

**United Nations Conference on Trade and Development**

# **World Investment Report 1999**

## **Foreign Direct Investment and the Challenge of Development**

**United Nations  
New York and Geneva, 1999**

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## Preface

In 1945 our founders enshrined the promotion of economic development and the improvement of the quality of life for people in all countries as fundamental objectives of the United Nations. Since then, countries have worked together to achieve these objectives and many of them have made great progress. Even so, the gap between developing and developed countries, and between rich and poor within many countries, remains as wide as ever. In some respects, it is growing even larger. Achieving sustainable and equitable development thus remains the unfinished task of the twentieth century.

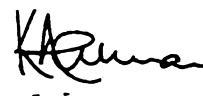
The central role in fulfilling this task must be played by the people of each country, through private enterprise and public organization at the local and national levels. But a very important role can also be played by foreign direct investment (FDI) – increasingly so, as the world economy becomes more global and new technology is ever more essential to economic growth.

Each year, the *World Investment Report* examines issues related to foreign direct investment. This year's edition looks specifically at the impact of such investment on key aspects of economic development – increasing financial resources, enhancing technological capabilities, boosting export competitiveness, generating and upgrading employment, and protecting the environment. The first message that emerges is that, while FDI can indeed contribute to economic growth and development, it is not a panacea. It can complement and catalyse economic activities and the performance of domestic enterprises, but in some circumstances it may also hinder them.

Another message of the report is, therefore, that public policy does matter, at the national and the international levels. It is important in creating the conditions that attract foreign direct investment. And it is important for enhancing its benefits. To promote the development of their own countries, Governments need to maximize the positive contribution that foreign direct investment can make to development, and to minimize any negative effects it may have.

While the primary responsibility for development rests with national Governments, corporations also have a responsibility, not only to their shareholders but to society at large. One of the challenges for the future is precisely to encourage firms to assume this responsibility more forcefully.

The report's focus on foreign direct investment and development is particularly timely, as it comes shortly before several important events in the year 2000 intended to advance the cause of development: UNCTAD X in February in Bangkok, the South Summit of the Group of 77 in Havana in April, and the United Nations Millennium Summit and Assembly in New York in the autumn. I hope the report will contribute to the deliberations at these events, and help to bring about an improved understanding of development-related processes and policies that are essential if the twenty-first century is to complete – as it must – the unfinished task of the twentieth.



Kofi A. Annan  
Secretary-General of the United Nations

New York, July 1999

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# OVERVIEW

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The momentum for the expansion of international production continues to hold, though the world economy is currently affected by a number of factors that could discourage investment, including FDI by TNCs. FDI flows to developing countries declined in 1998, but that decline was confined to a few countries. Technology flows, as measured by technology payments, continued to grow, partly reflecting the increasing importance of technology in the production process. Cross-border M&As among developed countries have driven the expansion of FDI flows and international production capacity in 1998. This suggests that, in the face of diminished financing and reduced market prospects world-wide, TNCs in the Triad are concentrating on consolidating their assets and activities so as to strengthen their readiness for global expansion or survival once the health of the world economy, including countries affected by the recent financial crises and their aftermath, is fully restored.

## TRENDS

### *Transnational corporations drive international production ...*

International production – the production of goods and services in countries that is controlled and managed by firms headquartered in other countries – is at the core of the process of globalization. Transnational corporations (TNCs) – the firms that engage in international production – now comprise over 500,000 foreign affiliates established by some 60,000 parent companies, many of which also have non-equity relationships with a large number of independent firms. The TNC universe comprises large firms mainly from developed countries, but also firms from developing countries and, more recently, firms from economies in transition, as well as small- and medium-sized firms. A small number of TNCs, ranking at the top, are noteworthy for their role and relative importance in international production:

- The world's 100 largest non-financial TNCs together held \$1.8 trillion in foreign assets, sold products worth \$2.1 trillion abroad and employed some six million persons in their foreign affiliates in 1997. They accounted for an estimated 15 per cent of the foreign assets of all TNCs and 22 per cent of their sales. General Electric is the largest among these TNCs ranked by foreign assets, holding the top place for the second consecutive year. Close to 90 per cent of the top 100 TNCs are from Triad countries (European Union, Japan and United States), while only two developing-country firms - Petroleos de Venezuela and Daewoo - figure in the list. While company rankings may change from year to year, membership in the list of the 100 largest TNCs has not changed much since 1990: about three-quarters of the TNCs in the list in 1997 were already part of the world's 100 largest TNCs in 1990. Even the ranking of the top TNCs by their degree of transnationality (an index reflecting the combined importance of foreign assets, sales and employment as shares of their respective totals) has been fairly stable. Automotive, electronics/electrical



equipment, petroleum and chemicals/ pharmaceuticals are the dominant industries to which firms in the top 100 belong.

- The top 50 non-financial TNCs based in developing countries together held \$105 billion in foreign assets in 1997. The top companies from developing countries are less transnationalized than the world's 100 largest TNCs. They are domiciled in a handful of economies: Hong Kong (China), Republic of Korea, China, Venezuela, Mexico and Brazil. Their industrial composition is different from that of the world's top 100 TNCs, with food and beverages, petroleum, construction and diversified activities being the most important industries.
- The list of the 25 largest TNCs based in Central Europe (not including the Russian Federation) - published for the first time in this year's *World Investment Report* — identifies a new nascent group of investors which, together, held \$2.3 billion in assets abroad in 1998 and had foreign sales worth \$3.7 billion. Employment in their foreign affiliates, however, is low, a factor that reduces the value of the transnationality index for these firms. Most of the top TNCs from Central Europe are active in transportation, chemicals and pharmaceuticals, and natural resources.

The largest TNCs as described above are determined on the basis of the value of assets that they control abroad. Control of assets is usually achieved by a minimum share in equity or ownership, which defines foreign direct investment (FDI). Increasingly, however, TNCs are also operating internationally through non-equity arrangements, including strategic partnerships. A rising number of technology partnerships have been formed, in particular in the information technology, pharmaceutical and automobile industries in the 1990s. Such partnerships assist firms in their search for ways to reduce costs and risks, and provide them with the flexibility required in an uncertain and constantly changing technological environment. Knowledge-based networks, a dimension not captured by the traditional measures of international production, can be a crucial factor of market power in some industries.

### ***... which takes place in an increasingly liberal policy framework.***

The trend towards the liberalization of regulatory regimes for foreign direct investment (FDI) continued in 1998, often complemented with proactive promotional measures. Out of 145 regulatory changes relating to FDI made during that year by 60 countries, 94 per cent were in the direction of creating more favourable conditions for FDI. The number of bilateral investment agreements also increased further, reaching a total of 1,726 by the end of 1998, of which 434 had been concluded between developing countries. Close to 40 per cent of the 170 treaties signed that year were between developing countries. By the end of 1998, the number of treaties for the avoidance of double taxation had reached a total of 1,871.

At the regional and interregional levels, rule-making activity on FDI continued to be intense in all regions, mainly in connection with the creation or expansion of regional integration schemes, and typically involving rules for the liberalization and protection of FDI. The most important development in 1998 was that the negotiations on a Multilateral Agreement on Investment within the OECD were discontinued; however, work in the OECD continued in several other investment-related areas. Overall, the question of governance in international business transactions has been a recurrent subject in discussions and work related to international instruments in recent years.

### ***International production has many dimensions ...***

International production involves a package of tangible and intangible assets. Its principal global features (which, of course, differ from country to country) can be captured in various ways:

- On the production side, the value of the output under the common governance of TNCs (parent firms and foreign affiliates) amounts to about 25 per cent of global output, one

third of it in host countries. Foreign affiliate sales (of goods and services) in domestic and international markets were about \$11 trillion in 1998, compared to almost \$7 trillion of world exports in the same year. International production is thus more important than international trade in delivering goods and services to foreign markets. In the past decade, both global output and global sales of foreign affiliates have grown faster than world gross domestic product as well as world exports. Judging from data on FDI stock, most international production in developed countries is in services, and most international production in developing countries is in manufacturing. For both groups of countries, FDI in the primary sector has declined, while FDI in services in developing countries is gaining in importance. These shifts reflect changes in the structure of the world economy, as well as changing competitive advantages of firms and locational advantages of countries, and the responses of TNCs to globalization and liberalization.

- Technology flows play an important role in international production. Technology embodied in capital goods exported to foreign affiliates is measured by the value of those exports. Technology provided via contractual agreements is measured by the value of payments and receipts associated with them. And technology transmitted through training is measured by the cost of resources used in the training. Technology payments and receipts of countries in the form of royalty payments and licence fees have risen steadily since the mid-1980s, and the intra-firm (between parent firm and foreign affiliate) share of these expenditures, already high, has also risen. These changes reflect the fact that FDI is increasingly geared to technologically-intensive activities and that technological assets are becoming more and more important for TNCs to maintain and enhance their competitiveness. Much of the increase has taken place in developed countries where royalty payments and receipts have risen faster than FDI flows. These countries accounted for 88 per cent of payments and 98 per cent of receipts of cross-border flows of royalties and licence fees world-wide in 1997.
- Innovation and research and development (R&D) are at the heart of the ownership advantages that propel firms to engage in international production. On the basis of data for Japanese and United States TNCs, it seems that the bulk of R&D expenditure is undertaken by parent firms in their home countries and, when located abroad, mostly in developed countries. Affiliates tend to spend much less on R&D, especially in comparison to the R&D expenditures of the host countries in which they are located, notable exceptions being Ireland and Singapore.
- International trade is stimulated by international production because of the trading activities of TNCs. At the same time, international production takes place because trade is not possible in some cases, such as in the case of certain services that are location-bound because of the need for proximity between buyers and sellers. Trade within TNCs and arm's-length trade associated with TNCs are estimated to account, together, for about two-thirds of world trade, and intra-firm trade, alone, for one-third. High propensities to export on the part of foreign affiliates may be accompanied by high propensities to import, which can lead to trade deficits.
- International production generates employment opportunities that are particularly welcome in host countries with high rates of unemployment. In recent years, employment in foreign affiliates has been rising despite stagnating employment growth in TNC systems as a whole, i.e. when parent firms are also taken into account. The trend towards increasing employment is more pronounced for foreign affiliates in developing countries. However, employment in foreign affiliates is typically a small share of total paid employment in these countries, amounting to not more than two per cent of the workforce. In the manufacturing sector, which receives the bulk of FDI, this share is higher.
- Financial flows associated with international production consist of funds for financing the establishment, acquisition or expansion of foreign affiliates. The source of these funds can be the TNC itself – new equity from parent firms, loans, and/or earnings of foreign affiliates that are reinvested, together defined as FDI. There are also sources of funds

external to a TNC, raised by foreign affiliates in host countries and international capital markets. The expenditure of TNCs on establishing, acquiring or expanding international production facilities is therefore higher in value than the amount normally captured by FDI flows.

- The capital base of international production, regardless of how it is financed, is reflected in the value of assets of foreign affiliates. This is about four times the value of the FDI stock in the case of developed countries, but only marginally higher than the value of the FDI stock in the case of developing countries.

The extent to which a particular host country is involved in international production can be measured by an index of transnationality. It captures the average of the following four ratios: FDI inflows as a percentage of gross fixed capital formation for the past three years; inward FDI stock as a percentage of GDP; value added of foreign affiliates as a percentage of GDP; and employment of foreign affiliates as a percentage of total employment. Among developed countries, New Zealand has the highest transnationality index and Japan, the lowest. Among developing countries, Trinidad and Tobago has the highest index and the Republic of Korea, the lowest. Small host countries tend to score high in terms of the transnationality index.

*... that manifest themselves differently in different regions.*

With the exception of data on FDI (one source of finance for international production), comprehensive data on the global dimensions of international production are not available. Judging from the growth in FDI inflows and outflows as well as in other variables related to the activities of foreign affiliates, however, more and more firms engage increasingly in international production. In 1998, despite adverse economic conditions such as the financial crisis and ensuing recession in several Asian countries, the financial and economic crisis in the Russian Federation and the repercussions of these crises in some Latin American countries, declining world growth, trade, and commodity prices, and reduced bank lending, portfolio investment and privatization activity, FDI inflows increased by 39 per cent globally, the highest rate since 1987. In 1998, FDI inflows reached \$644 billion, and are projected to increase in 1999 as well. Mergers and acquisitions (M&As) have fuelled the increases in FDI, with a rise of more than \$202 billion in the value of M&As transacted in 1998 as compared with that in 1997. The importance of M&As as modes of expansion of international production implies that the net addition to total physical production capabilities annually is less than that implied by the value of annual FDI flows, since most of the additions may well be created by simply a change in ownership.

The record level reached by world FDI flows in 1998 despite the prevailing gloomy economic environment also masks a high concentration of FDI: the largest 10 home countries accounted for four-fifths of global FDI outflows. It also masks divergent trends for developed and developing countries. In the former, economic growth remained stable, largely unaffected by the recession in Japan or the financial crisis. FDI inflows to and outflows from developed countries soared to new heights – to about \$460 billion and \$595 billion, respectively, in 1998. Economic growth rates in developing countries in Asia plummeted due to the financial crisis and recession, but FDI flows there declined only moderately, cushioned by the impact of currency depreciation, policy liberalization and a more accommodating attitude towards M&As. Nevertheless, largely because of reduced inflows into a few Asian economies, FDI flows to developing countries as a group declined from \$173 billion to \$166 billion. Moreover, the FDI gap among developing countries widened further, with the top five countries receiving 55 per cent of all the developing-country inflows in 1998 and the 48 least developed countries receiving less than one per cent.

Most FDI is located in the developed world, although the developing countries' share had been growing steadily until 1997, when it reached 37 per cent. The subsequent decline (to 28 per cent) in that share in 1998 reflects the strong FDI performance of developed countries in that year. Among developed countries, most FDI is located — and originates — in the Triad, which accounted for almost two-thirds of the outward stock of developed countries in 1997.

Differences in the size as measured by gross domestic product of host economies are an important factor accounting for the differences observed in the shares of various regions and countries in world FDI flows. However, developing countries as a group receive more FDI per dollar of gross domestic product than do developed countries. Furthermore, if differences in economies' size are taken into account, the FDI gap among groups of developing regions diminishes. This is not surprising since FDI is attracted to developing countries also by factors (such as natural resources) not directly related to the size of their economies; it also suggests that the significance of a given amount of FDI for a country depends upon the country's income level. However, even when differences in gross domestic product are controlled for, developed countries remain more important as regards FDI outflows, although the gap between them and developing countries diminishes. Moreover, on a *per capita* basis developing countries receive (and invest abroad) less FDI than do developed countries, reflecting the concentration of population in the former and the concentration of FDI in the latter.

FDI flows from developing countries accounted for 14 per cent of global outflows in 1997, but only eight per cent in 1998. Despite the sharp dip in 1998, the overall trend remains positive: more and more TNCs from developing countries are becoming competitive internationally and possess ownership advantages that allow them to invest abroad, mainly in other developing countries. However, only a handful of developing countries account for the bulk of developing country FDI outflows. Most intra-developing country FDI activity is recorded in East and South-East Asia, especially among ASEAN countries, and recently in Latin America, especially among MERCOSUR members. There are signs that FDI flows from East and South-East Asia to Latin America and Africa are picking up. One way to assist South-South FDI flows is to help firms from developing countries to obtain insurance from MIGA for their investments abroad. As such insurance often depends on the preparation of environmental assessment studies (which, for many firms, especially smaller ones, are quite expensive), the establishment of a trust fund that would provide assistance in this respect should be considered.

### ***Driven by M&As, FDI flows to developed countries register an impressive increase ...***

Record FDI inflows into, and outflows from, developed countries are behind the 1998 surge in global FDI. Developed countries accounted for 92 per cent of global outflows and 72 per cent of global inflows in 1997. The developed country picture is characterized by an intensification of TNC-led links between the United States and the European Union, each of them being the largest source of FDI for the other, and by the emergence of Australia, Canada and Switzerland as significant FDI recipients. The cornerstone of the 1998 surge of FDI was, however, the marked growth of FDI flows into the United States and a few European countries, reflecting their solid economic fundamentals.

Most new FDI in 1998, especially between the United States and the European Union, was in the form of M&As. In fact, cross-border M&As drove the large increases in both inflows and outflows for the United States and the strong FDI performance of the developed world as a whole. A new phenomenon is the growth of cross-border M&As in Japan. For developed countries, the value of cross-border M&A sales reached a record \$468 billion in 1998.

The European Union was the largest source of FDI, registering \$386 billion in outflows in 1998. The United Kingdom, with about \$114 billion, was the lead European Union investor. In contrast to the boost to intra- and extra-European Union investment in the late 1980s and early 1990s that resulted from anticipation of the Single Market Programme, steps towards monetary integration manifested by the adoption of a single currency have so far had only little effect on FDI. Flows to members of the European Monetary Union (EMU) increased only slightly more than those to non-members in 1998, and the share of EMU members in total FDI inflows to the EU was still lower than in 1996. This could change in 1999 and beyond, as, with the implementation of the monetary union, its advantages and disadvantages for the location of FDI are understood better.



Japan's outflows declined from \$26 billion in 1997 to \$24 billion in 1998, while inflows remained at almost the same level as in 1997, i.e. \$3.2 billion. Economic recession at home and in neighbouring Asia (translating into fewer sales and lower profits) has reduced both the motivation and the ability of Japanese TNCs to invest abroad. This was manifested by lower outflows of new equity and reinvested profits. Japanese TNCs were hard hit in Asia, suffering losses and having to shift to export-oriented production to the extent possible. To alleviate their difficulties, Japanese TNCs are restructuring their overseas operations. On the other hand, despite the recession in Japan, investment opportunities in Japan, particularly for M&As, are leading to an increase in inflows. Although lower FDI outflows and higher FDI inflows are reducing the gap between FDI inflows to and outflows from Japan, the low level of the former may affect Japan's trade structure.

As this brief review shows, cross-border M&As were the driving force of increased FDI flows in 1998. There are many factors that explain the current wave of M&A – a wave that does not seem to be deterred by the relatively poor results that have been observed with respect to M&As, particularly in some industries. These include the opening of markets due to the liberalization of trade, investments and capital markets and to deregulation in a number of industries, and fiercer competitive pressures brought about by globalization and technological changes. Under these conditions, expanding firm size and managing a portfolio of locational assets becomes more important for firms, as it enables them to take advantage of resources and markets world-wide. The search for size is also driven by the search for financial, managerial and operational synergies, as well as economies of scale. Finally, size puts firms in a better position to keep pace with an uncertain and rapidly evolving technological environment, a crucial requirement in an increasingly knowledge-intensive world economy, and to face soaring costs of research. Other motivations include efforts to attain a dominant market position as well as short-term financial gains in terms of stock value. In many instances, furthermore, the dynamics of the process feeds upon itself, as firms fear that, if they do not find suitable partners, they may not survive, at least in the long run.

### ***... while the developing regions present a diverse picture. FDI flows into Latin America and the Caribbean rose, ...***

Despite the turbulence in financial markets, FDI flows into Latin America and the Caribbean in 1998 were more than \$71 billion, a five per cent increase over those in 1997. The MERCOSUR countries received almost half of this amount. With more than \$28 billion, Brazil was the largest recipient, followed by Mexico with \$10 billion. As commodity prices fell sharply, portfolio investment dried up, speculative currency attacks multiplied and positive current account balances turned negative, FDI capital inflows served as a stabilizing force for Latin America and the Caribbean overall. Privatization of service or natural-resource state enterprises is still an important driving force of FDI inflows into Latin America and the Caribbean. Large markets, especially those of NAFTA and MERCOSUR, also provided lucrative investment destinations. To the extent that FDI is concentrated in services and other non-tradable industries, profit and dividend remittances, as well as expectation regarding remittances, could have implications for the balance-of-payments of the host countries. In Brazil, for instance, profit and dividend remittances increased by about 18 per cent to an estimated \$7.7 billion in 1998.

The United States remains the largest investor in Latin America and the Caribbean. The European Union, however, has made significant gains as a source of FDI to that region, and is beginning to challenge the traditional dominance of the United States. Spain in particular has been a significant investor, accounting for one third of all European Union FDI in Latin America and the Caribbean in 1997. FDI outflows from Latin America and the Caribbean rose to more than \$15 billion 1998 – but more than two-fifths of that originated from offshore financial centres and cannot therefore be attributed solely to Latin American and Caribbean TNCs. An estimated \$8 billion was invested within the region; Argentinian, Brazilian and Chilean TNCs were especially active in intra-regional FDI.

### ***... compensating partly for a moderate decline in Asia and the Pacific; ...***

Although down by 11 per cent to \$85 billion in 1998, FDI flows to Asia and the Pacific appeared to have weathered the financial crisis that threw several Asian countries into turmoil and slashed growth rates. It proved to be the most resilient form of private capital flows, even in some of the countries directly hit by the crisis. Contributing to its resilience were the availability of cheap assets due inter alia to currency devaluations, FDI liberalization, especially as regards M&As, intensified efforts to attract FDI, and the still solid long-term prospects of the region.

China remains the largest FDI host country in the developing Asian region, receiving \$45 billion in 1998. The Republic of Korea saw a dramatic increase in inflows (from less than \$3 billion in 1997 to \$5 billion in 1998) and became a net FDI recipient with FDI inflows exceeding outflows for the first time in the 1990s. Thailand also experienced a dramatic increase in inflows (by 87 per cent in 1998), as a number of weakened financial institutions were acquired by foreign investors. The Philippines also registered large gains. By contrast, Hong Kong (China), Indonesia, Singapore, Taiwan Province of China and Viet Nam suffered declines.

South Asian economies received small FDI flows; India for example was unable to sustain the high rate of FDI growth it had enjoyed in the recent past.

Continuing earlier trends, the Pacific Island economies received about \$175 million in 1998, mostly from Australia, Japan and New Zealand. FDI flows to West Asia remained at a level similar to those of 1997, a year that registered a sharp increase. This was due largely to the low oil prices prevailing in 1998. For the same reason, FDI flows to oil-exporting Central Asian economies lost their growth momentum, but that was partly compensated by increases in the non-oil based economies of Armenia and Georgia.

United States TNCs have been active investors in Asia during the crisis, followed by European TNCs.

Plagued by financing difficulties, TNCs from developing Asian countries decreased their overseas FDI (especially in other Asian countries) by a quarter, investing altogether \$36 billion in 1998. Financing shortages led many companies, especially TNCs based in the Republic of Korea, to slow down the acquisition of foreign companies and even to divest some of their assets abroad.

### ***... Africa is still awaiting the realization of its potential ...***

FDI inflows to Africa (including South Africa) — at \$8.3 billion in 1998 — were down from the record \$9.4 billion registered in 1997. This was largely accounted for by a decrease of flows into South Africa where privatization-related FDI — which had reached an unprecedented peak in 1997 — fell back in 1998 to levels of previous years. The rest of the continent registered a modest increase. Overall, Africa benefited from a rise in inward FDI since the early 1990s, but growth in FDI flows to the region was much less than that in FDI flows to other developing countries, leaving much of Africa's potential for FDI unutilized.

A survey of African investment promotion agencies, undertaken by UNCTAD in 1999, indicates where this potential lies, at least in the eyes of those who seek to attract FDI: during 1996-1998, the leading industries that attracted FDI were telecommunications, food and beverages, tourism, textiles and clothing, as well as mining and quarrying. For the years 2000-2003, they are expected to be tourism, food and beverages, telecommunications as well as textile and leather. Independently of specific industries, the five countries that were ranked most attractive to foreign investors in Africa for the period 2000-2003 were South Africa, Nigeria, Botswana, Côte d'Ivoire and Tunisia. The countries that were most frequently mentioned as regards the creation of a business-friendly environment were Botswana, South Africa, Nigeria, Uganda and Côte d'Ivoire. Among the countries that were ranked as the top 10 according to the criterion of a business-friendly environment, six countries - Botswana, Ghana, Mozambique, Namibia, Tunisia and Uganda — had been identified as FDI front-runners in *WIR98* (out of

seven front-runners). The survey, however, also indicated that, in spite of the reforms that have taken place and the progress expected in a number of African countries in terms of improving the business environment, further work is needed to change the image of Africa and to develop among foreign investors a more differentiated view of the continent and its opportunities.

***... and flows into Central and Eastern Europe, except the Russian Federation, reached new highs.***

Excluding the Russian Federation, Central and Eastern European countries received record FDI inflows of \$16 billion in 1998 — 25 per cent higher than in 1997. The Russian Federation, plagued by low investor confidence, a stagnant privatization programme and dependence on market-oriented investment that suffered a blow from devaluation and economic uncertainty, received only \$2 billion, 60 per cent less than in 1997. In most Central and Eastern European countries, FDI is still privatization-led, although a few countries have started a switch to non-privatization-generated investment.

## **FOREIGN DIRECT INVESTMENT AND THE CHALLENGE OF DEVELOPMENT**

***The new competitive context raises new challenges for governments and TNCs ...***

The development priorities of developing countries include achieving sustained income growth for their economies by raising investment rates, strengthening technological capacities and skills, and improving the competitiveness of their exports in world markets; distributing the benefits of growth equitably by creating more and better employment opportunities; and protecting and conserving the physical environment for future generations. The new, more competitive, context of a liberalizing and globalizing world economy in which economic activity takes place imposes considerable pressures on developing countries to upgrade their resources and capabilities if they are to achieve these objectives. This new global context is characterized by rapid advances in knowledge, shrinking economic space and rapid changes in competitive conditions, evolving attitudes and policies, and more vocal (and influential) stakeholders.

A vital part of the new context is the need to improve competitiveness, defined as the ability to sustain income growth in an open setting. In a liberalizing and globalizing world, growth can be sustained only if countries can foster new, higher value-added activities, to produce goods and services that hold their own in open markets.

FDI and international production by TNCs can play an important role in complementing the efforts of national firms in this respect. However, the objectives of TNCs differ from those of host governments: governments seek to spur *national* development, while TNCs seek to enhance their own competitiveness in an *international* context. In the new context, TNCs' ownership advantages are also changing. In particular, rapid innovation and deployment of new technologies, in line with logistic and market demands, are more important than ever before. Thus, TNCs have to change their relations with suppliers, buyers and competitors to manage better the processes of technical change and innovation. And they have to strike closer links with institutions dealing with science, technology, skills and information. The spread of technology to, and growth of skills in, different countries means that new TNCs are constantly entering the arena to challenge established ones.

A striking feature of the new environment is how TNCs shift their portfolios of mobile assets across the globe to find the best match with the immobile assets of different locations. In the process, they also shift some corporate functions to different locations within internationally integrated production and marketing systems (intensifying the process of "deep integration"). The ability to provide the necessary immobile assets thus becomes a critical part of an FDI —

and competitiveness — strategy for developing countries. While a large domestic market remains a powerful magnet for investors, TNCs serving global markets increasingly look for world-class infrastructure, skilled and productive labour, innovatory capacities and an agglomeration of efficient suppliers, competitors, support institutions and services. In addition, they may also seek to acquire created assets embodied in competitive host country firms, which may lead to a restructuring of these firms not necessarily beneficial for host countries. Low-cost labour remains a source of competitive advantage for countries, but its importance is diminishing; moreover, it does not provide a base for sustainable growth since rising incomes erode the edge it provides. The same applies to natural resources.

### *... and meeting them requires policy intervention.*

There is no conflict between exploiting static sources of comparative advantage and developing new, dynamic ones; existing advantages provide the means by which new advantages can be developed. A steady evolution from one to the other is the basis for sustained growth. What is needed is a policy framework to facilitate and accelerate the process: this is the essence of a competitiveness strategy. The need for such strategy does not disappear once growth accelerates, or economic development reaches a certain level; it merely changes its form and focus. This is why competitiveness remains a concern of governments in developing and developed countries alike. The starting point for this concern is that providing a level playing field and letting firms respond to market signals is sufficient only to the extent that markets work efficiently. The very existence of TNCs is a manifestation that this is not always the case. In the presence of market failures, e.g. when markets fail to exploit existing endowments fully, fail to develop new competitive advantages, or do not give the correct signals to economic agents so that they can make proper investment decisions, intervention is necessary — provided governments have the capabilities to design, monitor and implement policies that overcome market failures.

More specifically, government policies on FDI need to counter two sets of market failures. The first arises from information or coordination failures in the investment process, which can lead a country to attract insufficient FDI, or the wrong quality of FDI. The second arises when private interests of investors diverge from the economic interests of host countries. This can lead FDI to have negative effects on development, or it may lead to positive, but static benefits that are not sustainable over time. Private and social interests may, of course, diverge for any investment, local or foreign: policies are then needed to remove the divergence for all investors. However, some divergence may be specific to foreign investment. FDI may differ from local investment because the locus of decision-making and sources of competitiveness in the former lie abroad, because TNCs pursue regional or global competitiveness-enhancing strategies, or because foreign investors are less committed to host economies and are relatively mobile. Thus, the case for intervening with FDI policies may have a sound economic basis. In addition, countries consider that foreign ownership has to be controlled on non-economic grounds — for instance, to keep cultural or strategic activities in national hands.

The role of FDI in countries' processes and efforts to meet development objectives can differ greatly across countries, depending on the nature of the economy and the government. One vision — pursued, for example, by Malaysia, Singapore and Thailand — was to rely substantially on FDI, integrating the economy into TNC production networks and promoting competitiveness by upgrading within those networks. Another vision — pursued by the Republic of Korea and Taiwan Province of China — was to develop domestic enterprises and autonomous innovative capabilities, relying on TNCs mainly as sources of technology, primarily at arm's length. Yet another, that of the administration of Hong Kong (China), was to leave resource allocation largely to market forces, while providing infrastructure and governance. There is no ideal development strategy with respect to the use of FDI that is common for all countries at all times. Any good strategy must be context specific, reflecting a country's level of economic development, the resource base, the specific technological context, the competitive setting, and a government's capabilities to implement policies.



### ***FDI comprises a package of resources ...***

Most developing countries today consider FDI an important channel for obtaining access to resources for development. However, the economic effects of FDI are almost impossible to measure with precision. Each TNC represents a complex package of firm-level attributes that are dispersed in varying quantities and quality from one host country to another. These attributes are difficult to separate and quantify. Where their presence has widespread effects, measurement is even more difficult. There is no precise method of specifying a counter-factual – what would have happened if a TNC had not made a particular investment. Thus, the assessment of the development effects of FDI has to resort either to an econometric analysis of the relationships between inward FDI and various measures of economic performance, the results of which are often inconclusive, or to a qualitative analysis of particular aspects of the contribution of TNCs to development, without any attempt at measuring costs and benefits quantitatively.

FDI comprises a bundle of assets, some proprietary to the investor. The proprietary assets, the “ownership advantages” of TNCs, can be obtained only from the firms that create them. They can be copied or reproduced by others, but the cost of doing that can be very high, particularly in developing countries and where advanced technologies are involved. Non-proprietary assets – finance, many capital goods, intermediate inputs and the like – can usually be obtained from the market also.

The most prized proprietary asset is probably technology. Others are brand names, specialized skills, and the ability to organize and integrate production across countries, to establish marketing networks, or to have privileged access to the market for non-proprietary assets (e.g. funds, equipment). Taken together, these advantages mean that TNCs can contribute significantly to economic development in host countries – if the host country can induce them to transfer their advantages in appropriate forms and has the capacity to make good use of them. The assets in the FDI bundle are:

- **Capital:** FDI brings in investible financial resources to host countries. FDI inflows are more stable and easier to service than commercial debt or portfolio investment. In distinction to other sources of capital, TNCs typically invest in long-term projects.
- **Technology:** TNCs can bring modern technologies, some of them not available in the absence of FDI, and they can raise the efficiency with which existing technologies are used. They can adapt technologies to local conditions, drawing upon their experience in other developing countries. They may, in some cases, set up local R&D facilities. They can upgrade technologies as innovations emerge and consumption patterns change. They can stimulate technical efficiency and technical change in local firms, suppliers, clients and competitors, by providing assistance, by acting as role models and by intensifying competition.
- **Market access:** TNCs can provide access to export markets, both for goods (and some services) that are already produced in host countries, helping them switch from domestic to international markets; and for new activities that exploit a host economy’s comparative advantages. The growth of exports itself offers benefits in terms of technological learning, realization of scale economies, competitive stimulus and market intelligence.
- **Skills and management techniques:** TNCs employ and have world-wide access to individuals with advanced skills and knowledge and can transfer such skills and knowledge to their foreign affiliates by bringing in experts and by setting up state-of-the-art training facilities. Improved and adaptable skills and new organizational practices and management techniques can yield competitive benefits for firms as well as help sustain employment as economic and technological conditions change.
- **Environment:** TNCs are in the lead in developing clean technologies and modern environmental management systems. They can use them in countries in which they operate.

Spillovers of technologies and management methods can potentially enhance environmental management in local firms within the industries that host foreign affiliates.

While TNCs offer the potential for developing countries to access these assets in a package, this does not necessarily mean that simply opening up to FDI is the best way of obtaining or benefiting from them. The occurrence of market failures mentioned above means that governments may have to intervene in the process of attracting FDI with measures to promote FDI generally or measures to promote specific types of FDI. Furthermore, the complexity of the FDI package means that governments face trade-offs between different benefits and objectives. For instance, they may have to choose between investments that offer short as opposed to long-term benefits; the former may lead to static gains, but not necessarily to dynamic ones.

The principal issues to be addressed by governments fall into the following four groups:

- Information and coordination failures in the international investment process.
- Infant industry considerations in the development of local enterprises, which can be jeopardized when inward FDI crowds out those enterprises.
- The static nature of advantages transferred by TNCs where domestic capabilities are low and do not improve over time, or where TNCs fail to invest sufficiently in raising the relevant capabilities.
- Weak bargaining and regulatory capabilities on the part of host country governments, which can result in an unequal distribution of benefits or abuse of market power by TNCs.

### ***... the benefits of which can be reaped through policy measures ...***

While the ultimate attraction for FDI lies in the economic base of a host country and FDI-attracting efforts by themselves cannot compensate for the lack of such a base, there remains a strong case for proactive policies to attract FDI. Countries may not be able to attract FDI in the volume and quality that they desire and that their economic base merits, for one or more of the following principal reasons:

- *High transaction costs.* While most FDI regimes are converging on a similar set of rules and incentives, there remain large differences in how these rules are implemented. The FDI approval process can take several times longer, and entail costs many times greater in one country than in another with similar policies. After approval, the costs of setting up facilities, operating them, importing and exporting goods, paying taxes and generally dealing with the authorities can differ enormously.
- Such costs can, other things being equal, affect significantly the competitive position of a host economy. An important part of a competitiveness strategy thus consists of *reducing unnecessary, distorting and wasteful business costs*, including, among others, administrative and bureaucratic costs. This affects both local and foreign enterprises. However, foreign investors have a much wider set of options before them, and are able to compare transaction costs in different countries. Thus, attracting TNCs requires not just that transaction costs be lowered, but also, increasingly, that they be benchmarked against those of competing host countries. One important measure that many countries take to ensure that international investors face minimal costs is to set up one-stop promotion agencies able to guide and assist them in getting necessary approvals. However, unless the agencies have the authority needed to provide truly one-stop services, and unless the rules themselves are clear and straightforward, this may not help.
- Despite their size and international exposure, TNCs face *market failures in information*. Their information base is far from perfect, and the decision-making process can be subjective and biased. Taking economic fundamentals as given, it may be worthwhile for a country

that receives lower FDI than desired to invest in establishing a distinct image of its own and, if necessary, attempt to alter the perception of potential investors by providing more and better information. Such promotion efforts are highly skill-intensive and potentially expensive, and they need to be mounted carefully to maximize their impact. Investor targeting — general, industry-specific or company specific — could be a cost-effective approach in some cases. Targeting or information provision is *not* the same as giving financial or fiscal incentives. In general, incentives play a relatively minor role in a good promotion programme, and good, long-term investors are not the ones most susceptible to short-term inducements. The experiences of Ireland, Singapore — and, more recently, Costa Rica — suggest that promotion and targeting can be quite effective in raising the inflow of investment and its quality.

Effective promotion should go beyond simply “marketing a country”, into coordinating the supply of a country’s immobile assets with the specific needs of targeted investors. This addresses potential failures in markets and institutions — for skills, technical services or infrastructure — in relation to the specific needs of new activities targeted via FDI. A developing country may not be able to meet, without special effort, such needs, particularly in activities with advanced skill and technology requirements. The attraction of FDI into such industries can be greatly helped if a host government discovers the needs of TNCs and takes steps to cater to them. The information and skill needs of such coordination and targeting exceed those of investment promotion *per se*, requiring investment promotion agencies to have detailed knowledge of the technologies involved (skill, logistical, infrastructural, supply and institutional needs), as well as of the strategies of the relevant TNCs.

***... that also minimize the adverse effects on domestic enterprise development.***

Domestic enterprise development is a priority for all developing countries. In this regard, the possible “crowding out” of domestic firms by foreign affiliates is frequently an issue of concern. Crowding out due to FDI could occur in two ways: first, in the product market, by adversely affecting learning and growth by local firms in competing activities; second, in financial or other factor markets, by reducing the availability of finance or other factors, or raising costs for local firms, or both.

The first issue reflects “infant industry” considerations, but without the usual connotation of protecting new activities against import competition. It concerns the fostering of learning in domestic firms *vis-à-vis* foreign firms. FDI can abort or distort the growth of domestic capabilities in competing firms when direct exposure to foreign competition prevents local enterprises from undertaking lengthy and costly learning processes. Foreign affiliates also undergo learning locally to master and adapt technologies and train employees in new skills. However, they have much greater resources to undertake this learning, and considerably more experience of how to go about learning in different conditions. In these cases, “crowding out” can be said to occur if potentially competitive local firms cannot compete with affiliates at a given point in time.

The case for domestic enterprise protection differs from the infant industry argument for trade protection. When trade protection is eliminated, consumers benefit from cheaper imports and greater product variety; but some domestic production and employment can be lost. In contrast, in the case of local enterprise protection, the absence of such protection from FDI competition does not lead to loss of domestic production and employment in exchange for enhancing consumer benefits; but, indigenous entrepreneurial development may be hampered, particularly in sophisticated activities. The net cost of this is that linkages may be fewer and technological deepening may be inhibited. As with all infant industry arguments, crowding out is economically undesirable if three conditions are met. First, infant local enterprises are able to mature to full competitiveness if sheltered against foreign competition that takes place through (in this case) FDI. Second, the maturing process does not take so long that the discounted present social costs outweigh the social benefits. Third, even if there are social costs, there must be external benefits that outweigh them.

Crowding out can impose a long-term cost on the host economy if it holds back the development of domestic capabilities or retards the growth of a local innovative base. This can make technological upgrading and deepening dependent on decisions taken by TNCs, and in some cases hold back the host economy at lower technological levels than would otherwise be the case. However, it is important to distinguish between affiliates crowding out potentially efficient domestic enterprises and affiliates out-competing inefficient local firms that cannot achieve full competitiveness. One of the benefits of FDI can be the injection of new technologies and competition that leads to the exit of inefficient enterprises and the raising of efficiency in others. Without such a process, the economy can lack dynamism and flexibility, and can lose competitiveness over time, unless competition between local firms in the domestic market is intense, or they face international competition (say, in export markets).

TNCs, however, can also “crowd in” local firms if they strike up strong linkages with domestic suppliers, subcontractors and institutions. Crowding in can take place when foreign entry increases business opportunities and local linkages, raises investible resources or makes factor markets more efficient. Such stimulating effects are most likely when FDI concentrates in industries that are undeveloped in (or new to) host countries. Where local firms are well developed, but still face difficulties in competing with foreign affiliates, there can be harmful crowding out. However, local firms can also become suppliers to TNCs, or be taken over by them, as discussed below.

A second variety of crowding out reflects an uneven playing field for domestic firms because of a segmentation in local factor markets: TNCs may have privileged access to factors such as finance (which may give them a special advantage especially *vis-à-vis* local firms) and skilled personnel because of their reputation and size. They can thus raise entry costs for local firms, or simply deprive them of the best factor inputs.

Both forms of crowding out raise policy concerns. Most governments wish to promote local enterprises, particularly in complex and dynamic industrial activities. Many feel that the deepening of capabilities in local firms yields greater benefits than receiving the same technologies from TNCs: linkages with local suppliers are stronger, there is more interaction with local institutions, and where innovatory activities take place, knowledge developed within firms is not “exported” to parent companies and exploited abroad, and so on. The few developing economies that have developed advanced indigenous technological capabilities have restricted the entry of FDI (generally, or into specific activities). The possession of a strong indigenous technology base is vital not just for building the competitiveness of local enterprises – it is also important for attracting high-technology FDI and for R&D investments by TNCs.

At the same time, there are risks in restricting FDI *per se* to promote local enterprises. For one thing, it is very difficult in practice to draw the distinction between crowding out and legitimate competition. If policy makers cannot make this distinction, they may prop up uneconomic local firms for a long period, at heavy cost to domestic consumers and economic growth. The danger of technological lags if TNCs are kept out of sophisticated activities in a country is much greater now than, say, several decades ago. So is the risk of being unable to enter export markets for activities with high product differentiation and internationally integrated production processes. It is important however, to strengthen the opportunities for domestic firms to crowd in after the entry of FDI by building up local capabilities and a strong group of small- and medium-sized domestic firms that could develop linkages with foreign affiliates.

The right balance of policies between regulating foreign entry and permitting competition depends on the context. Only a few developing countries have built impressive domestic capabilities and world-class innovative systems while restricting the access of TNCs. Some others have restricted foreign entry, but have not succeeded in promoting competitive domestic enterprises in high-technology manufacturing activities. Success clearly depends on many other things apart from sheltering learning, including the availability of complementary resources and inputs, the size of the domestic market and the competitive climate in which learning takes place. In sum, the infant enterprise argument remains valid, and can provide a case for policy

intervention to promote local capability development, but interventions have to be carefully and selectively applied, monitored, and reversed where necessary.

Similar considerations to those highlighted above apply to M&As of local firms by TNCs, including privatization by sale of state enterprises to foreign investors, a common form of foreign entry into Latin America and Central and Eastern Europe, and more recently into developing Asian countries affected by the financial crisis. Some M&As that entail a simple change of ownership akin to portfolio investment can be of lesser developmental value. Some take-overs lead to asset stripping, and large M&A-related inflows can become large outflows when investments are liquidated, possibly giving rise to exchange rate volatility and discouraging productive investment. There may also be adverse effects on local innovatory capacity and competitiveness in trade as illustrated by the acquisition of firms in the automotive and telecommunications industries of Brazil by TNCs. These resulted in a scaling down of R&D activities in the acquired firms. Reduced reliance by Brazilian firms acquired by TNCs on locally produced high-technology inputs also led to increased import penetration in areas such as in automobile parts and components, information technology and telecommunication products. Many countries, including developed ones, are also concerned about the adverse impact of M&As on employment. M&As can also have anti-competitive effects if they reduce substantially the number of competitors in a domestic market, especially for non-tradable products such as most services.

M&As may also yield economic benefits, however. Where the investor makes a long-term commitment to the acquired firm and invests in upgrading and restructuring its technology and management, the impact is very similar to a greenfield investment. In Thailand, for instance, in the context of the recent financial crisis, a number of M&As in the automobile industry are leading to restructuring and increased competitiveness, manifested by increases in commercial vehicle exports. FDI related to M&As can play an important role in modernizing privatized utilities such as telecommunications and public utilities, as is the case in some instances in Latin America. Foreign acquisitions can prevent viable assets of local firms from being wiped out; this can be particularly important in economies in transition and financially distressed developing countries.

The benefits of M&As (including in the context of privatization) depend on the circumstances of a country and the conditions under which enterprises are acquired and subsequently operated. However, there may be value in monitoring M&As, instituting effective competition policies, and placing limits on them when the macroeconomic situation justifies it.

This raises the question of the effects of FDI on market structure in host countries. There has been a long-standing concern that the entry of large TNCs raises concentration levels within an economy and can lead to the abuse of market power. TNCs tend to congregate in concentrated industries. Whether this leads to the abuse of market power is an empirical question requiring further research. If host economies have liberal trade regimes, the danger of anti-competitive behaviour in such structures is largely mitigated. However, it remains true that effective competition policy becomes more and more important in a world in which large TNCs can easily dominate an industry in a host country.

### ***Positive dynamic FDI effects on host countries require appropriate skills and policies, ...***

Many important issues concerning the benefits of FDI for technology acquisition and technological capacity-building, skills development and competitiveness revolve around its static versus dynamic effects. TNCs can be efficient vehicles for the transfer of technologies and skills suited to *existing* factor endowments in host economies. They provide technology at very different levels of scale and complexity in different locations, depending on market orientation and size, labour skills available, technical capabilities and supplier networks. Where the trade regime in host (and home) countries is conducive (and infrastructure is adequate), they can use local endowments effectively to expand exports from host countries. This can create new capabilities



in the host economies and can have beneficial spillover effects. In low-technology assembly activities, the skills and linkage benefits may be low; in high-technology activities, however, they may be considerable. Unless they operate in highly protected regimes, pay particularly low wages (as in some export processing zones in low-skill assembly), or benefit from expensive infrastructure while paying no taxes, there is a strong presumption that FDI contributes positively to using host country resources efficiently and productively.

