a Defined as sales of foreign affiliates divided by sales of all firms in the manufacturing sector.

Table I.8. Significance of value added^a of foreign affiliates in selected host economies, 1985-1999
(Percentage)

Economy	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
<i>Developed countries:</i>																
Finland	3.4	4.3	5.3	5.7	6.1	9.5	..
France	4.0	4.2	4.1	..	..
Ireland	19.6	29.6	20.0	22.5	23.8	21.3	22.3	23.1	24.4	26.8	30.2	30.6	31.8	35.8	40.2	..
Japan	1.1	0.6	0.6	0.6	0.5	..	..
Netherlands	7.5	10.2	..	..	..	..
Norway	0.9	1.0	1.2	2.3	2.2	..	..	..	..
Portugal	7.1	6.0	6.4	6.2	..
Sweden	9.3	11.5	..
United Kingdom	5.5	6.0	5.9	6.6	6.0	..	..	..
United States	4.2	4.3	4.4	4.4	4.6	4.7	4.8	4.9	..
<i>Developing countries and countries in Central and Eastern Europe:</i>																
China	4.4	4.2	4.8	..	..	..
Czech Republic	10.2	13.7
Estonia	8.4	..
Hungary	24.0	24.2
India	1.1	..	1.5	1.4	1.4	1.3	1.3	..	1.4	1.3	1.0	..	..	..	..	..
Malaysia	15.8	15.0	15.5	15.0	16.1	17.5	18.6	20.1	20.6	23.1	23.8	..	..	..	..	..
Slovenia	3.5	5.4
Viet Nam	11.3	11.6	12.5	..	..	..

Sources: UNCTAD, based on FDI/TNC database (value added for foreign affiliates) and UNCTAD secretariat (GDP).

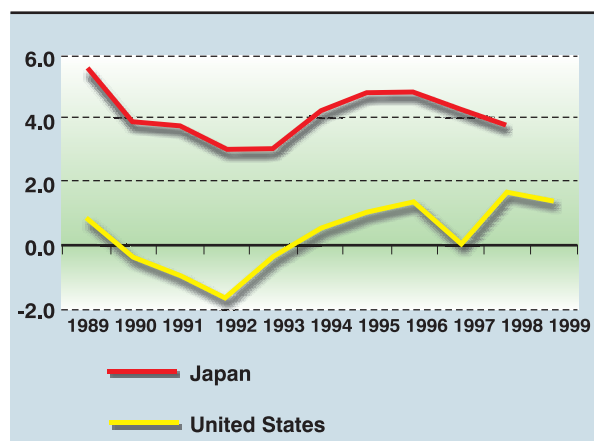
^a Defined as value added of foreign affiliates divided by GDP.

Notes: Data on value added for France, Ireland, Netherlands, Norway and the United Kingdom represent data for majority-owned foreign affiliates.

with a higher share of foreign value added. There is, for example, an interesting contrast between Japan and the United States in this respect (figure I.9). Although foreign affiliates play an insignificant role in Japanese production, they play a more significant

one in Japanese profits; the profitability (profits divided by sales) of foreign affiliates in Japan is twice that of domestic firms (Japan, METI, 2001b). On the other hand, foreign affiliates in the United States do not earn as much as domestic firms and

Figure I.9. Profitability^a of foreign affiliates operating in Japan and the United States, 1989-1999
(Percentage)



Source: UNCTAD, FDI/TNC database.

^a Defined as profits before taxes divided by sales.

account for less than 1 per cent of total profits. The profit share is considerably lower than any other measure of the significance of foreign affiliates in the United States. In developing countries such as Mexico and Singapore, foreign affiliates account for a fairly large share – more than one-third – of total profits in manufacturing (table I.9).

In general, the share of foreign affiliates in host economies is lower in terms of profits than in terms of other variables.