In this context, one of the main benefits of TNCs to export growth is not simply their ability to provide the technology and skills to complement local resources, or labour to produce for export, but to provide access to foreign markets. TNCs are increasingly important players in world trade. They have large internal (intra-firm) markets for some of the most dynamic and technology-intensive products, access to which is available only to affiliates. They have established brand names and distribution channels with supply facilities spread over several national locations. They can influence the granting of trade privileges in their home (or in third) markets. All these factors mean that they might offer considerable advantages in creating an initial export base for new entrants.

The development impact of FDI, however, also depends on the *dynamics* of the transfer of technology and skills by TNCs: how much upgrading of local capabilities takes place over time, how far local linkages deepen, and how closely affiliates integrate themselves in the local learning system. TNCs may simply exploit the existing advantages of a host economy and move on as those advantages erode. Static advantages may not automatically transmute into dynamic advantages. This possibility looms particularly large where a host economy's main advantage is low-cost unskilled labour, and the main TNC export activity is low-technology assembly.

The extent to which TNCs dynamically upgrade their technology and skills transfer and raise local capabilities and linkages depends on the interaction of the trade and competition policy regime, government policies on the operations of foreign affiliates, the corporate strategies and resources of TNCs, and the state of development and responsiveness of local factor markets, firms and institutions.

- The *trade and competition policy regime* in a host economy may provide the encouragement for enterprises, local and foreign, to invest in developing local capabilities. In general, the more competitive and outward-oriented a regime, the more dynamic is the upgrading process. A highly protected regime, or a regime with stringent constraints on local entry and exit, discourages technological upgrading, isolating the economy from international trends. This is not to say that completely free trade is the best setting. Infant industry considerations suggest that some protection of new activities can promote technological learning and deepening. However, even protected infants must be subjected to the rigours of international competition fairly quickly – otherwise they will never grow up. This applies to foreign affiliates, as well as to local firms. A strongly export-oriented setting with appropriate incentives provides the best setting for rapid technological upgrading.
- The second factor concerns *policies regarding the operations of foreign affiliates*, including local-content requirements, incentives for local training or R&D, and pressures to diffuse technologies. The results of the use of such policies have often been poor when they were not integrated into a wider strategy for upgrading capabilities. However, where countries have used them as part of a coherent strategy, as in the mature newly-industrializing economies, the results have often been quite beneficial: foreign affiliates enhanced the technology content of their activities and of their linkages to local firms, which were supported in raising their efficiency and competitiveness. Much of the effort by foreign affiliates to upgrade local capabilities involves extra cost, and affiliates will not necessarily undertake this effort unless it is cost effective and suits their long-term objectives. For the host economy, it is worth doing so only if it leads to efficient outcomes. If upgrading is forced beyond a country's capabilities, it will not survive in a competitive and open environment.

- The third factor involves *TNC strategies*. Corporate strategies differ in the extent to which they assign responsibility to different affiliates and decide their position in the corporate network. TNCs are changing their strategies in response to technological change and policy liberalization, and much of this is outside the scope of influence of developing host countries. Nevertheless, host country governments can influence aspects of TNC location decisions by measures such as targeting investors, inducing upgrading by specific tools and incentives and improving local factors and institutions. This requires them to have a clear understanding of TNC strategies and their evolution.
- The fourth factor, the state and responsiveness of *local factor markets, firms and institutions*, is probably the most important one. TNCs upgrade their affiliates where it is cost-efficient to do so. Moreover, since firms in most industries prefer their suppliers to be nearby, they will deepen local linkages if local suppliers can respond to new demands efficiently. Both depend upon the efficacy and development of local skills and technological capabilities, supplier networks and support institutions. Without improvements in factor markets, TNCs can improve the skills and capabilities of their employees only to a limited extent. They do not compensate for weaknesses in the local education, training and technology system. In the absence of rising skills and capabilities generally, it would be too costly for them to import advanced technologies and complex, linkage-intensive operations.

At the same time, there are risks that the presence of TNCs inhibits technological development in a host economy. TNCs are highly efficient in transferring the results of innovation performed in developed countries, but less so in transferring the innovation process itself. While there are some notable exceptions, foreign affiliates tend to do relatively little R&D. This may be acceptable for a while in the case of countries at low levels of industrial development, but can soon become a constraint on capability building as countries need to develop autonomous innovative capabilities. Once host countries build strong local capabilities, TNCs can contribute positively by setting up R&D facilities. However, at the intermediate stage, the entry of large TNCs with ready-made technologies can inhibit local technology development, especially when local competitors are too far behind to gain from their presence. Where a host economy adopts a proactive strategy to develop local skills and technology institutions, it may be able to induce TNCs to invest in local R&D even if there is little research capability in local firms. The appropriate policy response is not to rule out FDI, but to channel it selectively so that local learning is protected and promoted. In countries that do not restrict FDI, it is possible to induce advanced TNC technological activity by building skills and institutions.

***... as well as strong bargaining capabilities, regulatory regimes and policy-making capacity.***

In some cases, the outcome of FDI depends significantly on how well a host economy bargains with international investors. However, the capacity of developing host countries to negotiate with TNCs is often limited. The negotiating skills and information available to TNCs tend to be of better quality. With growing competition for TNC resources, the need of many developing countries for the assets TNCs possess is often more acute than the need of TNCs for the locational advantages offered by a specific country. In many cases, particularly in export-oriented investment projects where natural resources are not a prime consideration, TNCs have several alternative locations. Host countries may also have alternative foreign investors, but they are often unaware of them. Where the outcome of an FDI project depends on astute bargaining, developing host countries may sometimes do rather poorly compared to TNCs. The risk is particularly great for major resource-extraction projects or the privatization of large public utilities and other companies. Considerable bargaining also takes place in large manufacturing projects where incentives, grants and so on are negotiated on a case-by-case basis. Though the general trend is towards non-discretionary incentives, considerable scope for bargaining still exists, and developing countries tend to be at a disadvantage in this respect.

To strengthen developing countries' bargaining capabilities, legal advice is often required, but the costs of obtaining such advice are usually prohibitive, especially for least developed countries. Establishing a pilot facility that would help ensure that expert advice in contract negotiations is more readily available to developing countries is worth considering. Such a facility would benefit not only developing host countries, but also TNCs by reducing specific transaction costs in the process of negotiations (for instance, by reducing the risk of delays) and, more generally, by leading to more stable and lasting contracts.

To return to the regulatory framework: with liberalization and globalization, there are fewer policy tools available to countries left to influence the conduct of foreign and local firms. The capacities of host developing countries to regulate enterprises in terms of competition policy and environment policy are emerging as the most active policy-making areas. An effective competition policy is therefore an absolute necessity. However, most developing countries lack such policy. Mounting a competition policy is a complex task requiring specialized skills and expertise that are often scarce in developing countries. It is important for host countries to start the process of developing these skills and expertise, especially if large TNCs with significant market power are attracted to their markets.

Similar concerns arise with respect to the environment. Many developing host countries have only limited regulations on the environment, and often lack the capacity to enforce them effectively. TNCs are often accused of exploiting these in order to evade tougher controls in the developed world. Some host developing countries are accused of using lax enforcement to attract FDI in pollution-intensive activities. The evidence on the propensity of TNCs to locate their investments in order to evade environmental regulations is, however, not conclusive. TNCs are usually under growing pressure to conform to high environmental standards from home country environmental regulations, consumers, environment groups and other "drivers" in the developed and developing world. Many see environment management not only as necessary, but also as commercially desirable. However, it is up to host governments to ensure that all TNCs and domestic firms follow the examples set by the "green" TNCs.

Another important regulatory problem is that of transfer pricing to evade taxes or restrictions on profit remission. TNCs can use transfer pricing over large volumes of trade and service transactions. The problem is not restricted to dealings between affiliates; it may also arise in joint ventures. However, it may well be that the deliberate abuse of transfer pricing has declined as tax rates have fallen and full profit remittances are allowed in much of the developing world. Double-taxation treaties between host and home countries have also lowered the risk of transfer-pricing abuses. However, this problem still remains a widespread concern among developed and developing countries. Tackling it needs considerable expertise and information. Developing country tax authorities are generally poorly equipped to do this, and can benefit greatly from technical assistance and information from developed-country governments in this area.

Managing FDI policy effectively in the context of a broader competitiveness strategy is a demanding task. A passive, *laissez faire* approach is unlikely to be sufficient because of failures in markets and deficiencies in existing institutions. Such an approach may not attract sufficient FDI, extract all the potential benefits that FDI offers, or induce TNCs to operate by best-practices standards. However, a *laissez faire* FDI strategy may yield benefits in host countries that have under-performed in terms of competitiveness and investment attraction because of past policies. Such a strategy sends a strong signal to the investment community that the economy is open for business. FDI will be attracted into areas of existing comparative advantage. However, there are two problems. First, if attractive locational assets are limited, or their use is held back by poor infrastructure or non-economic risk, there will be little FDI response. Second, even if FDI enters, its benefits are likely to be static and will run out when existing advantages are used up. To ensure that FDI is sustained over time and enters new activities requires policy intervention, both to target investors and to raise the quality of local factors. Needless to say, for the great majority of countries the form of intervention has to be different from traditional patterns of heavy inward-orientation and market-unfriendly policies – it has to be aimed at competitiveness.

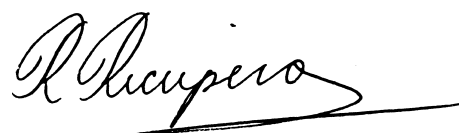


What all this suggests is that there is no ideal universal strategy on FDI. Any strategy has to suit the particular conditions of a country at any particular time, and evolve as the country's needs and its competitive position in the world change. Increasingly, it also has to take into account the fact that international investment agreements set parameters for domestic policy making. Governments of developing countries need to ensure, therefore, that such agreements do leave them the policy space they require to pursue their development strategies. Formulating and implementing an effective strategy requires above all a development vision, coherence and coordination. It also requires the ability to decide on trade-offs between different objectives of development. In a typical structure of policy making, this requires the FDI strategy-making body to be placed near the head of government so that a strategic view of national needs and priorities can be formed and enforced.

\* \* \*

In conclusion, TNCs are principal drivers of the globalization process, which defines the new context for development. In this context, there is more space for firms to pursue their corporate strategies, and enjoy more rights than before. The obvious question is: should these increased rights be complemented by firms' assuming greater social responsibility? The notion of social responsibility of TNCs encompasses a broad range of issues of which environmental, human and labour rights have attracted most attention in recent years. In a liberalizing and globalizing world economy, this question is likely to be asked with increasing frequency and insistence. In his Davos speech in January 1999, the Secretary-General of the United Nations initiated the discussions on this question by proposing a global compact. Perhaps they could be intensified in the framework of a more structured dialogue between all parties concerned. Development would have to be central to this dialogue, as this is the overriding concern of the majority of humankind and because it is, in any event, intimately linked to the social, environmental and human rights objectives that lead the agenda in this area. The dialogue could build on the proposal of a global compact made by the Secretary-General, with a view towards examining how, concretely, the core principles already identified, as well as development considerations, could be translated into corporate practices. After all, companies can best promote their social responsibilities by the way they conduct their own businesses and by the spread of good corporate practices.

The world today is more closely knit, using different means of organization, communication and production, and is more subject to rapid change than ever before. At the same time, the past 30 years show striking – and growing – differences between countries in their ability to compete and grow. They also show how markets by themselves are not enough to promote sustained and rapid growth: policies matter, as do the institutions that formulate and implement them. There is an important role for government policies, but not in the earlier mould of widespread intervention behind protective barriers. Rather, in a globalizing world economy, governments increasingly need to address the challenge of development in an open environment. FDI can play a role in meeting this challenge. Indeed, expectations are high, perhaps too high, as to what FDI can do. But it seems clear that if TNCs contribute to development – and do so significantly and visibly – the relationship that has emerged between host country governments, particularly in developing countries, and TNCs over the past 15-20 years can develop further with potential benefits for all concerned.

  
Rubens Ricupero  
Secretary-General of UNCTAD

Geneva, July 1999

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# **Part One**

## **Trends**

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# CHAPTER I

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## GLOBAL TRENDS

The growth of international production is an important part of the process of globalization. “International production” refers to that part of the production of goods and services of countries that is controlled and managed by firms headquartered in other countries. Firms can exercise control of production in countries (“host countries”) other than their own (“home country”) either through the ownership of a minimum share of equity – that is, a minimum share in the capital stock or assets – of the enterprises in which the production takes place, or through contractual (non-equity) arrangements that confer control upon them. Exercising control and having a voice in the management of an enterprise located abroad (“foreign affiliate”) – whether through capital investment or through contractual arrangement – leads to international production.

Firms that engage in international production – transnational corporations (TNCs) – establish, under the common governance of their headquarters, international production systems in which factors of production move, to a greater or lesser extent, among units located in different countries. These systems increasingly cover a variety of activities, ranging from research and development (R&D) to manufacturing to service functions such as accounting, advertising, marketing and training, dispersed over host-country locations and integrated to produce final goods or services. They are also increasingly being established, especially in developed countries, through mergers between existing firms from different countries or the acquisition of existing enterprises in countries by firms from others. Once internationally dispersed production units under common governance are established, mobile and location-bound factors of production to which a TNC has access in home and host countries (and sometimes even third countries) are combined in each unit in ways and for production that contribute the most to the firm’s economic and strategic objectives. From the perspective of factor use – as distinct from that of location as host or home country for enterprises engaged in international production – *all* of the production that takes place in these TNC production systems (in parent firms or home-country units as well as foreign affiliates or host-country units) constitutes international production. Viewed from the perspective of home and host countries, however, it is, respectively, the production in foreign locations by a country’s own firms, and the production by foreign firms in a country’s own locations, that constitute international production. It is this latter concept of production in foreign locations, or production by foreign affiliates, that is most commonly used and that is used in

this volume. It lends itself to measurement when attempting to understand the importance of international production.

The discussion in section A below examines recent trends in international production. It looks at the elements constituting the various parts of the phenomenon. These include the number and spread of the enterprises (or TNC parent firms) and their foreign affiliates that undertake international production, the capital and technology flows that take place within corporate systems between home and host countries, the assets accumulated to create the basis for international production, and the output, sales, trade and employment that international production generates. Section B focuses then on the geographical and industrial patterns of international production, as indicated by the distribution of FDI.

## **A. Trends**

The extent and spread of international production activity may be gauged from the number of enterprises that are involved in it and their location. Over 500,000 foreign affiliates are in operation world-wide, established by about 60,000 parent companies (table I.1), spanning virtually every country in the world. To this, an (unknown) number of firms would have to be added that are linked to each other through non-equity relationships. While a number of these parent corporations fit the traditional notion of TNCs as big and dominant (chapter III), many are small- and medium-sized enterprises (SMEs).<sup>1</sup> To illustrate, in 1996, small- and medium-sized TNCs accounted for four-fifths of all Swedish TNCs, while in Italy they accounted for three-fifths (UNCTAD, forthcoming a); in the case of Japan, small- and medium-sized TNCs accounted for 55 per cent of new foreign affiliates by Japanese firms in 1996 (Fujita, 1998, p. 70). In today's globalizing world economy, the increasing competitive pressures faced by firms of all sizes impel more and more of them to establish an international portfolio of locational assets to remain competitive (UNCTAD, 1995). However small parent firms and their foreign affiliates may be, they are part of an increasing network of production linkages across borders.

The establishment of foreign affiliates involves costs – in cash or kind, tangible and intangible. Some of the funds required are made available by parent firms in the form of equity (often in a package comprising capital as well as other resources such as technology, organizational and managerial practices and marketing expertise), intra-company loans, and reinvested earnings (which accounted for about one fifth of total FDI flows in 1994-1997 (figure I.1)),<sup>2</sup> together defined as foreign direct investment (FDI).<sup>3</sup> In addition, foreign affiliates can also be financed from funds that they raise in the domestic capital markets of host countries or in international capital markets in forms such as loans and bonds. Flows of funds from international capital markets may in fact sometimes be higher than FDI flows; this was the case in 1988, 1990, 1993 and 1996 in respect to international funds other than FDI channelled to foreign affiliates of United States TNCs (and, therefore, not recorded under FDI (figure I.2)). The relative importance of non-FDI finance for foreign affiliates is, however, likely to be lower in the case of affiliates in developing countries. Financing also comes from equity shares contributed by local partners or shareholders in the case of foreign affiliates that are not wholly owned by their parent companies. Total investment expenditure in foreign affiliates is, therefore, typically higher than the value captured by FDI data (see chapter VI). In the case of foreign affiliates set up through mergers and acquisitions (M&As) (which also include assets acquired in the context of privatization, a special case of M&A), it is not known whether cross-border M&As are being financed by FDI only. They too can be financed from domestic capital markets or from international capital markets. In addition, it is often not known to the user of data whether the payment for an M&A is made in the year of the M&A, or phased over several years (box I.1). Therefore, there is not necessarily a direct correspondence between the value of cross-border M&As and that of FDI flows; in other words, it cannot be taken for granted that the total value of cross-border M&As actually represents FDI inflows.<sup>4</sup>

Table I.1. Number of parent corporations and foreign affiliates,  
by area and economy, latest available year

(Number)

Area/economy	Year	Parent corporations based in economy <sup>a</sup>	Foreign affiliates located in economy <sup>a</sup>
<b>Developed economies</b>		<b>49 806<sup>b</sup></b>	<b>94 623</b>
<b>Western Europe</b>		<b>39 415</b>	<b>62 226</b>
<b>European Union</b>		<b>33 939<sup>b</sup></b>	<b>53 373</b>
Austria	1996	897	2 362
Belgium	1997 <sup>c</sup>	988	1 504
Denmark	1998	9 356	2 035 <sup>e</sup>
Finland	1997	1 963 <sup>e</sup>	1 200
France	1996	2 078	9 351
Germany	1996	7 569	11 445 <sup>f</sup>
Greece	1991	..	798
Ireland	1994	39	1 040
Italy	1995	966	1 630
Netherlands	1993	1 608 <sup>g</sup>	2 259 <sup>g</sup>
Portugal	1997	1 350	5 809
Spain	1998	857 <sup>h</sup>	7 465
Sweden <sup>i</sup>	1998	5 183	3 950
United Kingdom <sup>j</sup>	1997	1 085 <sup>k</sup>	2 525 <sup>l</sup>
<b>Other Western Europe</b>		<b>5 476<sup>b</sup></b>	<b>8 853</b>
Iceland	1998	70	79
Norway	1997	900 <sup>m</sup>	3 000 <sup>m</sup>
Switzerland	1995	4 506	5 774
Japan	1998	4 334	3 321 <sup>n</sup>
United States	1996	3 382 <sup>o</sup>	18 711 <sup>p</sup>
<b>Other developed</b>		<b>2 675</b>	<b>10 365</b>
Australia	1998	596	2 550
Canada	1997	1 722	4 562
New Zealand	1998	217	1 106
South Africa	1997	140	2 147
<b>Developing economies</b>		<b>9 246<sup>b</sup></b>	<b>238 906</b>
<b>Africa</b>		<b>43<sup>b</sup></b>	<b>429</b>
Ethiopia	1998	..	21 <sup>p</sup>
Mali <sup>r</sup>	1999	3	33
Seychelles	1998	-	30
Swaziland	1996	30	134
Zambia	1997	2	175
Zimbabwe	1998	8	36
<b>Latin America and the Caribbean</b>		<b>2 594<sup>b</sup></b>	<b>26 577</b>
Bolivia	1996	..	257
Brazil	1998	1 225	8 050
Chile	1998	478 <sup>s</sup>	3 173 <sup>t</sup>
Colombia <sup>q</sup>	1998	877	4 468
El Salvador	1990	..	225
Guatemala	1985	..	287
Guyana	1998	4	56
Jamaica	1997	..	156
Mexico	1993	..	8 420
Paraguay	1995	..	109
Peru	1997	10 <sup>u</sup>	1 183 <sup>v</sup>
Trinidad & Tobago	1998	..	70 <sup>w</sup>
Uruguay	1997	..	123

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**Table I.1. Number of parent corporations and foreign affiliates,  
by area and economy, latest available year (continued)**

(Number)

Area/economy	Year	Parent corporations based in economy <sup>a</sup>	Foreign affiliates located in economy <sup>a</sup>
<b>South, East and South-East Asia</b>		<b>6 067<sup>b</sup></b>	<b>206 148</b>
Bangladesh	1997	143 <sup>x</sup>	288
China	1997	379 <sup>y</sup>	145 000
Hong Kong, China	1998	500 <sup>z</sup>	5 312
India	1995	187 <sup>z</sup>	1 416
Indonesia	1995	313 <sup>aa</sup>	3 472 <sup>ab</sup>
Korea, Republic of	1998	4 488	5 137
Malaysia	1998	..	3 787 <sup>ac</sup>
Mongolia	1998	..	1 100 <sup>ad</sup>
Pakistan	1993	57	758
Philippines	1995	..	14 802 <sup>ae</sup>
Singapore	1995	..	18 154
Sri Lanka <sup>af</sup>	1995	..	139
Taiwan Province of China	1990	..	5 733
Thailand	1992	..	1 050
<b>West Asia</b>		<b>449<sup>b</sup></b>	<b>1 948</b>
Oman	1995	92 <sup>ab</sup>	351 <sup>ab</sup>
Saudi Arabia	1989	..	1 461
Turkey	1995	357	136
<b>Central Asia</b>		<b>9</b>	<b>1 041</b>
Kyrgyzstan	1997	9 <sup>ag</sup>	1 041 <sup>ah</sup>
<b>The Pacific</b>		<b>84</b>	<b>2 763</b>
Fiji	1997	-	151
Papua New Guinea	1999 <sup>ai</sup>	-	2 342
Tonga	1998	84	270
<b>Central and Eastern Europe</b>		<b>850<sup>b</sup></b>	<b>174 710</b>
Albania	1998	..	1 239
Armenia	1998	..	157 <sup>aj</sup>
Belarus	1994	..	393
Bulgaria	1994	26	918
Croatia	1997	70	353
Czech Republic	1999	660 <sup>ak</sup>	71 385 <sup>al</sup>
Estonia	1999	..	3 066 <sup>am</sup>
Hungary	1998	..	28 772 <sup>af</sup>
Lithuania	1998	16	1 778
Poland	1998	58 <sup>an</sup>	35 840 <sup>ao</sup>
Romania	1998	20 <sup>an</sup>	9 195 <sup>ap</sup>
Russian Federation	1994	..	7 793
Slovakia	1997	..	5 560 <sup>aq</sup>
Slovenia	1997	..	1 195 <sup>af</sup>
Ukraine	1998	..	7 066
<b>World</b>		<b>59 902</b>	<b>508 239</b>

Source: UNCTAD estimates.

<sup>a</sup> Represents the number of parent companies/foreign affiliates in the economy shown, as defined by that economy. Deviations from the definition adopted in the World Investment Report (see section on definitions and sources in the annex B) are noted below.

<sup>b</sup> Includes data for only the countries shown below.

<sup>c</sup> Provisional figures by Banque Nationale de Belgique.

<sup>d</sup> Of this number, 1,517 are majority-owned foreign affiliates.

<sup>e</sup> Directly and indirectly owned foreign affiliates.

<sup>f</sup> Does not include the number of foreign-owned holding companies in Germany which, in turn, hold participating interests in Germany (indirect foreign participating interests).

<sup>g</sup> As of October 1993.

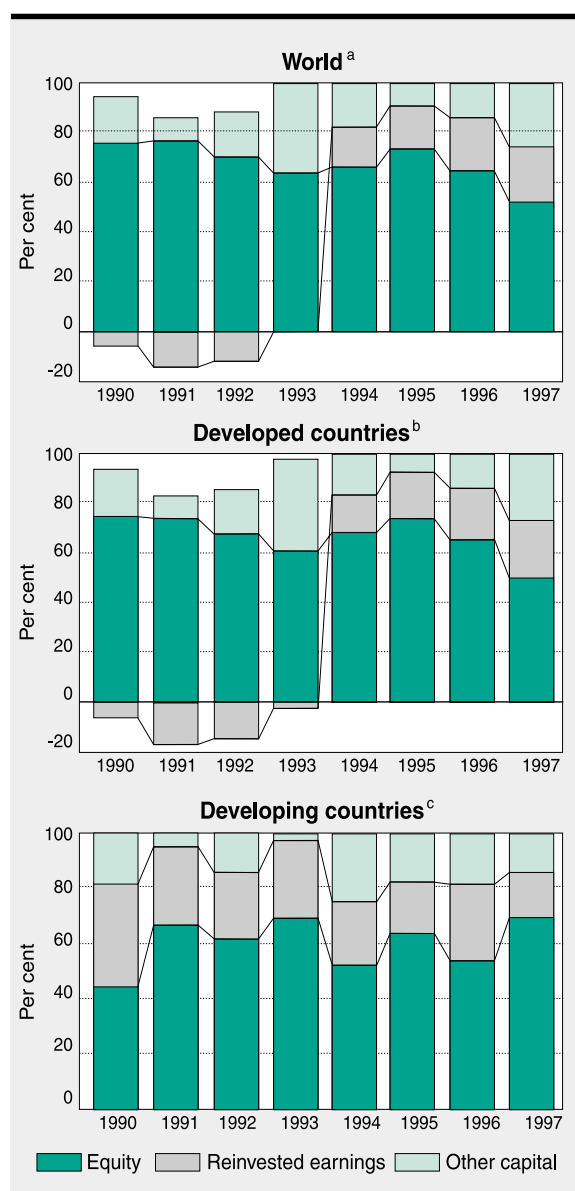
<sup>h</sup> Includes those Spanish parent enterprises which, at the same time, are controlled by a direct investor.

- i Data provided by Sveriges Riksbank. Includes non-active firms (i.e. firms that are not in operation). If the Swedish enterprises owning majority-owned foreign affiliates are considered, the number of Swedish TNCs was 1,833. Similarly, the number of majority-owned foreign affiliates operating in Sweden was 3,953. The survey on majority-owned foreign affiliates is conducted by NUTEK (Swedish National Board for Industrial and Technical Development).
- j Data on the number of parent companies based in the United Kingdom, and the number of foreign affiliates in the United Kingdom, are based on the register of companies held for inquiries on the United Kingdom FDI abroad, and FDI into the United Kingdom conducted by the Central Statistical Office. On that basis, the numbers are probably understated because of the lags in identifying investment in greenfield sites and because some companies with small presence in the United Kingdom and abroad have not yet been identified.
- k Represents a total of 27 bank parent companies and 1,058 non-bank parent companies.
- l Represents 453 foreign affiliates in banking and 2,072 non-bank foreign affiliates.
- m Approximation.
- n Only foreign affiliates that have over 20 per cent stake in their affiliates located in Japan. plus the number of foreign affiliates, insurance and real estate industries in November 1995 (284).
- o Represents a total of 2,613 non-bank parent companies in 1996 and 60 bank parent companies in 1994 with at least one foreign affiliate whose assets, sales or net income exceeded \$3 million, and 709 non-bank and bank parent companies in 1994 whose affiliate(s) had assets, sales and net income under \$3 million. Each parent company represents a fully consolidated United States business enterprise, which may consist of a number of individual companies.
- p Represents a total of 12,226 bank and non-bank affiliates in 1996 whose assets, sales or net income exceeded \$1 million, and 5,551 bank and non-bank affiliates in 1992 with assets, sales and net income under \$1 million, and 534 United States affiliates that are depository institutions. Each affiliate represents a fully consolidated United States business enterprise, which may consist of a number of individual companies.
- q Represents the number of foreign affiliates that received permission to invest during 1992-May 1998.
- r As of April 1999.
- s Estimated by Comité de Inversiones Extranjeras.
- t Number of foreign companies registered under DL600.
- u Less than 10.
- v Out of this number, 811 are majority-owned foreign affiliates, while 159 affiliates have less than 10 per cent equity share.
- w An equity stake of 25 per cent or more of the ordinary shares or voting power.
- x Estimates by the Board of Investment.
- y As of 1989.
- z As of 1991.
- aa As of October 1993.
- ab As of May 1995.
- ac Wholly-owned foreign affiliates only.
- ad The number of companies receiving foreign investment that are registered with the Foreign Investment and Foreign Trade Agency.
- ae This number covers all firms with foreign equity, i.e., equity ownership by non-resident corporations and/or non-resident individuals, registered with the Securities Exchange Commission from 1989 to 1995.
- af Data are for the number of investment projects.
- ag The number of firms that are registered with the National Bank of Kyrgyz Republic. The actual number of firms that are in operation was three.
- ah The number of firms that are registered with the National Bank of Kyrgyz Republic. The actual number of firms that are in operation was 387.
- ai As of March 1999.
- aj The number refers to the firms that are in operation. The total number of foreign affiliates registered is 1,299.
- ak As of 1997.
- al Out of this number 53,775 are fully-owned foreign affiliates. Includes joint ventures.
- am As of 15 March 1999. Only registered affiliates with the Estonian Commercial Register.
- an As of 1994.
- ao Number of firms with foreign capital.
- ap The number of affiliates established during December 1990-December 1998.
- aq Includes joint ventures with local firms.

*Note:* The data can vary significantly from preceding years, as data become available for countries that had not been covered before, as definitions change, or as older data are updated.



Figure I.1. Components of FDI inflows, 1990-1997



Source: UNCTAD, based on IMF, the May 1999 International Financial Statistics CD-ROM.

<sup>a</sup> Includes two economies in Central and Eastern Europe: Estonia, for which data starts in 1992, and Poland.

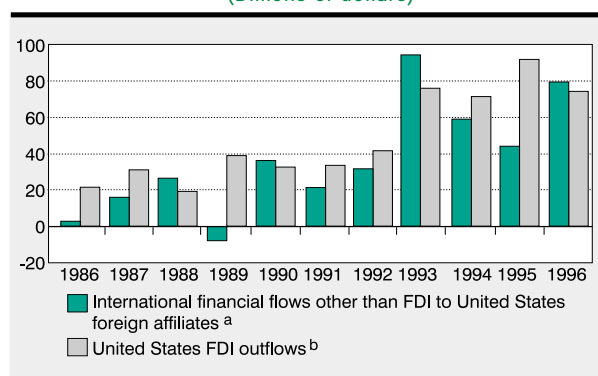
<sup>b</sup> Includes Australia, Finland, Germany, Iceland, Netherlands, New Zealand, Switzerland, United Kingdom and the United States.

<sup>c</sup> Includes Antigua and Barbuda, Barbados, Botswana, Dominica, Fiji, Grenada, Guatemala, Kazakhstan, Malta, Mexico, Namibia, Netherlands Antilles, Panama, Saint Lucia, Saint Vincent and the Grenadines, Senegal, Sri Lanka, Swaziland, and Trinidad and Tobago. 1996 data are not available for the Netherlands Antilles and Trinidad and Tobago. 1997 data are not available for Antigua and Barbuda, Dominica, Fiji, Grenada, Netherlands Antilles, Saint Lucia, Saint Vincent and the Grenadines, Senegal, and Trinidad and Tobago. Data for Kazakhstan are not available prior to 1995.

Note: Figures are based on 30 countries for which the data on each component of FDI inflows are available throughout the period.

Figure I.2. International financial flows other than FDI outflows to foreign affiliates of United States TNCs and United States FDI outflows, 1986-1996

(Billions of dollars)



Source: UNCTAD, based on United States Department of Commerce, various issues a and various issues b.

<sup>a</sup> Covers only majority-owned non-bank foreign affiliates of non-bank United States parent firms. Not including reinvested earnings. Fiscal year.

<sup>b</sup> Excluding outflows to banking industry.

#### Box I.1 The difficulty of relating M&A values to FDI flows

In July 1998, Brazil privatized Telebrás System, the state-owned Brazilian group comprised of some 20 Brazilian telecommunications companies. The state sold its interests in Telebrás System for \$18.9 billion. Foreign investors invested \$12.62 billion (or about two-thirds of the total sale). The payments were supposed to be phased over three years, with 40 per cent in 1998, 30 per cent in 1999 and 30 per cent in 2000.

The payments for 1998 were made in 1998; the payments for 2000 were advanced to 1999 and made together with the 1999 payments. Out of the total of \$12.62 billion, \$5.26 billion were paid in 1998, of which \$2.72 billion took the form of FDI, while \$2.54 billion were borrowed in international capital markets.

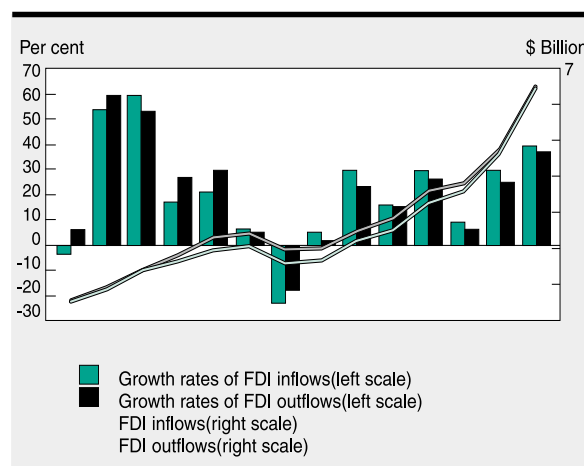
If the total amount paid by foreign investors for the privatization of Telebrás (\$12.62 billion) would have been calculated as a per cent of total 1998 FDI inflows (of \$26 billion), the ratio would have been 48 per cent. In reality, however, only about 10 per cent consisted of FDI inflows on account of the Telebrás privatization in 1998.

This example demonstrates the difficulty of simply calculating M&A amounts as a percentage of FDI inflows. Indeed, there are other sources of finance for foreign investors not captured by FDI flows, and parts of the payment can be phased.

Source: UNCTAD, based on information from the Banco Central do Brasil.

Total outward FDI per annum – the value of financial flows per year (including the value of in-kind assets) from home countries to foreign affiliates in host countries – and the inward FDI corresponding to it (which should, in principle, equal outward FDI) have grown steadily in recent years (figure I.3). In 1998, world FDI outflows reached a record level of \$649 billion and inflows, \$644 billion (table I.2), making it the single most important component of private capital flows to developing countries (box I.2). These levels were reached against the backdrop of numerous unfavourable conditions in the world economy which could have slowed down FDI in 1998 – but, at least in 1998, did not: recession in Asia, including Japan; instability in financial markets in Asia, the Russian Federation and Latin America; reduced bank lending; declining world trade; decreases in commodity prices, especially oil prices; reduced privatization activity; and

**Figure I.3. World FDI inflows and outflows: value and annual growth rates, 1985-1998**



Source: UNCTAD, FDI/TNC database.

**Table I.2. Selected Indicators of FDI and International production, 1986-1998**

(Billions of dollars and percentage)

Item	Value at current prices (Billion dollars)			Annual growth rate (Per cent)				
	1996	1997	1998	1986-1990	1991-1995	1996	1997	1998
FDI inflows	359	464	644	24.3	19.6	9.1	29.4	38.7
FDI outflows	380	475	649	27.3	15.9	5.9	25.1	36.6
FDI inward stock	3 086	3 437	4 088	17.9	9.6	10.6	11.4	19
FDI outward stock	3 145	3 423	4 117	21.3	10.5	10.7	8.9	20.3
Cross-border M&As <sup>a</sup>	163	236	411	21.0 <sup>b</sup>	30.2	15.5	45.2	73.9
Sales of foreign affiliates	9 372	9 728 <sup>c</sup>	11 427 <sup>c</sup>	16.6	10.7	11.7	3.8 <sup>c</sup>	17.5 <sup>c</sup>
Gross product of foreign affiliates	2 026	2 286 <sup>d</sup>	2 677 <sup>d</sup>	16.8	7.3	6.7	12.8 <sup>d</sup>	17.1 <sup>d</sup>
Total assets of foreign affiliates	11 246	12 211 <sup>e</sup>	14 620 <sup>e</sup>	18.5	13.8	8.8	8.6 <sup>e</sup>	19.7 <sup>e</sup>
Exports of foreign affiliates	1 841 <sup>g</sup>	2 035 <sup>g</sup>	2 338 <sup>g</sup>	13.5	13.1	-5.8 <sup>g</sup>	10.5 <sup>g</sup>	14.9 <sup>g</sup>
Employment of foreign affiliates (thousands)	30 941	31 630 <sup>f</sup>	35 074 <sup>f</sup>	5.9	5.6	4.9	2.2 <sup>f</sup>	10.9 <sup>f</sup>
<i>Memorandum:</i>								
GDP at factor cost	29 024	29 360	..	12.0	6.4	2.5	1.2	..
Gross fixed capital formation	6 072	5 917	..	12.1	6.5	2.5	-2.5	..
Royalties and fees receipts	57	60	..	22.4	14.0	8.6	3.8	..
Exports of goods and non-factor services	6 523	6 710	6 576 <sup>h</sup>	15.0	9.3	5.7	2.9	-2.0 <sup>h</sup>

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

<sup>a</sup> Majority-held investments only.

<sup>b</sup> 1987-1990 only.

<sup>c</sup> Based on the following regression result of sales against FDI inward stock for the period 1982-1996:

Sales = 757 + 2.61 \* FDI inward stock.

<sup>d</sup> Based on the following regression result of gross product against FDI inward stock for the period 1982-1996:

Gross product = 224 + 0.60 \* FDI inward stock.

<sup>e</sup> Based on the following regression result of assets against FDI inward stock for the period 1982-1996:

Assets = -506 + 3.70 \* FDI inward stock.

<sup>f</sup> Based on the following regression result of employment against FDI inward stock for the period 1982-1996:

Employment = 13 448 + 5.29 \* FDI inward stock.

<sup>g</sup> Based on the following regression result of exports against FDI inward stock for the period 1982-1995:

Exports = 261 + 0.52 \* FDI inward stock.

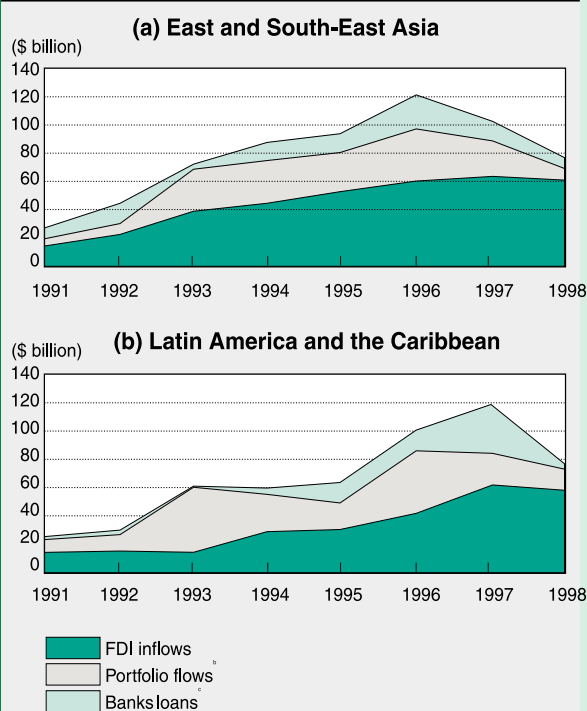
<sup>h</sup> On the basis of an estimated -2 per cent growth rate by the World Trade Organization (WTO, 1999).

*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), those from Germany and the United States (for assets) on the basis of the shares of those countries in the worldwide outward FDI stock.

### Box I.2. The rise of FDI as a source of finance for developing countries

As a result of its growth in recent years, FDI has come to account for an increasing share of international financial flows. These include (in addition to FDI) funds that firms borrow from foreign banks and raise from other sources in foreign financial markets, as well as official flows, primarily official development assistance (ODA). FDI differs in nature from private bank lending in that a good part of it is non-debt creating, and returns to it are directly linked to the performance of the projects that it finances, which are a part of the international production systems that it brings into being. Moreover, and largely because of the interest and direct involvement of the investors in the production activities financed, FDI flows differ

**Box figure I.2.2. Private net resource flows<sup>a</sup> to selected developing regions, 1991-1998**

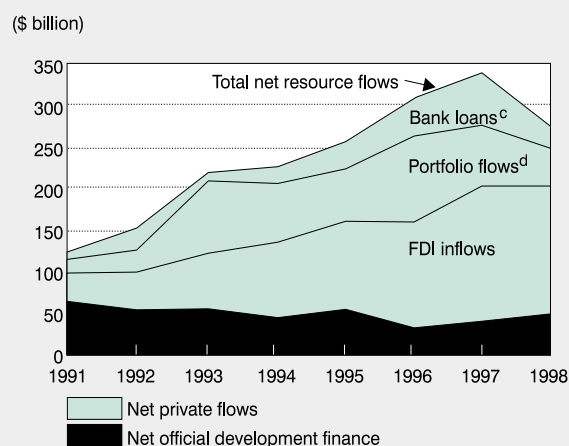


Source: World Bank, 1999b.

- <sup>a</sup> Net resource flows refer to flows net of divestments or repayments of principal on loans. They are not net of dividends, interests, royalty payments etc.
- <sup>b</sup> Bonds and portfolio equity flows.
- <sup>c</sup> Includes other private flows.

Source: UNCTAD.

**Box figure I.2.1. Net resource flows<sup>a</sup> to developing countries,<sup>b</sup> 1991-1998**



Source: World Bank, 1999b.

- <sup>a</sup> Net resource flows refer to flows net of divestments or repayments of principal on loans. They are not net of dividends, interests, royalty payments etc.
- <sup>b</sup> Includes Central and Eastern Europe.
- <sup>c</sup> Includes other private flows.
- <sup>d</sup> Includes other private flows.

Note: The World Bank's classification on developing countries is different from that of UNCTAD. Central and Eastern Europe is also included in developing countries.

from portfolio capital flows raised in international capital markets in that they are usually not geared towards short-term profits (but rather long-term returns) and are not prone to herd behaviour (UNCTAD, 1998a).

Total net resource flows to developing countries reached \$275 billion in 1998 (box figure I.2.1). Private capital flows have increased until 1997, while official flows have been declining in absolute terms compared to the beginning of the 1990s. Within private capital flows, the relative shares of both bank loans and portfolio investment have declined, while the share of FDI has increased over the past few years. In 1998, bank lending and portfolio investment declined in absolute terms as well, which could affect FDI flows. In contrast to other types of private capital flows, FDI flows to developing countries have demonstrated remarkable resilience in the face of the financial and economic crises of the past two years (box figure I.2.2).

excess capacity (e.g. in automobiles) contributed to a slow-down in world economic growth in 1998 to an estimated two per cent, compared to a growth rate of 3.4 per cent in 1997.<sup>5</sup> Indeed, estimates of FDI flows for 1998 and 1999 made by various organizations all reflected expectations of a substantial slow-down in FDI flows, albeit to different degrees (box I.3).

Contrary to expectation, FDI flows grew in 1998 by 39 per cent in the case of inflows and 37 per cent in the case of outflows, the highest growth rate attained since 1987 (figure I.3). Indications are that FDI flows could increase further in 1999, even though the world economic scenario continues to be difficult and a further decrease of world GDP growth to 0.9 per cent is expected (World Bank, 1999a). For example, the value of cross-border M&As announced in the first half of 1999 reached a new record level (\$574 billion), already close to the value of all cross-border M&As announced in the whole 1998.<sup>6</sup>

The apparent paradox of FDI growth under adverse global circumstances is partly resolved by a closer look at FDI trends by region:

- On average, virtually all of the increase in FDI in 1998 was concentrated in developed countries. There, the rate of economic growth has remained more or less stable (with growth rates of 2.5 per cent in 1996, 2.7 per cent in 1997 and 2.3 per cent in 1998), mainly because the effects of the recession in Japan were compensated for by increases in production in the United States and the European Union. FDI inflows to and outflows from developed countries reached new heights of \$460 billion and \$595 billion, respectively (representing increases over 1997 of 68 per cent and 46 per cent, respectively).
- In developing countries, which grew at a rate of only 1.5 per cent in 1998 (and that, too, almost entirely on account of China) – the first time in 10 years that they recorded a lower rate of economic growth than the developed countries<sup>7</sup> – inward FDI flows decreased slightly, from \$173 billion in 1997 to \$166 billion in 1998, a decline of four per cent. The extent of the decline was moderated by factors such as currency depreciations, FDI policy liberalization and more hospitable attitudes towards M&As (chapter II).
- Flows to the economies in transition of Central and Eastern Europe remained almost stable, at close to \$19 billion,<sup>8</sup> although the Russian Federation saw a sharp decline.
- The 48 least developed countries (LDCs) continued to attract less than \$3 billion, accounting for 1.8 per cent of flows to all developing countries and 0.5 per cent of world FDI flows.

The dramatic growth of FDI in 1998 was fuelled to a large extent by a boom in cross-border M&As. Their value, at \$544 billion, was \$202 billion higher than in 1997. Some of these – e.g. the takeover of Amoco by BP for \$55 billion and the acquisition of Chrysler by Daimler-Benz for \$44.5 billion – involve record amounts. As discussed further below, the increased competition brought about by liberalization and globalization and the special needs and conditions of particular industries leading to a consolidation on a global scale, especially in developed countries, are driving cross-border M&As. This is aided by the fact that most of the large M&A deals do not necessarily require cash or new funds, as they can be based on a mutual exchange of stock. By historical standards, however, the size of today's M&As may not be all that big: when, at the turn of the 19th century, the United States internal market went through a

### Box I.3. FDI estimates

Various private and public organizations estimate FDI flows. Among international organizations, these include UNCTAD, the World Bank and OECD; in the private sector, institutions such as the Institute of International Finance and J.P. Morgan estimate or forecast FDI flows. Except for estimates by UNCTAD, none of these estimates are for the world as a whole. Moreover, there are differences in the estimates made by different institutions for the regions or countries that they all cover. These differences arise from differences in the time of the year at which estimates are made and different methods of estimation. UNCTAD estimates that FDI flows to developing countries and Central and Eastern Europe as a whole were \$183 billion in 1998. J.P. Morgan, for example, estimated for a group of selected developing countries and Central and Eastern European countries (classified as “emerging markets”) FDI flows to be \$101 billion (annex table A.I.1).

*Source:* UNCTAD.

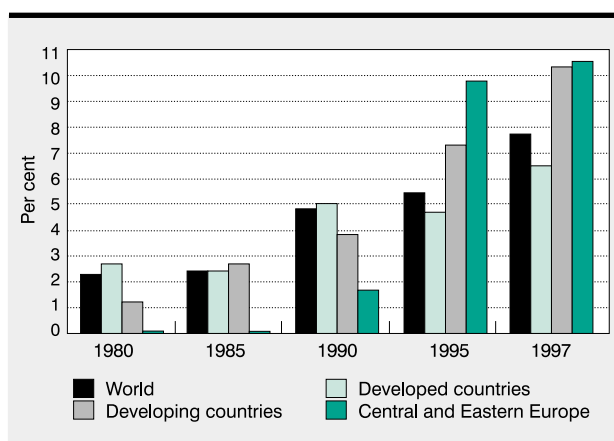
process of consolidation – perhaps not unlike what the global economy may be experiencing today – the value of the largest merger of that time, leading to the creation of US Steel,<sup>9</sup> represented seven per cent of the country's GDP (Maucher, 1998). The merger between BP and Amoco represented one per cent of combined GDP of the United Kingdom and the United States.

To the extent that M&As become a more important form of entry of TNCs into host markets, the rising ratio of FDI to gross fixed capital formation (GFCF) that can be observed in recent years (figure I.4) must be reinterpreted, since it does not necessarily signify an increase in the net contribution to domestic investment in host countries. Rather, it indicates a turnover of ownership and management control over countries' production facilities among shareholders located in different countries. This applies primarily to FDI in developed countries, because, on the whole, M&As play a smaller (though rising) role as a mode of entry for TNCs in developing countries. At the same time, as FDI is a package of which capital is only one (and, as noted, not necessarily the most important) component, this rising ratio, signaling greater TNC participation in host country production activity, may well indicate increasing additions to overall resources and capabilities of host countries as well as increasing control over production by TNCs. Be that as it may, the ratio of FDI flows to GFCF has exceeded six per cent for the world as a whole, and 10 per cent for developing countries in 1997. If total capital mobilized by TNCs is taken into account, the ratio capturing investment under the governance of TNCs as a percentage of total investment in host countries is likely to be higher (table VI.6).

Regardless of whether foreign affiliates are established through new (greenfield) investment or M&As, the upshot is to increase the share of international production activities that comes under the common governance of TNCs. This, in turn, leads to "deep integration" – integration at the production level – of the economies concerned, compared to the "shallow integration" of markets alone brought about by trade. A part of the capital base of international production, the part financed by FDI, is measured by the accumulated stock of FDI. The world stock of FDI rose by about 20 per cent in 1998, to reach \$4.1 trillion (table I.2). Judging from data for such countries as Germany, Japan and the United States, in developed countries the total value of assets of foreign affiliates (a measure that includes the value of production facilities under TNC governance, as well as other assets, financed not only by FDI but also in other ways) is some four to five times the value of FDI inward stock (annex table A.I.2). In developing countries, however, this asset value is only slightly higher than FDI stock. This suggests that international production activity in developing countries relies much more on capital from parent firms than it does in developed countries. The global stock of total assets associated with international production is estimated at around \$15 trillion in 1998 (table I.2). However, this figure does not capture the asset base of international production that takes place in establishments under non-equity forms of TNC control. The size of, and stakes in, international production are much larger and extend wider than the assets owned by TNCs.

Technology, created by parent firms and elsewhere within TNC systems, is a key element in the stock of assets built up in foreign affiliates. It is generally a part, along with capital, of the package of resources made available by TNCs to their affiliates in host countries. Some of it

**Figure I.4. FDI inflows as a percentage of gross fixed capital formation, 1980, 1985, 1990, 1995 and 1997**



Source: UNCTAD, FDI/TNC database.



is embodied in machinery and other capital goods exported to foreign affiliates; some takes the form of codified knowledge contained in blueprints, designs or manuals made available for affiliates' use; and some involves the training of local personnel, knowledge conveyed by expert individuals or teams and generated by technological activity in affiliates. Technology is also often provided via contractual arrangements (for example, licensing, franchising, management and marketing service agreements, subcontracting) that involve control by the foreign provider over the operations of recipient firms (during the life of the contract). These kinds of "unpackaged" or "externalized" technology flows represent direct participation in international production activity in much the same manner as FDI that involves the acquisition of a controlling equity stake. However, in many contractual arrangements control is shared between the provider and the recipient, or rests primarily in the recipient. The depth of integration between home and host country firms involved in the international production made possible by such arrangements is likely to be weaker than in the case of the other forms of TNC participation discussed above.

Data on technology payments and receipts – flows of royalties and licence fees paid by technology recipients and received by technology providers – give a rough idea of trends in technology flows within and outside TNC systems.<sup>10</sup> Technology payments and receipts worldwide have risen steadily since the mid-1980s, reflecting the growing importance of technology for international production. If data for Germany, Japan and the United States are indicative, between two-thirds and nine-tenths of international technology flows by this measure are intra-firm in nature (annex tables A.I.3 and A.I.4). This share has increased over time, suggesting that the industrial pattern of FDI has shifted increasingly towards technology-intensive activities (see below). As technology-based assets have become more important for TNCs' overseas operations, and R&D in foreign affiliates has risen, intra-firm flows of technology and payments of royalties and fees have increased. The increased share of intra-firm payments in total technology payments also suggests that, in technology-intensive industries, the role of non-equity inter-firm arrangements for the acquisition of technology has diminished in importance. This might make technological catching up by developing countries on their own more difficult (chapter VII). On the other hand, inter-firm alliances for the generation of technology are on the rise (chapter III), and these do not necessarily involve payment flows.

Reflecting the high share of intra-firm flows of technology in the total of such flows, world FDI flows and flows of technology measured – however imperfectly – by payments of royalties and fees have grown at comparable rates for some time (figure I.5a). In the 1990s, payments of royalties and fees for technology rose more rapidly than FDI in developed countries (reversing the trends of the late 1980s). This suggests that the movement of technologies among these countries is increasing (figure I.5b). Flows of technology payments by foreign affiliates in developing countries have also been rising in the 1990s, but at a lower rate than FDI inflows to them and at a lower rate than that of technology payments to developed countries (figure I.5c). This may mean that the sophistication of technologies in developing countries is not increasing at the same pace as that in developed countries. In the countries of Central and Eastern Europe, the rate of growth of FDI flows has been much higher than that of technology payments ever since those countries' transition to market economies began (figure I.5d). This probably reflects the fact that extending the scope of international production to these countries requires, first of all, inflows of finance and, perhaps most importantly, knowledge of organizational and managerial practices ("soft technology"), rather than new or more modern product and process technologies.

The purpose of building up facilities for international production and equipping them with requisite technology is to generate output for sale in markets, be they in host countries, home countries or elsewhere on the globe. Various measures – value-added,<sup>11</sup> sales, employment, exports, R&D, profits – show that, while international production is increasing in importance at the global level, its relative importance in individual host countries varies greatly (annex tables A.I.5-A.I.11). During the past decade, global output and sales of foreign affiliates have been growing faster than output generally, that is, world gross domestic product (GDP) (table I.2). Output and sales of foreign affiliates have also been growing faster than world exports. Indeed, the value of estimated total foreign-affiliate sales (\$11 trillion in 1998) has exceeded that of

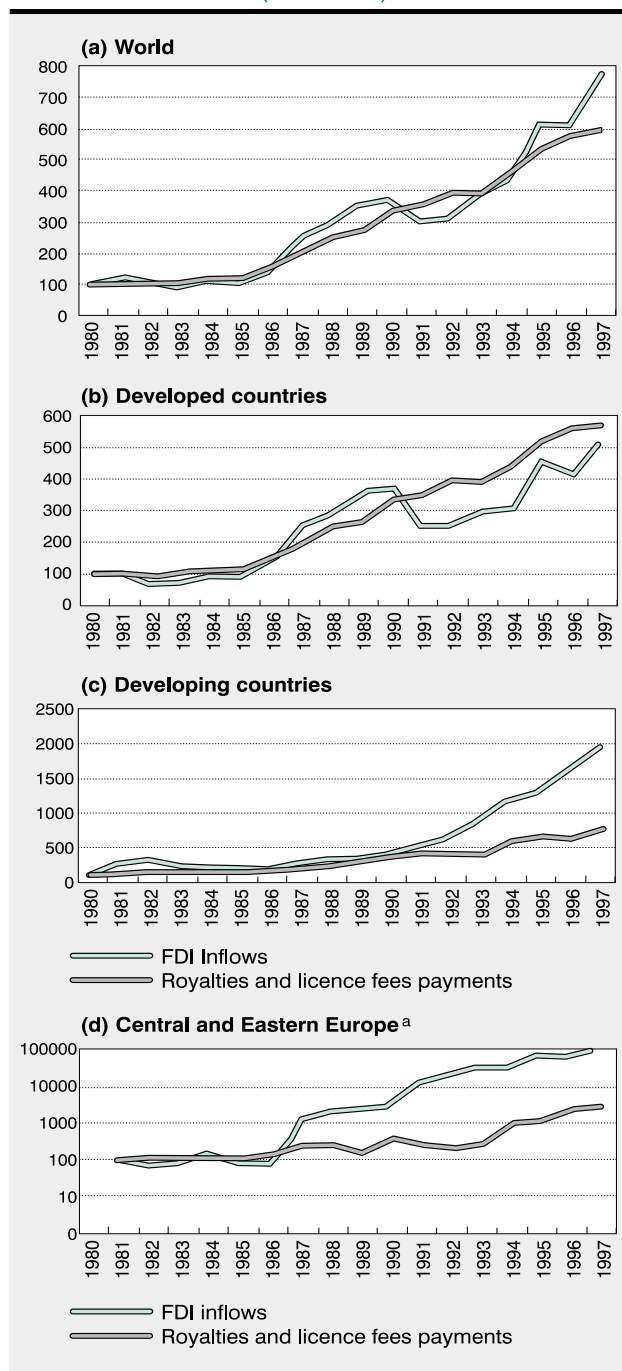


world exports (\$7 trillion in 1998) since the early 1980s (UNCTC, 1992), making international production globally more important than trade in terms of delivering goods and services to foreign markets.

Part of international production itself takes place, of course, because of opportunities for international trade. Exports by foreign affiliates – including intra-firm exports – are estimated to account for one fifth of sales of foreign affiliates in the world (table I.2), a ratio that ranges widely between countries (figure I.6a and I.6b; see also chapter VIII). On the one hand, international production is the principal means for the international delivery of products – especially services – that are impossible or difficult to trade at arm's length. On the other hand, international production provides a stimulus to international commerce in goods and services that are tradable. This it does by extending the opportunities for the international division of labour by bringing mobile and nonmobile factors of production together in particular locations for production within TNC systems and, in the case of some industries, by enabling firms to reap large economies of scale and scope. However, although trade within TNC systems and involving TNCs at arm's length makes up for a significant share of world trade (each accounting for about one third of total world trade; see chapter VIII), the size and relative significance of exports and those of production by foreign affiliates in individual countries are not necessarily correlated with one another. This reflects the fact that there are different types of FDI; in particular, domestic-market-oriented FDI is not associated with exports. Thus, the positions of different countries with respect to the relative significance of exports by foreign affiliates in total exports (annex table A.I.8) are different as compared with their respective positions as regards sales, value added or employment, the latter two of which are correlated with one another (annex tables A.I.5 - A.I.7).

International production is closely intertwined with trade not only because part of that production is for export, but also because foreign affiliates import goods and services that are inputs for their production activities. In some countries in which foreign affiliates contribute significantly to exports, they also have high propensities to import, indicating that the strong link between international production and trade may sometimes result in increasing the deficit or reducing the surplus of the countries

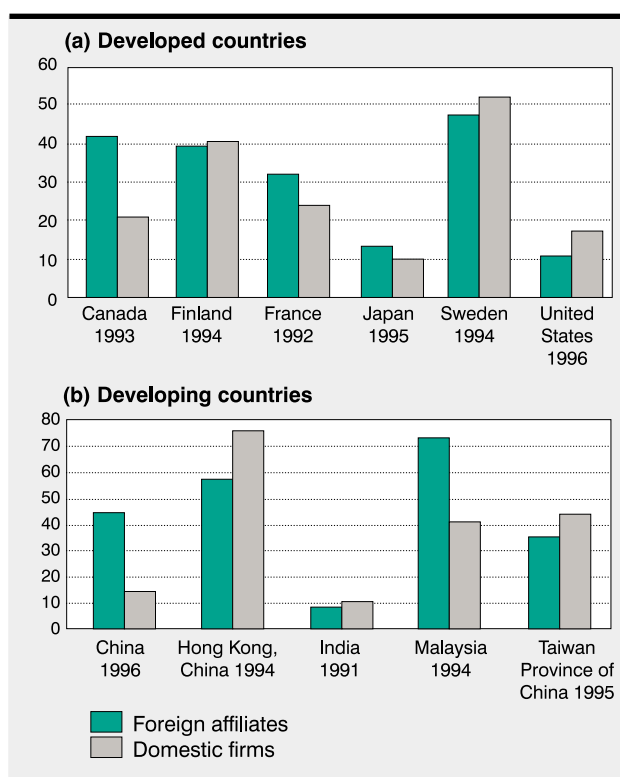
**Figure I.5. Growth of technology payments and FDI flows, by group of countries, 1980-1997**  
(1980 = 100)



Source: UNCTAD, based on UNCTAD FDI/TNC database; and IMF, balance of payments Statistics CD-ROM (February 1999).

<sup>a</sup> 1981-1997 only, due to unavailability of data on royalties and licence fees in 1980. The present country composition is applied throughout the period.

**Figure I.6. The export propensity<sup>a</sup> of foreign affiliates and domestic firms in manufacturing, latest available year (Percentage)**



Source: UNCTAD, based on annex tables A.I.6 and A.I.8; UN Comtrade database; OECD, 1997a; UNIDO Industrial Statistics Database; and UNCTAD FDI/TNC database.

<sup>a</sup> Defined as exports as a percentage of sales.

on their trade and balance-of-payments accounts (see annex table A.I.9 and chapter VI).

One dimension of international production that is of particular interest to many host countries is the extent to which location-bound factors of production – especially labour – are utilized in international production. This is what largely determines how much of the income generated by that production accrues to residents of the host economy (although taxes on foreign affiliates' dividends and profits also represent retained income), how much employment is generated and what multiplier and linkage effects can be expected to result from the deep integration that international production involves. In recent years, the number of employees in foreign affiliates has increased noticeably, even though employment in TNC parent firms in some major home countries has stagnated or increased marginally (see chapter IX), a trend also observed for the world's largest 100 TNCs (chapter III). In particular, employment in foreign affiliates in developing countries has grown significantly (chapter IX). Nevertheless, it accounts for only a small percentage of total paid employment even in those countries taken as a group, and a somewhat higher but still modest share of paid employment in their manufacturing sectors (annex table A.I.7). However, in some individual countries, especially in

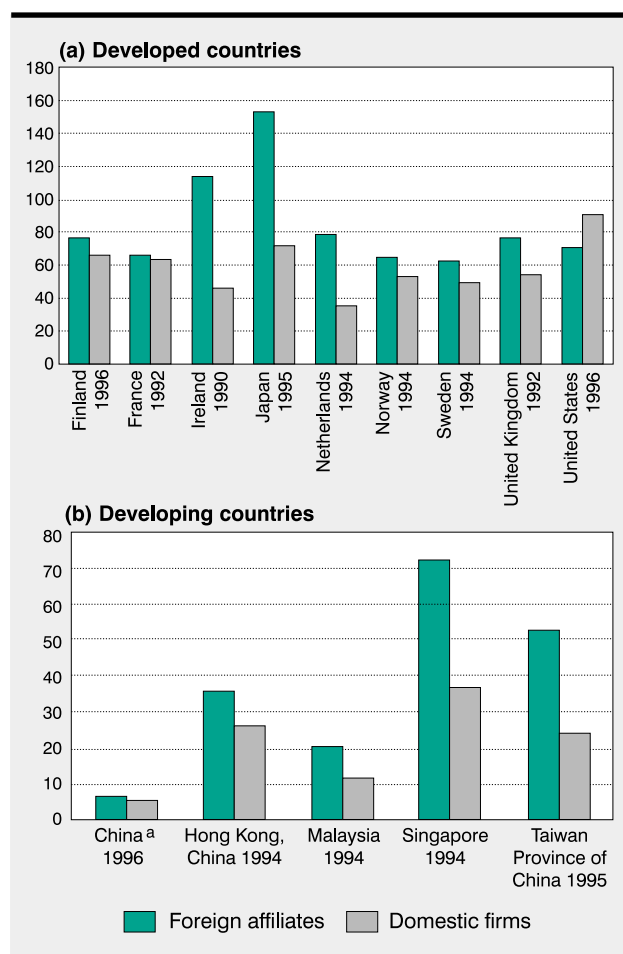
the developing Asian region, international production has become an important and growing source of employment, the lion's share of it comprising locally-hired labour and professional staff.

R&D is another area of international production activity of special importance to host countries. Innovative activities, reflected partly in the number of researchers or R&D expenditures in foreign affiliates, contribute to the building of technological capacities and competitiveness of host countries (chapter VII). Data on persons employed in R&D in foreign affiliates are available for only Japan and the United States, where they accounted for one per cent (1992) and nine per cent (1993), respectively, of total scientists, engineers and technicians engaged in R&D (UNESCO, 1998). Data on R&D expenditures, available a little more widely, show that foreign affiliates account for quite different total R&D expenditures of host countries (annex table A.I.10). But parent firms control by far the greater proportion of R&D expenditure: as much as 97 per cent (1995) and 87 per cent (1996) of total R&D expenditures by Japanese and United States TNCs, respectively (United States, Department of Commerce, 1998a; and Japan, MITI, 1998a). In general, developing countries have not attracted much by way of TNC activities in R&D, despite their eagerness to attract technology-intensive FDI and, in some cases, special incentives offered to such FDI (chapter VII).

Judging from data on value added per employee for a number of developed countries and a few developing countries, productivity is generally higher in foreign affiliates than in domestic firms in host countries (figure I.7). Noteworthy exceptions are the United States, where

**Figure I.7. Value added per employee of foreign affiliates and domestic firms in manufacturing in selected host economies, latest available year**

(Thousands of dollars)



Source: UNCTAD, based on annex tables A.I.5 and A.I.7; OECD, 1997a; UNIDO Industrial Statistics Database; and UNCTAD FDI/TNC database.

<sup>a</sup> All industries.

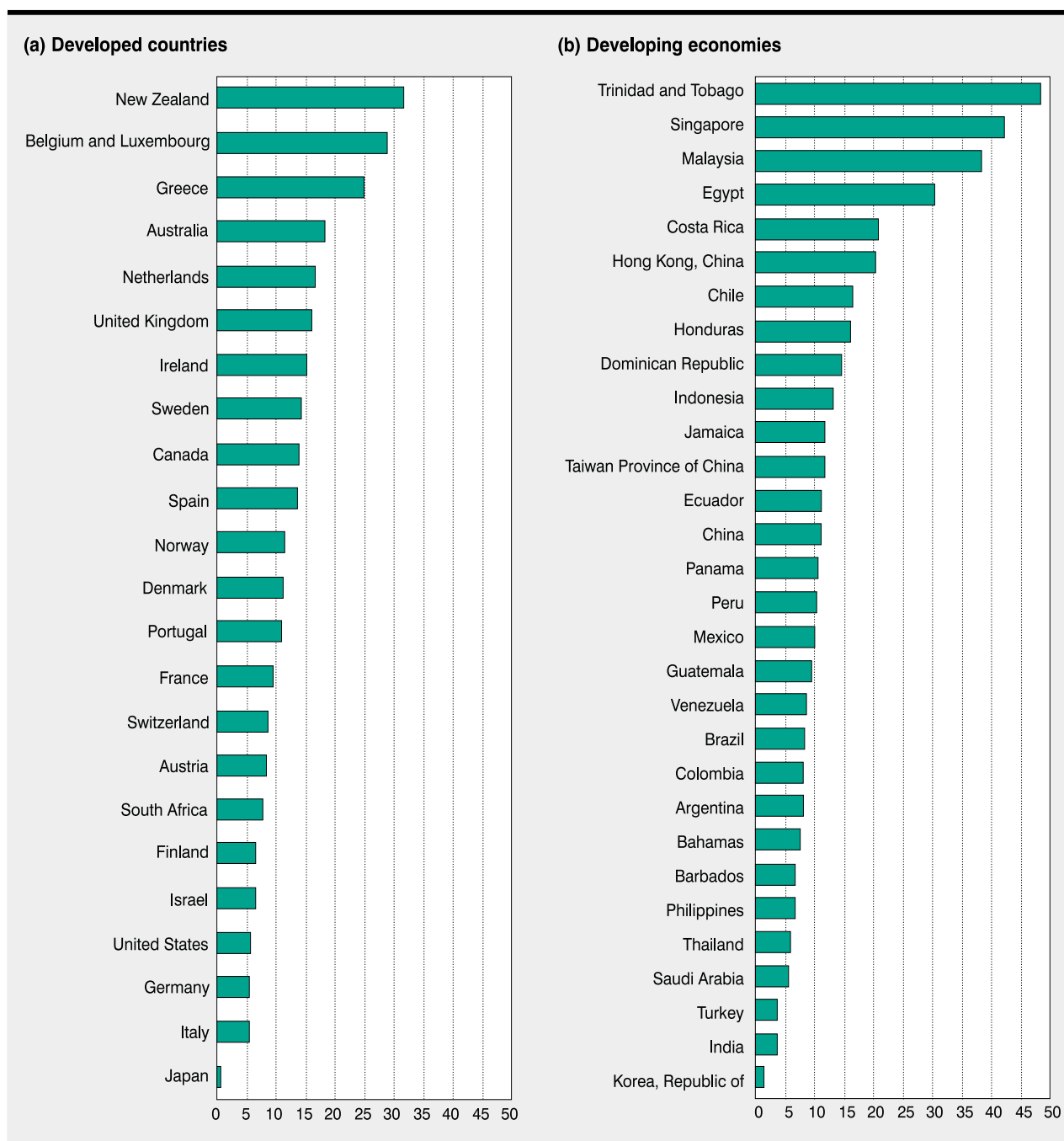
the reverse situation prevails,<sup>12</sup> and France and China, where foreign affiliates and domestic firms have similar productivity. There are, of course, wide variations between foreign-affiliate productivity in different countries, reflecting the differences in the industries and activities in which affiliates in different countries are engaged and in the capital- and technology-intensity of affiliate operations. Differences in productivity may explain, at least partly, differences in profitability. Higher productivity of foreign affiliates would therefore be accompanied by higher profitability of foreign affiliates, resulting in the share of foreign affiliates in total profits being higher than their share in value added. Countries for which foreign affiliates account for higher shares of profits or net income (annex table A.I.11) are not necessarily the same countries as those in which the share of foreign affiliates in production variables such as value added or sales is high (annex tables A.I.5 and A.I.6). Japan and the United States provide a remarkable contrast in this regard. International production has low significance in Japan in terms of any production measure, both absolutely and in relation to the country total (annex tables A.I.5 - A.I.7). In terms of profits, however, it becomes less insignificant (annex table A.I.11). The profitability of foreign affiliates operating in Japan is, in fact, twice as high as that of domestic firms (Japan, MITI, 1998b). On the other hand, in keeping with their lower productivity in manufacturing as compared with domestic firms (figure I.7), foreign affiliates in the United States do not earn much compared to domestic firms, and account for less than six per cent of total profits generated by all firms in the

manufacturing sector (annex table A.I.11).

\* \* \*

The magnitudes of FDI and various foreign-affiliate operations each provides a measure of a different dimension of international production; and the magnitude of each relative to the relevant total provides a measure of the relative significance for a host country or group/region of international production in terms of a particular dimension. These different measures can be combined into an integrated host country "transnationality index", which, however imperfect,<sup>13</sup> throws some light on the overall significance of international production for each host economy. For the 53 countries for which data (or estimates) are available for 1996 (figure I.8), the host country transnationality index ranges between less than one per cent for Japan and 32 per cent for New Zealand among developed countries, and between 1.4 per cent for the Republic of Korea and 48 per cent for Trinidad and Tobago among developing countries. Smaller host countries appear to rank higher on the transnationality index.

**Figure I.8. Transnationality index<sup>a</sup> of host countries,<sup>b</sup> 1996**  
(Percentage)



Source: UNCTAD estimates.

<sup>a</sup> Average of the four shares: FDI inflows as a percentage of gross fixed capital formation for the last three years; FDI inward stock as a percentage of GDP; value added of foreign affiliates as a percentage of GDP; and employment of foreign affiliates as a percentage of total employment.

<sup>b</sup> Only the countries for which the data for all of these four shares are available, are selected. Data on value added are available for Finland, Japan, Sweden, United States, China, India, Mexico and Taiwan Province of China only (annex table A.I.5). For other countries data are 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 for Finland, Germany, Japan, Sweden, United States, Brazil, China, Hong Kong (China), Indonesia, Mexico and Taiwan Province of China only (annex table A.I.7). For other countries, data are estimated by applying the ratio of employment of German and United States affiliates to German and United States outward FDI stock to total inward FDI stock of the country.

## B. Geographical and sectoral distribution

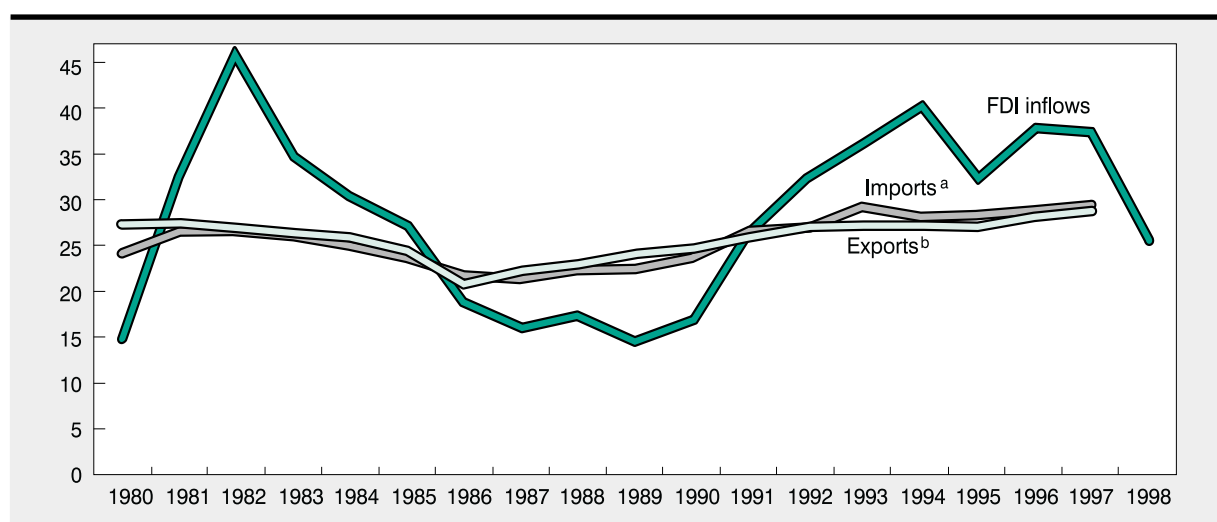
While international production has been growing rapidly and has come to assume an important role in the globalization process, its significance, quantitative as well as qualitative, is not the same for all countries, or in all economic activities. There are striking disparities in the extent to which different regions, countries and industries are involved in the process. An examination of the geographic and industrial distribution of FDI flows sheds some light on these disparities.

### 1. Geographical patterns of FDI

#### a. Regional distribution

Until 1998, which saw a reversal in the trend, the share of developing countries in world FDI inflows had increased, reaching 37 per cent in 1997. The share of Central and Eastern Europe in the world inflows performed similarly. The reversal in 1998 is largely explained by the exceptionally strong FDI performance of the developed countries and the weaker one of the other regions (especially Asia).<sup>14</sup> The share of developing countries in world FDI inflows has exceeded their shares in world imports and exports between 1991-1997 (figure I.9). This suggests that, as a group, developing countries play a more important role in world inward FDI flows than as participants in world trade. The least developed countries (LDCs), however, did not participate in the upward trend in FDI flows to developing countries: their share in world FDI flows remained less than one per cent during most of this period, similar to their share in world trade.

Figure I.9. FDI and trade shares of developing countries in world totals, 1980-1998  
(Percentage of world total)



Source: UNCTAD, FDI/TNC database.

<sup>a</sup> Imports of goods and non-factor services to developing countries.

<sup>b</sup> Exports of good and non-factor services for developing countries.

What is particularly striking is the concentration of world FDI flows in a handful of top home and host countries (figure I.10). The 10 largest *home* countries (in terms of outward FDI stock) accounted for four-fifths of the world's outward FDI flows in 1998; in total, some 34 countries had FDI outflows of \$1 billion or more (compared to 13 countries in 1985). On the host country side the 10 largest (in terms of inward FDI stock) accounted for 71 per cent of world FDI inflows in 1998. At the same time, 111 countries in 1998 recorded inflows of over \$100 million, compared to 45 countries in 1985. If only developing host countries are considered, the degree of concentration seems to have risen recently: the five largest host countries over the past decade



or so (China, Brazil, Mexico, Singapore and Indonesia, in that order on the basis of inward FDI stock) accounted for 55 per cent of FDI inflows to all developing countries in 1998, compared to 41 per cent in 1990.

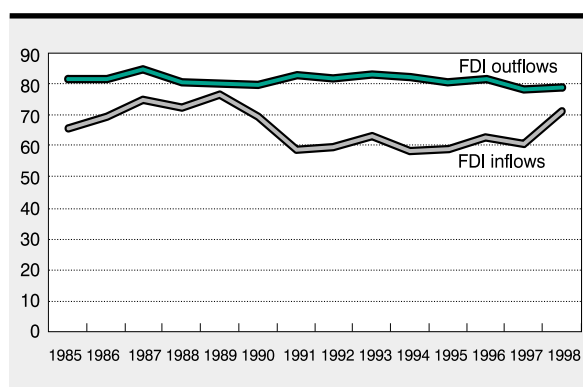
The pattern of concentration of FDI inflows and outflows by absolute values of flows does not, however, provide a full picture of the significance of inward and outward FDI for different countries. If the size of host economies is taken into account by looking at FDI inflows per \$1,000 of GDP, in 1997, developing countries as a group received more FDI per income dollar than did developed countries, several developing regions received more FDI per income dollar than did any developed region, and the disparities among different developing regions were considerably reduced from those suggested by the distribution of absolute values of world FDI inflows (table I.3 (b) and (a)). What this means, of course, is that developing countries receive more FDI inflows than might be expected on the basis of their incomes (and market size) alone. This is not surprising, since FDI is also attracted by factors other than market size, especially natural and human resources. Perhaps more importantly, this means that the significance of FDI needs to be seen against the size of each economy to appreciate its importance. It should, however, be cautioned that in some cases, high FDI per \$1,000 may simply reflect exceptionally low GDP.

As far as FDI outflows are concerned, outflows per income dollar from developed countries remain higher than those from developing countries but, judging from data for 1997, the disparity in outflows between the two groups is less than might be expected from the shares of the two groups in world FDI outflows (table I.3b). Moreover, for some developing regions, such as South, East and South-East Asia, FDI outflows per \$1,000 of income do not fall far short of outflows per \$1,000 of income for developed countries in general as well as some major developed outward investor countries. This suggests that, even at lower levels of development, countries are likely to have firms that are sufficiently competitive to establish themselves abroad.

In contrast to the picture of a less uneven distribution of FDI inflows that is seen if GDP of countries is taken into account, taking population into account reveals a picture in which the gaps between FDI inflows and outflows per capita between regions are higher than what might be expected by looking at their respective shares in absolute values of world FDI inflows and outflows (table I.3c). For example, in 1998, the value of *per capita* FDI inflows to developing countries as a group were about seven per cent of that for developed countries.<sup>15</sup> This simply reflects the fact that developing countries receive a smaller proportion of the world's FDI and yet account for the bulk of the world population. Not surprisingly, a similar remark can be made as regards comparisons between outward FDI per capita.

Differences in the involvement of developed and developing regions in international production and in the nature of that involvement are also reflected in the patterns of technology payments. Developed countries accounted for 88 per cent of payments and 98 per cent of receipts for technology in cross-border flows of royalties and license fees in 1997.<sup>16</sup> The United States is the largest recipient and the second largest (after Japan) payer country for international technology flows, accounting for 56 per cent of the world's total cross-border receipts, and 18 per cent of payments, of royalties and license fees in 1997.<sup>17</sup> However, its dominant position as

**Figure I.10. Concentration of FDI flows by the largest 10 host<sup>a</sup>/home<sup>b</sup> countries, 1985-1998<sup>c</sup>**  
(Percentage)



Source: UNCTAD, FDI/TNC database.

<sup>a</sup> United States, United Kingdom, China, Germany, France, Netherlands, Belgium and Luxembourg, Brazil, Canada and Spain.

<sup>b</sup> United States, United Kingdom, Germany, Japan, Netherlands, France, Switzerland, Italy, Canada and Hong Kong (China).

<sup>c</sup> FDI flows of the 10 largest countries as a percentage of world's FDI flows.



**Table I.3. Regional distribution of FDI inflows and outflows, 1995-1998**

<b>(a) Regions as a share of totals<sup>a</sup></b>					(Percentage)			
Region/country	Inflows				Outflows			
	1995	1996	1997	1998	1995	1996	1997	1998
<b>Developed countries</b>	63.4	58.8	58.9	71.5	85.3	84.2	85.6	91.6
Western Europe	37.0	32.1	29.1	36.9	48.9	53.7	50.6	62.6
European Union	35.1	30.4	27.2	35.7	44.7	47.9	46.0	59.5
Other Western Europe	1.8	1.8	1.9	1.2	4.2	5.8	4.6	3.1
United States	17.9	21.3	23.5	30.0	25.7	19.7	23.1	20.5
Japan	-	0.1	0.7	0.5	6.3	6.2	5.5	3.7
Other developed countries	8.5	5.3	5.6	4.1	4.4	4.6	6.4	4.9
<b>Developing countries</b>	32.3	37.7	37.2	25.8	14.5	15.5	13.7	8.1
Africa	1.3	1.6	1.6	1.2	0.1	-	0.3	0.1
Latin America and the Caribbean	10.0	12.9	14.7	11.1	2.1	1.9	3.3	2.4
Developing Europe	0.1	0.3	0.2	0.2	-	-	0.1	-
Asia	20.7	22.9	20.6	13.2	12.3	13.6	10.0	5.6
West Asia	-0.1	0.2	1.0	0.7	-0.2	0.6	0.4	0.3
Central Asia	0.4	0.6	0.7	0.5	-	-	-	-
South, East and South-East Asia	20.4	22.1	18.9	12.0	12.5	13.0	9.6	5.3
The Pacific	0.2	0.1	-	-	-	-	-	-
<b>Central and Eastern Europe</b>	4.3	3.5	4.0	2.7	0.1	0.3	0.7	0.3
<i>World</i>	100	100	100	100	100	100	100	100

<b>(b) FDI flows per \$1,000 GDP</b>					(dollars)			
Region/country	Inflows				Outflows			
	1995	1996	1997	1998	1995	1996	1997	1998
<b>Developed countries</b>	9.4	9.5	12.4	..	13.8	14.4	18.4	..
Western Europe	13.7	12.8	15.8	..	19.8	22.6	28.2	..
European Union	13.7	12.7	15.6	..	19.1	21.2	27.0	..
Other Western Europe	13.1	14.0	21.0	..	32.9	48.3	52.4	..
United States	8.5	10.5	13.5	..	13.2	10.3	13.6	..
Japan	-	-	0.8	..	4.4	5.1	6.2	..
Other developed countries	23.5	15.2	19.9	..	13.3	14.0	23.4	..
<b>Developing countries</b>	19.3	22.3	26.9	..	9.4	9.8	10.0	..
Africa	12.5	16.2	15.6	..	1.4	-0.1	3.7	..
Latin America and the Caribbean	19.2	25.0	33.7	..	3.0	3.1	6.1	..
Developing Europe	10.0	21.5	20.0	..	1.4	1.8	5.2	..
Asia	20.0	21.6	24.8	..	13.4	13.9	12.7	..
West Asia	-0.7	0.9	7.4	..	-1.6	3.1	3.3	..
Central Asia	37.7	42.9	49.9	..	-	-	0.1	..
South, East and South-East Asia	24.2	25.8	27.8	..	16.5	16.4	14.7	..
The Pacific	49.8	15.0	12.5	..	-0.4	0.1	2.7	..
<b>Central and Eastern Europe</b>	20.6	15.2	22.3	..	0.7	1.4	4.1	..
<i>World</i>	11.6	12.3	15.8	..	12.7	13.1	16.2	..

*l...*

a supplier of technology flows has declined somewhat, with its share in receipts of cross-border technology payments declining from 62 per cent in 1985 to 56 per cent in 1990. This reflects the emergence of other technology suppliers, including developing countries whose share increased marginally from 0.7 per cent in 1990 to 1.3 per cent in 1997. The smaller share of developing countries in receipts of royalties and fees than in FDI outflows suggests that international production by developing country TNCs is based more on competitive strengths other than advanced technology. However, the technological content of FDI from some newly industrializing economies such as the Republic of Korea is increasing (UNCTAD, 1997b). On the payments

Table I.3. Regional distribution of FDI inflows and outflows, 1995-1998 (concluded)

(c) FDI flows per capita					(dollars)			
Region/country	Inflows				Outflows			
	1995	1996	1997	1998	1995	1996	1997	1998
Developed countries	238.6	240.3	309.3	518.3	350.4	364.0	460.2	669.5
Western Europe	317.0	300.0	350.1	614.8	457.8	530.5	623.4	1 051.9
European Union	310.9	292.3	337.9	614.7	431.7	488.0	584.9	1 032.1
Other Western Europe	509.2	541.2	730.2	617.6	1 280.0	1 864.0	1 826.3	1 670.4
United States	220.0	283.7	402.2	706.4	344.7	277.7	404.8	485.2
Japan	0.3	1.8	25.7	25.3	180.9	186.9	206.9	191.8
Other developed countries	286.6	192.1	256.3	257.9	161.6	177.2	302.0	307.3
Developing countries	23.8	29.8	37.4	35.4	11.7	13.0	14.1	11.1
Africa	6.1	8.5	10.8	10.9	0.7	-	2.0	0.7
Latin America and the Caribbean	69.7	96.2	140.1	144.8	16.0	15.0	32.0	31.2
Developing Europe	37.5	84.2	76.0	99.9	5.4	7.0	19.8	11.2
Asia	20.7	24.5	28.1	24.6	13.4	15.4	14.0	10.5
West Asia	-2.0	2.8	20.7	20.0	-4.1	9.7	9.3	8.1
Central Asia	21.0	28.3	42.1	41.6	-	-	-	0.1
South, East and South-East Asia	22.2	26.0	28.3	24.6	14.9	16.2	14.7	10.9
The Pacific	91.4	28.6	22.7	26.7	-0.5	0.1	3.3	3.8
Central and Eastern Europe	42.3	36.8	55.1	52.2	1.4	3.3	10.2	5.7
World	58.0	62.4	79.6	108.9	63.2	66.0	81.4	109.7

Source: UNCTAD, based on annex tables B.1 and B.2 and UNCTAD, FDI/TNC database.

<sup>a</sup> Due to rounding, the sum of subregions might not add up to the total.

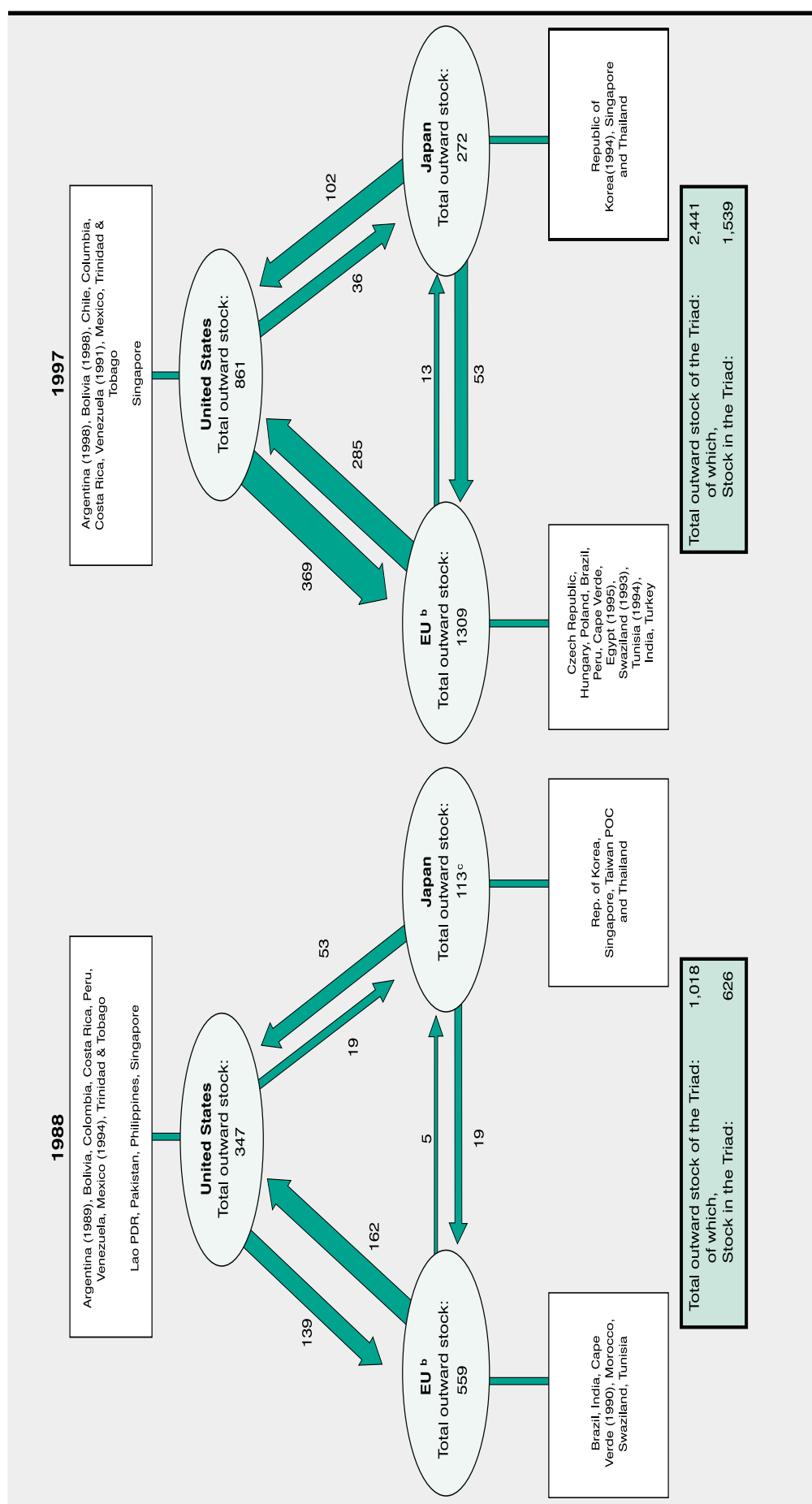
side, although developing countries account for a larger share of total technology payments (as compared with receipts), these payments are highly concentrated among a few countries (chapter VII).