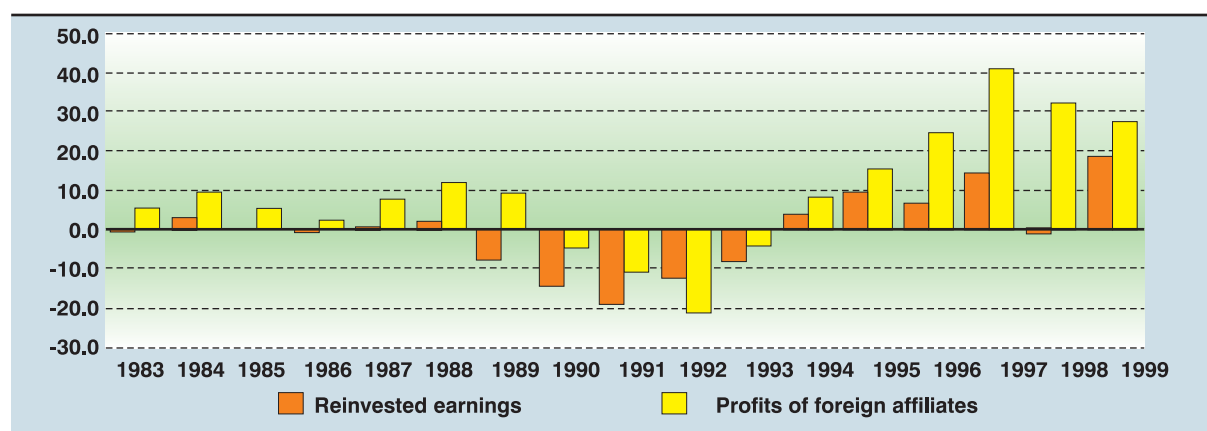
Table I.9. Significance of profits^a of foreign affiliates in manufacturing in selected host economies, 1983-1999
(Percentage)

Economy	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
<i>Developed countries:</i>																
Canada	..	..	..	14.4	..	..	..	..	8.8	..	..	..	..	..	..	..
Finland	..	..	..	..	..	..	..	..	..	1.2	2.5	3.5	5.7	4.4	..	..
France	..	..	13.2	..	..	..	..	12.7	..	..	..	..	..	..	..	..
Japan	..	..	..	0.9	0.8	0.5	0.5	0.2	0.4	0.6	0.7	0.7	0.7	0.5	..	..
Netherlands	..	..	..	..	..	..	..	..	..	..	29.7	33.9	..	..	..	..
Norway	..	..	..	..	..	..	..	7.7	..	..	..	..	..	..	..	..
Sweden	4.2	..	..	..	..	..	..	..	..	11.2	..	..	..	..	..	..
United Kingdom	13.1	..	..	..	..	..	..	14.7	..	..	..	..	..	..	..	..
United States	..	..	..	..	..	..	..	0.4	0.6	1.4	1.4	1.6	1.7	1.9	1.5	..
<i>Developing economies and countries in Central and Eastern Europe:</i>																
India	..	..	..	..	..	..	..	..	2.9	2.7	2.4	..	..	..	..	..
Malaysia	9.1	11.1	12.2	14.4	13.6	13.7	12.9	12.0	10.7	19.0	14.2	..	..	..	..	..
Mexico	12.7	..	..	..	..	..	..	..	34.3	..	..	..	..	..	..	..
Singapore	22.3	37.6	41.1	39.7	40.2	38.4	37.3	30.6	36.6	37.5	42.7	42.7	40.6	39.5	56.8	..
Slovenia	..	..	..	..	..	..	..	..	..	..	..	..	..	..	41.3	32.7
Taiwan Province of China	3.3	5.0	5.5	7.4	7.6	6.2	6.6	8.4	7.0	9.8	..	..	..	..	..	..

Sources: UNCTAD, based on UNCTAD's FDI/TNC database (profits of foreign affiliates) and UNIDO Industrial Statistics Database (profits of all firms).

^a Defined as profits of foreign affiliates divided by profits of all firms in the manufacturing sector.

Figure I.10. Comparison of reinvested earnings of FDI inflows and profits of foreign affiliates in the United States, 1983-1999
(Billions of dollars)



Source: UNCTAD, FDI/TNC database.