Although, as pointed out, there have been significant increases in FDI flows to developing countries and in their share in world FDI over the past two decades, the basic fact that the bulk of FDI stock originates from, and is located in, developed countries remains unchanged. FDI from developed countries remains mostly in developed countries, in particular in the Triad (Japan, European Union and United States). In fact, the FDI concentration of the Triad increased over the past decade: some 63 per cent of total FDI outward stock from the Triad in 1997 was located in the Triad, compared to 61 per cent in 1988 (figure I.11).<sup>18</sup> This means that the importance of non-Triad countries as destinations for outward FDI from the Triad member countries has declined. However, developing countries did not experience a decreasing share: on the contrary, their share as recipients in outward FDI stock from developed (mainly Triad) countries increased during the last decade from 19 per cent to 21 per cent. The increase in developing countries' share in FDI outflows from developed countries is more evident than that in FDI stock (from 17 per cent in 1988 to 24 per cent in 1997).

### ***b. FDI among developing countries***

Developing countries' participation in international production was, until not long ago, mainly to host foreign affiliates of TNCs, which have been increasingly welcomed as a means of establishing and strengthening an industrial base for economic development. In the past two decades, however, firms from developing countries have also been investing abroad, giving rise to international production themselves (Kumar and McLeod, 1981; Wells, 1983). FDI from developing countries has grown to account for about 14 per cent of world FDI outflows in 1997 (but declined to eight per cent in 1998), compared with about 5-7 per cent in the 1980s (figure

**Figure I.11. FDI stocks among the Triad and the countries in which FDI from the Triad dominates,<sup>a</sup> 1988 and 1997**  
(Billions of dollars)



Source: UNCTAD, FDI/TNC database.

<sup>a</sup> The host countries in which the Triad member accounts for at least 30 per cent of total FDI inflows during a three-year period in the latter half of the 1980s/beginning of the 1990s or total inward FDI stock in 1988 are selected for the 1988 chart; and at least 30 per cent of total FDI inflows during a three-year period in the mid-1990s or total inward FDI stock in 1997 for the 1997 chart. In cases where data are available for years other than those stated in the respective charts, those years are indicated in parenthesis.

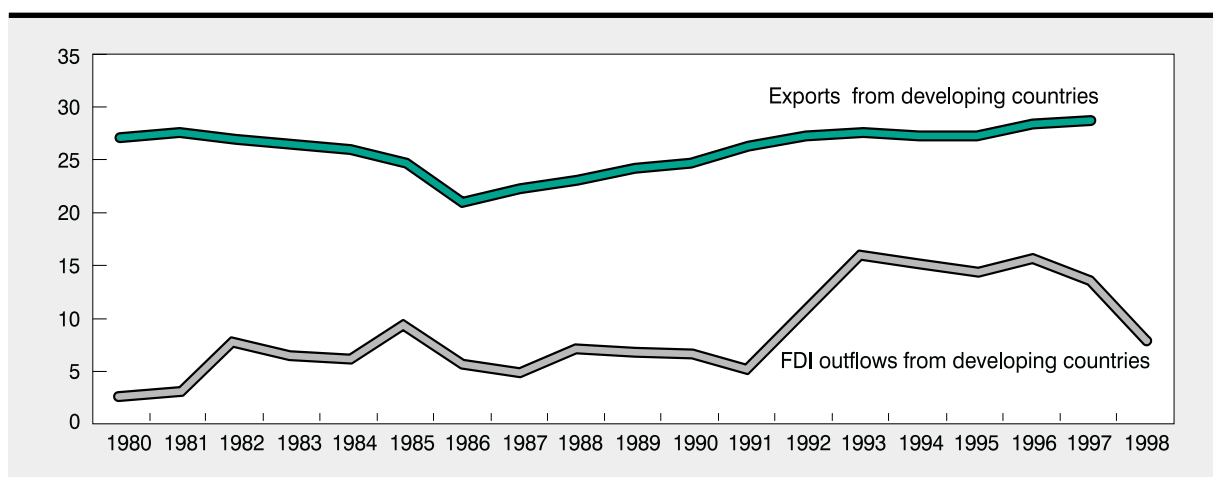
<sup>b</sup> Includes Austria (1996 instead of 1997), Denmark (1996 instead of 1997), Finland (1991 instead of 1988 and 1996 instead of 1997), Italy, Netherlands (1996 instead of 1997), Sweden (1996 instead of 1997) and United Kingdom that account for more than 90 per cent of the EU outward stock. Denmark is not included for 1988 due to unavailability of data.

<sup>c</sup> Cumulative flows on a balance-of-payment basis since 1968.

I.12). The destination of this FDI is mainly other developing countries. Many developing countries are heterogeneous with respect to levels of development, size of domestic markets, efficiency, diversification of production and other factors. Asymmetrical levels of industrial development among heterogeneous member countries provide opportunities to exploit different comparative advantages and derive benefits from an international division of labour by TNCs, although they may also make the integration of production among the countries involved more difficult.

The increasing importance of FDI from developing countries until 1997 reflects, among other things, the growing ownership advantages of firms from a number of developing countries. This is in line with improvements of the performance of their home economies as reflected, for example, in competitiveness rankings<sup>19</sup>: while, in 1986, there was only one developing economy (Turkey) among the 20 most competitive economies in the world, that number increased to six in 1998 (Singapore, Hong Kong (China), Taiwan Province of China, Malaysia, Chile and the Republic of Korea in that order) (EMF Foundation, 1986; World Economic Forum, 1998a). The improved performance of developing countries is also reflected in their growing share in world exports since the mid-1980s (figure I.12).

**Figure I.12. FDI outflows and exports of goods and non-factor services from developing countries as percentages of the world total, 1980-1998**



Source: UNCTAD, FDI/TNC database.

FDI from developing countries exhibits a high level of home-country concentration: a few of the more developed among the developing countries account for the bulk of FDI from developing countries. The major home economies in terms of FDI stock are, Hong Kong (China), Singapore, Taiwan Province of China, China, the Republic of Korea, Malaysia, Nigeria, Brazil, Argentina and Chile (annex table B.4).<sup>20</sup> These 10 largest investors account for about 80 per cent of FDI stock from the developing world.

It is difficult to generalize regarding trends in FDI among developing countries. One reason is that FDI from most of these countries is generally so small that a single large investment easily changes the pattern of their outward FDI. Nevertheless, data confirm that most of the TNCs based in developing economies (except, notably, those from Mexico) invest more in developing countries than in developed countries (annex tables A.I.12 - A.I.15). It is therefore important to developing countries whether firms from other developing countries will continue to invest in, and direct more FDI to, other developing countries over the coming years. While some developing countries such as Colombia, Malaysia and Thailand have seen a decrease in the share of host developing countries in their outward FDI stock over the past decade or so (annex table A.I.13 and A.I.15), developing countries in general have been increasing their FDI more in other developing countries than in developed countries (table I.4). This rising share should be considered in the context of many events that could have diverted FDI from developing

countries to other regions during the past decade. These include the opening up of Central and Eastern Europe to FDI and the economic integration of the European Union and North American countries, as well as, more recently, a less favourable climate for investment in some developing countries affected by such factors as financial crisis, debt problems and depressed commodity prices.

The importance of developing countries as partners for one another in international transactions is greater, in relative terms, in the case of FDI than in exports. FDI directed to other developing countries as a percentage of total developing country FDI stock is estimated to be about four-fifths (table I.4), as compared with a 44 per cent share in total developing country exports in 1997 (IMF, 1998). This implies that FDI and international production are beginning to play a role in integrating countries in the developing world. However, it must be recognized that the magnitude of inter-developing country FDI is still small. Measured in terms of the number of affiliates, there is a much higher concentration in FDI by developing countries than in FDI by developed countries (Fujita, 1990). For example, firms based in the Republic of Korea established about four-fifths of their foreign affiliates in developing countries (Republic of Korea, Bank of Korea, 1998). Some noteworthy trends in FDI among developing countries are summarized in box I.4.

\* \* \*

All in all, as an outcome of their development over the past few decades, developing countries as a group now have a larger potential for mutually beneficial investment and technology flows among themselves. Differences among developing countries in terms of levels and forms of skills and technical know-how provide conditions conducive to mutual exchanges of goods and services. Faced with a rapid shift in competition from the national to the regional and to the global level, TNCs from both developed and developing countries have responded rapidly to these developments.<sup>21</sup> The implications of this for developing countries as host and home countries for FDI are important not only for maintaining the current levels of and even attracting new inflows of FDI into their economies, but also for securing the participation of TNCs in their efforts of integration into a rapidly changing and globalizing world economy.

**Table I.4 Outward FDI directed to other developing countries from South, East and South-East Asia and Latin America**  
(Millions of dollars)

Host region	Flows				Stocks			
	South, East and South-East Asia <sup>a</sup>		Latin America <sup>b</sup>		South, East and South-East Asia <sup>a</sup>		Latin America <sup>b</sup>	
	1987	1997	1986	1992	1987	1997	1986	1992
Africa	43	182	-	-	154	923	16	33
Latin America and the Caribbean	50	1 712	89	1 457	92	6 376	1 139	4 177
South, East and South-East Asia	2 833	40 008	0.2	2	21 107	319 777	16	19
West Asia	110	61	2	-	277	371	27	24
Developing countries, total	3 040	42 144	91	1 459	21 732	327 954	1 199	4 253
<i>Memorandum :</i>								
Developed countries	1 706	4 515	827	1 035	5 734	32 585	2 556	4 312
Central and Eastern Europe	37	123	-	-	27	106	-	0.4
World	4 804	47 449	917	2 494	29 333	368 724	3 755	8 566

Source: UNCTAD, FDI/TNC database and annex tables A.I.12-A.I.15.

<sup>a</sup> Includes China, Hong Kong (China), India, Malaysia, Pakistan, Philippines, Republic of Korea, Singapore, Taiwan Province of China and Thailand.

<sup>b</sup> Includes Argentina, Brazil, Chile, Colombia, Mexico, Peru and Venezuela.

### Box. I.4. Salient features of FDI among developing countries and regions

#### *South, East and South-East Asia:*

- The share of developing countries in the total FDI outflows from this region has increased from three-fifths in 1987 to about nine-tenths in 1997 (annex table A.I.12). On a stock basis, more than four-fifths of FDI from this region is in developing countries, with more than 90 per cent of it being invested in the same region (annex table A.I.13).
- FDI among ASEAN member states is fairly significant: 28 per cent of total outflows from Malaysia and 38 per cent from Thailand went to other ASEAN member states in 1997 (UNCTAD, FDI/TNC database). In the case of Singapore, 72 per cent of its total outflows were invested in other ASEAN member states in 1997.
- More than half of FDI flows into relatively newly opened countries in Asia such as Cambodia, Lao People's Democratic Republic, Myanmar and Viet Nam are from other developing Asian countries (UNCTAD, forthcoming b).<sup>a</sup>
- The majority of FDI into China is also from other developing Asian economies (especially economies with large numbers of overseas Chinese residents – Hong Kong (China), Singapore and Taiwan Province of China).
- TNCs from the Republic of Korea and Taiwan Province of China have sizeable investments in many countries in the world. However, while FDI directed to developing countries from the former economy is mainly in South, East and South-East Asia, FDI within the region from the latter economy is smaller (about one third of total FDI), comparable to its FDI in Latin America and the Caribbean in terms of stock in 1997 (annex table A.I.13).

#### *Latin America and the Caribbean:*

- The share of developing countries in total FDI outflows from this region in the early 1990s was slightly lower than that in outward FDI from South, East and South-East Asia. On a stock basis, in the early 1990s, about half of FDI from this region was in developing countries, compared to about one third in the mid-1980s (annex table A.I.15).
- Intra-regional FDI is significant (see box II.6). All countries except Mexico direct a large part of their FDI to countries in their own region. Intra-regional investment accounts for more than 90 per cent of the region's FDI in developing countries (annex tables A.I.14 and A.I.15).
- Most of the intra-regional FDI is between major Latin American home countries and the Caribbean island economies. FDI from Brazil in Cayman Islands accounted for the bulk of intra-regional FDI in the early 1990s (UNCTAD FDI/TNC database).
- Two-way flows of FDI between Argentina and Brazil are growing. The total cumulative value of registered foreign investment projects between these two countries amounted to \$23 billion by 1997, 10 times larger than that in 1980 (CEP, 1998).<sup>b</sup> MERCOSUR has been instrumental in increasing FDI among the two as well as Paraguay and Uruguay, its other member states. Most of the foreign affiliates owned by firms from these countries in this subregion were established in the mid-1990s.
- Most FDI from Mexico is made in the United States, because of NAFTA. Mexico's investment within Latin America and the Caribbean is very small (UNCTAD, FDI/TNC database).

#### *Latin America and the Caribbean and South, East and South-East Asia:*

- Investment from South, East and South-East Asia to Latin America and the Caribbean is on the rise. Incentives to export-oriented investment as well as privileged access to the United States market have played a role in attracting, for instance, garments and other labour-intensive industries from Asian to Central American and Caribbean countries (Lall, Mortimore and Romijn, 1999).
- Taiwan Province of China is the largest home economy from Asia for investment in Latin America and the Caribbean (annex tables A.I.12 and A.I.13), but a large part of its investment is concentrated in tax-haven economies such as Panama and the Virgin Islands.

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**(Box I.4, concluded)**

- Latin America and the Caribbean are slowly emerging as hosts for FDI from the Republic of Korea. Five per cent of Korean outward FDI stock in 1997 was in Latin America and the Caribbean, as compared to two per cent in 1987 (annex table A.I.13).
- Most FDI from Latin America in South, East and South East Asia is made by Brazilian firms, which have investments in Singapore and Macau. However, compared to flows from developing Asia to Latin America and the Caribbean, those from the latter to the former are still almost negligible in size (annex tables A.I.13 and A.I.15).

*Africa and South, East and South-East Asia:*

- FDI from developing Asia in Africa is growing (Fujita, 1997). While the Republic of Korea is the largest investor in Africa, China, India, Malaysia and Taiwan Province of China also have FDI – all of more or less similar levels of stock – in Africa.
- There is some FDI from Africa in developing Asia. For example, Egyptian firms have FDI in Bangladesh, China and India. Kenyan firms have invested in Pakistan. Indonesia has received FDI from Nigeria. However, all of these investments are small, less than \$1 million in FDI stock (except for FDI from Kenya in Pakistan, which is \$3 million). The most notable is investment from Mauritius in India. Because of the conclusion of a double taxation treaty between these two countries in 1982, FDI flows increased over the years to have reached more than \$900 million on approval basis in 1997 (UNCTAD, forthcoming b).<sup>c</sup>

*Africa and Latin America and the Caribbean:*

- No noteworthy FDI is recorded between these two regions, although there is some FDI from Panama in Egypt.

*Source:* UNCTAD.

<sup>a</sup> Based on cumulative flows of approved FDI, Cambodia received 83 per cent of its total inward FDI from South, East and South-East Asia (\$3.7 billion in 1997); Lao People's Democratic Republic, 69 per cent of its total inward FDI from this region (\$4.7 billion in 1997); Myanmar, 55 per cent of total inward FDI from this region (\$3.8 billion in 1998); and Viet Nam, 51 per cent of its total inward FDI from this region (\$13.1 billion in 1996).

<sup>b</sup> Registered investment is different from FDI reported on a balance-of-payments basis. It is the latter data that are mostly used in this report.

<sup>c</sup> Most of the investment from Mauritius to India is made by holding companies established by United States firms. The double-taxation treaty between Mauritius and India stipulates a dividend tax on Mauritius firms in India of five per cent, while the treaty between the United States and India stipulates a tax on dividends of 15 per cent on United States firms in India (JETRO, 1998).

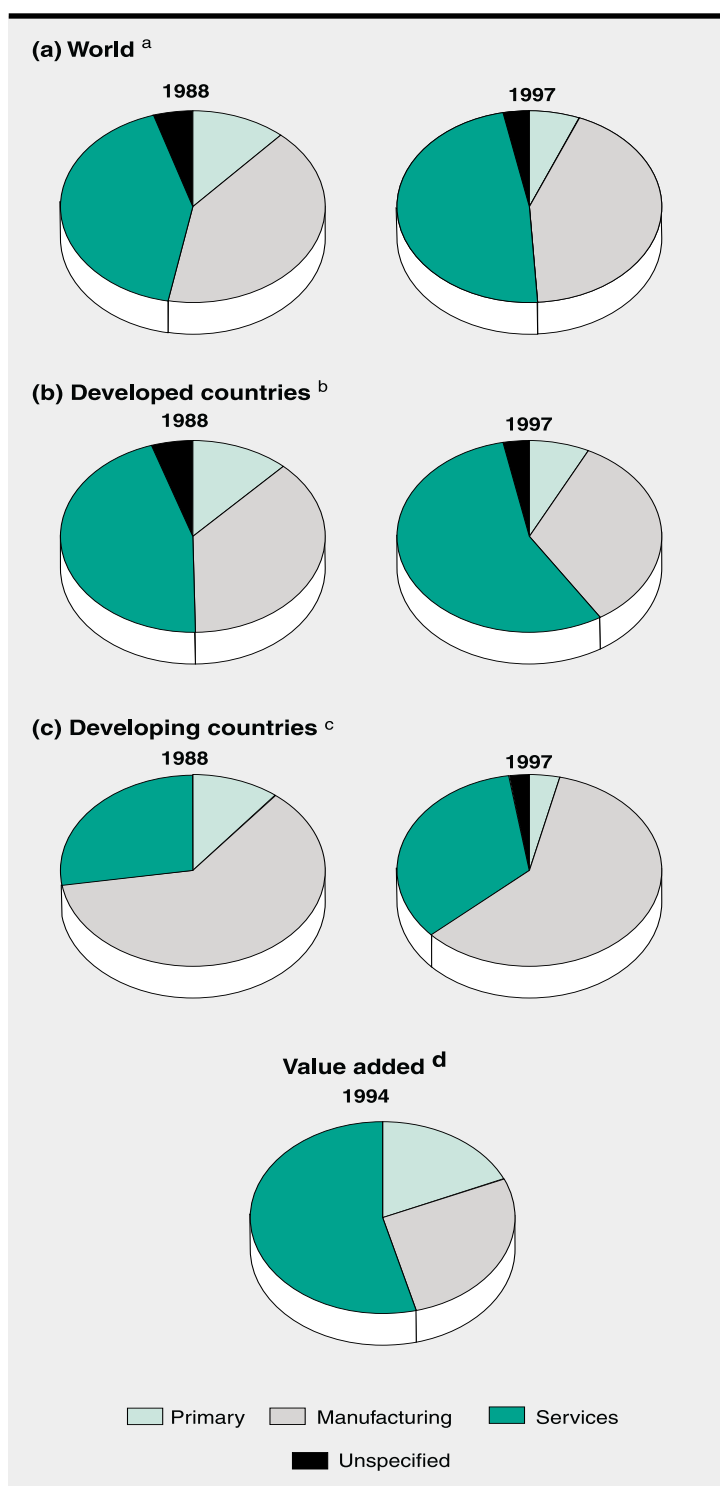
## **2. Sectoral and industrial patterns of FDI**

International production is distributed among different sectors and industries, reflecting, among others, the relative importance of different sectors and industries in home and host countries, the degree of liberalization of host country policies with respect to TNC participation in different sectors and industries, and the strategies of firms. FDI data by sector and industry have limitations of country coverage as well as of disparities in industry classification among the reporting countries; nevertheless, they throw light on various aspects of the sectoral and industrial patterns of international production and the trends emerging in those respects.<sup>22</sup>

The most striking feature of the sectoral distribution of the FDI (inward) stock is the decline, by half, of the share of the primary sector between 1988 and 1997, globally as well as in developed and developing countries (figure I.13). The services sector experienced a corresponding increase, again in both developed and developing countries. The share of manufacturing in total FDI remained stable, representing the single most important sector in developing countries (annex tables A.I.16 to A.I.21). A number of other important trends and patterns have, moreover, emerged during the past decade:

**Figure I.13. Inward FDI stock, by sector for the world and developed countries, and inward FDI stock and value added, by sector for developing countries, 1988 and 1997**

(Percentage)



Source: UNCTAD, based on annex tables A.I.18 and A.I.19 and United Nations, 1997a.

<sup>a</sup> Not including Central and Eastern Europe.

<sup>b</sup> For 1988, data are based on inward stock in Australia, Austria, Canada, Germany, Iceland, Italy, Norway, Switzerland, United Kingdom and United States that accounted for 76 per cent of total inward stock in developed countries in 1988. For 1997, data are based on inward stock in Australia, Austria (1996), Canada, Denmark (1996), Finland, France (1996), Germany (1996), Iceland, Italy, Netherlands (1996), Norway, Switzerland, United Kingdom and United States. They accounted for 81 per cent of total inward stock in developed countries in 1997.

<sup>c</sup> For 1988, data are based on actual inward stock in Bolivia, Brazil, Colombia, Hong Kong (China), India, Indonesia (1992), Namibia (1990), Nigeria, Pakistan, Peru, Philippines, Republic of Korea, Singapore, Swaziland, Thailand and Venezuela, as well as inward stock on an approval basis in Bangladesh, Cambodia (1994), Lao People's Democratic Republic, Malaysia, Nepal, Sri Lanka, Taiwan Province of China and Viet Nam. They accounted for 53 per cent of total inward stock in developing countries in 1988. For 1997, data are based on actual inward stock in Brazil, Colombia, Hong Kong (China), India (1995), Namibia (1994), Nigeria (1992), Pakistan (1996), Peru, Philippines, Singapore (1996), Swaziland (1993), Thailand and Viet Nam (1996), as well as inward stock on an approval basis in Bangladesh, Cambodia, China, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar (1996), Nepal, Republic of Korea, Sri Lanka and Taiwan Province of China. They accounted for 67 per cent of total inward stock in developing countries in 1997.

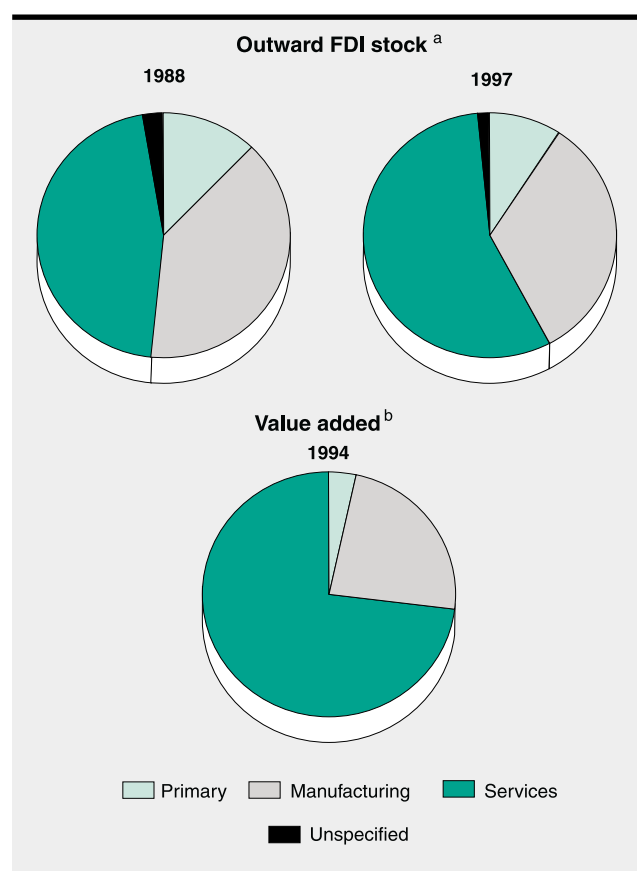
<sup>d</sup> Data are based on value added at constant prices for Argentina (1992), Brazil, Chile, China, Colombia (1992), Egypt (1991), Hong Kong (China) (1993), India, Indonesia (1993), Kenya (1993), Malaysia (1992), Mexico (1993), Nigeria, Philippines, Peru, Republic of Korea (1992), Singapore, Thailand, Tunisia (1992), Uganda, Uruguay (1991), Venezuela, Viet Nam (1991), Zambia (1991) and Zimbabwe (1989), that accounted for 73 per cent of total value added of developing countries in 1994.

- The industry with the largest share of inward FDI stock in the *world* is finance followed by trade. The position of financial services (banks, insurance, securities and other financial companies) as top recipient has not changed over the past decade (annex tables A.I.16-A.I.19). The industry distribution of FDI inflows also shows that the finance industry was the largest recipient both in 1988 and 1997 (annex tables A.I.16 and A.I.17). In both inward

stock and inflows, the share of this industry increased. In addition to the usual explanation the need for the presence of TNCs in financial services for facilitating the business (especially international trade) of foreign affiliates in manufacturing and other services – the recent restructuring of this industry in developed countries through cross-border M&As is a factor underlying its dominant share. Liberalization of the industry in developing countries has given further momentum to FDI in financial services.

- In *developed* countries too, finance and trade are the first and second largest recipients, while in the *developing* world, real estate and chemicals are the first and second largest (annex tables A.I.16 to A.I.19).
- In outward FDI from developed countries (which account for some 90 per cent of world outward FDI stock), the manufacturing sector accounts for a larger share than its share in total value added of all economic sectors (figure I.14); this suggests that the industry composition of FDI may not necessarily reflect closely the comparative advantages or demand patterns of home countries. Capital- or technology-intensive industries such as chemicals, electrical machinery and motor vehicles account for a relatively large share in total manufacturing FDI, reflecting the global strategies of TNCs in those industries to benefit from technological development and scale and scope economies from international production. Recent large M&As in motor vehicles and chemicals (pharmaceuticals) have intensified the concentration of FDI in these industries, in which partnership also play an increasing role (chapter III).
- Services FDI has been growing over the past years at a faster rate than FDI in other sectors, increasing its share in total outward FDI stock of developed countries from 45 per cent in 1988 to 56 per cent in 1997 (figure I.14). The increase is explained by the liberalization of investment and trade in many service industries and by the non-tradability of many service products that necessitates FDI for delivering them to foreign

**Figure I.14. Outward FDI stock, 1988 and 1997, and value added, 1994, of developed countries, by sector**  
(Percentages)



Source : UNCTAD, based on annex tables A.1.20 and A.1.21 and United Nations, 1997a.

<sup>a</sup> For 1988, data are based on outward stock of Australia, Austria, Canada, Finland, France, Germany, Iceland, Italy, Japan (approval basis), Norway, Switzerland, United Kingdom and United States; together these countries accounted for 86 per cent of total outward stock of developed countries in 1988. For 1997, data are based on outward stock of Australia, Austria (1996), Canada, Denmark (1996), Finland, France (1996), Germany, Iceland, Italy, Japan (approval basis), Netherlands (1996), Norway (1996), Switzerland, United Kingdom and United States, that accounted for 91 per cent of total outward stock of developed countries in 1997.

<sup>b</sup> Value added at constant prices. Data cover the same countries as FDI stock in 1997. The countries covered accounted for 93 per cent of total value added of developed countries in 1994.

markets. However, the share of services in FDI is still lower than that in the value added of home countries, suggesting that there is still room for international production in certain service industries to expand; at the same time, some service industries, in particular those primarily comprising SMEs, are almost exclusively domestic-market-oriented, and many SMEs in the services sector continue to serve their own country markets only.

- United States TNCs, the largest single country-group that accounts for about one quarter of the world's outward FDI stock, are not necessarily the largest investors in every industry (annex tables A.I.20 and A.I.21). In the manufacture of food, beverages and tobacco, United Kingdom TNCs invested more than their United States counterparts as of end-1997. The largest FDI stocks in machinery and equipment are held by TNCs from Japan.<sup>23</sup> In the services sector, Japan is the largest investor in real estate business and transport services (the latter reflecting the active involvement of Japanese companies in flags-of-convenience FDI), while in business services activities, FDI by German TNCs is larger than that by TNCs from any other country.
- The sectoral distribution of inward FDI stock in developed countries is more or less similar to that of their outward FDI stock (annex tables A.I.18 and A.I.19). This similarity emerges mainly because about three quarters of FDI stock from developed countries is located in other developed countries. Thus, the share of the services sector in inward FDI has been on the rise, while the shares of primary and manufacturing sectors have declined during the past decade (annex table A.I.16 and A.I.17). Large increases in inward FDI stock took place during this period in the financial services industry.
- Similarly, in developing countries, the services sector has gained in importance in inward FDI, but principally at the expense of the primary sector (figure I.13). Although there are small decreases in the share of manufacturing in total inward FDI stock in developing countries during the past decade, manufacturing continued to be the most important sector. Compared with the sectoral distribution of value added of economic activities, the share of the manufacturing sector in total FDI is much higher. However, in terms of FDI inflows, there is a significant decline in the share of this sector in 1997, as compared with that in 1988 (annex tables A.I.16 and A.I.17).

Overall, the sectoral distribution of FDI has changed over the years, reflecting the competitive advantages of firms in host and home countries, the degree of liberalization in each industry and firm strategies in response to globalization in various industries. The range of activities in which TNCs are engaged also affects the industry pattern of FDI, as exemplified by Japanese *sogo shosha* that are engaged in virtually all industries in their international investments abroad. One fifth of Japanese affiliates abroad have been established by such firms (including other trading firms) that accounted for only 17 per cent of all Japanese parent firms (Japan, MITI, 1998a, p.104).

In general, services affiliates are established not only by services TNCs but also TNCs in primary and manufacturing industries: these firms often begin with international production by establishing trading affiliates (UNCTAD, 1996a, chapter III). For example, according to the sectoral distribution by industry of parent firms of United States foreign affiliates, the share of the services sector in total assets of foreign affiliates was only 38 per cent in 1996, while that share was 63 per cent on the basis of the industry of foreign affiliates of United States TNCs (United States, Department of Commerce, 1998a). Similarly, for Japanese TNCs, the numbers of foreign affiliates in services accounted for one third of the total number of all Japanese affiliates in 1996 according to the industry of parent firms; according to the industry of foreign affiliates, they accounted for nearly a half (Japan, MITI, 1998a, pp. 104 and 125).<sup>24</sup> All of this points to the fact that the importance of services activities for manufacturing TNCs is an additional factor contributing to the growth of FDI in services.

\* \* \*

To conclude, the momentum for the expansion of international production continues to hold although the world economy is currently affected by a number of factors that could discourage investment, including FDI by TNCs. Although the growth of FDI flows to developing countries fell in 1998, the decline was confined to a few countries (chapter II). Flows of payments for technology continue to grow, reflecting the rise of the knowledge economy. Cross-border M&As among developed countries have contributed substantially to the expansion of FDI flows and international production capacity in 1998. This suggests that TNCs in the Triad are less affected by the immediate turmoil in financial markets but rather take a longer term view and position themselves for the future. They are strengthening their competitive advantages and ready themselves for global expansion (or survival) once the health of the world economy, including countries affected by the recent financial crises and its aftermath, is restored.

## Notes

- <sup>1</sup> An SME is defined in many developed countries as a firm with employment of less than 300-500.
- <sup>2</sup> As noted in the discussion on definitions and sources provided in Annex B as well as in footnotes to figure I.1, only 30 countries reported figures on all three components of FDI (equity investment, reinvested earnings and intra-company loans). These countries account for about half of world FDI flows. According to the countries for which data on all of the components of FDI flows in 1998 are available (June 1999), the share of reinvested earnings in total outflows declined - for example, from 53 per cent in 1997 to 41 per cent in 1998 for the United States and from 27 per cent in 1997 to 14 per cent in 1998 for Canada. In the case of FDI inflows to the United States, reinvested earnings accounted for only 10 per cent in 1998, as compared to 24 per cent in 1997 (Bach, 1999).
- <sup>3</sup> For a definition of FDI and its measurement, see Annex B. Equity can also include company stock exchange for the stock of foreign firms acquired through mergers and acquisitions.
- <sup>4</sup> In an extreme case, for instance, FDI inflows into a country can be zero, although foreign TNCs have acquired firms worth \$10 billion in that same country (by, for example, financing the acquisition from the domestic capital market).
- <sup>5</sup> Data provided by the UNCTAD Secretariat.
- <sup>6</sup> Data provided by the Securities Data Company on an announcement basis. The value of announced cross-border M&As in 1998 is \$655 billion.
- <sup>7</sup> Going back further, during 1970-1998, there were only four years (1981, 1983, 1988, and 1998) when the real GDP growth rate of developing countries was lower than that of developed countries (UNCTAD, various issues).
- <sup>8</sup> Without the countries shown under the heading "Developing Europe" in the statistical annex, FDI flows in 1998 were \$17.5 billion.
- <sup>9</sup> In today's figures, this would have been around \$600 billion (Maucher, 1998, p.160).
- <sup>10</sup> Data on these flows are very imperfect indicators of the magnitude and trends in the international flows of technology for three reasons. First, all flows of technology within TNC systems do not necessarily involve explicit payments of royalties or licence fees; some of them may simply be provided as part of the FDI package and the returns to them reflected in the dividends to the investor. On the other hand, technology payments can be used as a hidden form for other payments or transfers. Third, data on royalties and fees have numerous limitations, including in terms of coverage of countries and of recipients or payers. See also note 17 below.
- <sup>11</sup> "Value added" refers to the total value of outputs minus that of inputs purchased by firms - that is, net addition to production. The value-added measure is a better indicator of the size of production than are sales, which involve problems of measurement since sales may refer to operating revenues, total revenues or net sales, and sales in certain industries (such as wholesale trade, financial institutions) are not directly comparable to those of the manufacturing sector. The data on sales of all industries are therefore not reported by countries.
- <sup>12</sup> It was already noted in the mid-1980s that there was no systematic difference between foreign and domestic firms in the United States as regards productivity (Graham and Krugman, 1989, p. 58).
- <sup>13</sup> The host country transnationality index captures in the form of a simple average the following four ratios: FDI inflows as a percentage of gross fixed capital formation for the last three years; FDI inward stock as a percentage of GDP; value added of foreign affiliates as a percentage of GDP; and employment of foreign affiliates as a percentage of total employment.
- <sup>14</sup> In 1998, with the first decline in FDI flows to developing countries since 1985 and a sizeable increase in flows to developed countries, the share of developing countries in world FDI flows declined to 26 per



- cent, from 37 per cent in the previous year, while that of the developed countries rose to 72 per cent, with the Triad accounting for the bulk of that share (table I.3a).
- 15 In 1996 and 1997, this ratio was slightly higher, at about 12 per cent.
- 16 Based on data on receipts and payments of royalties and licence fees from IMF, Balance of Payments Statistics, CD-ROM, February 1999.
- 17 Based on data on receipts and payments of royalties and licence fees from IMF, Balance of Payments Statistics CD-ROM, February 1999. It should be noted that the coverage of countries is incomplete. Data for Canada, Denmark, New Zealand, Switzerland and many developing countries are not reported. The calculations therefore over-estimate the shares of particular countries in the world's total.
- 18 In terms of FDI outflows the share of the Triad as hosts in total outflows from the Triad declined from 69 per cent in 1988 to 60 per cent in 1997.
- 19 The competitiveness index developed by the World Economic Forum is an index of economic indicators that have proven to be correlated with medium to long-term economic growth. It measures the extent to which a country's national environment is conducive or detrimental to the domestic and international competitiveness of enterprises operating in that country; it incorporates quantitative data, namely indicators of a country's economic performance, technological capacity and infrastructure, as well as survey data measuring the perceptions of business executives about the country in which they operate. (World Economic Forum, 1998a).
- 20 It should be noted, however, that significant portions of FDI from Hong Kong (China) and Singapore are made by foreign affiliates operating in these economies (UNCTAD, 1997f).
- 21 The recent boom in cross-border M&As is a typical example. In 1997, there were four cross-border M&A deals worth more than \$1 billion between developing countries (UNCTAD, 1998a), though this number declined to only one in 1998 (annex table A.III.1).
- 22 Estimated on the basis of 38 countries that report data on inward FDI by industry and account for three-quarters of the world's inward FDI stock, and of 15 countries that report data on outward FDI by industry and account for some 90 per cent of the world's outward stock.
- 23 Data on Japanese FDI by industry are available only on a notification basis. These data show FDI values that are higher than actual FDI.
- 24 Based on data for 2,390 TNCs that cover about 60 per cent of all Japanese TNCs (Japan, MITI, 1998a).





# CHAPTER II

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## REGIONAL TRENDS

### A. Developed countries

Developed countries registered record levels of FDI inflows and outflows in 1998 amounting respectively to \$460 billion (68 per cent more than 1997) and \$595 billion (or 46 per cent more) (annex tables B.1 and B.2). Their share in worldwide outflows further increased from an already high ratio of 86 per cent in 1997 to about 92 per cent in 1998, while their share in inflows rose even more from 59 per cent to 72 per cent. This marked change reflects a combination of factors both in developed and developing countries: first, a solid growth performance in the United States, and in several member countries of the EU (and non-EU European countries), resulting in a stimulation of outflows from TNCs from these countries, and in greater attractiveness of these economies as an investment location; second, the significant wave of M&As that took place last year, especially between the EU and the United States as well as in Japan as a new eager host; and, third, the economic and financial crisis experienced by a number of developing economies in 1997 and 1998 which reduced the capacity of firms in affected countries to invest abroad and at the same time made some types of investment – market seeking FDI – in their domestic economies relatively less attractive.

As in the past, the Triad (EU, Japan and the United States) dominate the picture (figures II.1 and II.2), accounting for about 93 per cent and 91 per cent of FDI inflows into and outflows from developed countries in 1998. Outside the Triad, Australia, Canada and Switzerland remain significant FDI recipients, the latter two also being significant outward investors. Particularly striking in that respect is the difference between the ratios of FDI outflows and FDI inflows to gross fixed capital formation which characterized Switzerland; at 26 per cent during 1995-1997, the ratio of outflows to gross fixed capital formation is much higher than that of inflows (seven per cent during the same period) (figure II.3).

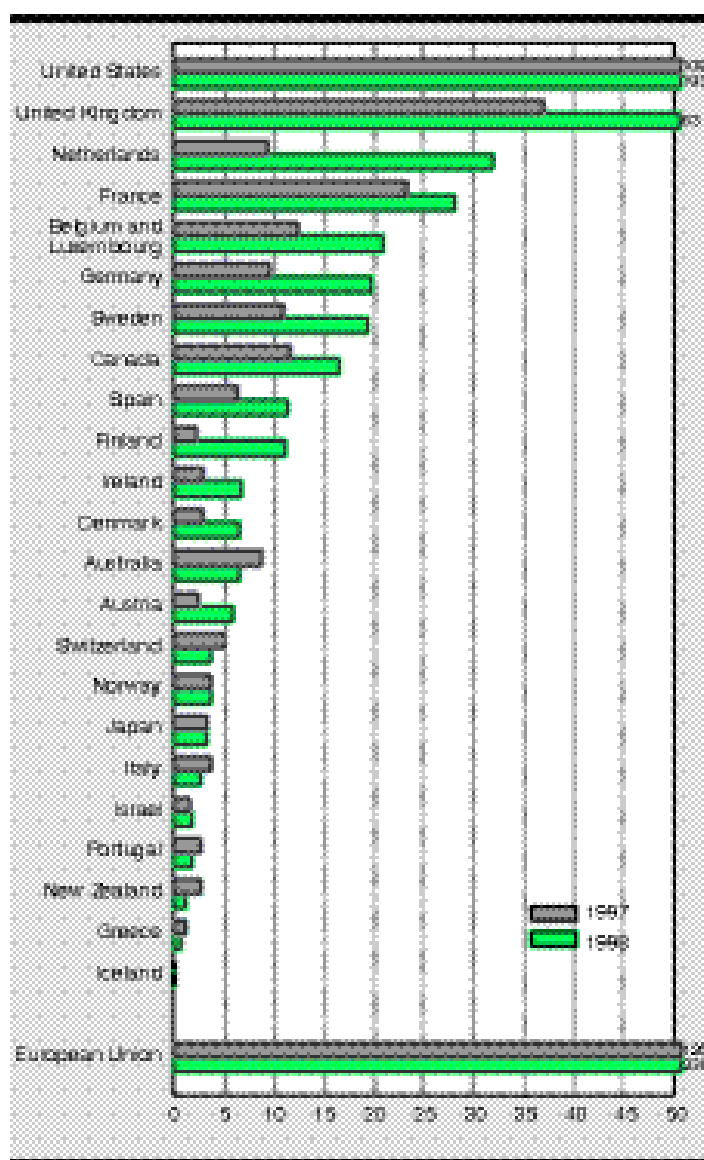
#### 1. United States

FDI inflows to, and FDI outflows from, the United States were at record highs in 1998 (figures II.1 and II.2). FDI inflows nearly doubled to \$193 billion, mainly because of large-scale M&As (see chapter III.B). Inflows soared even though Japan, the most important investor in the United States after the European Union (EU), suffered from persistent recession and structural problems in the financial sector. While Japan's FDI flows to the United States slightly declined to less than \$9 billion in 1998, EU FDI flows to the United States tripled to \$155 billion. European investors were eager to benefit from the economic boom in the United States, a boom that

continued into the seventh consecutive year. In particular, German FDI flows to the United States increased fourfold, and United Kingdom FDI flows rose more than eightfold. Taken together, these two investor countries contributed almost 60 per cent to total FDI inflows to the United States in 1998.

The expanding United States economy and rising asset prices – which enhance a firm's capacity to raise funds – stimulated United States FDI outflows as well: they reached \$133 billion in 1998. Compared to inflows, however, the growth of FDI outflows was marginal (figure II.2). The EU continued to be the most important recipient of United States FDI, accounting for 54 per cent of total outflows in 1998. Outflows to Latin America declined by 26 per cent, mainly because of sharply reduced flows to Brazil. Outflows to Mexico, too, suffered a significant setback. By contrast, outflows to some host countries in Asia and the Pacific (notably to Australia, Japan and Thailand) increased significantly.

Figure II. 1. Developed countries: FDI inflows, 1997 and 1998<sup>a</sup>  
(Billions of dollars)



Source: UNCTAD, FDI/TNC database and annex table B.1.

<sup>a</sup> Ranked on the basis of the magnitude of 1998 FDI inflows.

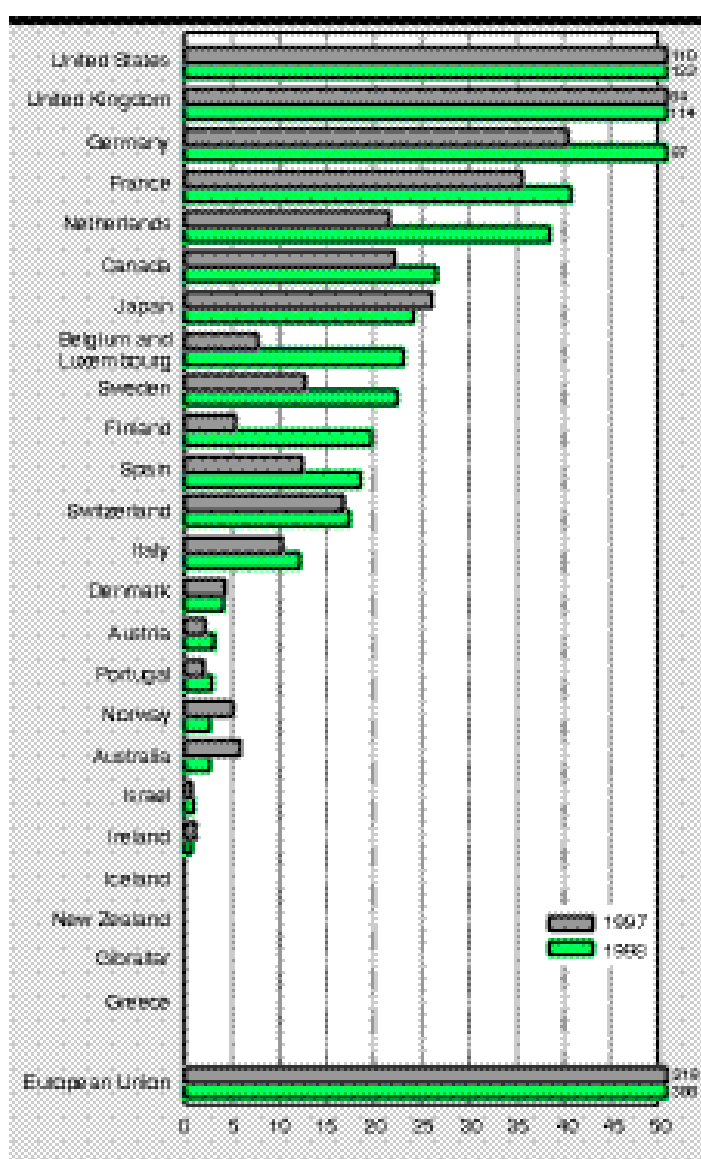
The sectoral composition of FDI in 1998 differed significantly between inflows and outflows. Manufacturing (48 per cent) and petroleum (30 per cent) accounted for the bulk of total FDI inflows. Booming inflows in the petroleum industry were related to exceptionally high M&A activities in this industry (see annex table B.9). By contrast, services industries (notably non-bank finance and insurance) figured most prominently in FDI outflows in 1998, considerably exceeding the share of manufacturing in total outflows (around 60 per cent against 28 per cent). FDI outflows in services were encouraged by the worldwide trend towards privatization and deregulation in this sector.

Likewise, the mode of financing differed between FDI inflows and FDI outflows. Inflows were financed up to 80 per cent by equity capital in 1998, while intra-company loans and reinvested earnings each accounted for roughly one tenth (Bach, 1999). Increases in equity capital were quite significant in 1998, amounting to \$157 billion compared to only \$46 billion in 1997 (or half of total FDI inflows). This prominence seems to be related to M&A activities, which accounted for the bulk of FDI inflows to the United States.<sup>1</sup> Equity capital also was important for FDI outflows, but the largest source of financing of FDI outflows was reinvested earnings. Intra-

company loans provided a much less important source of FDI outflows — less than one tenth of the overall total.

The United States' overall attractiveness to FDI tends to disguise the uneven distribution of foreign investment across individual states of the country. This is reflected, for instance, in the wide differences between states in the share of private sector employment accounted for by affiliates of foreign TNCs (figure II.4). In 1996, they were highest in Hawaii (11 per cent), South Carolina (eight per cent) and North Carolina (seven per cent). Japanese-owned affiliates contributed about 70 per cent to affiliate employment in Hawaii, whereas European-owned affiliates accounted for about three-quarters of affiliate employment in the Carolinas. At the opposite extreme, the employment share of foreign affiliates was below two per cent in Montana, North Dakota and South Dakota. Apart from Hawaii, the employment impact of FDI was concentrated on the east coast of the United States.

**Figure II.2. Developed countries: FDI outflows, 1997 and 1998<sup>a</sup>**  
(Billions of dollars)

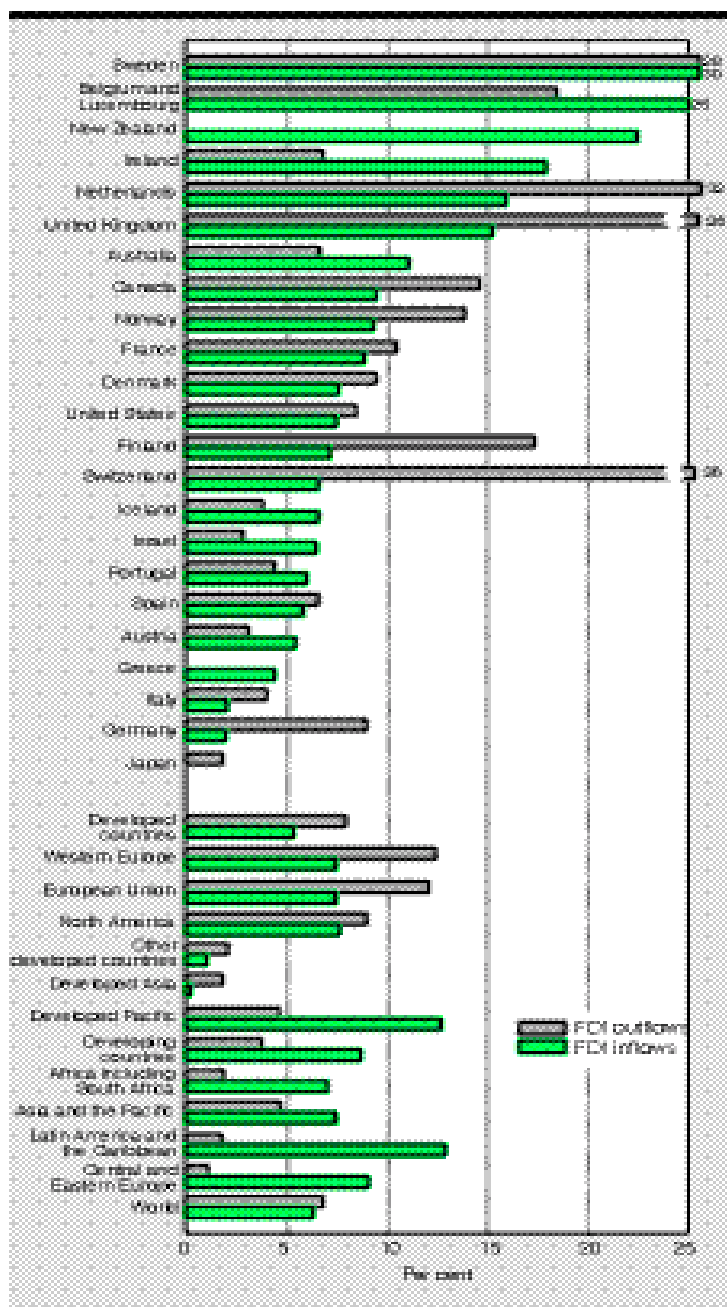


Source: UNCTAD, FDI/TNC database and annex table B.2.

<sup>a</sup> Ranked on the basis of the magnitude of 1998 FDI outflows.

On average, the share of employment accounted for by foreign affiliates was higher in manufacturing than in other sectors.<sup>2</sup> But across states it was not significantly linked to the share of manufacturing in gross state product, whereas it was positively correlated with the share of finance, insurance and real estate in gross state product (table II.1). Not surprisingly, the employment impact of FDI was relatively low in states in which the agricultural sector figured prominently. While the share of foreign affiliates in employment was higher in richer states than in poorer ones, the wage level does not appear to be of relevance in this respect. Other factors that may have had an impact on the allocation of FDI across states cannot easily be captured empirically. For example, the discouraging effect of relatively high wage costs in particular states may have been outweighed by a better endowment of highly skilled labour and/or the provision of financial and tax incentives to foreign investors by state authorities. Two observations tend to support this reasoning: high-wage economic areas have a higher proportion of their manufacturing jobs in industry clusters, allowing foreign (and domestic) investors to take advantage of benefits associated with clustering, such as economies in transportation and access to common input suppliers (Bernat, 1998, p. 55). At the same time, these economic areas tend to

Figure II.3. Developed countries: FDI flows as a percentage of gross fixed capital formation, 1995-1997<sup>a</sup>



Source: UNCTAD, FDI/TNC database and annex table B.5.

<sup>a</sup> Ranked on the basis of the magnitude of 1995-1997 FDI inflows as a percentage of gross fixed capital formation.

<sup>b</sup> The ratio of FDI outflows to gross fixed capital formation was -6.7 per cent.

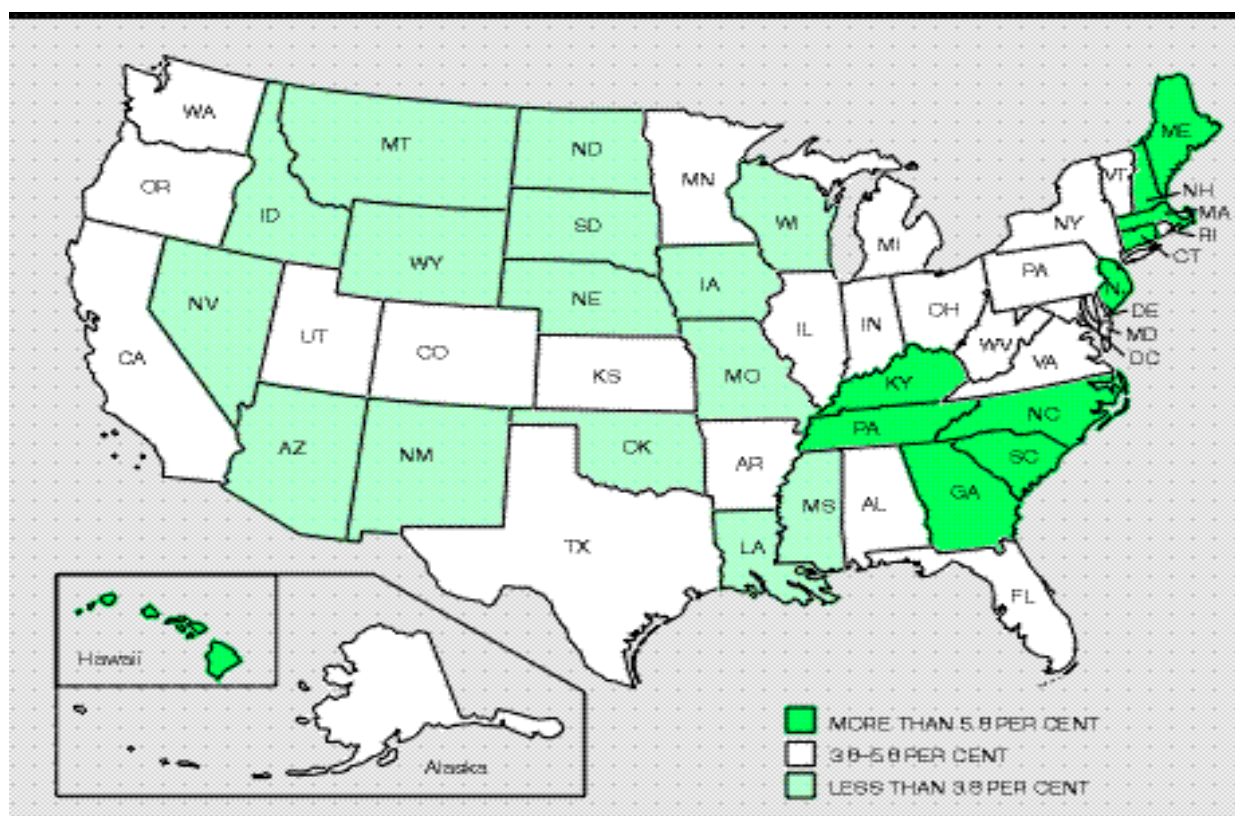
have a well-educated and diverse workforce.

It remains to be seen whether the record FDI inflows and outflows in 1998 for the United States as a whole can be sustained. In the short run, various factors working in opposite directions have to be taken into account when assessing this question. Much depends on short-term business conditions in the United States. While the United States economy is widely expected to grow in 1999, inflationary pressures may induce the Federal Reserve to raise interest rates. Such a move could affect FDI in- and outflows in two major ways:

- A rise in United States interest rates could further strengthen the dollar *vis-à-vis* the euro and the yen. The effects on United States FDI outflows would be ambiguous. While higher interest rates add to the costs of financing FDI outflows, a stronger dollar would counteract this cost factor. In the case of inflows, experience suggests that a dollar appreciation tends to discourage FDI into the United States (Graham and Krugman, 1995, pp. 45-47).
- A still more critical question is whether rising interest rates would trigger a major correction in asset prices. If stock markets were to decline significantly, United States FDI outflows could be affected negatively as United States investors would be constrained financially. On

the other hand, foreign investors (e.g. from Europe) might take advantage of reduced asset prices to enter through M&As and expand their activities in the United States.

Besides internal factors in the United States, economic conditions prevailing in partner countries have an impact on the sustainability of record FDI inflows and outflows. For FDI outflows, the situation in Asia – where United States firms are already active as acquirers of assets through M&As – is of particular relevance. If the optimistic perception proves to be correct that emerging markets in Asia have largely overcome the financial crisis, United States

Figure II.4. United States: employment share of foreign affiliates across states,<sup>a</sup> 1996

Source: Based on data from Fahim-Nader and Zeile, 1998.

<sup>a</sup> Employment by non-bank United States affiliates of foreign companies as a percentage of total private sector employment in the state. The average share for the United States was 4.8 per cent.

investors may strengthen their engagement in this region, in order to benefit from economic recovery. Moreover, if China were to become a WTO member, this would be an incentive for export-oriented FDI flows from the United States (and other investor countries) to China. As for FDI outflows to Europe, the expected decline in economic growth in several members of the European Monetary Union (EMU) (notably in Germany and the Netherlands) and in the United Kingdom may discourage United States investors from increasing their engagement in this region. A stronger euro could work in the same direction. In the longer run, however, United States investors are likely to take an active part in the restructuring and globalization of manufacturing and services industries in Europe.

An important factor shaping United States FDI inflows in the short run relates to the capacity of Japan to solve its internal problems and resume its traditional role with respect to acquiring and establishing new businesses in the United States. If Japan recovers, large-scale investments in the United States that have contributed significantly to the recent boom in overall inflows may receive another boost. The number of investments of \$100 million or more has tripled between 1991-1993 and

Table II.1. United States: possible determinants of the employment impact of FDI across states, 1996, correlation results<sup>a</sup>

Correlation of employment share of affiliates of foreign TNCs with:	Pearson correlation coefficient
Per-capita income (United States average = 100)	0.30 <sup>b</sup>
Share in gross state product (per cent)	
Agriculture, forestry and fishing	-0.51 <sup>b</sup>
Manufacturing	0.1
Transportation, public utilities	-0.11
Finance, insurance and real estate	0.28 <sup>b</sup>
Other services	0.07
Wages and salaries per capita (dollars)	0.02
Population density	-0.07

Source: UNCTAD, based on data from *Survey of Current Business*, June and October 1998 and January 1999.

<sup>a</sup> The number of observations is 51.

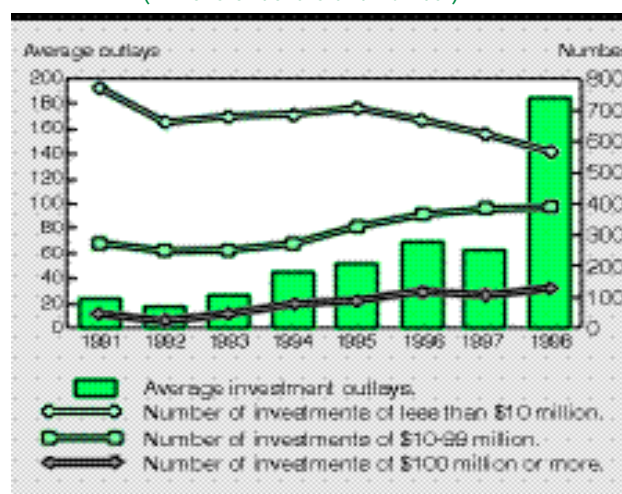
<sup>b</sup> Significant at the five per cent level (two-tailed test).



1996-1998 (figure II.5). Likewise, the average size of FDI outlays has tripled since the early 1990s. Investments of \$100 million or more contributed 87 per cent to total outlays in 1996-1998, compared with 57 per cent in 1991-1993.

As a result, and as in the case of FDI outflows, the sustainability of record FDI inflows cannot be taken for granted in the short run. Yet, in the longer term, the United States can be expected to remain an attractive location for foreign investors. Indeed, based on a positive perception by investors of a number of locational factors that go beyond market size and include, for instance, the country's domestic labour and financial markets, its favourable business environment (which for instance facilitates the start of new business), the quality of its infrastructure, its leading role in technological innovation and the close collaboration between research institutions and industries, the United States is widely considered to be today one of the most competitive developed countries (World Economic Forum, 1998).

**Figure II.5. FDI projects in the United States, by size of outlays, 1991-1998**  
(Millions of dollars and number)



Source: UNCTAD, based on data from Fahim-Nader and Zeile, 1998, and "Foreign investors' spending to acquire or establish U.S. businesses tops \$200 billion for the first time in 1998", BEA News Release ([www.bea.doc.gov/bea/newsrel/fdi98.htm](http://www.bea.doc.gov/bea/newsrel/fdi98.htm)).

## 2. European Union

The EU as a whole continued to be the world's most important outward investor in 1998, with \$386 billion FDI outflows registered during that year, 77 per cent more than in 1997. The United Kingdom maintained its position as the largest EU investor, followed by Germany, France and the Netherlands. The increase in FDI outflows in 1998 was most pronounced for some smaller investor countries, including Finland, and Belgium/Luxembourg. Another familiar feature was that the EU reported substantially lower FDI inflows than FDI outflows. The discrepancy between inflows and outflows almost doubled from \$92 billion in 1997 to \$156 billion in 1998. Nonetheless, with \$230 billion in 1998 (82 per cent more than in 1997), the EU succeeded once again in outperforming the United States as the single most important FDI recipient (annex table B.1). Finland and the Netherlands were the best performers in the EU in terms of growth of FDI inflows in 1998, whereas FDI inflows declined in Greece, Portugal and, most notably, Italy (figure II.1). Sweden turned to become one of the major recipients for FDI flows recently (box II.1), with again the highest ratio of FDI inflows to gross fixed capital formation among EU members (figure II.3). However, in terms of FDI inward stock to GDP, Belgium and Luxembourg led the way, while the Netherlands outperformed all other EU members in terms of outward stock to GDP (annex table B.6).

In light of the experience with previous steps towards market integration and their impact on intra-EU FDI flows, expectations were that intraregional FDI would be on the rise again after the announcement of the EMU. The EU recorded a boom in FDI inflows in the process of completing the internal market programme (Dunning, 1997; UNCTAD, 1993). The fact that the EU's share in world FDI inflows peaked at 50 per cent in 1991 indicates that foreign investors largely anticipated effective market integration at that time. The effects of the internal market programme on FDI have tapered off since 1993 (Gundlach and Nunnenkamp, 1994).

In contrast to the internal market programme, the data available so far suggest that the prospect of launching the single currency in January 1999 had little effect on FDI flows:

**Box II.1. Policy changes and FDI: the case of Sweden**

Sweden represents an interesting empirical case of how a change in attitudes and policies can make a difference in attracting FDI. For many decades, Sweden has been a prominent base for TNCs and thus a significant source of outward FDI. As a recipient of FDI, however, the country has historically played a more modest role. This was particularly the case in the 1980s, when Swedish companies invested heavily abroad but very little foreign investments entered the country. Between 1981 and 1990, the cumulative flows of FDI from Sweden amounted to about \$48 billion, while inflows were \$9 billion. Among the developed countries, only Japan had a greater discrepancy between outflows and inflows during the same period (Andersson and Fredriksson, 1993).

Today, the picture is quite different. In 1993, Sweden experienced a net FDI inflow for the first time in 25 years. Despite its population of only nine million inhabitants, Sweden was the fifth largest recipient of FDI flows in 1995 and the ninth in 1998 (annex table B.1). The big discrepancy between inflows and outflows has disappeared. As in most OECD countries, M&As partly explain this increase, although an increasing number of green-field and expansion investments have also been undertaken. Between 1990 and 1998, the number of foreign affiliates in Sweden increased by more than 52 per cent, from 2,600 to 3,953 entities.<sup>a</sup> Meanwhile, total employment in foreign affiliates rose from 200,000 to 333,000 employees. Interestingly, United States firms, which invested virtually nothing in Sweden during the 1980s, accounted for the largest volume of investment in the 1990s. Since 1990, the number of United States companies present in Sweden has risen from 350 to 670.

Several factors explain this dramatic shift. These include a number of measures that were taken at the end of the 1980s and in the early 1990s: the removal of exchange controls, tax reforms, the relaxation of restrictions for foreign participation in the financial sector and for M&As of Swedish companies and liberalization and deregulation policies in a number of industries (telecommunications, transport and electricity, for instance). Changes in the external political and economic environment were also important factors. On the one hand, the major political changes in Central and Eastern Europe meant the opening up of significant consumer markets for which Sweden is particularly well positioned for historical and geographical reasons. Indeed, since the early 1990s, Swedish trade and investment flows with Poland, the Russian Federation and the Baltic States have expanded rapidly, and a growing number of TNCs are locating in Sweden as a base for future expansion eastward. On the other hand, the enlargement of the European Union with Austria, Finland and Sweden in 1995 also enhanced Sweden's attractiveness to foreign investors: from being a country on the periphery of the European Union, it became strategically positioned in one of the most dynamic regions of Europe.

The tendency for TNCs to focus more on the availability of skilled labour, good infrastructure facilities, technology and innovative capacity – created assets – than on more traditional determinants such as labour costs, access to natural resources and large domestic markets (UNCTAD, 1998), is also a factor which works in favour of Sweden. In that respect, it is interesting to note that Sweden spends about 3.4 per cent of its GDP on R&D, the highest ratio in the world (among all reporting countries (UNESCO, 1998)). Leading-edge industrial clusters exist for instance in fields such as telecommunications and information technology, pharmaceuticals and health care, and the automotive, steel and paper and pulp industries.

*Source:* Fredriksson, 1999.

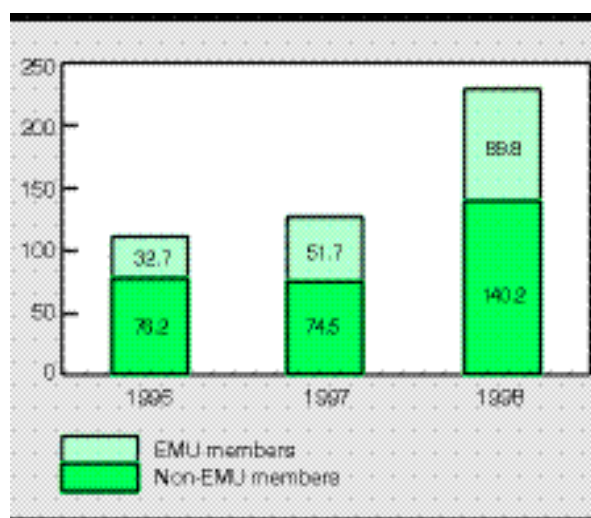
<sup>a</sup> Majority-owned foreign affiliates only, surveyed by NUTEK (Swedish National Board for Industrial and Technical Development).

- In particular, world FDI flows to EMU member countries increased only slightly more than the world's FDI flows to non-EMU member countries (Denmark, Greece, Sweden and the United Kingdom) in 1998 (88 versus 74 per cent). The share of EMU members in total EU FDI inflows in 1998 (61 per cent) was still below their share in 1996 (70 per cent; see also figure II.6).
- The share of the EU in world FDI inflows of about 36 per cent in 1998 was about the same as in 1995.
- In contrast to expectations, the growth of EU FDI outflows to non-EU countries surpassed the growth of intra-EU flows in 1997.<sup>3</sup> As a result, the extra-EU share in total outflows reached an unprecedented high (figure II.7).

- The rising share of intra-EU flows in total EU FDI inflows since 1995 has to be attributed to the EU's rather poor record in attracting inflows from outside the EU (figure II.7).<sup>4</sup> The negative balance between EU FDI inflows from non-EU investors and outflows to non-EU host countries reached ECU 42 billion in 1997 (compared with an accumulated ECU 28 billion in 1993-1996).<sup>5</sup>

There are various reasons why anticipatory effects of EMU on FDI turned out to be less impressive than those emanating from previous measures towards a closer regional integration of the EU. First of all, important decisions (e.g. on EMU membership) were taken only in May 1998; there were still rumours in early 1998 that the whole project may be postponed. Second, incentives to increase intra-EU FDI were weakened, if not dominated, by incentives to invest outside the EU. Notably the booming United States economy stimulated EU FDI outflows: as documented above, EU FDI in the United States tripled in 1998. However, the rather weak anticipatory effects should not be understood as indicating that the euro will not affect FDI flows after its introduction in early 1999. It is obviously too soon to assess the longer-term impact of the single currency on FDI flows. As a matter of fact, the effects of EMU on the member countries' locational attractiveness continue to be debated controversially.

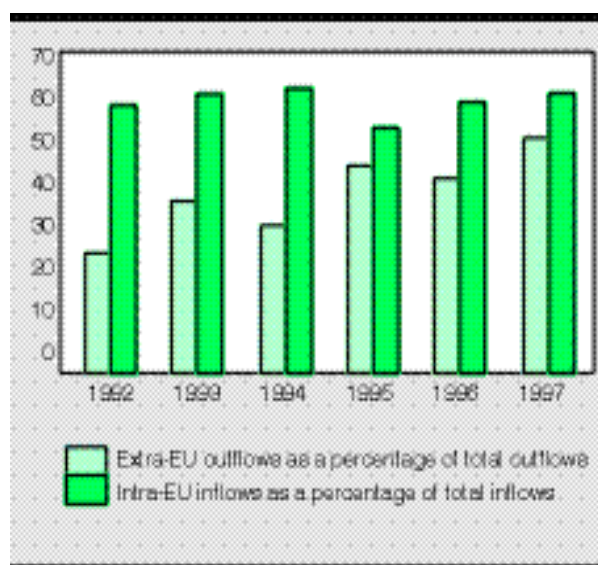
Figure II.6. FDI inflows to the EU: EMU members of the EU versus non-EMU members of the EU, 1996-1998  
(Billions of dollars)



Source: UNCTAD, FDI/TNC database.

<sup>a</sup> Denmark, Greece, Sweden and the United Kingdom.

Figure II.7. Intra-EU and extra-EU FDI flows,<sup>a</sup> 1992-1997  
(Billions of ECU and percentage)



Source: EUROSTAT, 1999.

<sup>a</sup> Excluding reinvested earnings which are available only since 1995. Intra-EU flows according to outflow data reported by investor countries.

The sectoral structure of intra-EU FDI flows differed significantly from the sectoral structure of extra-EU FDI outflows (table II.2). In 1995-1996, manufacturing accounted for 28 per cent of total intra-EU FDI flows, while its share in total extra-EU FDI outflows exceeded 40 per cent, signaling perhaps a more intensified international division of labour. As a corollary, services figured more prominently in intra-EU FDI. This is largely because many service industries were highly regulated in EU countries prior to 1993. Hence, the completion of the internal market involved effective market integration with regard to services in the first place (Hiemenz et al., 1994). Privatization and deregulation of service industries induced enterprise restructuring and encouraged cross-border investment relations in this sector.

Within the manufacturing and services sectors, however, intra-EU and extra-EU FDI flow patterns were rather similar in 1995-1996 (see table II.2). The capital-intensive chemical industry clearly figured most

Table II.2. Sectoral distribution of Intra-EU and extra-EU

**FDI flows, 1995-1996**  
(Millions of ECU and percentage)

Sector/industry	Outflows				Inflows	
	Intra-EU		Extra-EU		Extra-EU	
	Million ECU	Per cent	Million ECU	Per cent	Million ECU	Per cent
All industries	110 148	100	88 346	100	65 640	100
<i>Primary</i>	1 796	1.6	108	0.1	1 349	2.1
Agriculture, fishing	27	–	-1 630	-1.8	34	0.1
Mining, quarrying	1 769	1.6	1 738	2.0	1 315	2.0
<i>Manufacturing</i>	31 014	28.2	36 051	40.8	21 727	33.1
Food products	1 467	1.3	3 762	4.3	523	0.8
Textiles and wood	4 231	3.8	3 556	4.0	3 260	5.0
Refined petroleum, chemicals, rubber	9 364	8.5	13 950	15.8	11 732	17.8
Metal and mechanical	3 264	3.0	3 986	4.5	1 010	1.5
Office machinery, radio	2 689	2.4	956	1.1	2 906	4.4
Motor vehicles, other transport equipment	4 458	4.0	1 031	1.2	1 013	1.5
Miscellaneous	5 540	5.0	8 808	10.0	1 283	2.0
<i>Services</i>	71 131	64.6	47 923	54.2	40 185	61.2
Electricity, gas, water	1 355	1.2	1 817	2.1	4 224	6.4
Construction	1 541	1.4	1 402	1.6	2 039	3.1
Trade and repairs	11 357	10.3	8 144	9.2	6 278	9.6
Hotels, restaurants	2 346	2.1	297	0.3	420	0.6
Transport	252	0.2	974	1.1	550	0.8
Telecommunications	4 060	3.7	3 851	4.4	230	0.4
Financial intermediation	31 407	28.5	18 571	21.0	11 946	18.2
Real estate	1 517	1.4	1 179	1.3	2 492	3.8
Computer activities	1 012	0.9	475	0.5	831	1.3
Research and development	805	0.7	691	0.8	1 047	1.6
Other business activities	15 479	14.1	10 522	11.9	10 128	15.4
Not specified industries	6 207	5.6	4 264	4.8	2 379	3.6

Source: UNCTAD, based on EUROSTAT, 1999.

prominently in manufacturing. More surprisingly perhaps, FDI in relatively labour-intensive and standardized lines of manufacturing tended to be at least as important as FDI in relatively human-capital intensive and technology-intensive industries; this may be partly explained by the fact that in some industries, usually considered as low-technology, upgrading has taken place. For example, the textiles and wood industries on the one hand and motor vehicles and other transport equipment on the other hand accounted for similarly high shares in intra-EU FDI. In extra-EU FDI outflows, human-capital intensive and technology-intensive industries (office machinery/radio and motor vehicles/other transport equipment) were significantly less important than labour-intensive and resource-based industries (textiles/wood and food products). FDI inflows from non-EU foreign investors were roughly of the same order in these two groups of industries. The industrial structure of FDI in manufacturing seems to suggest that the EU (at least up to the mid-1990s) had not achieved its objective to improve its competitive position in high-technology segments of manufacturing.<sup>6</sup> High-technology items are most likely to be found in relatively human-capital intensive and technology-intensive industries. As shown before, such industries were of minor importance with regard to both FDI outflows from, and FDI inflows to, the EU.

Recent developments may change the industrial pattern of FDI, however. For example, the trend towards global networking in the motor vehicles industry is likely to result in an increasing share of this industry in manufacturing FDI inflows and outflows. An indication of this effect may be that the share of the motor vehicles industry in German FDI outflows in manufacturing increased over the years from 2.6 per cent in 1991-1992 to 15.8 per cent in 1996-1997. This trend was further strengthened in 1998 due to large-scale investments in this industry



(e.g. Daimler-Chrysler). On the other hand, EMU may encourage additional intra-EU FDI in standardized lines of manufacturing. The competition-enhancing effect of higher transparency, going along with the introduction of the euro as the single currency, is likely to be most pronounced in industries producing standardized and fairly homogeneous goods. For these goods, competitiveness depends on sales prices in the first place. Hence, EU companies supplying these goods may increasingly resort to intra-EU FDI, in order to reduce production and transaction costs (unless, of course, they are located in low-cost production sites outside the EU).

The structure of intra-EU and extra-EU FDI is similar within the services sector, too (table II.2): financial intermediation, other business activities (including the management of holding companies as a prominent item) and trade and repairs (in descending order of importance) accounted for the largest FDI shares. Especially in financial intermediation, both inward and outward FDI was associated with enterprise restructuring and the response of banks and insurance companies to European integration as well as to the globalization of these service industries. In striking contrast, FDI inflows and FDI outflows did not play significant roles in computer activities and research and development.

In summary, FDI patterns in the EU suggest that growing integration at the regional level so far has had limited effects on the EU's attractiveness to FDI in sophisticated lines of manufacturing and in innovative service industries. While EMU is rather unlikely to result in a strongly overproportionate growth of intraregional FDI, the longer-term effects are not yet clear. EU companies in important manufacturing and service industries, e.g. in the automobile industry and in financial intermediation, appear to be increasingly involved in global restructuring (Economist Advisory Group, 1998). Hence, close investment relations with non-EU countries in these industries, notably with the United States, are likely to be maintained or even strengthened.

### 3. Japan

While Japan's FDI *outflows* declined in 1998 by seven per cent to \$24 billion in 1998, *inflows* remained almost at the same level as in 1997 of \$3.2 billion.<sup>7</sup> Lower profitability<sup>8</sup> and depressed domestic demand<sup>9</sup> in the wake of the economic recession led to changes in the corporate strategies of a number of Japanese TNCs faced with a reduced ability to expand abroad. On the other hand, the perception that foreign firms had of Japan as an investment location changed as opportunities for investment, in particular through M&As, became more attractive. While Japanese FDI outflows in recent years were only half of their 1989-1990 level (the peak period of Japanese investment), the level of inflows has been no longer the lowest among developed countries since 1997 (figure II.I). As a result, the discrepancy between FDI outflows and inflows has shrunk remarkably: the ratio of outflows to inflows declined from 60 during the outward FDI boom by Japanese TNCs in the latter half of the 1980s to slightly above seven in 1998.

FDI outflows declined in 1998 mainly because of lower equity investment and reinvested earnings (figure II. 8). Intra-company loans, on the other hand, rose significantly, perhaps aided partly by significantly low interest rates. Japan's economic recession had a direct impact on the flow of equity investment, while host country factors affected all three components of FDI flows. Increases in intra-company loans in particular aimed partly at stabilizing Japanese affiliates, especially those faced with serious difficulties in East and South-East Asia as a result of the financial crisis in that region (see section B.2 below). Toyota's affiliate in Thailand, for instance, obtained funds in equity form worth eight times its capital base from its parent firm. On the other hand, Japanese TNCs also took advantage of relaxed rules regarding M&As and equity ownership in a number of countries in the region: for example, the number of firms acquired by Japanese TNCs increased from two to 14 between 1997 and 1998 in the Republic of Korea and from 10 to 26 in Thailand.<sup>10</sup>

It is interesting to note that FDI flows increased to tax havens such as Panama and the Cayman Islands in 1998. The Cayman Islands became actually the second largest recipient of Japanese FDI, after the United States, accounting for 11 per cent of total flows (on a notification basis).

The restructuring of Japanese firms triggered by the recent economic difficulties was most pronounced in financial industries (banking, securities firms etc.), and affected most particularly their foreign affiliates. For instance, the number of foreign branches and affiliates of Japanese TNCs had declined by more than 40 per cent in early 1999 compared to 1995,<sup>11</sup> and the assets of foreign branches and affiliates of Japanese banks had diminished to half of the peak level registered in 1990.<sup>12</sup> The restructuring process has now been extended to foreign affiliates of Japanese TNCs in the manufacturing sector, particularly in East and South-East Asia. Various surveys illustrate the decline in the activities of these affiliates; one by JETRO indicates for instance that about two-thirds of Japanese manufacturing affiliates in East and South-East Asia experienced a decline in sales due to the impact of the financial crisis.<sup>13</sup>

In response to the crisis in East and South-East Asia, a number of Japanese foreign affiliates tried to shift to more export-oriented production. However, about half of these faced serious difficulties in doing so (Nishiyama, Kushima and Noda, 1999). Therefore, and contrary to its practice as regard the permanent employment for full-time staff, a number of employees had to be laid off in affiliates of Japanese TNCs, such as in an Indonesian affiliate of Mitsubishi Electric (220 employees), a Thai affiliate of Mazda (550 employees), and Singaporean affiliates of Hitachi (363 employees) and Sony (296 employees).<sup>14</sup>

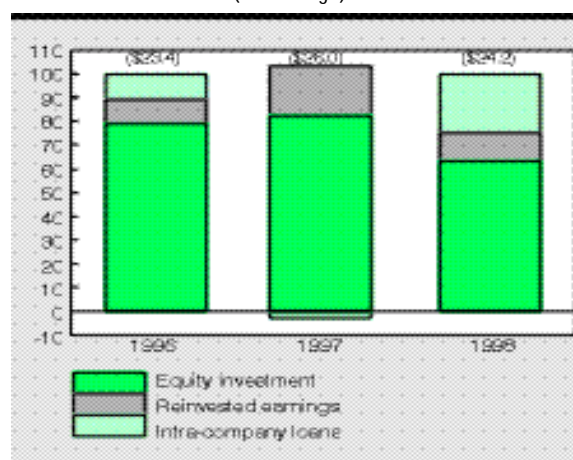
If the slow-down in outward FDI persists, it may affect Japanese exports and imports, and the trade balance. Indeed, the high and increasing levels of FDI outflows registered till recently have led to increased imports of manufactured products (especially consumer products) from, and increased exports of capital goods to, affiliates of Japanese TNCs abroad, with a small overall negative impact on Japan's trade balance (box II.2). Indeed, about one tenth of imported goods in Japan (in value terms) originated in foreign affiliates of Japanese firms in the mid-1990s. Conversely, the decline in FDI outflows, if maintained, may well result in a reduced share of imports from foreign affiliates, without exports to them increasing.

Prospects for significantly higher FDI by Japanese TNCs are not very promising in the near future. In 1998, for instance, only slightly more than a quarter of Japanese manufacturing TNCs projected increased investment abroad during the next three years (1999-2001), compared with more than 40 per cent in 1997 (figure II.9). If FDI outflows should increase in 1999, it would be led by M&As,<sup>15</sup> away from greenfield FDI – the dominant mode preferred by Japanese TNCs so far.

Relatively high levels of FDI *inflows* in 1997 and 1998, though still small relative to the size of the economy as well as to other large developed countries, took place partly as a consequence of the weakening of Japanese firms due to the economic recession. M&As have been the most important way of entering the Japanese market. This entry mode appears to foreign firms to be more efficient than greenfield FDI as it involves less hustle and transaction costs in a complex business environment. The growth of M&As also reflects changes in the attitude of

**Figure II.8. Japanese FDI outflows, by component, 1996-1998**

(Percentage)



Source: UNCTAD, FDI/TNC database.

Note: Figures in the parentheses show absolute values of FDI flows.



Japanese firms – including SMEs – towards such deals (chapter III.B and box III.2). More than three-quarters of Japanese SMEs for instance consider M&As as an important tool of management strategy.<sup>16</sup> Recent government measures to facilitate M&As, particularly fiscal measures, have also played a role. As a result, M&As by foreign firms have come to account for one tenth of all M&A deals involving Japanese firms in 1998, compared to only 2.5 per cent in 1990 (figure II.10).

### **Box II.2. Effects of FDI on Japan's trade**

The integrated international production systems that are increasingly being built by Japanese TNCs have intensified the relationship between trade and FDI, changing the volume as well as the composition of Japan's trade. Increased FDI has contributed to a rise in both exports and imports, suggesting that Japanese TNCs are taking advantage of increased opportunities for an international division of labour through their investments abroad. Even if substitution effects on exports due to overseas production — the reduction in exports of some goods and services for which foreign affiliates' sales are a substitute — are taken into account, the net impact on merchandise exports amounting to \$29 billion in fiscal year 1995, the most recent available year (box table II.1), accounted roughly for seven per cent of total exports from Japan. The positive net effects of FDI on exports reflects the fact that, at early stages of international production, capital goods from home countries constitute essential inputs for production by foreign affiliates and that, in international integrated production systems, parent firms provide goods that are inputs for further processing or assembly and finished products for sale by trading affiliates. The value of capital goods (equipment as well as parts and components) directed to foreign affiliates has been increasing, accounting for an estimated 36 per cent of Japan's total capital goods exports in fiscal year 1995, compared with 31 per cent in fiscal year 1991 (Japan, MITI, 1995, p. 29). On the import side, it has been estimated that, given certain assumptions, Japan's imports were higher by some \$30 billion in fiscal year 1995 on account of FDI by Japanese TNCs (box table II.1). Imports from Japanese foreign affiliates have been on the rise, accounting for 9 per cent of merchandise imports in fiscal year 1995, compared to 6 per cent in fiscal year 1991 (Japan, MITI, 1998a, pp. 63-64).

Estimates of the impact of FDI on trade indicate that, in the aggregate, the sum of the export inducement effects and the export-substitution effects was slightly lower than reverse import effects resulting in a small negative impact on the trade balance (box table II.1). During 1991-1995, imports induced by FDI grew while exports triggered by FDI stagnated: in fiscal year 1995 the overall impact on the merchandise balance is estimated to be \$0.3 billion, compared to \$5 billion in fiscal year 1991. However, in textiles, electric machinery, transport equipment, and precision equipment the impact on trade has been negative since the early 1990s, reflecting that FDI in these industries was at least partially directed towards sourcing low-cost resources for production geared to the home-country market. This trend has been reinforced by the efforts of Japanese TNCs to increase the local-content ratio of their foreign affiliates and by the appreciation of the yen.

**Box table II.1 . Effects of FDI on merchandise trade in Japan, fiscal year 1995<sup>a</sup>**

(Billions of dollars)

Industry	Effects on exports <sup>b</sup>	Effects on imports <sup>c</sup>	Net effect on trade balance <sup>d</sup>
Primary	-	0.4	-0.4
Manufacturing	28.9	29.3	-0.3
Chemicals	4.8	1.7	3.1
General machinery	6.5	1.7	4.8
Electric machinery	6.3	16.7	-10.4
Transport equipment	-15.5	0.3	-15.8
Services	-	0.05	-0.05
All industries	28.9	29.6	-0.7

Source: Japan, MITI, 1998a, table 2-99-5.

<sup>a</sup> Ending March 1996.

<sup>b</sup> Export-substitution effects (decreases in exports) plus export-inducement effects (increases in exports).

<sup>c</sup> Reverse import effects (increases in imports due to goods and services exported to Japan from Japanese foreign affiliates) plus import-conversion effects (changes in imports caused by changes in domestic production owing to FDI).

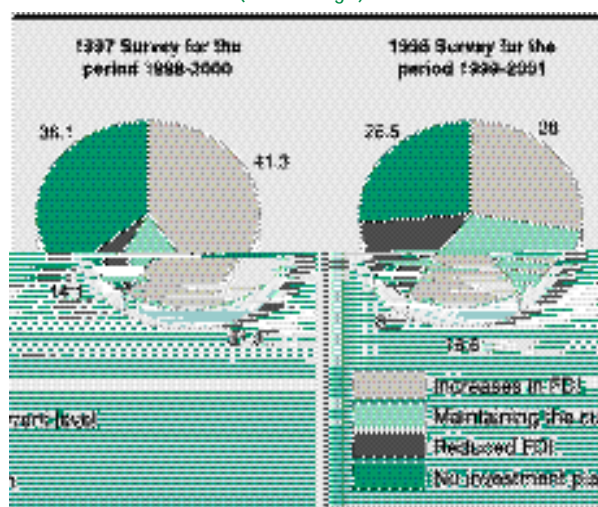
<sup>d</sup> Exports minus imports.

Note: Negative signs before a number indicate negative effects on the trade balance. The MITI survey takes into account situations of substitution effects with and without FDI.

Source: UNCTAD.

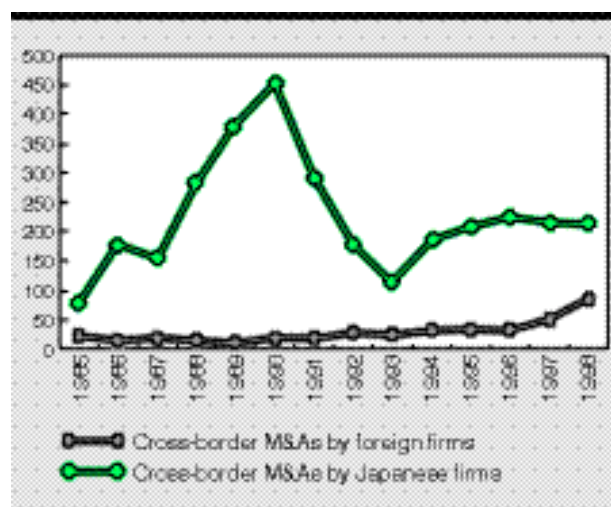
**Figure II.9. Prospects for Japanese outward FDI in manufacturing, 1999-2001**

(Percentage)



Source: UNCTAD, based on data from Nishiyama, Kushima and Noda, 1999, p. 18.

**Figure II.10. Number of cross-border M&As in Japan, 1985-1998**



Source: UNCTAD, based on data provided by Recof (Japan).

Large M&As by foreign firms continued to take place in 1999 as well. Each of the two biggest deals to date — the acquisition of a 37 per cent stake in Nissan by Renault (for \$5.4 billion) and the purchase by GE Capital of Japan Leasing Corporation, the second largest leasing company in Japan<sup>17</sup> (for an undisclosed transaction value, but likely the largest acquisition in Japan by a foreign firm) — already exceeded the amount of the record 1998 FDI inflows. Even if part of these M&As are not financed by FDI inflows, it is highly likely that 1999 will be a record year for FDI inflows into Japan.<sup>18</sup>

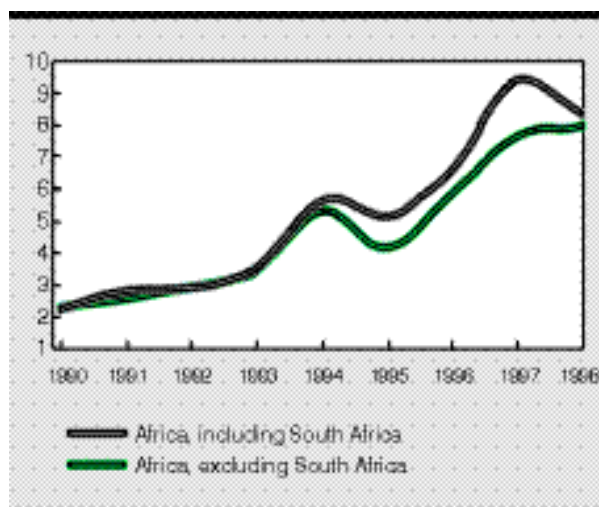
## B. Developing countries

For the first time in 13 years, FDI flows into developing countries declined in 1998, by four per cent to \$166 billion. The decline was mainly due to reduced flows to Asia's developing countries (\$85 billion compared to \$96 billion in 1997) and, more specifically, to reduced FDI into three economies, Indonesia, Taiwan Province of China and Hong Kong (China) (which together registered a reduction of \$11.5 billion in FDI flows). As a result, the share of Asia in total FDI inflows to developing countries declined from 55 per cent in 1997 to 51 per cent in 1998. The performance of Latin America and the Caribbean, on the other hand, remained strong, even if the growth rate of FDI inflows (at about five per cent) was less impressive than in 1997. That region received 43 per cent of the FDI flows to developing countries. Particularly striking in that respect was the increase in FDI flows to Brazil which, in spite of the economic difficulties experienced by this country in 1998, attracted about 40 per cent of the total inflows of \$72 billion received by the region. Inflows to Africa (excluding South Africa) increased modestly compared to 1997, a year of a significant rise in inflows. Including South Africa, however, the continent registered a decrease in such FDI inflows.