Table I.10. Significance of R&D expenditures of foreign affiliates in selected host economies, 1986-1999
(Percentage)

Economy	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
<i>Developed countries:</i>														
Canada	31.8	29.7	29.7	31.7	34.6	34.2	..
Finland	13.3	13.2	14.9
France	14.2	17.1	16.7	..	16.4	..
Greece	6.5	..	3.8	3.4	3.6	..	..
Ireland	71.0	..	64.6	..	65.6	..	..
Japan	0.9	1.5	1.4	0.9	1.3	1.7	..
Netherlands	20.6	21.8	..
Portugal	18.0
Spain	26.8	..	35.7	..	32.8
Sweden	14.7	10.4	18.4	18.7	15.9	17.5	..
United Kingdom	28.0	29.2	30.1	32.5	30.1	31.2
United States	12.1	13.0	13.3	12.4	12.2	14.9	..
<i>Developing economies and countries in Central and Eastern Europe:</i>														
Czech Republic	1.3	2.7	6.4
Hungary	22.6	21.8	44.4	65.3	78.5	..
India	..	0.5	0.4	0.3	0.4	0.4	..	2.0	1.6	..	..	..	..	..
Taiwan Province of China	28.0	26.2	26.1	23.1	29.9	52.9	33.1	24.5	65.3	..	..	..	..	..
Turkey	16.3	29.4	32.8	21.7	18.6	10.1	..

Sources: UNCTAD, based on OECD 2001a, table 59, UNCTAD's FDI/TNC database and World Bank, 2001b.

Notes: Data refer to R&D expenditures of foreign affiliates as a percentage of R&D expenditures of all enterprises.

with other developed countries ranging in between. In developing and transition economies, affiliates in Hungary and Taiwan Province of China also accounted for a high share of R&D – over 50 per cent. However, most other developing countries were not successful in attracting R&D by TNCs (WIR01).

The share of R&D conducted abroad by parent firms varies widely by home country. In the United States, 87 per cent of the R&D by TNCs was conducted at home in 1998 (United States, Department of Commerce, 2001); in Japan, the figure was 97 per cent in 1995 (Japan, MITI, 1998).

These shares can be compared with the one-third and one-quarter of total sales generated by the foreign affiliates of United States and Japanese TNCs. However, these trends are not representative of other developed countries (WIR99). A broader coverage of data is available from patents taken out internationally (in the United States) by parent companies and affiliates, which reflects better their pattern of R&D spending.²⁵ The patent data show that, in smaller countries (e.g. Belgium, the Netherlands and Switzerland), the ratio of overseas to domestic patenting was over half

in the early 1990s. Even the United Kingdom, a larger but highly internationalized economy, had a ratio of 56 per cent, Germany 21 per cent and Sweden 42 per cent. Thus, apart from Japan and the United States, TNC R&D is quite internationalized, although most of it continues to be undertaken in other industrial countries.

2. The Transnationality Index of host countries

This index was developed by UNCTAD to compare the transnationality of countries in which TNCs operate (*WIR99*). It attempts to measure the transnationalization of economic activity of host countries in real terms, taking into consideration both the production potential created through inward FDI and the results of this investment. The transnationality index for a country is based on two FDI variables and two variables related to foreign firms' operations in a host country:

- FDI inflows as a percentage of gross fixed capital formation;
- FDI inward stock as a percentage of GDP;
- value added by foreign affiliates as a percentage of GDP; and
- employment by foreign affiliates as a percentage of total employment.

The simple average of these four shares results in the Transnationality Index of a host country (annex table A.I.6). The first two shares indicate the importance of inward FDI flows and stocks in an economy. A larger capital base – corresponding to larger FDI – indicates the potential to produce more. The last two shares capture the significance of foreign affiliates. The two sets of variables are correlated: high FDI shares are normally reflected in more activities by foreign affiliates in a country. The average value of the first two variables of the 74 countries for which it is calculated was 24.0 in 1999, higher than the average of the last two which was 9.8 (annex table A.I.6). The average Transnationality Index of these 74 countries was 16.9.

The world's most transnational host economy is Hong Kong (China), followed by Belgium and Luxembourg, Trinidad and Tobago and Nigeria. Regionally most host countries with a high Transnationality Index are in Latin America (figure I.11). In general,