### 1. Africa<sup>19</sup>

FDI *inflows* into Africa in 1998 amounted to \$8.3 billion, compared to the record \$9.4 billion achieved in 1997. The decrease was largely accounted for by South Africa (see below). Still, the value of flows remained considerably higher than the average flows recorded in the first part of the 1990s (figure II.11).<sup>20</sup> Africa benefited from the rise in FDI flows that characterized the period 1990-1997, though to a much lesser extent than other developing regions. Its share in

**Figure II.11. FDI inflows to Africa, 1990-1998**  
(Billions of dollars)

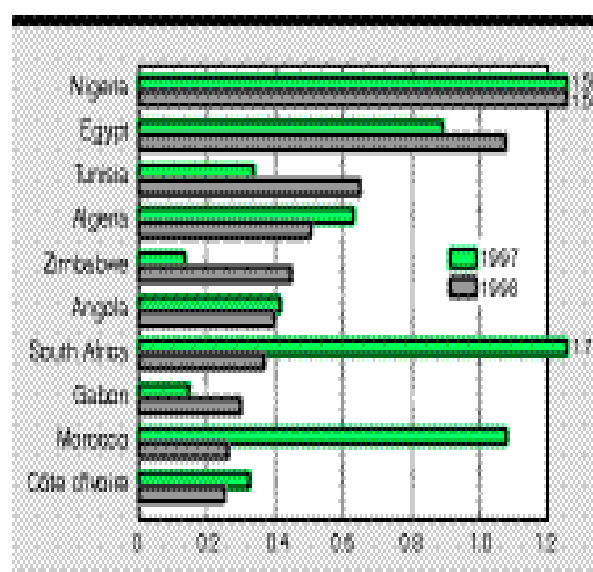


Source: UNCTAD, FDI/TNC database.

Egypt, combined with that registered in Tunisia, and to a lesser extent Zimbabwe and Gabon (figure II.12), helped to maintain a relatively high level of FDI inflows, at least compared to the early 1990s. Some of the other large recipients experienced a decline. This was due in some cases to reduced inflows for privatization projects (Morocco, South Africa), or reduced inflows in the oil and other natural resource industries (Angola).<sup>21</sup>

The 33 least developed countries (LDCs) in Africa experienced an increase in FDI inflows for the sixth consecutive year. This raised their share in total FDI inflows into the region from one fifth in 1997 to one quarter in 1998. Nevertheless, at about \$2.2 billion in 1998, the amount of FDI this group of countries receives remains very low. In addition, this increase was not evenly distributed among the LDCs; it was concentrated in only a few countries, namely Equatorial Guinea, Ethiopia, Mozambique, Uganda and the United Republic of Tanzania. While in a country like Equatorial Guinea a significant share of FDI flows went into natural resources, in such countries as Ethiopia or Mozambique much of the newly recorded FDI was in manufacturing or service industries. Angola, with about \$400 million, was the biggest recipient of FDI among African LDCs in 1998 (slightly down from \$412 million in 1997); as in previous years, it went to a large extent into offshore petroleum and natural gas exploration and production. Liberia's surprisingly high inflows of \$250 million in 1997-1998 do not necessarily represent real investment flows, for a number of reasons, including statistical ones; data relating to Liberia have therefore to be treated with caution.<sup>22</sup>

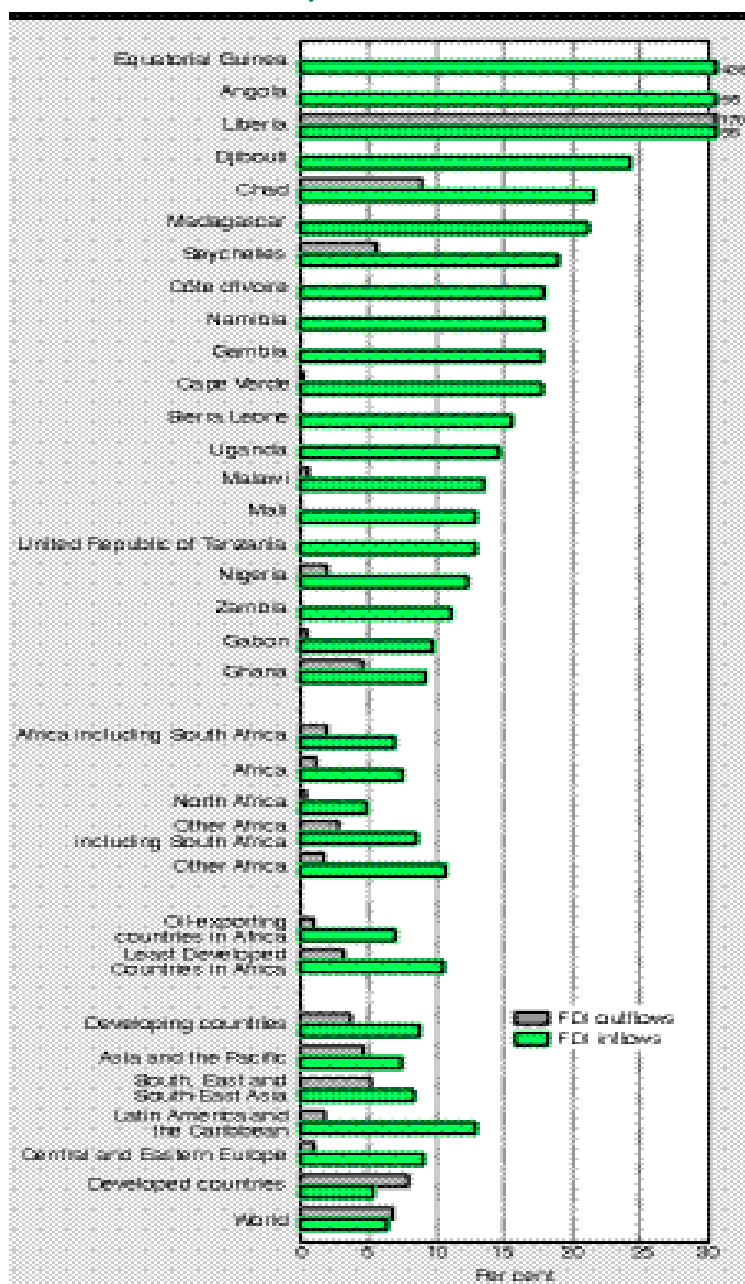
**Figure II.12. Africa: FDI inflows, top 10 countries, 1997 and 1998<sup>a</sup>**  
(Billions of dollars)



Source: UNCTAD, FDI/TNC database.

<sup>a</sup> Ranked on the basis of the magnitude of 1998 FDI inflows.

**Figure II.13. Africa: FDI flows as a percentage of gross fixed capital formation, top 20 countries, 1995-1997<sup>a</sup>**



Source: UNCTAD, FDI/TNC database and annex table B.5.

<sup>a</sup> Ranked on the basis of the magnitude of 1995-1997 FDI inflows as a percentage of gross fixed capital formation.

As in previous years, the ratio of FDI to gross fixed capital formation (GFCF), which was quite high by international standards for a number of African countries, illustrates the relative importance of FDI in these countries, in particular in smaller economies such as Equatorial Guinea, Djibouti, and the Seychelles (figure II.13).<sup>23</sup> These ratios need, however, to be seen against the very low level of investment in those other economies.

The main sources for FDI into Africa have traditionally been France, the United Kingdom and the United States and – to a lesser extent – Germany and Japan. While these countries remain important home countries for FDI flows into Africa, others such as Canada, Italy and the Netherlands have gained in importance (UNCTAD, 1999i, p.10). In 1997, the latest year for which figures were available, the United States topped the list with \$3.7 billion of FDI outflows to Africa, followed by Belgium with \$1.2 billion, the United Kingdom with \$1.1 billion and France with almost \$600 million.<sup>24</sup>

FDI inflows into South Africa in 1998 – when denominated in dollars and South African Rand<sup>25</sup> – fell far short of the record inflow figure attained in 1997. This was mainly due to lower privatization-related FDI<sup>26</sup> and, though to a lesser extent, reduced investment by Asian companies (especially from Malaysia) which had become an important source of FDI just before the Asian crisis.<sup>27</sup>

The industries attracting most FDI in South Africa in 1998 were energy and oil, mining and quarrying, construction and materials, motor vehicles and components as well as food and beverages. In mining in particular, a marked increase took place with major investments by Billiton from the United Kingdom and Placer Dome of Canada (Business Map, 1999; IRRRC, 1999d). Service industries such as retail and distribution industries as well as finance, insurance and real estate, on the other hand, attracted lower FDI than in previous years. While it is not possible to get the exact ranking of the most important home countries, it appears that Germany, Italy, Malaysia, Switzerland, the United Kingdom and the United States are the main sources for FDI inflows into South Africa.<sup>28</sup> Italy is a newcomer in this group, mainly due to Aeroporti di Roma's investment. All in all, FDI into South Africa is driven by M&As (Business Map, 1999), suggesting that many South African firms are regarded as interesting partners for foreign companies.



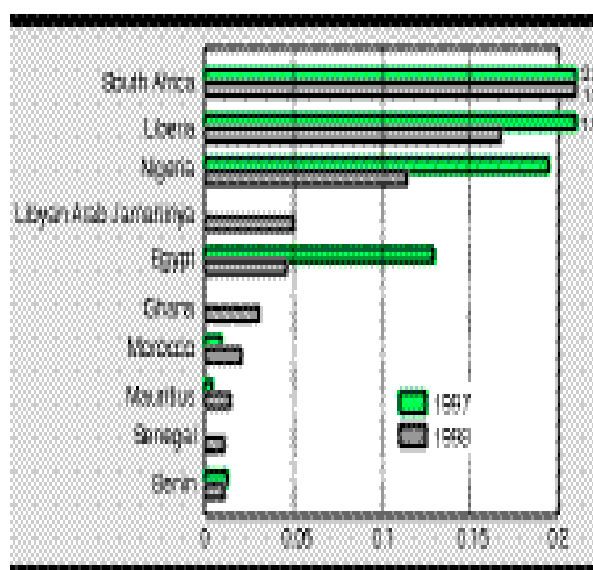
Prospects for higher FDI into South Africa in 1999 are good. This is particularly the case in mining where – despite a recent drop in gold prices – South African mining firms such as Anglo Gold continue to raise capital abroad, and in manufacturing, where major investments were announced such as a \$146 million project by Daimler-Chrysler in East London. Forthcoming privatization projects (in telecommunications, for example) are likely to contribute to higher levels of FDI as well (IRRC 1999d). Major factors influencing FDI flows to South Africa in the medium and long term include the successful pursuit of regional integration and market liberalization within the South African Development Community (SADC), the conclusion of trade agreements with both the United States and the EU, as well as domestic economic and political developments. The latter include for instance the handling of the security issue that – whether justified or not – continues to cause concern among foreign investors.

FDI *outflows* from Africa represent only a small fraction – less than five per cent – of total FDI outflows from developing countries. In 1998, \$2 billion were invested by African TNCs outside their respective home countries, a decline of \$1.7 billion compared to 1997; this was largely due to a sharp decrease in outflows from South Africa (figure II.14). Outflows by South African companies had been growing in recent years, largely because, with less restrictions on capital movements than before, they resorted to outward FDI to maintain and increase competitiveness in global markets. Despite the drop registered in 1998, however, the level of South African FDI outflows still far exceeds that of the preceeding five years when the apartheid regime ended and international sanctions against the country were lifted. South African investments have been oriented towards other African economies, in particular such neighbouring countries as Namibia, Swaziland, Lesotho and Mozambique. In 1997, the latest year for which figures are available, South Africa's outward FDI stock in other African countries increased by about one third to more than \$1.3 billion.<sup>29</sup>

Looking into the near future, prospects for increased FDI inflows into Africa have improved, as illustrated by the results of a survey conducted by UNCTAD for *WIR99* of 44 African investment promotion agencies (IPAs).<sup>30</sup> Of the 31 agencies that responded, the vast majority indicated that FDI prospects for the period 2000-2003 for their own country, as well as for Africa in general, are expected to “improve” or be “significantly improved”.<sup>31</sup> Most of the respondents also considered that “many African countries” are a better place to do business than the overall negative image of Africa would suggest. Replies differed, however, regarding the five countries that are expected to offer the most attractive investment opportunities in 2000-2003 (figure II.15a) and those that would make most progress in creating a business-friendly environment (figure II.15b).

Out of the more than 30 countries that were named by the IPAs, South Africa, Nigeria, Botswana, Côte d'Ivoire and Tunisia stand out as countries most frequently mentioned as the most attractive destinations in Africa for FDI in 2000-2003. In terms of countries which, according to IPAs, would make most progress over 2000-2003 in creating a business-friendly environment, Botswana tops the list, followed by South Africa, Nigeria, Uganda and Côte d'Ivoire. Interestingly, Botswana, Ghana and Uganda as well as a few other countries (all of them LDCs) – Burkina Faso, Ethiopia, Malawi,

Figure II.14. Africa: FDI outflows, top 10 countries, 1997 and 1998<sup>a</sup>  
(Billions of dollars)

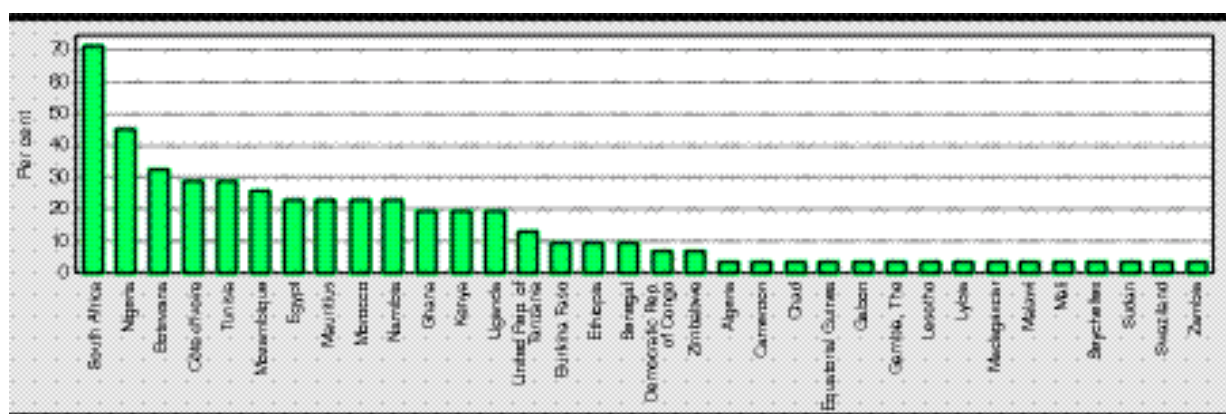


Source: UNCTAD, FDI/TNC database and annex table B.2.

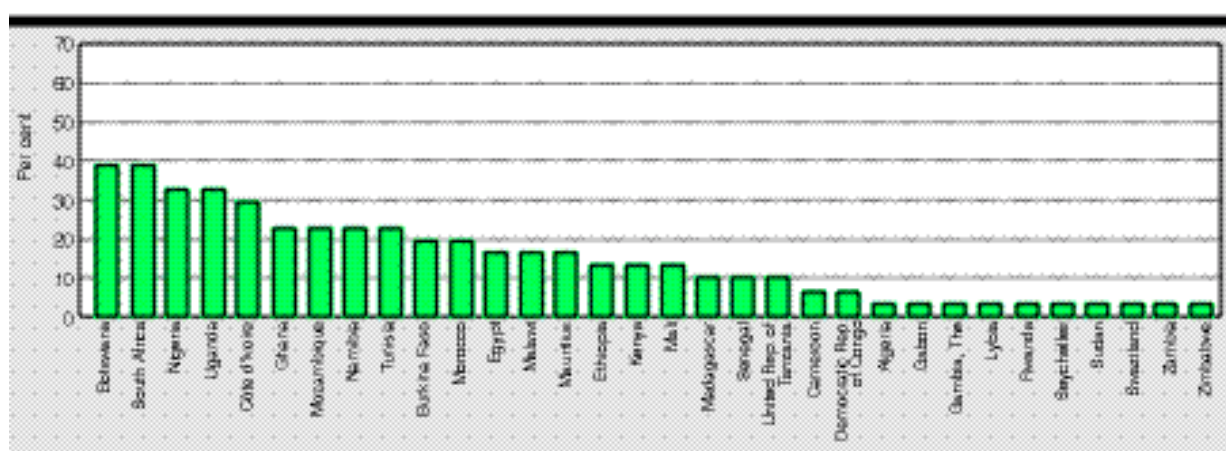
<sup>a</sup> Ranked on the basis of the magnitude of 1998 FDI outflows.

Mali and Madagascar – have a higher ranking for their progress on business environment than for their general attractiveness as a location over the next four years. These findings support the proposition that, in particular in LDCs, the creation of a business-friendly environment (including a better regulatory framework) does not automatically make a country more attractive for FDI. One of the most striking differences in rankings is in the case of Uganda (ranked eleventh in terms of attraction, and third in terms of business environment progress), a country which has in general a good reputation in terms of economic reform. The situation is reversed in the case of South Africa and Nigeria, which suggests that these two economies are perceived (by other IPAs) as attractive locations because of factors (such as a large market) other than business environment. Six of the top countries – Botswana, Ghana, Mozambique, Namibia, Tunisia and Uganda – that were most frequently mentioned in connection with an improvement of the business environment had actually been singled out by UNCTAD last year (UNCTAD, 1998a) as “African FDI front runners”, i.e. countries that demonstrated a particular dynamism in attracting FDI throughout the 1990s.<sup>32</sup> Interestingly, too, with the notable exception of Côte d’Ivoire, Mozambique and Nigeria, the majority of countries identified by African IPAs as most attractive destinations for FDI had also been singled out as the most competitive African countries, according to the competitiveness index published by the World Economic Forum in 1998 (WEF, 1998).

**Figure II.15a. African countries ranked according to their attractiveness for FDI in 2000-2003: frequency of replies**  
(Percentage)<sup>a</sup>



**Figure II.15b. African countries ranked according to their progress in creating a business-friendly environment in 2000-2003: frequency of replies**  
(Percentage)<sup>a</sup>



Source: UNCTAD, based on results of an UNCTAD Survey of African investment promotion agencies, 1999.

<sup>a</sup> The percentage figures in the chart represent the share of responses naming a particular country in total responses received from African IPAs.



The most attractive industries for FDI in 1996-1998 were telecommunications, food and beverages, tourism, mining and quarrying and textile and leather (figure II.16a). For 2000-2003 (figure II.16b), all of the four most frequently mentioned industries were either from the manufacturing or from the services sector, led by tourism and followed by food and beverages, textile and leather as well as telecommunications. Agriculture and mining and quarrying ranked in only fifth and sixth positions respectively. Petroleum, gas and related production were ranked near the bottom. This suggests that many African countries are receiving significant FDI flows in non-natural resource industries, confirming earlier findings (UNCTAD, 1999i). The most striking differences in terms of past record and future prospects were for tobacco, petroleum, gas and related production, and forestry. While the first two industries were mentioned much less frequently in terms of attraction over 2000-2003, forestry was much more often listed for the future than for 1996-1998, implying a growth potential for this industry.

In terms of the factors that are likely to have a *positive* impact on TNC decisions to invest in their country (figure II.17a), the profitability of investments (confirming earlier findings – UNCTAD, 1999), the regulatory and legal framework and the political and economic outlook for FDI were most frequently mentioned.<sup>33</sup> Access to regional markets (and to a lesser extent global markets), trade policy, tax regime as well as access to low-cost skilled labour were also mentioned by most agencies as positive factors. Only about half of the participating agencies

Figure II.16a. Africa: Industries that received considerable FDI inflows in 1996-1998<sup>a</sup>: frequency of replies (Percentage)<sup>b</sup>

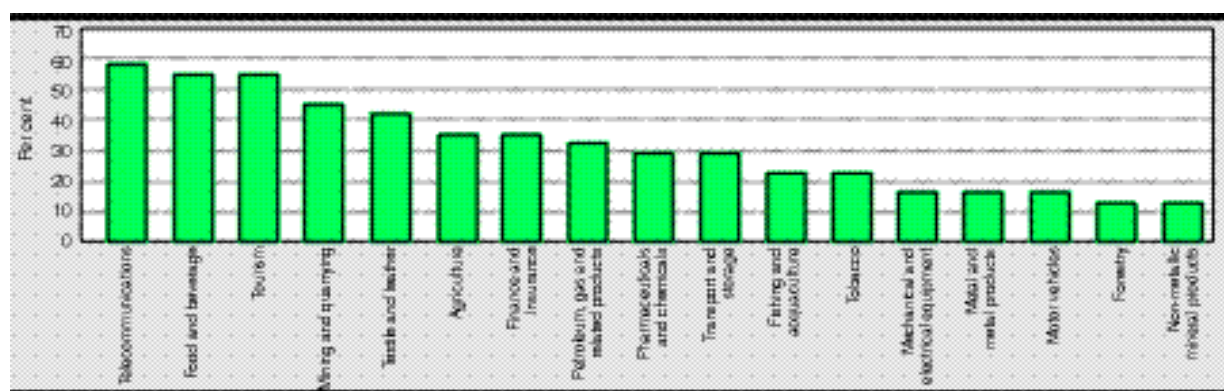
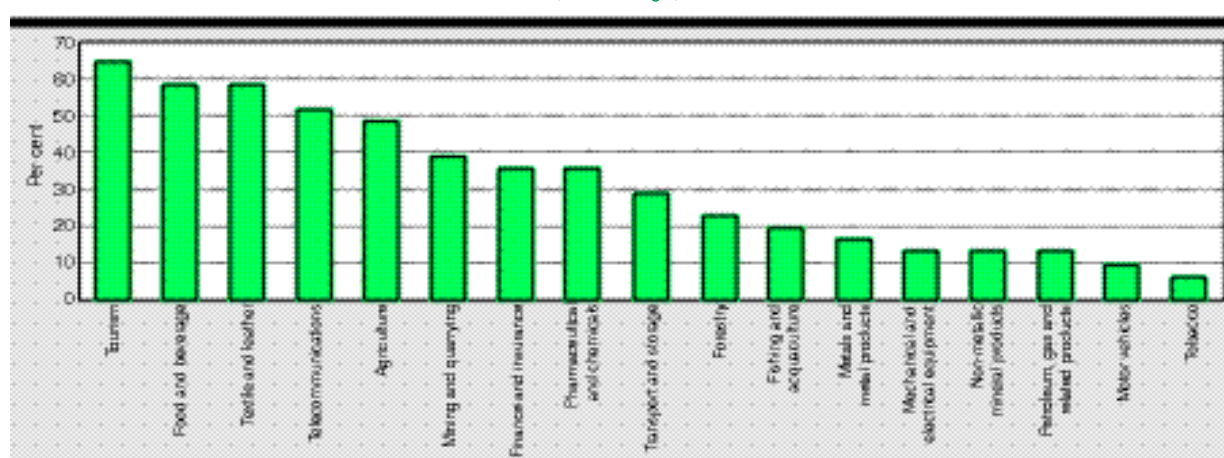


Figure II.16b. Africa: most attractive industries for FDI in 2000-2003: frequency of replies (Percentage)<sup>b</sup>

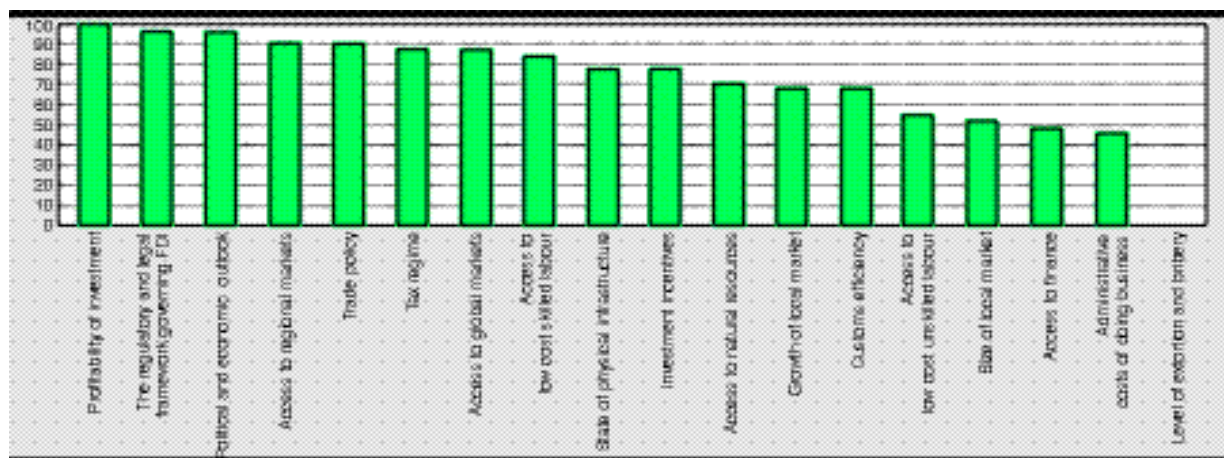


Source: UNCTAD, based on results of a survey among African investment promotion agencies, 1999.

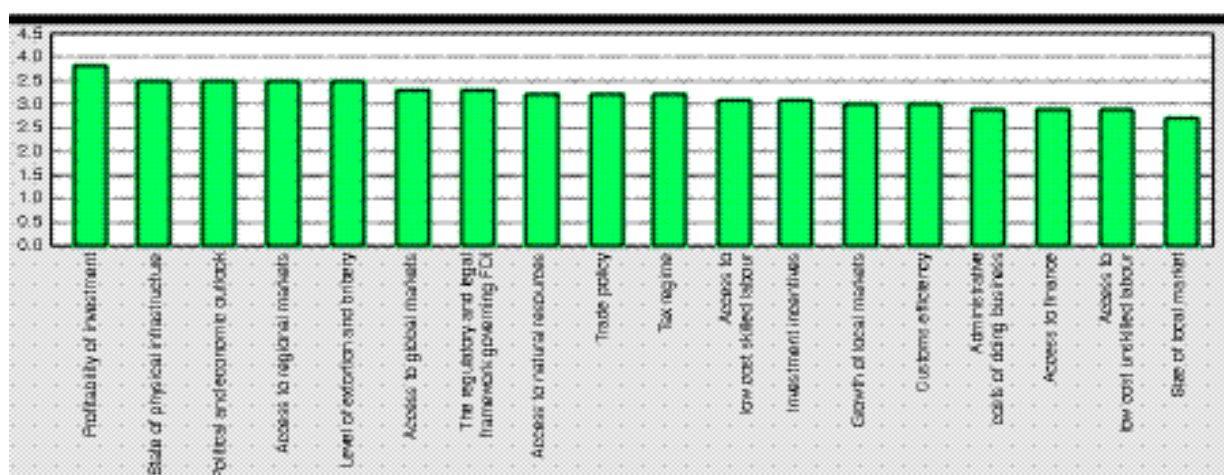
<sup>a</sup> Defined as having received a share of more than 10 per cent of a country's FDI.

<sup>b</sup> The percentage figures in the chart represent the share of responses naming a particular industry in the total of responses received from African IPAs.

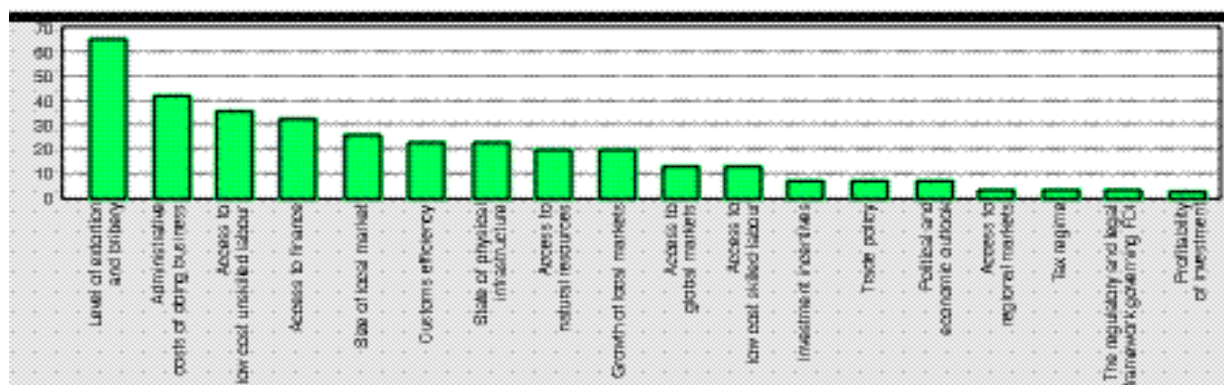
**Figure II.17a. Africa: most frequently mentioned positive factors for FDI inflows in 2000-2003:**  
frequency of replies  
(Percentage)<sup>a</sup>



**Figure II.17b. Africa: most important factors affecting FDI inflows in 2000-2003**  
(Rating average)<sup>b</sup>



**Figure II.17c. Africa: most important factors with a negative impact on investment decisions by TNCs:**  
frequency of replies  
(Percentage)<sup>a</sup>



Source: UNCTAD, based on results of an UNCTAD survey among African investment promotion agencies, 1999.

<sup>a</sup> The percentage figures in the chart represent the share of responses naming a particular factor in the total of responses received from African IPAs.

<sup>b</sup> Rating scale: 1 to 4.

considered access to low-cost unskilled labour, access to finance, and relative low costs of doing business to be particular advantages for their country in attracting FDI. This result is surprising in particular regarding low-cost unskilled labour, which is in abundant supply in most African countries.<sup>34</sup>

In terms of rating on the basis of the degree of influence, the profitability of investments was seen as the factor with the highest influence, followed by the state of physical infrastructure, political and economic outlook and access to regional markets (figure II.17b).<sup>35</sup> As regards physical infrastructure, however, it should be noted that considerably fewer agencies mentioned it as a positive factor compared to other factors. This should be kept in mind when considering the degree of influence of factors.

The most frequently mentioned factor with a *negative* influence on TNCs investment in 2000-2003 was extortion and bribery (figure II.17c). Other frequently mentioned negative factors include high administrative costs of doing business and, interestingly, the availability of low cost unskilled labour as well as problems related to access to finance for investment. Of all factors, extortion and bribery, administrative costs of doing business and access to capital were the only ones which received more negative than positive answers, underlining that – according to the IPAs – these are core problem areas for FDI into Africa.

The ranking of the regulatory and legal framework factors, the tax regime, trade policy and investment incentives and – by contrast – the ranking relating to the administrative costs of doing business suggest a strong feeling, shared by many IPAs, that the legal and regulatory framework and the investment incentive schemes – having gone through substantive revisions – are less of a problem for foreign investors than the implementation and administration of laws and regulations on a daily basis (i.e. the cost of doing business).

In general, although many IPAs are – not surprisingly – rather optimistic about attracting FDI in the near future, the survey identified a number of areas in which they feel that improvements could be made. Among the most important policy changes that they deem necessary to further attract FDI in 2000-2003, they ranked first those related to stabilization of the political situation; macro-economic stabilization; deregulation of the economy and privatization; business facilitation measures (including measures to facilitate the administrative decision-making processes and increased transparency) and other measures to implement the liberalized legal framework on FDI set up in many of the countries surveyed.

\* \* \*

In conclusion, African countries lag behind other developing countries regions in terms of attracting FDI inflows. As the survey of IPAs – which, after all, know best the potential of their countries – indicates there are a number of industries that could be particularly attractive to foreign investors (annex table A.II.1). For these industries to catch the attention of corporate executives who make locational decision in TNCs requires, first of all, that they look beyond the image of Africa and take a more differentiated look at the continent, country by country, industry by industry, opportunity by opportunity. Changing Africa's image is, of course, a task for African countries backed up by information on investment opportunities and the regulatory framework for FDI. But international organizations can help. And helping to change the image of Africa (box VI.6) and providing information (box II.3) are precisely areas in which some efforts are being made.

## **2. Asia and the Pacific**

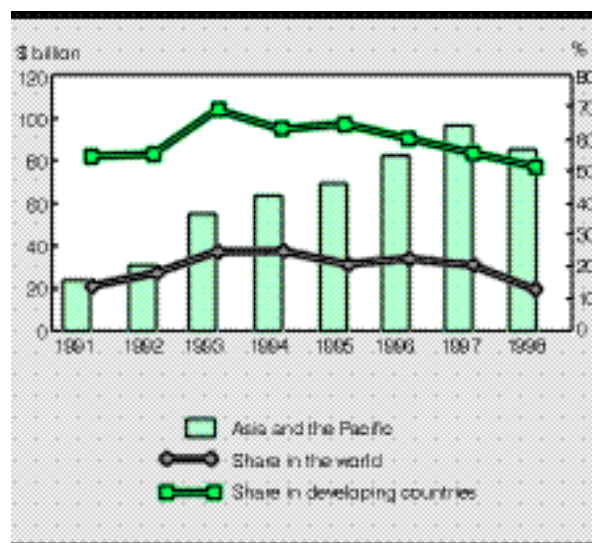
FDI *inflows* to developing Asia as a whole have weathered the financial crisis that hit the region in 1997-1998 and the economic downturn that followed. Flows into the region in 1998 were \$85 billion, compared to \$96 billion in 1997. Although down – for the first time since the mid-1980s – by 11 per cent, 1998 flows remained above the level of 1996 and well above the



average of annual flows recorded during 1991-1995 (figure II.18). The decrease in 1998 was almost entirely due to a steep decline in FDI flows to Indonesia (resulting in net divestment), Taiwan Province of China and Hong Kong, China (figure II.19). In some of the countries directly hit by the financial crisis, however, FDI remained resilient (box II.4).

Despite the decline in inflows, the region still accounted for over half of flows into developing countries and over half of their FDI stock. The FDI stock in the region reached \$717 billion in 1998, an increase of 13 per cent over that in 1997. The region's FDI inflows as a percentage of gross fixed capital formation in 1995-1997 remain slightly lower than the corresponding averages for all developing countries, and much lower than that of Latin America and the Caribbean. Singapore ranked at the top of the list of Asian countries by the ratio of FDI inflows to gross fixed capital formation (figure II.20).<sup>36</sup>

**Figure II.18. FDI flows into developing Asia and the Pacific and its share in world and developing countries inflows, 1991-1998**  
(Billions of dollars and percentage)



Source: UNCTAD, FDI/TNC database.

### **Box II.3. The joint UNCTAD/ ICC project on investment guides and capacity-building for least developed countries**

UNCTAD and the International Chamber of Commerce have undertaken a joint project on investment guides and capacity-building for least developed countries. In a pilot phase, the project will be implemented in six countries - Bangladesh, Ethiopia, Madagascar, Mali, Mozambique and Uganda.

This project is a response to the fact that LDCs are receiving less than one per cent of the world's FDI flows, even though most LDCs have removed many obstacles for foreign investors and are now actively seeking FDI. The project attempts, first, to supply potential foreign investors with an objective and up-to-date overview of investment conditions in LDCs in the form of an investment guide. Second, it aims at building capacity in LDCs in the area of investment promotion, inter alia by organizing workshops on this issue in each country participating in the project, and by involving local partners (both from the public and private sector) in the preparation of the guide. Third, and in the long run most importantly, it launches a process at the heart of which is an ongoing dialogue between LDC governments and the business community.

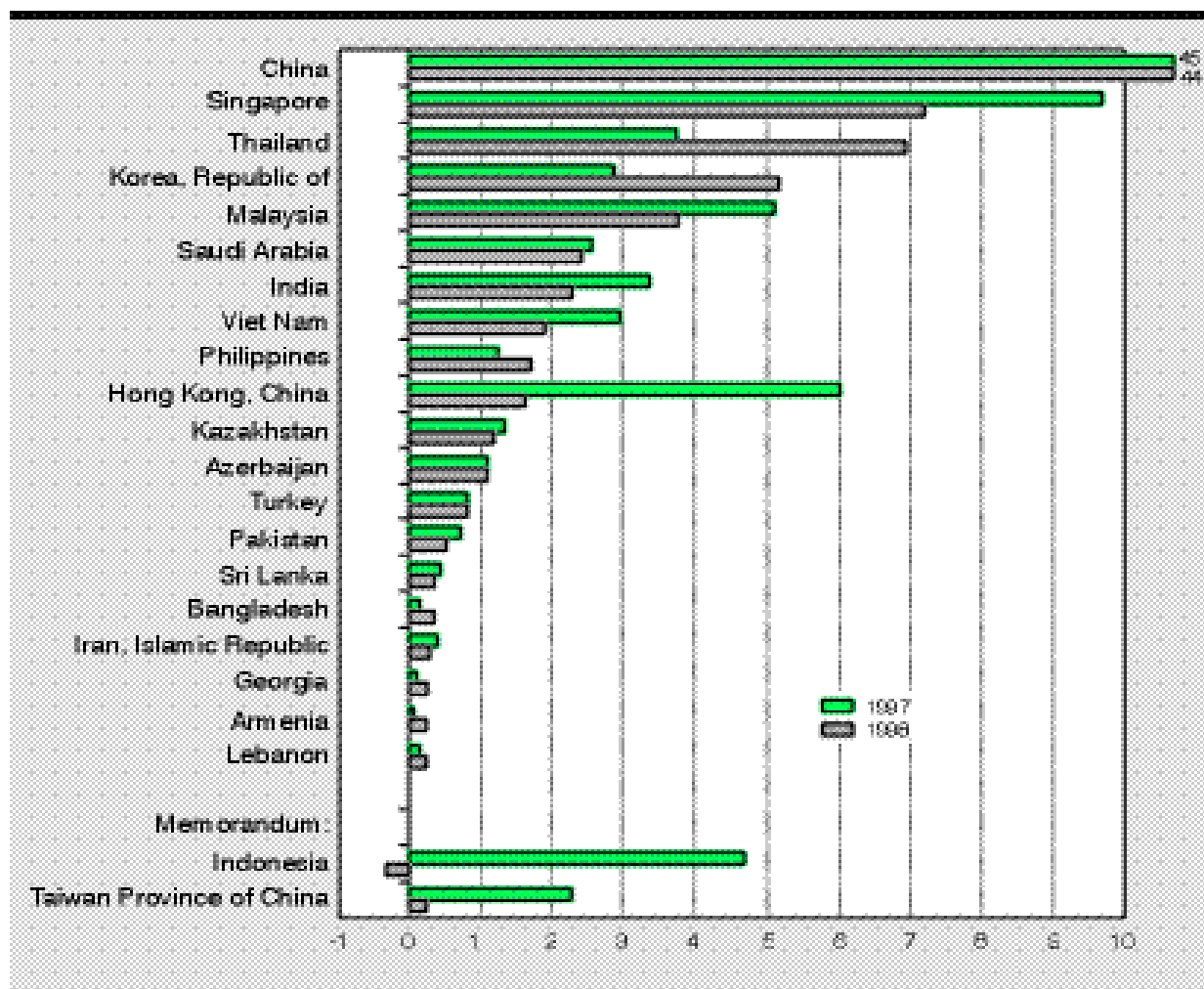
Ethiopia was the first LDC in which the project was implemented and for which a guide has been prepared (UNCTAD/ICC, 1999c). UNCTAD has also started to implement the project in Mali. Work will begin on most of the other countries in the pilot phase before the end of the year.

The project is financed by contributions from donor countries: China, Finland, France, India and Norway.

Source: UNCTAD.

In contrast to portfolio investment and bank lending, the withdrawal of which triggered a downturn in overall private capital inflows, FDI remained relatively stable and increased its importance in private capital flows into the region (box figure II.4.1). TNCs, particularly from the United States and Europe, continued to be very active in the region. Some are restructuring

Figure II.19. Asia and the Pacific: FDI inflows, top 20 economies, 1997 and 1998<sup>a</sup>  
(Billions of dollars)



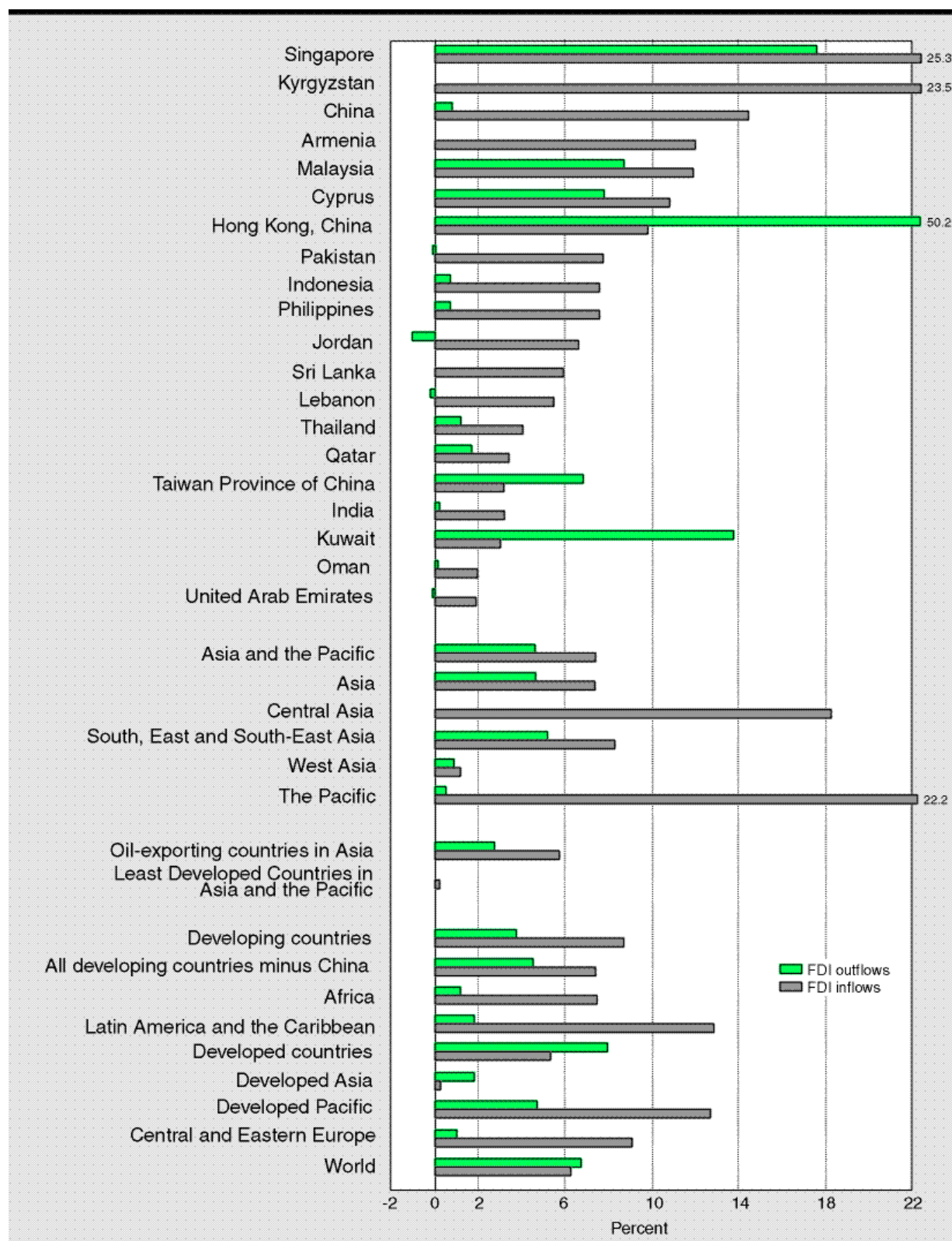
Source: UNCTAD, FDI/TNC database and annex table B.1.

<sup>a</sup> Ranked on the basis of the magnitude of 1998 FDI inflows.

their production networks in Asia to respond to changes in supply and demand patterns in the light of the crisis. Further FDI liberalization, the availability of cheap assets in some countries and the longer-term prospects of the region have been the main driving forces behind TNC decisions to expand in developing Asia.<sup>37</sup>

Efforts to attract FDI have been intensified in all of the crisis-affected economies of the region and at all levels (chapter IV). The shortage of capital for financing production and trade, combined with the recognition of the role that FDI can have in restoring growth and development, has led governments to intensify their efforts to attract FDI. Recent moves include the further opening of certain industries (in particular, in the services sector) to FDI and the relaxing of rules with respect to ownership, mode of entry and financing. At the regional level, member states of the ASEAN agreed in October 1998 on the establishment of the ASEAN Investment Area. They have also undertaken measures to accelerate the realization of the ASEAN Free Trade Area and to grant special incentives and privileges to attract FDI into the region.

Figure II.20. Asia: FDI flows as a percentage of gross fixed capital formation, top 20 economies, 1995-1997<sup>a</sup>



Source: UNCTAD, FDI/TNC database and annex table B.5

<sup>a</sup> Ranked on the basis of the magnitude of 1995-1997 FDI inflows as a percentage of gross fixed capital formation.



#### Box II.4. FDI in the five countries most affected by the financial crisis

Despite a disparate performance among individual countries in the group, FDI flows into the five crisis-hit countries (Indonesia, Republic of Korea, Malaysia, the Philippines and Thailand) as a group remained resilient in 1998, down only two per cent from the peak level of \$18 billion in 1997 (figure II.21). Viewed from the perspective of the preceding decade, 1998 inflows to those countries as a group stood up well, remaining substantially above the average of flows recorded during the 1991-1995 period (\$11 billion). However, individual national performances varied greatly. Inflows into the Republic of Korea, the Philippines and Thailand showed dramatic increases; Malaysia showed a decline, while Indonesia suffered divestment for the first time since 1974.

FDI flows to the five countries as a group were remarkably resilient when compared with foreign bank lending and foreign portfolio equity investment before and during the financial crisis (box figure II.4.1). There are several reasons for this: corporate networks of integrated international production that have already existed in Asia allowed some TNCs to compensate for declining domestic sales through increased exports spurred by devaluations; some TNCs took advantage of cheaper asset prices; in some cases, parent firms increased investment stakes in their existing affiliates, either to buy some or all shares of distressed joint venture partners or to alleviate affiliates' financial difficulties in the wake of the crisis; and some TNCs have increased capital investments in response to the relaxation of FDI regimes that has taken place after the financial crisis.<sup>a</sup>

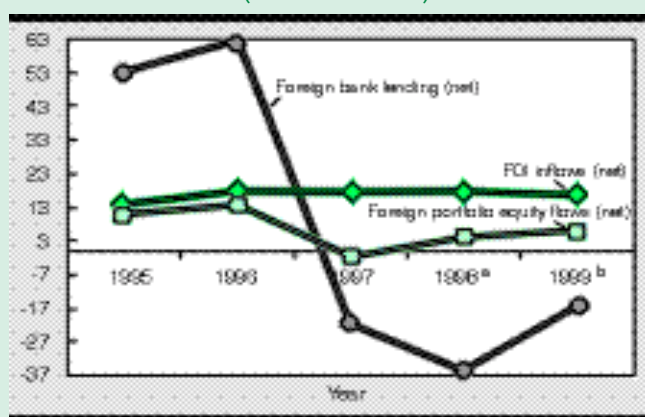
Barring an unforeseen worsening of the crisis, FDI inflows in 1999 are likely to remain at a level above annual average inflows during the 1990s so far (i.e., \$13 billion), although the performance of individual countries is likely to continue to differ. Measures to deal with the severity of the impact of the crisis continue to be necessary.

Source: UNCTAD.

<sup>a</sup> For an elaboration, see UNCTAD, 1998c.

Box figure II.4.1. FDI flows, foreign portfolio equity flows and foreign bank lending to the five Asian countries most affected by the financial crisis, 1995-1999

(Billions of dollars)



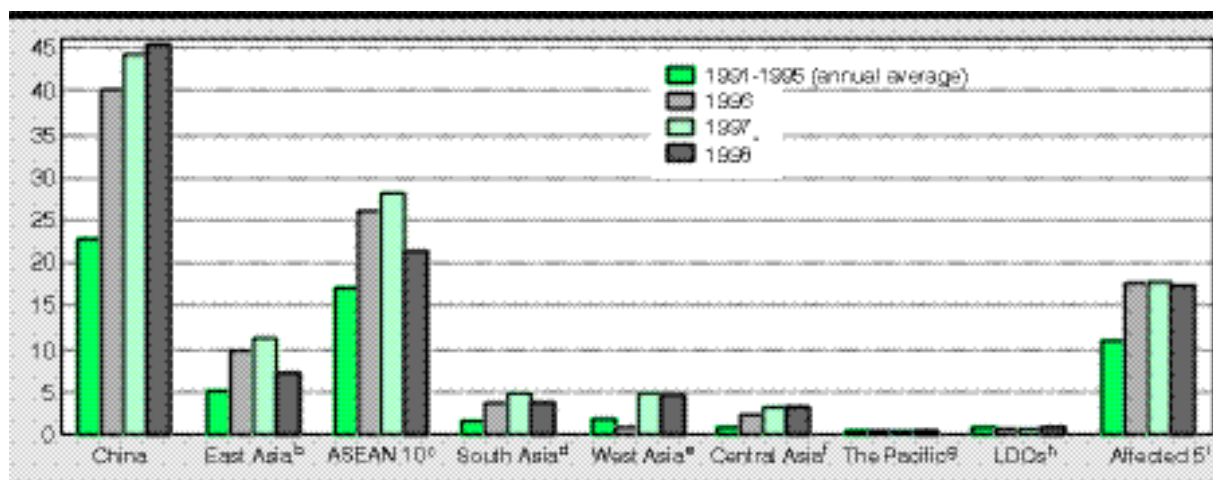
Source: UNCTAD, FDI/TNC database for FDI inflows and Institute of International Finance, 1999b for portfolio flows and bank lending.

Cross-border M&As have become more important as a mode of entry to Asia for TNCs. Majority-owned M&As in South, East and South-East Asia in 1998 increased by 28 per cent in value over 1997, to \$12.5 billion. The significant increases that occurred in two of the five countries directly hit by the financial crisis, namely in the Republic of Korea and Thailand, are particularly noteworthy. However, if the value of cross-border M&As in Asia is placed in relation to FDI inflows into Asia, the percentage remained relatively low (figure II.22); it was only 16 per cent compared to 46 per cent in Latin America.

Within these overall trends, the performance of individual sub-regions and economies varied considerably (figure II.21).

China remained the single largest FDI recipient in the developing world. Inflows to China were \$45 billion, a slight increase over 1997. While FDI inflows from within the region declined by over nine per cent, flows from the United States and Europe increased by 21 per cent and three per cent, respectively. Faced with a number of adverse factors, including the negative consequences of the Asian financial crisis and the slow-down of growth, China intensified its efforts to attract investment. At the beginning of 1998, the Government revised its industrial

**Figure II.21. FDI flows into developing Asia and the Pacific, by country group, 1991-1998**  
(Billions of dollars)



Source: UNCTAD, FDI/TNC database.

<sup>a</sup> Estimates.

<sup>b</sup> Includes Hong Kong, China; Republic of Korea and Taiwan Province of China.

<sup>c</sup> Includes Brunei Darussalam, Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, Philippines, Singapore, Thailand and Viet Nam.

<sup>d</sup> Includes Bangladesh, India, Nepal, Pakistan and Sri Lanka.

<sup>e</sup> Includes Bahrain, Cyprus, Islamic Republic of Iran, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syrian Arab Republic, Turkey, United Arab Emirates and Yemen.

<sup>f</sup> Includes Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan.

<sup>g</sup> Includes Fiji, Kiribati, New Caledonia, Papua New Guinea, Solomon Islands, Tonga, Vanuatu and Samoa.

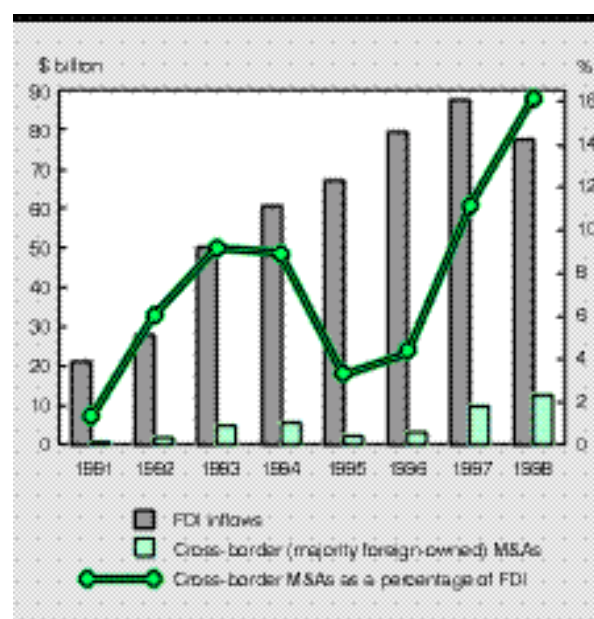
<sup>h</sup> Includes Afghanistan, Bangladesh, Cambodia, Kiribati, Lao People's Democratic Republic, Maldives, Myanmar, Nepal, Solomon Islands, Vanuatu, Samoa and Yemen.

<sup>i</sup> Includes Indonesia, Republic of Korea, Malaysia, Philippines and Thailand, the five countries most affected by the Asian financial crisis of 1997-1998.

guidelines for FDI. A part of the incentive scheme for foreign investors abolished earlier, such as the exemption of import duties and value-added tax on imports of equipment, was reinstated, particularly for industries listed as having high priority for attracting FDI.

*East Asia* (Hong Kong, China; the Republic of Korea; and Taiwan Province of China) experienced a mixed performance. The Republic of Korea received its largest-ever annual volume of FDI inflows in 1998 (\$5 billion), a four-fold increase over its average annual performance during the first half of the 1990s. The country became a net FDI recipient after having been a net FDI outflow country since the beginning of 1990s. In Hong Kong (China) and Taiwan Province of China, the slowdown of the domestic economies and the regional economic situation prompted a sharp decline of FDI inflows in 1998. The number of TNC regional headquarters in Hong Kong, China declined by 10 per cent in 1998. Taiwan Province of China suffered from divestment in the fourth quarter of 1998, leading to a sharp decline of FDI for the year as a whole.

**Figure II.22. South, East and South-East Asia: cross-border M&As in relation to FDI inflows, 1991-1998**



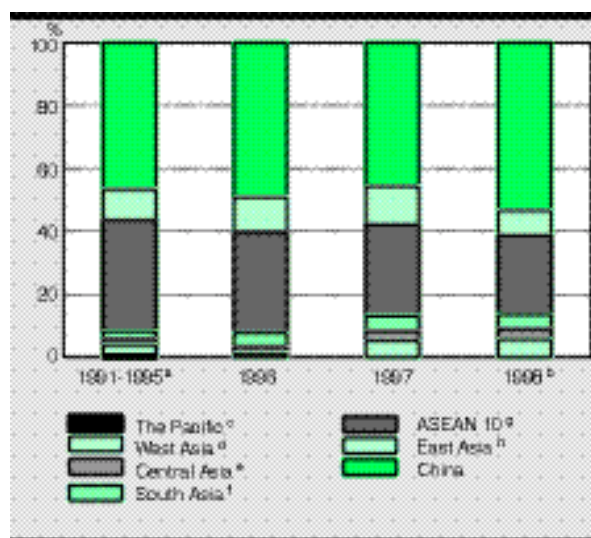
Source: UNCTAD FDI/TNCs database, and data provided by KPMG Corporate Finance.

FDI in *South-East Asia* (ASEAN 10) decreased by 23 per cent in 1998. The share of these countries as a group in total FDI in Asia has declined by nearly one tenth during the 1990s (figure II.23). The performance of individual countries was, however, highly uneven. In particular, FDI in Thailand, unaffected by plummeting GDP growth, has boomed to historical highs since the onset of the crisis, increasing by 87 per cent in 1998. Financial institutions (with inflows 10 times higher than the year before), and machinery and automobile industries were the largest recipients of FDI. The dramatic increase in FDI flows to Thailand reflected a significant rise in cross-border M&As. Flows into the Philippines, which had started to slow down at the end of 1997, regained momentum in the fourth quarter of 1998, pushing FDI to a record high in 1998. This reflects partly the recognition by foreign investors of two distinct features of the Philippines, namely its continuing strong export performance and its relatively sound financial sector. Singapore experienced a reduction of inflows by 26 per cent, and the Government adopted measures, such as tax concessions, to reduce business costs and stimulate FDI. Inflows to Malaysia in 1998 declined by 27 per cent over the previous year. The value of manufacturing FDI projects approved, however, registered a 14 per cent increase in 1998. Viet Nam, although not directly hit by the financial crisis, experienced a decline in inflows, largely due to its heavy dependence on other countries in the region for investment and the loss of export competitiveness as a result of the sharp currency depreciation in neighbouring countries.<sup>38</sup> Indonesia has been hit the hardest by the Asian financial crisis. All major sectors suffered setbacks. The impact of the crisis was aggravated by some serious non-economic factors. The resultant loss of confidence of foreign investors caused a net divestment in 1998 compared with annual average inflows of \$5.4 billion during 1996-1997.

Although the financial crisis did not significantly affect FDI in *South Asia*, the growth momentum of FDI into the sub-region was lost in 1998. Inflows to India, the single largest recipient in the sub-region, were unable to maintain a level similar to that of 1997. Measures to encourage private investment and foreign participation in the domestic economy were strengthened in 1998. FDI flows into the other economies in the sub-region remained low. The sub-region has, however, considerable potential to attract FDI. Bangladesh, unlike other Asian LDCs, experienced fast FDI growth in 1998, particularly in the energy sector (box II.5).

FDI flows into developing *West Asia* remained at a level similar to that of 1997 (\$4.6 billion), after a sharp increase in 1997, a slow-down largely due to the sharp fall in the price of oil. Overall, the level of FDI inflows registered during the 1990s is still significantly lower than that of the early 1980s, though it has recovered markedly from the fall of FDI inflows in the second half of the 1980s. The share of the region in total developing country FDI inflows has in fact eroded significantly, falling from 25 per cent during 1980-1985 to less than five per cent during the 1990s. Oil and oil-related activities are still attracting most FDI, though non-oil related activities such as tourism and some manufacturing industries (electrical machinery and

Figure II.23. FDI in developing Asia and the Pacific, by country group, 1991-1998  
(Percentage)



Source: UNCTAD, FDI/TNC database.

<sup>a</sup> Annual average.

<sup>b</sup> Estimates.

<sup>c</sup> Includes Fiji, Kiribati, New Caledonia, Papua New Guinea, Solomon Islands, Tonga, Vanuatu and Samoa.

<sup>d</sup> Includes Bahrain, Cyprus, Islamic Republic of Iran, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syrian Arab Republic, Turkey, United Arab Emirates and Yemen.

<sup>e</sup> Includes Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan.

<sup>f</sup> Includes Bangladesh, India, Nepal, Pakistan and Sri Lanka.

<sup>g</sup> Includes Brunei Darussalam, Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, Philippines, Singapore, Thailand and Viet Nam.

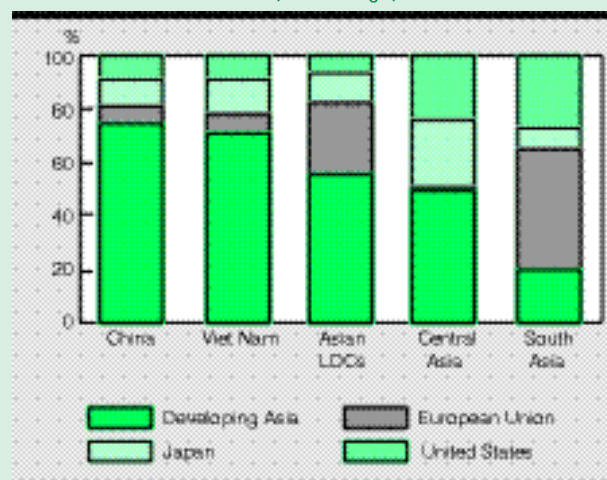
<sup>h</sup> Includes Hong Kong, China; Republic of Korea and Taiwan Province of China.

### Box II.5. Negative effects of the financial crisis on FDI flows to Asian LDCs

FDI inflows to Asia's LDCs (Afghanistan, Bangladesh, Cambodia, Lao People's Democratic Republic, Myanmar and Nepal) declined dramatically in 1998. Except for Bangladesh, LDCs in South, East and South-East Asia saw a substantial decline in FDI flows in the second half of 1997 and in 1998: they attracted 20 per cent less in 1997-1998 than in 1995-1996, and their share in total FDI in this sub-region fell from 0.6 to 0.4 per cent. The heavy dependence of Asian LDCs on investments by firms from developing Asia (box figure II.5.1), whose capacity to invest abroad had weakened due to the financial crisis, and the effects of the currency depreciation that occurred in the most affected countries, have had negative implications for FDI flows into the LDCs. The current financial crisis in Asia has, indeed, led to a slowdown of the process of TNC-assisted restructuring that had begun to facilitate the development of LDCs in the region along the lines of the "flying-geese" pattern.

Source: UNCTAD.

Box figure II.5.1. FDI in selected Asian economies/subregions, by source, cumulative flows, 1993-1996 (Percentage)



Source: UNCTAD, FDI/TNC database.

electronics, textiles) in non-oil exporting countries are also drawing in foreign investors. However, plans to expand oil and gas production capacity in Kuwait, Oman, Qatar, United Arab Emirates, and Yemen, and the opening up of the petroleum sector to foreign investors in Kuwait and the Islamic Republic of Iran<sup>39</sup> should lead to increased FDI.

FDI in *Central Asia* in 1998 also remained at a level similar to that of 1997 (\$3 billion), losing the growth momentum it had built up since the beginning of the decade. The reduction of inflows in Kazakhstan was compensated for by increases in flows to Armenia and Georgia. The economies in the region are heavily dependent on investment in petroleum exploration and extraction, a sector that suffered from weakened international demand for oil, contributing to the suspension or postponement of some investment projects. FDI in non-oil sectors, on the other hand, rose. The difficulties of Central Asian economies in attracting FDI were further exacerbated by the fact that investors from both the East Asian economies and the Russian Federation (which had been important sources of FDI in that sub-region) reduced their levels of investment due to their respective financial crises.

Inflows to the *Pacific Island* economies in 1998 were estimated at \$175 million. The main sources of FDI continued to be Australia, Japan and New Zealand, while several European countries as well as the United States also remained important. Most recently, there has been a growing interest in tourist facilities as well as tourism-related activities in the sub-region. Declining official development assistance (ODA) and diminishing benefits from non-reciprocal preferential treatment by the major trading partners due to trade liberalization is encouraging the liberalization of investment regimes in the sub-region.

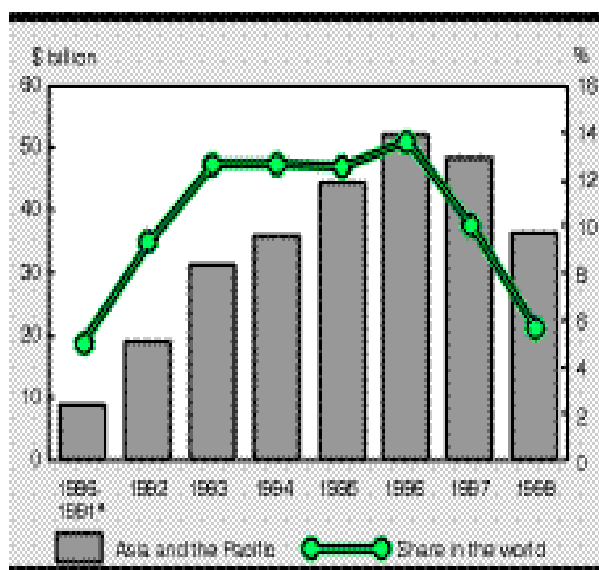
The financial crisis in Asia has reduced both the capacity and the incentives for Asian TNCs to undertake FDI, both within and outside the region; furthermore, some policy measures adopted by some governments to contain the crisis have also discouraged outward FDI.<sup>40</sup> As a result, *outward FDI* from developing Asia and the Pacific as a whole decreased in 1998 by a quarter, to \$36 billion. The reversal of the upward trends in outward FDI from Asian TNCs is



paralleled by the declining value of cross-border M&As undertaken by them (figure II.24). Although total outflows remain at a level similar to the annual average during the 1990s, their share in world outflows in 1998 dropped to its lowest level in the 1990s (figure II.25). Most of the outflows originated in no more than 10 economies, primarily in East and South-East Asia (figure II.26). Out of the top 10 outward-investor countries, six experienced a sharp decline in their FDI outflows in 1998. The stock of outward FDI from developing Asia reached \$317 billion, accounting for over four-fifths of the total outward stock from developing countries world-wide. Over half of this stock is located in other economies in the region. China alone absorbed over half of developing Asia's outflows, mainly from Hong Kong (China) and Taiwan Province of China.

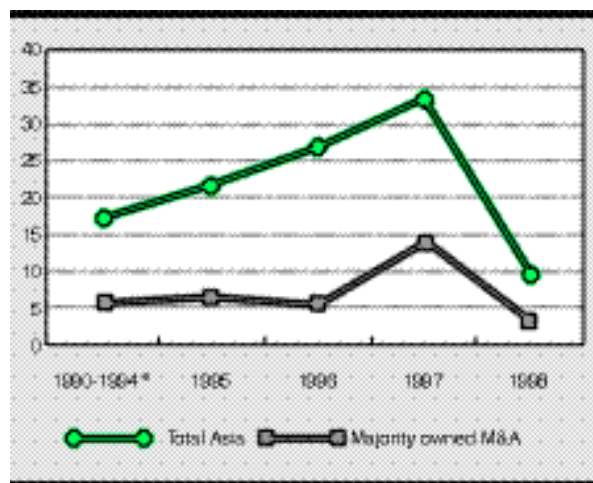
**Figure II. 25. Outward FDI flows from developing Asia and the Pacific and its share in world outflows, 1986-1998**

(Billions of dollars and percentage)



Source: UNCTAD, FDI/TNC database.

**Figure II. 24. Cross-border M&As by TNCs headquartered in developing Asia, 1990-1998**  
(Billions of dollars)

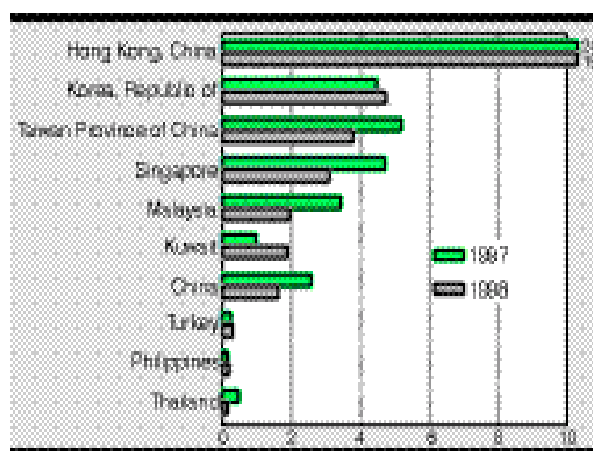


Source: UNCTAD, FDI/TNC database and data provided by KPMG Corporate Finance.

a Annual average.

**Figure II. 26. Asia and the Pacific: FDI outflows, top 10 economies, 1997 and 1998<sup>a</sup>**

(Billions of dollars)



Source: UNCTAD, FDI/TNC database and annex table B.2.

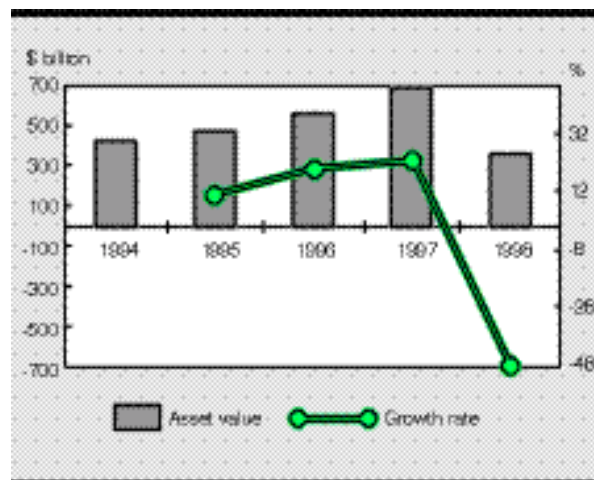
<sup>a</sup> Ranked on the basis of the magnitude of 1998 FDI outflows.

Over the past decade, TNCs owned by overseas Chinese as well as Korean *chaebols*, have been two major forces for outward FDI from developing Asia. The former – headquartered all over East and South-East Asia and whose business has been focused largely within the region – suffered heavy loss from the financial crisis. For instance, the market capitalization of the assets owned by the top 500 overseas Chinese firms was reduced by nearly half in 1998 (figure II.27). Surprisingly, however, FDI outflows from the Republic of Korea increased by seven per cent in 1998, to a record level of \$4.8 billion. This is due mainly to a sharp increase in financing directly from headquarters of existing overseas operations and ongoing investment projects. Their foreign



affiliates had difficulties in raising funds in the international financial market in the light of their lowered credit ratings. Indeed, Korean TNCs had little choice but to channel funds from the parent companies to their overseas affiliates that experienced difficulties in debt servicing owing to the crisis. While engaged in divestment both at home and abroad, Korean TNCs have apparently struggled to maintain some of their core international operations, for longer-term strategic consideration. The drastic decrease in cross-border M&As undertaken by Korean TNCs in 1998 shows that there were very few new investment projects initiated during that year. The shortage of cash induced a number of Korean TNCs to cancel some of their investment plans and to divest some of their assets held abroad in order to raise funds. According to the records of the Ministry of Finance and Economy, 68 overseas investment projects with a value of \$336 million were liquidated during 1998 and the first quarter of 1999.<sup>41</sup>

**Figure II. 27. The asset value and its growth rate of the top 500 overseas Chinese firms**  
(Billions of dollars and percentage)



Source: Yazhou Zhoukan, *Asia Weekly*, "Top 500 international Chinese firms", 9-15 November 1998.

Looking ahead, FDI flows into the developing Asia region may decline further in 1999, especially if China does not maintain its previous high level. The decline of FDI approvals in 1998 and the first quarter of 1999 in a number of countries signals the possibility of a trend in that direction. However, in the region as a whole, FDI in 1999 is likely to remain above the average of the 1990s. In the longer run, FDI growth is likely to be resumed, as the fundamental determinants of inward FDI in the region remain sound. FDI outflows from developing Asia, too, can be expected to lower in 1999 than they were in 1997. Asian TNCs are likely to continue their focus on restructuring, spinning off non-core activities. The revitalization of their outward investment drive will take some time. Moreover, Asian TNCs may well be more cautious than before in their overseas business expansion (and, perhaps, diversify a bit away from Asia) – a lesson learnt from their past experience.

### 3. Latin America and the Caribbean

In 1998, a year of turbulence for emerging markets, FDI *inflows* into the region remained strong, exceeding \$71 billion, a five per cent increase over the already record level of 1997 (annex table B.1). South American countries attracted 70 per cent of these inflows, with the countries of the Southern Common Market (MERCOSUR — Argentina, Brazil, Paraguay and Uruguay) receiving about half of all inflows to Latin America and the Caribbean. For a third consecutive year, Brazil was the single largest host country, receiving FDI inflows of more than \$28 billion (figure II.28), 53 per cent more than in 1997, equivalent to 40 per cent of all inflows into the region as a whole. Mexico maintained its position as the second largest host country, but its share in total inflows declined from 19 to 14 per cent, followed by Argentina, Chile and Venezuela, each accounting for 5-8 per cent of the region's total in 1998. Inflows as a percentage of gross fixed capital formation to Latin America and the Caribbean remain at high levels (16 per cent in 1997) compared to other developing regions. This is particularly noteworthy in countries such as Bolivia, Chile, Colombia, Costa Rica, Nicaragua and Venezuela which, with ratios exceeding 20 per cent, are clearly above international standards (figure II.29).

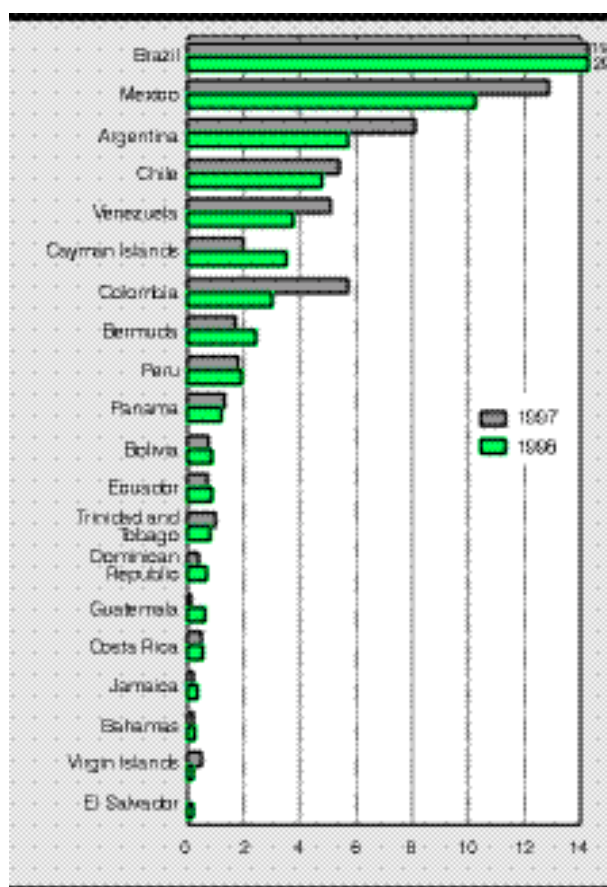
The increase in FDI inflows to Brazil in 1998 is largely a reflection of the country's privatization process, and it underlines the commitment of long-term investors to this country, despite short-term turbulence. TNCs long established in the country are restructuring existing

operations; new entrants compete for a share of this large market, often through the acquisitions of private companies and their participation in the privatization process. Overall, privatizations accounted for almost 25 per cent of FDI inflows in 1998 (Banco Central do Brasil, 1999). The biggest operation in this respect in 1998 was the participation of foreign companies in the sale of the telecommunications giant Telebrás. Additional privatizations and the opening up to private investment of the state-owned oil company Petrobras suggest that the momentum of this process would be maintained. In the case of Mexico, despite inflows having dropped by 20 per cent compared to 1997, they remained around their 1995-1997 average of about \$10.5 billion. An important proportion of FDI in this country in recent years has been directed to manufacturing industries producing for the extended North American market, institutionalized through the North American Free Trade Agreement (NAFTA).

Recent FDI inflows into Argentina (as into Brazil, Paraguay and Uruguay) have also been influenced by the extension of the country's market into the larger MERCOSUR area. In 1998 inflows to Argentina experienced a 30 per cent fall compared to 1997 but remained around their 1994-1997 average of nearly \$6 billion. After the accelerated privatization process — which was a main driving force for attracting FDI during the first part of the decade — most inflows to Argentina in recent years have been directed to the acquisition of private companies, an important proportion of which have been in the banking industry, telecoms and media as well as hydrocarbons. In Colombia and Venezuela, new FDI attracted by the privatization of service industries in the past few years has complemented continuing strong inflows in their oil and natural gas industries. In Chile, an important proportion of recent investments has gone into the acquisition of private companies in service industries, such as banking and electricity, while traditional investments in mining have also continued strongly.

Inflows into other medium-sized natural resource-rich Andean countries, such as Bolivia, Ecuador and Peru, have increased rapidly in recent years due both to the liberalization of their investment regimes and privatization programmes. In an overall turbulent year for financial movements, inflows into offshore financial centres such as Bahamas, Bermuda and Cayman Islands increased in 1998, representing about half of total inflows into Central America and the Caribbean (excluding Mexico). Inflows into the Central American countries of El Salvador and Guatemala also rose in 1998, largely on account of the privatization of companies in the services sector (see annex table B.7 for M&A sales). These inflows complemented more traditional investments in export-oriented assembly manufacturing activities, also important in Costa Rica, the Dominican Republic and Jamaica. In Costa Rica, one third of total inflows as of 1998 were directed to electronics which is expected to be the most dynamic industry in the near future.

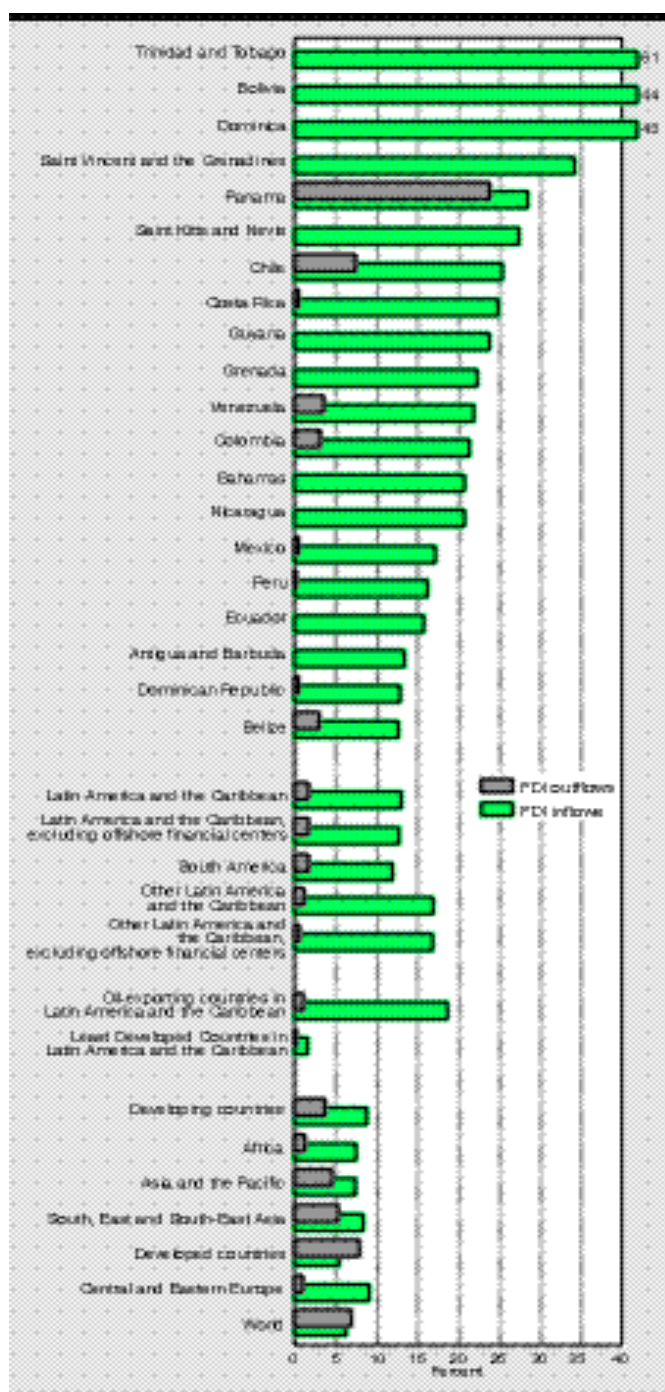
**Figure II.28. Latin America and the Caribbean: FDI inflows, top 20 countries, 1997 and 1998<sup>a</sup>**  
(Billions of dollars)



Source: UNCTAD, FDI/TNC database and annex table B.1.

<sup>a</sup> Ranked on the basis of the magnitude of 1998 FDI inflows.

**Figure II.29. Latin America and the Caribbean: FDI flows as a percentage of gross fixed capital formation, top 20 countries, 1995-1997<sup>a</sup>**



Source: UNCTAD, FDI/TNC database and annex table B.5.

<sup>a</sup> Ranked on the basis of the magnitude of 1995-1997 FDI inflows as a percentage of gross fixed capital formation.

region as a whole played an important role in stabilizing overall capital inflows (figure II.31) in the context of highly volatile short-term capital flows and the sharp increase in the cost of debt financing experienced by the region, particularly during the second half of the year. This financial effect also coincided with an abrupt fall in Latin America's terms of trade, due to the sharp fall in commodity prices registered in 1998. More specifically, about \$38 billion of net portfolio investment and private bank loans (including other private flows) left Latin America and

As regards the origin of FDI in the region, the United States continued to be the largest single investor country with outward flows amounting to about \$17 in 1998.<sup>42</sup> United States TNCs have invested heavily in manufacturing in Mexico and the Caribbean Basin, seeking efficiency gains, and in service industries in South America, competing with other TNCs in these markets. Inflows from Japan reached \$5.6 billion in 1998, compared to \$2.3 billion in 1997.<sup>43</sup> A strong increase in inflows from European countries in recent years, however, has begun to challenge the traditional dominance of United States TNCs in the region: inflows from the European Union (EU) were almost equivalent to those from the United States in 1997 while they were less than half of the level of such flows in 1995 (IDB-IRELA, 1998 and IDB, 1999a).<sup>44</sup>

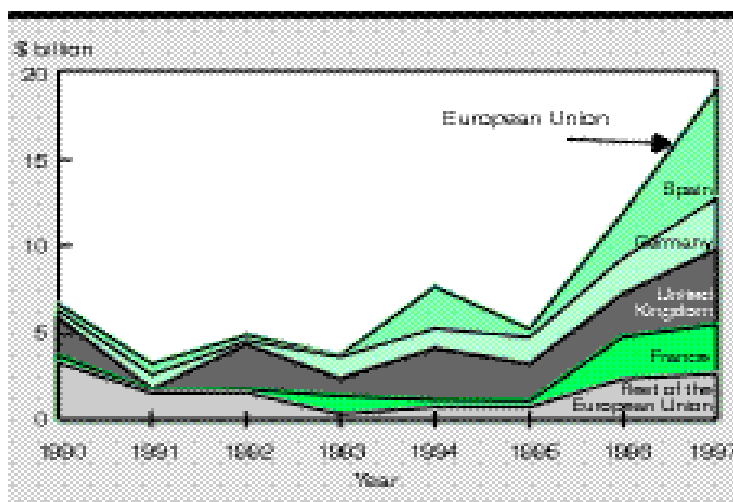
Within the EU, the largest investor country in 1997 was Spain (figure II.30), as FDI inflows from this country accounted for one third of all inflows from the EU into Latin America and the Caribbean. Spanish TNCs have acquired controlling stakes in important companies in the electricity industry in Brazil and Chile and the oil and gas industries in Argentina, and in telecommunications industries in Argentina, Brazil, Chile and Peru. Inflows from the United Kingdom, the second largest EU investor country in 1997, accounted for 23 per cent of EU inflows into the region that year, while both France and Germany each were the origin of a further 15 per cent of total EU inflows. A similar picture emerges when one examines the origin of foreign companies operating in the region: in 1997, 44 of the largest 100 foreign affiliates in the region (ranked by sales) were from the United States, 37 from the EU, five from Switzerland and only three from Japan (América Economía, 1998).

During 1998, FDI inflows to the



Caribbean in 1998, precisely at a moment when the region's current account deficit reached \$87 billion (World Bank, 1999). During most of the 1990s, the current account deficit was more than offset by private capital inflows, half of it FDI<sup>45</sup> (figure II.31). In 1998, bank loans and portfolio investment collapsed. That year, FDI inflows financed two-thirds of the region's current account deficit. The stability of FDI inflows in the turbulent financial environment of 1998 proved important for Brazil as it faced strong speculative attacks against its currency following the Russian devaluation and debt moratorium in August 1998, and again in the first quarter of 1999. However, while FDI flows to Brazil increased significantly in 1998, dividend and profit remittances on the accumulated stock of FDI also grew by about 18 per cent compared to those in 1997 – to reach an estimated \$7.7 billion. FDI inflows continued to increase in the first quarter of 1999, reaching \$8 billion, more than double the level of inflows in the first quarter of 1998. Around half of these inflows were linked to privatization.

Figure II.30. European Union <sup>a</sup> FDI outflows to Latin America and the Caribbean, 1990-1997



Source: UNCTAD, FDI/TNC database.

<sup>a</sup> Includes Austria, Belgium and Luxembourg, Denmark, Finland, France, Germany, Italy, Netherlands, Portugal, Spain, Sweden and the United Kingdom.

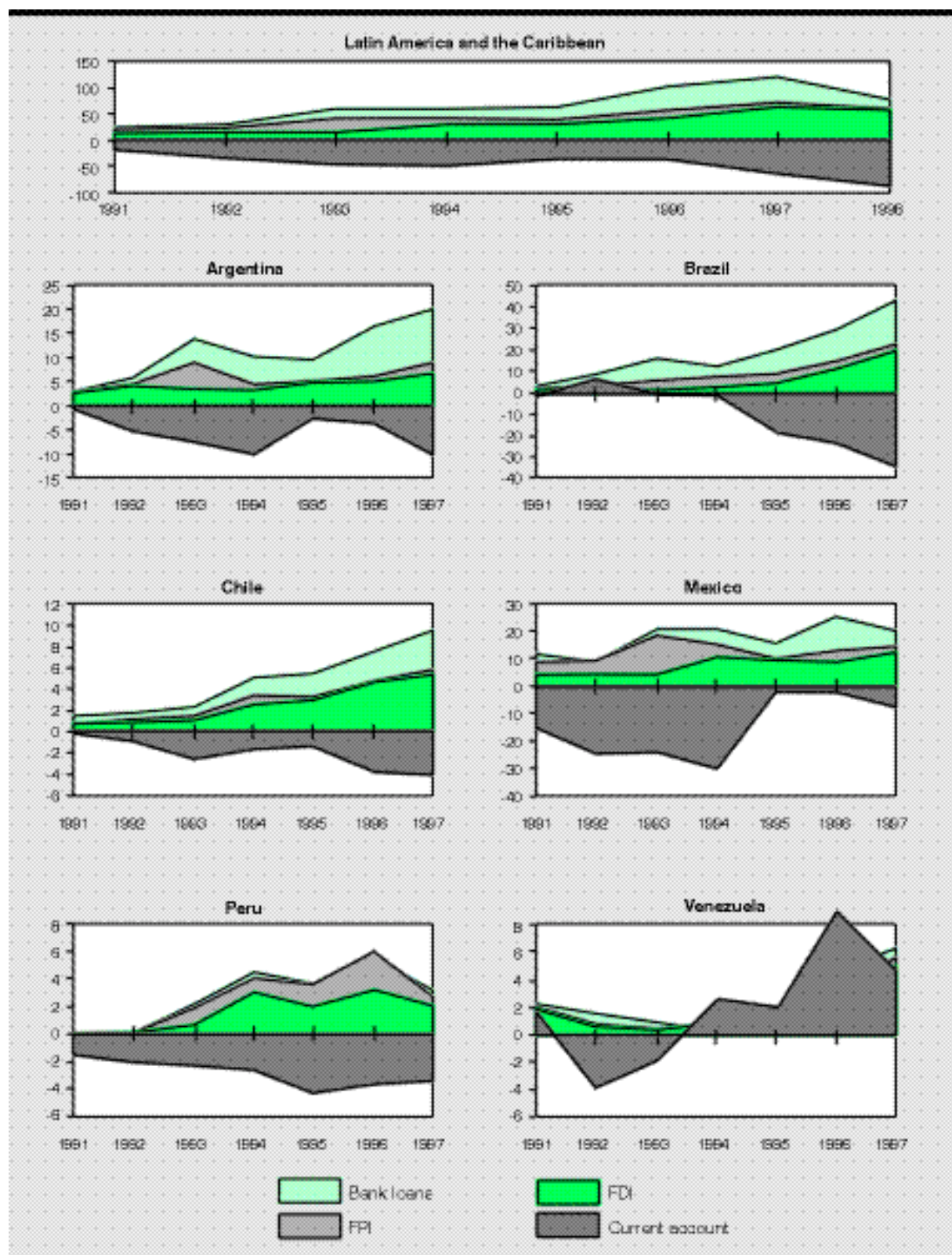
FDI inflows were also important for countries such as Argentina, Chile and Peru – that were hard hit by the trade – related effects of the Asian crisis, through lower commodity prices and sluggish Asian demand for their exports, aggravating their already existing 1997 trade deficits – for Mexico and Venezuela, that were significantly affected by low oil prices. In the case of Venezuela (dependent on oil for two-thirds of its exports earnings), a \$10.5 billion trade surplus in 1997 dropped to \$3.5 billion in 1998, while in Mexico the trade balance turned from a modest 1997 surplus into a \$7.8 billion deficit in 1998. Although FDI inflows into these countries declined in 1998, their relatively high levels helped offset the current account deficit.