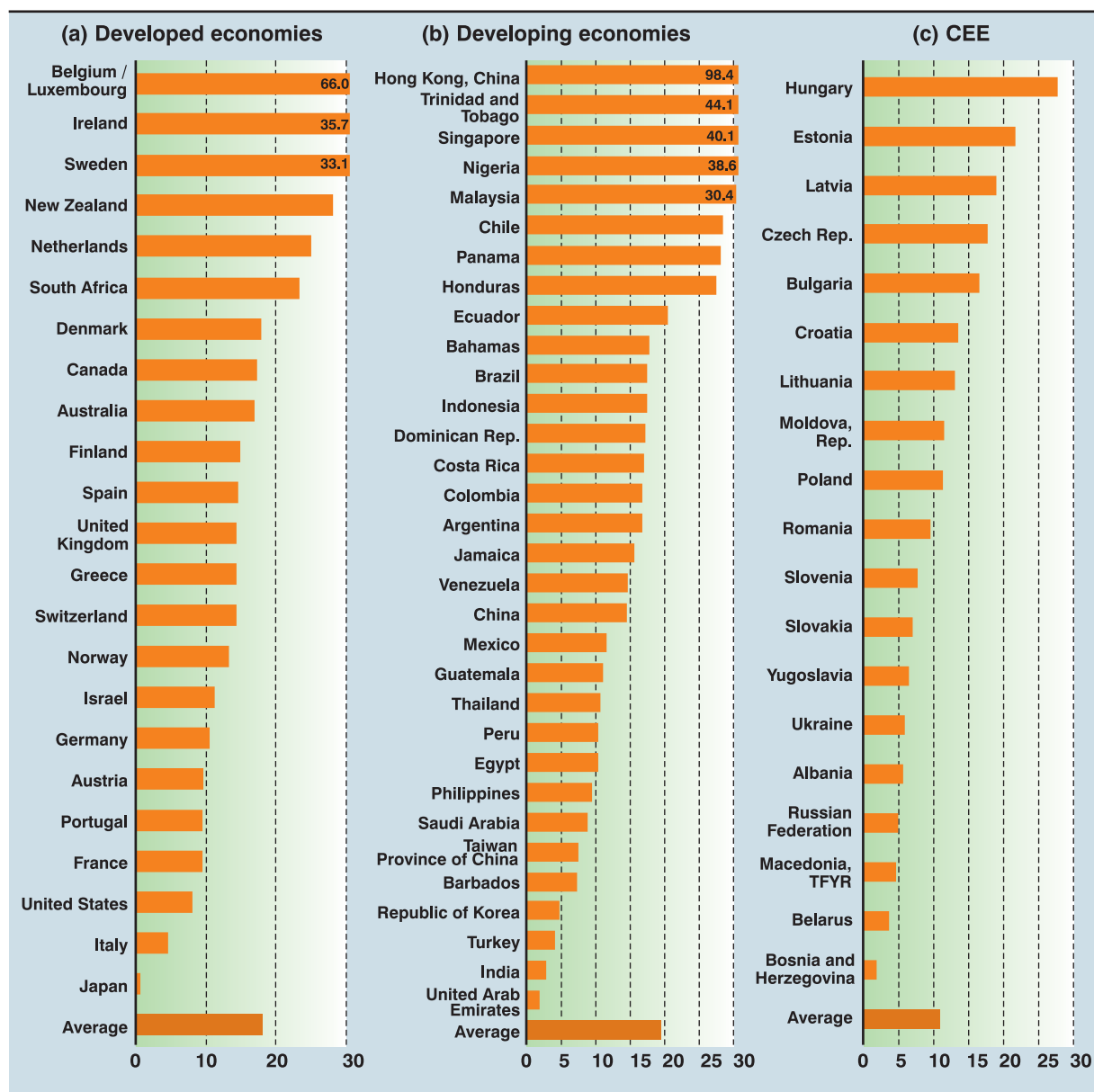
the average index, by group of economies, is higher for developing (19.5 in 1999) than for developed countries (18.0) and for CEE (11.2). The low index number for CEE reflects the fact that this region opened its markets to foreign investors only in the 1990s.

The ranking of some economies based on the Transnationality Index is significantly different from their ranking based on the FDI variables alone. Denmark (ranking 18th among 74 countries by the Transnationality Index as opposed to 38th by the FDI shares only), Greece (ranking 35th and 59th, respectively), Honduras (ranking 13th and 42nd), Spain (ranking 33rd and 48th) and Taiwan Province of China (ranking 60th and 69th) are typical examples. This suggests that foreign affiliates in these countries use more resources than those provided by parent firms and/or generate more employment and value added per unit of resources than do foreign affiliates in other host countries.

Notes

- 1 Starting with this year's *Report*, some changes are made to the country composition in each group of economies. CEE now includes all countries of former Yugoslavia; South Africa is now included in Africa; and Malta is grouped with developed countries. For details, see the definitions and sources in Annex B.
- 2 All FDI figures in *WIR02* and previous *WIRs* are in current prices. In constant prices (using the world import prices of 1995 as the base year), world inflows and outflows would be \$872 billion and \$736 billion, respectively.
- 3 FDI inflows declined in 1976 (by \$6 billion or 24 per cent), 1982 (by \$10 billion or 15 per cent), 1983 (by \$8 billion or 13 per cent), 1985 (by \$2 billion or 4 per cent) and 1991 (by \$43 billion or 21 per cent). Similarly, outflows declined in 1974 (by \$2 billion or 6 per cent), 1980 (by \$9 billion or 15 per cent), 1982 (by \$25 billion or 47 per cent) and 1991 (by \$35 billion or 15 per cent).
- 4 FDI outflows in the first four months of 2002 were: \$0.8 billion for Germany (\$9.3 billion during the same period of 2001), \$14.7 billion for France (\$24.4 billion), \$15.1 billion for Italy (\$5.2 billion), \$14.7 billion for Japan (\$14.4 billion), \$20 billion for the United Kingdom (27.4 billion during the first quarter only) and \$21.3 billion for the United States (\$22.9 billion during the first quarter only).
- 5 FDI inflows in the first quarter of 2002 were \$6.7 billion for Brazil (\$6.8 billion during the same period of 2001), \$2.8 billion for Mexico (\$3.0 billion), \$6.7 billion for the United Kingdom (\$24.0 billion) and \$24.6 billion for the United States (\$42.6 billion), \$24.6

Figure I.11. Transnationality index^a of host economies,^b 1999
(Percentage)



Source : UNCTAD estimates.

^a Average of the four shares : FDI inflows as a percentage of gross fixed capital formation for the past three years, 1997-1999; FDI inward stocks as a percentage of GDP in 1999; value added of foreign affiliates as a percentage of GDP in 1999; and employment of foreign affiliates as a percentage of total employment in 1999.

^b Only the economies for which data for all of these four shares are available were selected. Data on value added are available only for Finland, France (1998), Italy (1997), Japan (1998), Netherlands (1996), Norway, Portugal, Sweden, United Kingdom (1997), United States, China (1997), India (1995), Malaysia (1995), Singapore and Taiwan Province of China (1994). For other economies, data were estimated by applying the ratio of value added of United States affiliates to United States outward FDI stock to total inward FDI stock of the country. Data on employment are available only for Austria, Denmark (1996), Finland, France (1998), Germany, Ireland, Italy (1997), Japan (1998), Netherlands (1996), Norway (1996), Portugal (1996), Sweden, United Kingdom (1997), United States, Hong Kong (China) (1997), Indonesia (1996) and Singapore. For other countries, data were estimated by applying the ratio of employment of Finnish, German, Japanese, Swedish, Swiss and United States affiliates to Finnish, German, Japanese, Swedish, Swiss and United States outward FDI stock to total inward FDI stock of the economy. Data for France, Ireland, Netherlands, Norway, Sweden and United Kingdom refer to majority-owned foreign affiliates only. For Albania, Belarus, Bosnia and Herzegovina, Croatia, Estonia, Lithuania, the Republic of Moldova, Poland, Ukraine and Yugoslavia, the employment impact of foreign-owned affiliates was estimated on the basis of their per capita inward FDI stocks. For the benchmark data, see annex table A.I.5. With the exception of the Czech Republic, Hungary and Slovenia, the value added of foreign-owned firms was estimated on the basis of the per capita inward FDI stocks. For the benchmark data, see annex table A.I.3.

billion for China (\$20.7 billion during the first six months), \$15.3 billion for Germany (-\$0.3 billion for the first four months), \$9.2 billion for France (\$12.6 billion for the first four months) and \$6.4 billion for Japan (\$11.5 billion for the first four months).
 6 The correlation between the FDI growth rate and the GDP growth rate was 0.3 during 1971-2000. Similarly, a simple regression of FDI inflows against GDP during the same period is as follows:

$$\text{FDI inflows} = -190.9 + 0.0251(\text{GDP}).$$

$$R^2 = 0.75, \text{ adjusted } R^2 = 0.55,$$

t-value of GDP coefficients = 6.0.
 7 In earlier years as well, when the growth rates of the world economy were low, the share of developing countries in world flows rose: from an average of 22 per cent during 1976-1980 to 39 per cent during 1981-1982; and from 18 per cent during 1986-1990 to 31 per cent during 1991-1992.

8 This is what a number of Asian countries did in partial response to the Asian financial crisis (see *WIR98*).

9 For a detailed account on trends in cross-border M&As and their impact on economic development, see *WIR00*.

10 For example, in the transport, storage and communications industries, the value of cross-border M&As declined from almost \$366 billion in 2000 to just over \$121 billion in 2001; and in the motor vehicle and other transport equipment industries, from about \$25 billion in 2000 to about \$5.7 billion in 2001 (annex table B.9).

11 Data from the UNCTAD cross-border M&A database. This figure represents deals concluded through the exchange of shares.

12 The six major stock exchanges are the New York Stock Exchange, the NASDAQ, the Tokyo Stock Exchange and the stock exchanges of Frankfurt, London and Paris. *Nihon Keizai Shimbun*, 2 October 2001.

13 For example, Japanese TNCs financed some 30 per cent of capital expenditures in their affiliates in the United States and Europe with funds raised through stocks and bonds in 1998 (Japan, METI, 2001a, pp. 166-172).

14 The data cover completed cross-border M&A deals involving more than 10 per cent equity only. For details on the nature of the data, see "Definitions and Sources" in annex B.

15 In comparison, the ratio of FDI to GDP worldwide was 2.3 per cent, 4.8 per cent and 2.4 per cent, respectively in 2001, 2000 and 1998.

16 "M&A volume down almost a half in 2001", *Financial Times*, 10 December 2001.

17 Some prominent examples were the \$200-billion acquisition of Mannesmann (Germany) by VodafoneAirTouch (United Kingdom) in 2000 and the \$60-billion deal of AirTouch

Communications (United States) and Vodafone Group (United Kingdom) in 1999. By comparison, in 2001, the largest cross-border deal (the acquisition of VoiceStream (United States) by Deutsche Telekom AG (Germany)) was worth "only" \$29 billion (annex table A.1.2).

18 Flows are netted out. The other components – net portfolio investment flows and other net private capital flows such as bank lending – were projected to be negative in 2001, -\$30 billion and -\$114 billion, respectively (IMF, 2002).

19 Figures for FDI flows to developing countries are strongly affected by the geographical coverage of estimates made by different sources. For example, the Institute of International Finance estimates \$132.5 billion in 2000, \$148.8 billion in 2001 and \$117.1 billion in 2002 in direct equity investments for 29 emerging countries, which include seven countries in CEE (see IIF, "Capital flows to emerging market economies", 30 January 2002). In comparison, UNCTAD's estimate for developing countries is based on data on FDI covering all of Africa, Asia (except Japan and Israel), Latin America and the Caribbean, and Oceania (except Australia and New Zealand), while that for CEE is based on all economies of that region.

20 The survey covered 501 respondent manufacturing firms.

21 Defined as the total value of equity and reserves in foreign affiliates held by parent companies, plus loans by their parent companies to the affiliates. (For details, see "Definitions and Sources" in annex B.)

22 Although the share of employment of foreign affiliates in total employment is higher in Sri Lanka than in Singapore, Sri Lanka's data on affiliates' employment are overestimated as they are figures for cumulative (potential) employment in approved FDI projects, some of which have not been realized.

23 While sales data are more widely available than value-added data, appropriate sales data do not exist to measure the size of foreign affiliates' activity in the services sector (e.g. wholesale trade, financial institutions). On the other hand, value-added data do not suffer from measurement problems, or from differences in interpretation of the concept (unlike sales, which can be operating revenues, total revenues or net sales). As value added is the value of outputs minus the inputs that firms purchase (or net addition to production), it can be compared with GDP.

24 Labour productivity can reflect many differences other than efficiency between firms: capital intensity, capacity utilization, scale economies, extent of vertical integration and so on.

25 The data for 1991-1995 are taken from Cantwell and Janne, 1998.