FDI *outflows* from Latin American and Caribbean countries also continued to be strong in 1998, at more than \$15 billion (figure II.32). An important distinction, however, needs to be made between outflows from offshore financial centres and those that originate in other countries. Offshore financial centres are commonly used by TNCs as an intermediate destination for funds to be invested in other countries of the region or outside it. Most outflows from these centres were not originally generated in the region, but rather cancel out previous inflows into these centres. The confidentiality with which these centres operate makes it difficult to discuss their potential significance from an analytical perspective. In quantitative terms, however, FDI outflows from offshore financial centres in 1998 represented almost two-fifths of total FDI outflows from countries in the region, reaching about \$6 billion, almost the same level as in 1997.

FDI outflows originating in some of the larger countries of South America and Mexico, on the other hand, follow a different economic logic and reflect, by and large, an incipient but accelerated process of internationalization, mostly within the region, of some leading Latin American companies (box II.6). This recent process of internationalization within the region, which accelerated in Chile in the early 1990s, can also be observed in the latter part of the decade in Argentina (box II.7), Brazil, Colombia and Mexico, and has led to a large increase in intra-regional FDI. Though accurate data are scarce, the evolution of total outflows from countries in

**Figure II.31. Private net resource flows and current account deficits in Latin America and the Caribbean, 1991-1998**

(Billions of dollars)



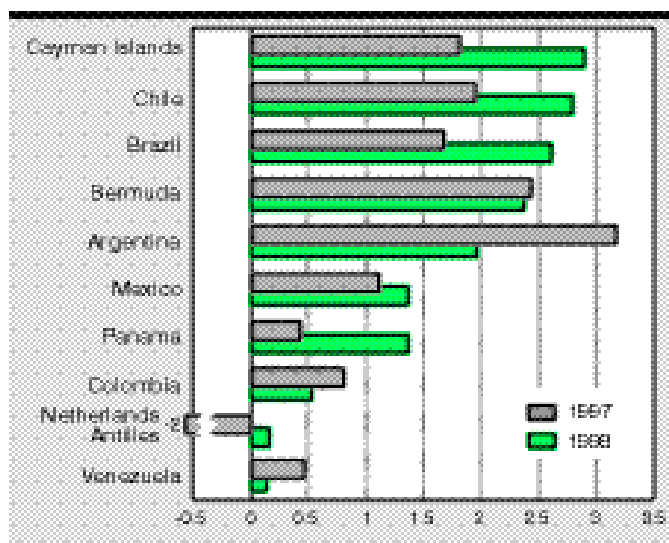
Source : World Bank, 1999.

Notes : FPI = Foreign portfolio equity investment. Bank loans include bonds and other private flows.



**Figure II.32. Latin America and the Caribbean: FDI outflows, top 10 countries, 1997 and 1998<sup>a</sup>**

(Billions of dollars)



Source: UNCTAD, FDI/TNC database and annex table B.2.

<sup>a</sup> Ranked on the basis of the magnitude of 1998 FDI outflows.

the region which do not operate as offshore financial centres provides an indication as to the growth of intra-regional FDI.

In 1998, FDI outflows from Latin American and Caribbean countries (excluding offshore financial centres) were about \$10 billion, comparable to the level of 1997. It is, however, more than twice the 1994-1996 average, and remains particularly impressive given the financial turbulence faced by Latin America in 1998. If one assumes that three-quarters of all FDI outflows from these countries in 1998 went into other countries of the region (estimates for Argentina, one of the most internationalized economies of the region, suggests that this is a prudent assumption), intra-regional investment would have reached almost \$8 billion in 1998. Intra-regional investment in Latin America involves in particular Argentine and

Brazilian companies extending their activities to cover the larger MERCOSUR region; large Chilean service companies expanding in neighbouring countries through participation in privatization projects; the integration of the Colombian and Venezuelan markets through FDI; and investments by Mexican companies in Central and South America.

#### Box II.6. A new wave of FDI from developing countries: Latin American TNCs in the 1990s

Several Latin American countries (Argentina, Brazil, Colombia, Mexico and Venezuela) were involved in the "first wave" of FDI from developing countries which took place in the 1960s and 1970s. It consisted mainly of market-seeking FDI, motivated by the existence of trade barriers in host countries (Lall, 1983). Latin American countries lost ground in the 1980s during the "second wave" of outward FDI from developing countries, which was led by Asian firms (Dunning, Van Hoesel and Narula, 1997).

The "third wave" of FDI from developing countries, which began during the 1990s, has been led by Latin American firms, mainly from Argentina, Chile and Mexico and, to a lesser extent, Brazil. Assets abroad by firms headquartered in these countries can be estimated at between \$40 and \$50 billion. Only a few of these firms started their foreign investments in the first wave, though many have been operating for a long time in their home economies.

The current wave of Latin American FDI cannot be separated from the adoption of more outward-oriented economic strategies and of structural reform programmes – including trade liberalization, privatizations and deregulation – in most Latin American countries in the 1990s. These programmes have significantly increased competitive pressures on domestic firms, and have induced processes of restructuring in the economies of the region. In this sense, it is not surprising that Chile and Mexico were the first countries to enter the third wave of outward FDI from developing countries (in the early 1990s), followed by Argentina a few years later, while Brazil is still lagging in this respect. FDI outflows from Chile increased from an annual average of only \$8 million during 1986-1990 to \$525 million during 1991-1995 and to \$2.0 billion during 1996-1998. In Mexico, official figures – which do not fully capture the magnitude of this phenomenon – indicate that from an annual average of \$142 million during 1986-1990, FDI outflows reached nearly \$300 million in 1991-1995 and, after the financial crisis, amounted to \$836 million during 1996-1998. In Argentina, the outward FDI "boom" began in 1994. FDI outflows increased from an annual average of a mere \$5 million during 1986-1990 to \$869

/...

**(Box II.6, concluded)**

million during 1991-1995 and to \$2.2 billion during 1996-1998. In this sense, the sequence in the countries' FDI process is to some extent a mirror of the sequence of the structural reform processes in their home economies.

Chile is the country in which outward FDI stock in relation to GDP is the highest among non-offshore financial centres, while in Brazil it is among the lowest (annex table B.6) . Mexico and Argentina are in-between cases. Among the factors that foster outward FDI in these countries are the relative size of their home economies, the sequence and timing of structural reforms, the insufficient availability of raw materials in the home country and the fact that many firms have already acquired dominant positions in their domestic markets.

Though there are cases of investments in the United States, Europe and some developing countries in East Asia, the bulk of current Latin American FDI stays in Latin America and especially in neighbouring countries and is geared towards their markets.

The majority of FDI from the region has been made by domestic economic conglomerates, though some Brazilian medium-sized enterprises made significant investments as well. Some of these large firms are trying to gain world leadership in specific market segments. Cemex (Mexico) for instance, is the second world producer of cement, with plants in the United States, Europe and Asia; and Techint (Argentina) accounts for 30 per cent of the world market in seamless pipes for the oil industry and operates a global network with a productive presence in Argentina, Mexico and Italy.

As a rule, ownership advantages of Latin American TNCs are based more on management capabilities, knowledge of well-diffused technologies, efficient quality and production management, sound marketing experience and access to financial resources, rather than on technological assets. In some cases the ownership advantages are also strongly based on the capability to work in similar cultural environments and on the knowledge of tastes and specific conditions in certain markets, due to geographical, cultural, linguistic or other forms of proximity.

Even those few Latin American firms operating in advanced technology industries do not seem to have entered yet into a path of technological accumulation ( Cantwell and Tolentino, 1990) to become genuine innovators. As a result, contrary to what happened with Asian TNCs that tend to operate in skill-intensive industries, Latin American firms invest very little in developed countries' economies. In addition, their outward FDI takes place more specifically in services, mature industries or resource-based activities, though some cases of FDI in more skill-intensive and more technology-oriented activities can be found: in pharmaceuticals, custom-made capital goods, telecommunications and information services in Argentina; in autoparts and transport equipment in Brazil; and in biotechnology, television, telecommunications and transport equipment in Mexico, for instance.

Two opposite forces are at work, which have an impact on the maintenance (or development) of this third wave of outward FDI by Latin American companies. On the one hand, for a growing number of firms an FDI strategy is becoming indispensable for their own survival and expansion in the new context of globalization. It is hence plausible to assume that a growing number of Latin American firms will enter into a global FDI path and acquire a portfolio of locational assets, to maintain or strengthen their competitive position in a global environment: by investing abroad, domestic firms can better exploit their tangible and intangible assets and achieve economies of scale. This situation can be summarized in the dilemma faced by many domestic firms "to buy or to be bought", in a scenario in which foreign TNCs have shown a growing propensity to invest in Latin America.

On the other hand, the relative small size of the Latin American firms, compared with TNCs from developed and even developing Asian countries, may be a constraint for a sustainable FDI path. The costs of obtaining financial, technology and human resources are greater than those faced by their competitors based in developed and Asian countries. In addition, not only are Asian firms generally more transnationalized than Latin American enterprises; a number of them have also made more inroads in technology and skill-intensive activities.

The significant financial, technological and human resources constraints faced by Latin American enterprises are to some extent a consequence of the many weak points that characterize their home economies including in some cases relatively small domestic capital markets mostly geared towards short-term finance, educational systems not generally producing the kind of human power and management required for competing in open economies, and an inappropriate level of infrastructure. Overcoming these structural problems needs time, as well as systematic efforts and well designed and implemented public policies.

*Source:* Chudnovsky, Kosacoff and López, 1999.

**Box II.7. Regional integration and the internationalization of Argentine companies**

In terms of magnitude and characteristics, the internationalization of Argentine companies has responded over time to the different policy regimes that the country has experienced. Some early examples of internationalization of Argentine companies occurred in the first decades of this century as, within an overall exporting model of agricultural products, a selected number of companies set up affiliates in less developed neighbouring countries to expand their natural resource export base. A second wave of about 100 companies developed an international presence during the import-substitution period, spanning from the 1930s to the 1970s. However, the strategy and activities of these companies were essentially oriented towards the domestic market, and their incipient internationalization, still not very significant, served mainly as a complement to their domestic strategies.

The third and by far most active wave of internationalization of Argentine companies has occurred in the 1990s in a different context. The economic structure that emerged from the accelerated process of liberalization and privatization of the Argentine economy in the late 1980s and in the 1990s is characterized by strong competitive pressures and a concentration of economic activity in foreign affiliates and a few large domestic conglomerates, which together accounted for 83 per cent of total assets of the largest 1,000 companies in Argentina in 1997 (Kosacoff, 1999). Some large conglomerates expanded their activities into other Latin American countries, and in some cases into countries outside the region (Indonesia, Italy, Malaysia and the United States). In general, and with the exception of some important resource-seeking investments by the oil company Yacimientos Petroliferos Fiscales (YPF), the overwhelming motivation for recent FDI outflows from Argentina appears to be market-seeking through the sub-regional integration of production and distribution networks with neighbouring countries, particularly in the context of MERCOSUR.

This expansion into other Latin American countries to enlarge productive networks and access larger regional markets, already manifest in effective outflows in the first half of the 1990s, appears even clearer in planned investments. Indeed, while company surveys show that 68 per cent of actual and planned investments by leading Argentine companies in the 1990s were directed to other South American countries (26 per cent to Brazil), all major planned investments after the year 2000 are in South America, particularly in MERCOSUR countries (60 per cent of them being directed to Brazil — Kosacoff, 1999). In this respect, the institutionalization and consolidation of the sub-regional MERCOSUR market is playing a crucial role not only in the strategies of TNCs from outside Latin America that invest in the region but also in the internationalization strategies of Latin American companies.

In quantitative terms, the largest foreign investments by Argentine companies in the region are in the oil industry, which concentrates just under half of all actual and planned Argentine investments abroad since 1990. In this respect, the internationalization of YPF in neighbouring countries, in production and distribution of oil and gas in its energy-importing partners in the MERCOSUR and Chile, is a relevant example. Other interesting examples of internationalization by Argentine companies, especially within the MERCOSUR region, can be observed in particular in the food industry (Arcor, Bemberg, Socma), pharmaceuticals (Bago) and autoparts (IMPSA). As the sub-regional South American integration process consolidates further, with planned agreements between MERCOSUR and the Andean Community and the eventual accession of Chile as a full member of MERCOSUR, the process of intra-regional investment by Argentine companies is likely to increase, both in magnitude and coverage.

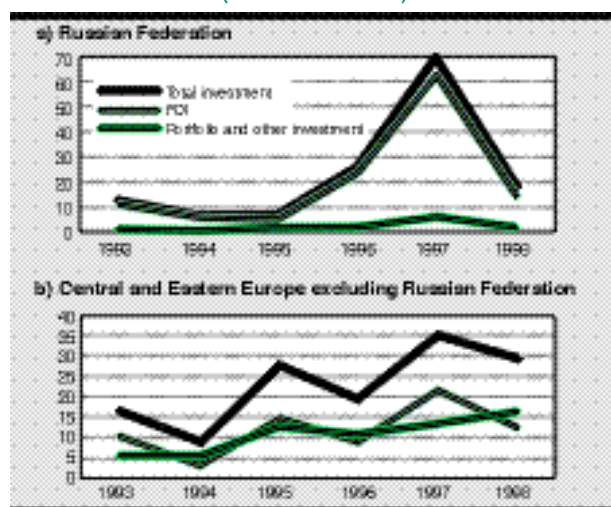
*Source:* UNCTAD based on IDB-IRELA, 1998; and Kosacoff, 1999.

## C. Central and Eastern Europe

Overall FDI inflows to the countries of Central and Eastern Europe (CEE)<sup>46</sup> were remarkably resilient in 1998, registering a minor reduction of four per cent compared with 1997, to about \$19 billion. However, this apparent stability masks two dramatically different trends: on the one hand, the Russian Federation saw its FDI fall by more than 60 per cent, to a mere \$2 billion in 1998; on the other hand, the rest of the CEE region as a whole registered another record year, with FDI inflows topping \$16 billion, i.e. 26 per cent above in 1997 (figure II.33). Even in some economies that have close trade and investment links with the Russian Federation, such as Ukraine and the Republic of Moldova, FDI inflows continued to increase in 1998, indicating that the Russian financial crisis had limited contagion effect on FDI inflows to other CEE countries.

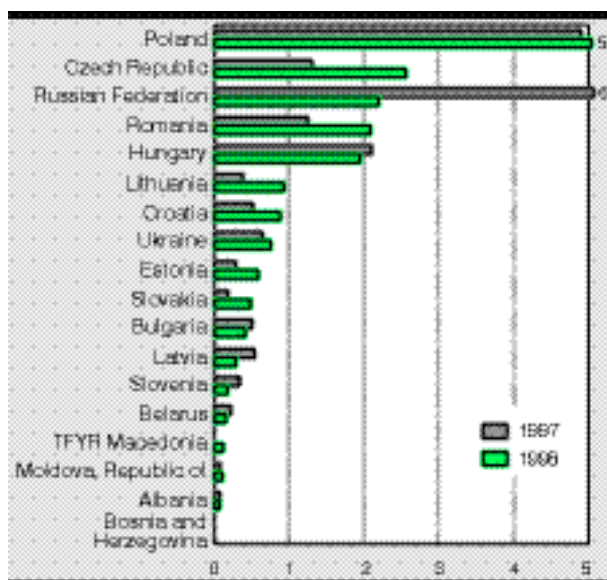
Though the decrease in FDI inflows (65 per cent) was less acute in the Russian Federation than the drop in portfolio and other investment inflows (by 75 per cent, to \$18 billion in 1998), the divergence between FDI and portfolio and other investment flows was much more striking in the rest of the region: the above-mentioned 26 per cent increase in FDI inflows contrasts with the 40 per cent decline in portfolio and other investment flows registered by the other countries of the region in 1998 (figure II.34).

**Figure II.34. Total foreign investment inflows in Central and Eastern Europe, 1993-1998**  
(Billions of dollars)



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

**Figure II.33. Central and Eastern Europe<sup>a</sup>: FDI inflows, 1997 and 1998<sup>b</sup>**  
(Billions of dollars)



Source: UNCTAD, FDI/TNC database and annex table B.1.

- <sup>a</sup> Central and Eastern Europe includes countries that are classified under developing Europe according to the United Nations classification.
- <sup>b</sup> Ranked on the basis of the magnitude of 1998 FDI inflows.

Central and Eastern Europe is catching up with the rest of the world as evidenced in the growth rates of FDI inflows in 1993-1997: over that period the inflows of Central and Eastern Europe increased faster (28.5 per cent per year) than those of the developing world (23 per cent), the developed countries (16 per cent), and the world as a whole (19 per cent). And this catching up may be even faster than data suggest because inflows into the region are often under-reported.

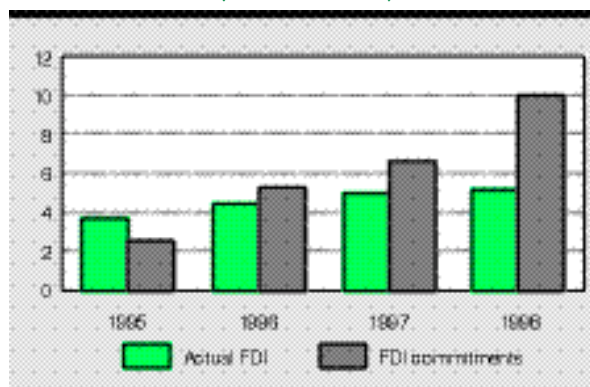
FDI inflows remained concentrated in a few countries in 1998. Five countries – Poland, Czech Republic, Romania, Hungary and the Russian Federation – accounted for 74 per cent of total FDI flows into the region. In Poland, by far the top



recipient if measured on the basis of total inflows, the growth of FDI was relatively moderate (five per cent); however, FDI commitments to this country, increasing by more than 50 per cent in 1998, indicate that the upward trend may be maintained in the near future (figure II.35). In spite of negative GDP growth, the Czech Republic and Romania saw a significant increase of FDI inflows. The reasons were privatization programmes, some of which included large companies and banks, particularly in Romania. Hungary, which registered a slight decline in FDI inflows in 1998, has been experiencing a smooth transition from privatization-led to greenfield-led FDI; in 1998, non-privatization investment accounted for 94 per cent of FDI inflows, compared to 34 per cent in 1995 (UNCTAD, FDI/TNC database).

**Figure II.35. Actual FDI inflows and FDI commitments into Poland, 1995-1998**

(Billion of dollars)



Source: UNCTAD, FDI/TNC database (actual FDI), and Polish Foreign Investment Agency

The impact of the economic and financial crisis in the Russian Federation on its inward FDI flows was felt through a number of channels:

- The crisis reduced investor confidence in the strength of the Russian economy, leading to a scaling down or postponement of investment plans.
- The depreciation of the ruble (by 71 per cent) resulted in a reduction in asset values and revenues in dollar terms (or other currency terms) which was and will be (because of the time effect) strongly felt by foreign investors. A survey of 50 United States affiliates in the Russian Federation conducted by the American Chamber of Commerce in that country in September 1998, one month after the outbreak of the crisis, estimated that the immediate losses for these enterprises already amounted to almost \$500 million (American Chamber of Commerce, 1998). However, while only two per cent of the respondents to the survey indicated that they planned to divest, 13 per cent planned to suspend production; and 28 per cent would reduce their workforce.
- In addition, as a result of the crisis, finance for the current operations of firms from domestic or international capital markets virtually dried up. This was a particularly severe blow to smaller-sized foreign investors. Already in September 1998, 72 per cent of the respondents to the above-mentioned American Chamber of Commerce survey indicated that the lack of access to finance was a major problem they faced.
- The crisis also increased uncertainty about Russian economic policies, particularly as far as privatization policies were concerned. In fact, privatization-related FDI inflows were among those worst hit. In 1997, these transactions accounted for more than one-third of (larger) total inflows; in 1998, there were virtually none.
- Another reason for the collapse of inward FDI flows in the Russian Federation lies in the nature of such flows: according to 1998 stock data, less than 16 per cent of inward FDI is efficiency-seeking, (which usually includes investment that generates exports and would hence have benefited from the ruble depreciation). Thus, the Russian Federation's capabilities to transform its inward manufacturing FDI into an engine of export-led growth were limited. Foreign investors were instead attracted to the country's natural resources and large domestic market, with a preference for mining (13 per cent of 1998 FDI stock), basic metallurgy (nine per cent), food production (17 per cent) and services (40 per cent).



- Finally, the amount of FDI inflows was further reduced by a sharp reduction in round-tripping, confirming the findings of WIR98 in this respect (UNCTAD, 1998a).<sup>47</sup>

In the coming years, various factors could mitigate the negative impact of the Russian financial crisis on FDI inflows to the Russian Federation. They include privatization, FDI liberalization in industries in services and natural resources that are now closed to such investment, and opportunities for small- and medium-sized foreign investors to acquire Russian assets at low prices partly as a result of the ruble depreciation. Besides, while it is true that the crisis led to a suspension of investment plans and a reduction in the workforce of foreign affiliates, only a small number of foreign investors have decided to leave the Russian Federation altogether (American Chamber of Commerce, 1998).

In seven other Central and Eastern European countries— (Croatia, Estonia, Lithuania, TFYR Macedonia, Republic of Moldova, Slovakia, Ukraine), FDI inflows also increased in 1998. An increase took place in the Republic of Moldova and in Ukraine in spite of these economies' negative GDP growth, again casting doubt on the link between GDP growth and FDI in this region. In the other countries of the region, FDI inflows remained virtually unchanged, or registered minor decreases.

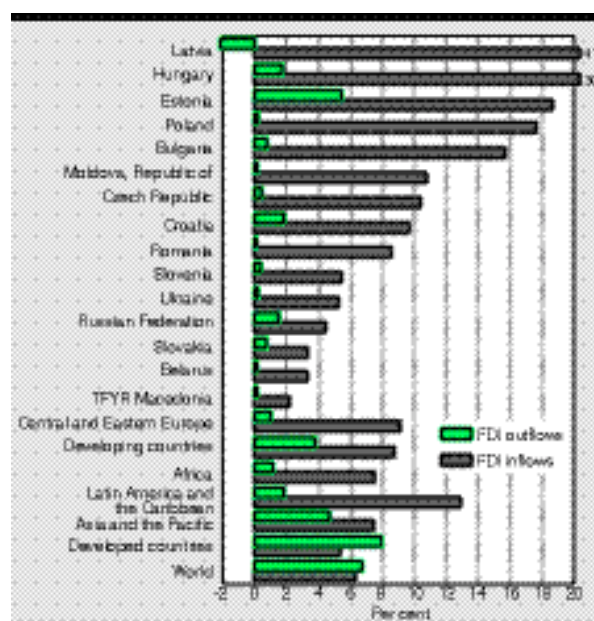
Compared with the size of domestic economies, and the level of domestic investment, FDI inflows play a significant role in at least half of Central and Eastern European countries. In 1995-1997, the ratio of FDI to gross fixed capital formation exceeded 40 per cent in Latvia, 30 per cent in Hungary, and 15 per cent in Estonia, Poland and Bulgaria. The average of this ratio for the region as a whole (9 per cent) compares well with those of other regions: it is slightly higher than the average of developing countries and significantly higher than the world average (figure II.36).

The inward FDI stock of Central and Eastern Europe reached about \$90 billion in 1998, and is expected to exceed \$100 billion in 1999. Inward FDI stock continues to be concentrated in four countries (Poland, Hungary, Czech Republic and the Russian Federation), which together account for three-quarters of the region's stock (see annex table B.3). Four countries have very high ratios of inward FDI stock to GDP by international standards: Hungary (35 per cent in 1997), Estonia (25 per cent), Latvia (23 per cent) and the Czech Republic (23 per cent) (annex table B.6).

The inward FDI stock of CEE countries is dominated by investors from the European Union, whose share accounted for almost two-thirds of the total in 1998 (figure II.37).<sup>48</sup>

In this respect, the possible accession of some countries in the region to the European Union partly explains the relative importance of EU investment in Eastern Europe. Next in line were investors from the United States, with 15 per cent. The United States is the single most important investor in the Russian Federation and Croatia and the Ukraine, although in the Ukraine its share is somewhat lower than that of the European Union as a whole (annex table A.II.2).

**Figure II.36. Central and Eastern Europe<sup>a</sup>: FDI flows as a percentage of gross fixed capital formation, 1995-1997<sup>b</sup>**



Source: UNCTAD, FDI/TNC database and annex table B.5.

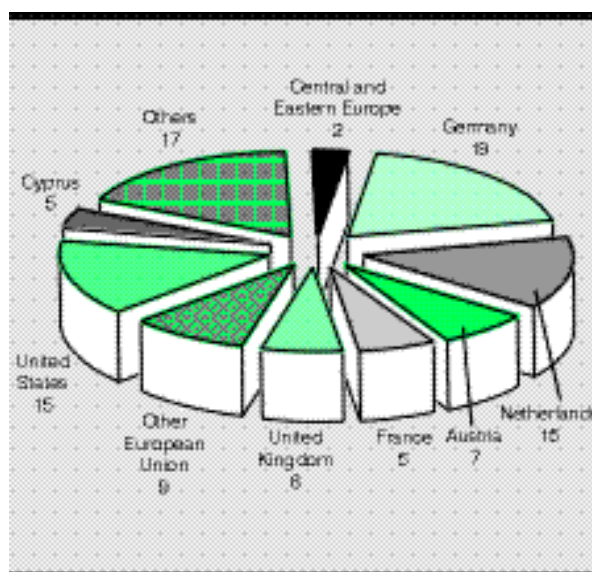
<sup>a</sup> Central and Eastern Europe includes countries that are classified under developing Europe according to the United Nations classification.

<sup>b</sup> Ranked on the basis of the magnitude of 1997 FDI inflows

Investors from the Russian Federation accounted for one per cent of inward FDI to Central European countries. Besides the Russian Federation and Croatia (for specific reasons), no other country of the region is among the top three investors in another Central and Eastern European economy, which points to the still relatively small importance of intra-regional FDI (table II.3).

A sectoral breakdown of inward stock indicates that the primary sector (mainly mining) is not very significant (figure II.38 and annex table A.II.3), except in Belarus and, to a lesser extent, in the Russian Federation. The secondary and tertiary sectors are quite similar in terms of importance: manufacturing is the lead sector in six countries (Bulgaria, Croatia, Czech Republic, Poland, Romania and Ukraine), although in three of them (Czech Republic, Poland and Ukraine) it is closely followed by the services sector. Services are dominant in nine countries (Bosnia and Herzegovina, Estonia, Hungary, Latvia, Lithuania, Republic of Moldova, Russian Federation, Slovakia and Slovenia).

**Figure II.37. Central and Eastern Europe: geographical sources of inward FDI stock, 1998<sup>a</sup>**  
(Percentage)



Source: UNCTAD, FDI/TNC database.

<sup>a</sup> Estimates.

In 1998, FDI outflows from Central and Eastern Europe declined by 44 per cent from an already low level to \$2 billion. Just as for inward trends, there was a sharp difference between the Russian Federation and the rest of the region. Russian enterprises, suffering from the crisis, decreased their outward investment by 60 per cent to \$1 billion (figure II.39), while FDI outflows from the rest of the region as a whole decreased by a modest six per cent to about \$1 billion. Despite this sharp decline, the Russian Federation continues to be the biggest outward investor in the region. It alone accounts for more than half of the outward FDI stock of Central and Eastern Europe in 1998, estimated at \$13 billion.

**Table II.3. The top three source countries of inward FDI stock in Central and Eastern Europe, 1998**

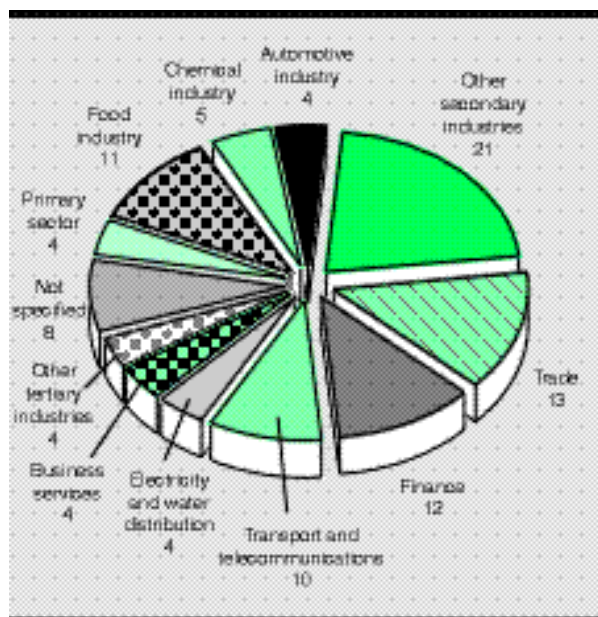
Host country	Top source country	Second source	Third source
Belarus <sup>b</sup>	Germany	Netherlands	United States
Bosnia and Herzegovina <sup>b</sup>	Kuwait	Germany	Croatia
Bulgaria <sup>b</sup>	Belgium-Luxembourg	Germany	United States
Croatia	United States	Austria	Switzerland
Czech Republic <sup>a</sup>	Germany	Netherlands	Austria
Estonia	Sweden	Finland	United States
Hungary <sup>a</sup>	Germany	United States	Netherlands
Latvia	Denmark	United States	Russian Federation
Lithuania	Sweden	Finland	United States
Macedonia, FYR <sup>a</sup>	Germany	Austria	Greece
Moldova, Republic	Russian Federation	United States	Germany
Poland <sup>a</sup>	Netherlands	Germany	United States
Romania	Netherlands	Germany	France
Russian Federation <sup>a</sup>	United States	Cyprus	Germany
Slovakia	Austria	Germany	United Kingdom
Slovenia <sup>b</sup>	Austria	Croatia	Germany
Ukraine	United States	Netherlands	Germany

Source: UNCTAD, FDI/TNC database.

<sup>a</sup> Based on commitments.

<sup>b</sup> 1997.

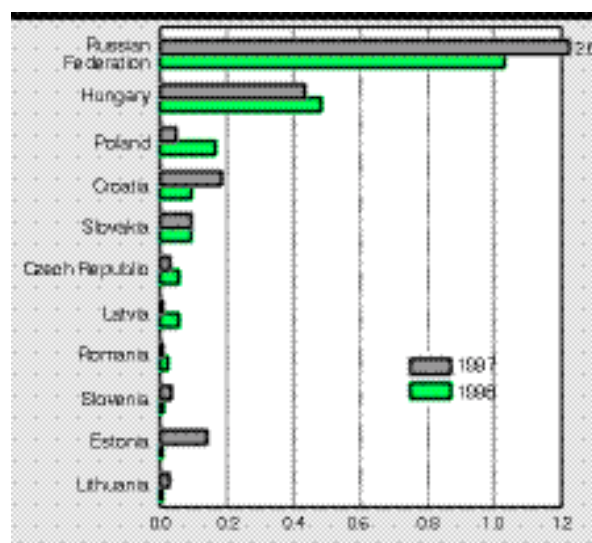
**Figure II.38. Central and Eastern Europe: industry composition of inward FDI stock, 1998<sup>a</sup>**  
(Percentage)



Source: UNCTAD, FDI/TNC database.

<sup>a</sup> Estimates.

**Figure II.39. Central and Eastern Europe<sup>a</sup>: FDI outflows, 1997 and 1998<sup>b</sup>**  
(Billions of dollars)



Source: UNCTAD, FDI/TNC database and annex table B.2.

<sup>a</sup> Central and Eastern Europe includes countries that are classified under developing Europe according to the United Nations classification.

<sup>b</sup> Ranked on the basis of the magnitude of 1998 FDI outflows.

## Notes

- There were two especially large cross-border M&As in 1998 (Daimler-Chrysler and BP-Amoco). It appears that they were financed by FDI (in the form of an exchange of stocks). If these transactions were excluded, equity capital in 1998 still increased by \$11 billion (Bach, 1999).
- Manufacturing affiliates of foreign TNCs accounted for 11.2 per cent of private sector employment in manufacturing in 1996, compared with 4.8 per cent in all sectors. Yet, a very uneven distribution of FDI across states prevailed in manufacturing, too. The employment share of foreign affiliates in manufacturing ranged from almost one fifth in Kentucky, South Carolina and New Jersey to 4-5 per cent in Idaho and Mississippi.
- For example, EU FDI outflows to the United States and to all non-OECD host countries increased by 154 and 75 per cent, respectively, in 1997, compared with 27 per cent for outflows to EU partner countries (EUROSTAT, 1999).
- According to EUROSTAT, extra-EU inflows of ECU 36 billion in 1997 were slightly below extra-EU inflows in 1995.
- Note that inflow data reported by EU host countries and outflow data reported by EU investor countries may differ substantially in coverage. The reasons for this discrepancy are manifold, including an incorrect geographical allocation of FDI flows and different data collection systems in EU member countries. Some countries have collection systems based on partial inquiries using enterprise panels. Transactions below a certain minimum value are not always recorded as FDI flows. Loans provided by an affiliate to another affiliate of the same parent company are partly attributed to FDI outflows from the country of the parent company, rather than to outflows from the country where the affiliate resides which has provided the loan. Still more importantly, reinvested earnings as well as long-term and short-term loans are treated differently by EU member countries. For example, Germany has just revised FDI statistics by including short-term loans, while other EU countries have not yet done so. For a detailed discussion of the various reasons for discrepancies between inflow and outflow data, see EUROSTAT, 1999.



- 6 See, for example, the EU Commission's White Paper "Growth, competitiveness, unemployment", which was published in December 1993. As noted by the Commission in another report in 1993 (Commission of the European Communities, *European Economy*, No. 52, Brussels, 1993), the EU trade balance for high-technology products had worsened progressively; the growth rate of EU imports of high-technology products was nearly double the growth rate of the corresponding EU exports.
- 7 On a notification basis FDI outflows declined by 21 per cent and FDI inflows increased by 98 per cent in fiscal year 1998 (ending March 1999).
- 8 Several indicators point to low profitability. For example, in manufacturing the ratio of current profits to sales declined to 3.3 per cent in 1997 (Japan, Ministry of Finance, 1998). Low profits earned in the previous year affect investment expenditures in the following year. This continued in 1998 when current profits declined by 13 per cent for the firms listed in stock markets. *Nihon Keizai Shimbun*, 22 May 1999, p.1.
- 9 Negative growth rates of real GDP were registered in 1998 (-2.8 per cent). Industrial production for the fiscal year 1998 fell 7.1 per cent, its worst decline in 24 years (Michiyo Nakamoto, "Pressure grows in Tokyo for supplementary budget", *Financial Times*, 29 April 1999, p. 12).
- 10 Information provided by Recof (Tokyo).
- 11 This is based on the 15 major Japanese banks that received public funds from the Government of Japan for their restructuring. The number of foreign affiliates (including branches) was 393 in March 1999 (*Nihon Keizai Shimbun*, 9 March 1999, p. 7), compared with 669 at the end of 1995 (Japan, Ministry of Finance, 1997). This number is expected to be reduced further to 270 by March 2003.
- 12 *Nihon Keizai Shimbun*, 11 January 1999, p. 3. Because of this, FDI outflows in the financial sector are expected to decline. However, interestingly, both flows in this industry and their share in total Japanese outflows as reported by the Ministry of Finance increased in fiscal year 1998. There are statistical problems in the data reported by this Ministry, as they are based on a notification basis and do not take into account divestments. (These are the only data available providing industry breakdown of FDI flows.) Therefore, investments in Cayman Islands, for example, are recorded as positive, but closures or sell-offs of Japanese banking affiliates in the United States are not recorded in the statistics.
- 13 Based on a survey of 400 manufacturing affiliates conducted in mid-1998 (*Nihon Keizai Shimbun*, 1 September 1998, p. 11). Another survey by the Export-Import Bank of Japan also indicates that sales decreased in about 60 per cent of Japanese affiliates in that region (291 manufacturing affiliates surveyed in July-August 1998) (Nishiyama, Kushima and Noda, 1999).
- 14 *Nihon Keizai Shimbun*, 29 July 1998, p.11.
- 15 For instance, the international tobacco business of RJR Nabisco was acquired in 1999 by Japan tobacco for \$7.8 billion — the largest cross-border M&A by a Japanese firm ever.
- 16 *Nihon Keizai Shimbun*, 29 July 1998, p.11.
- 17 This financial company is the largest foreign investor in Japan, controlling \$12 billion worth of assets in Japan. (Gillian Tett, "GE Capital planning to expand in Japan", *Financial Times*, 23 February 1999, p. 17).
- 18 It is noteworthy that foreign affiliates in Japan have been more profitable than Japanese firms in general, even during the current economic recession. The ratio of current profits to total sales during the first half of the 1990s was 3-5 per cent for affiliates compared to 2-3 per cent for Japanese firms. One third of 705 foreign affiliates surveyed by JETRO in October 1998 expected to increase sales in 1998 (*Nihon Keizai Shimbun*, 11 December 1998, p. 11).
- 19 In order to give a comprehensive picture of FDI flows into and out of Africa, South Africa (otherwise classified among "other developed countries" in United Nations statistics) is included in the figures on FDI flows presented in this section. The data for South Africa can be found in the statistical annex under the heading "Other developed countries".
- 20 It should be noted that the figures for FDI flows into and out of Africa for recent years as published in this report differ from those reported in *WIR98*, due to changes in methodologies to compile and calculate the relevant data. (See also definitions and sources, Annex B.)
- 21 In some countries, such as Angola, a destabilization of the political situation contributed also to the decline in FDI inflows.
- 22 Liberia is traditionally one of the world's most important addresses for the registration of ships. However, although this influences the FDI statistics of the country, it does not represent *de facto* direct investment in Liberia.
- 23 For an explanation of the relatively large number of African countries with a high ratio of FDI inflows to gross fixed capital formation and GDP, see UNCTAD, 1998a, p.164.
- 24 These figures are based on unpublished data received from OECD. For a more detailed analysis of the home country distribution of FDI flows into Africa in recent years, see UNCTAD, 1998a.
- 25 Data from the South African Reserve Bank. Other sources (from private organizations such as IRRC and Business Map) also provide data on FDI, which can be different from the SARB data due to differences in

definition and methodologies.

- 26 According to the Investors Responsibility Research Centre (IRRC): "if the sale of state assets are excluded from both years' tallies, inward FDI rose by more than 32 percent." (IRRC, 1999, p.1).
- 27 Indeed, except for significant investments of 4 billion Rand by Petronas in the South African petroleum and refining company of Engen, there was no other major investment by Malaysian firms in South Africa in 1998. In fact, there were some divestments by Malaysian firms in 1998 (Business Map 1999, p. 2).
- 28 The information regarding the distribution of FDI inflows into South Africa by industry and by home country is based on information from IRRC (1999) and Business Map (1999), private sources for FDI information. Information of this kind is not available from official sources, including the South African Reserve Bank.
- 29 FDI outflow figures by host country are not available from the South African Reserve Bank.
- 30 The survey took place between March and June 1999: 44 countries were surveyed, of which 30 answered. These were Algeria, Botswana, Burkina Faso, Cameroon, Cape Verde, Democratic Republic of the Congo, Côte d'Ivoire, Egypt, Ethiopia, The Gambia, Ghana, Kenya, Madagascar, Malawi, Mali, Mauritius, Morocco, Mozambique, Namibia, Niger, Rwanda, Senegal, Seychelles, South Africa, Sudan, Togo, Tunisia, Uganda, Zambia and Zimbabwe. A response was also received from the investment promotion agency of Zanzibar, which is part of the United Republic of Tanzania. The 30 countries listed above accounted for almost \$16 billion of FDI inflows representing 64 per cent of total accumulated inflows between 1996 and 1998 into Africa.
- 31 This result is perhaps not surprising, given the promotion function of these agencies (although they could have been less optimistic for Africa as a whole).
- 32 Equatorial Guinea, owing to its recent success in attracting sizeable amounts of FDI largely due to its oil reserves, was the only "front runner" country that did not make it onto the list.
- 33 The IPAs were asked to indicate "a) which of the factors listed below contribute positively or negatively to the future development of FDI into your country in the period 2000-2003 and b) the level of their importance". The rating scale to assess the importance of the factor was 1 (lower) to 4 (higher).
- 34 A possible reason for this result might be low productivity levels which offset the advantage of low labour costs and may underline a need to emphasize education and skill development.
- 35 The factor "extortion and bribery" also ranked high. However, since the value 3.5 for this item represents the average of the evaluations of only two countries the figure is less meaningful than the other figures presented in figure II.17b.
- 36 In the Pacific, Vanuatu ranked top in terms of FDI inflows to gross fixed capital formation (figure II.20).
- 37 For a full analysis of the effect of the Asian crisis on FDI flows, see UNCTAD, 1998b.
- 38 FDI approvals in Viet Nam dropped by eight per cent to \$4.1 billion in 1998, which included a \$1.3 billion joint-venture oil refinery with the Russian Federation.
- 39 In 1998, foreign investment projects (on an approval basis) in Iran amounted to \$1.3 billion, 90 per cent of which were in the petroleum and petrochemical industries.
- 40 For a detailed analysis, see UNCTAD, 1998a.
- 41 Data provided by the Ministry of Finance and Economy. Actual divestment of FDI by Korean TNCs could be higher, as not all divestment abroad was recorded by the Ministry.
- 42 Data from United States Department of Commerce ([www.boa.doc.gov/bea/di/usdiacap.htm](http://www.boa.doc.gov/bea/di/usdiacap.htm)).
- 43 This included flows to the Cayman Islands, which surged suddenly in 1998. Excluding Cayman Islands, the share of Japan in inflows to the region is less than five per cent on a notification basis.
- 44 In 1995, United States FDI flows to Latin America and the Caribbean were \$16 billion, as compared with \$7 billion from the European Union. In 1997, these flows were respectively, \$24 billion and almost \$20 billion.
- 45 Payment outflows due to dividend and profit remittances contribute to the current account deficit. For a discussion of the overall impact of FDI on balance of payments, see chapter VI.
- 46 For the purpose of this analysis, this region is defined to include the following countries: Albania, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, Former Yugoslav Republic of Macedonia, Hungary, Latvia, Lithuania, Poland, Republic of Moldova, Romania, Russian Federation, Slovakia, Slovenia, Ukraine, Yugoslavia. (The data for Croatia, Former Yugoslav Republic of Macedonia and Slovenia can be found in the annex under the heading "Developing Europe"). There are no official FDI data available for Yugoslavia. The Asian transition economies (Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan) are analysed in the Central Asian section of this chapter.
- 47 The 1997 FDI inflow figures of the Russian Federation were inflated by the sale of 25 per cent of Svyazinvest, the biggest telecommunications holding company, to a consortium of Russian offshore banks and foreign banks and investment funds (KPMG, 1998). Despite the presence of Russian banks in the consortium, and the lack of telecommunications management experience among the foreign partners, the transaction



was registered as FDI because the consortium had been registered abroad and acquired more than 10 per cent of a holding company. If the Svyazinvest transaction had not been registered under FDI in 1997, the 1998 decrease would have been 50 per cent, and not 65 per cent, as judged from the balance-of-payments data (UNCTAD, 1998a, p. 290).

<sup>48</sup> Seventeen countries report data on the sources of FDI. None are available for Albania.

## CHAPTER III

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### THE LARGEST TRANSNATIONAL CORPORATIONS AND CORPORATE STRATEGIES

Although there are many TNCs in the world, FDI is actually concentrated in relatively few of them. In many countries, only a small number of firms account for the bulk of outward FDI (UNCTAD, 1993a). This chapter looks at the largest non-financial TNCs in terms of foreign assets, firstly in the world as a whole, then secondly in developing countries and – for the first time – in countries of Central Europe. It next proceeds to examine mergers and acquisitions (M&As), an activity in which the largest TNCs are leading actors and which was the driving force behind the growth of FDI in 1998. The chapter then turns to consider another way in which firms expand abroad, a way which is becoming increasingly important: strategic partnering, and examines how such partnerships, as well as M&As, affect the competitive environment of industries.

#### A. The largest transnational corporations

##### 1. The world's 100 largest TNCs

###### *a. Highlights*

In 1997, General Electric again held the top position among the world's 100 largest non-financial TNCs (table III.1) ranked by foreign assets. Ford Motor Company regained the second position, pushing Royal Dutch Shell to third. Overall, however, stability predominates within the world's largest TNCs. Only a few changes have occurred among the top 10 largest TNCs: Daimler-Benz has replaced Mitsubishi Corporation and Nestlé has re-entered the top 10 while Mobil Corporation just left it (ranked 11th). Approximately 85 per cent of the top 100 TNCs list is dominated by firms that have been in the top 100 ranking during the past five years. A substantial part of these TNCs originate in the European Union, United States and Japan. For the list as a whole, 12 new entrants and corresponding exits were registered (table III.2). As in preceding years, in 1997 too, only two firms among the top 100 largest TNCs, Petroleos de Venezuela (PDVSA) and Daewoo Corporation, originate in developing countries. These two firms have strongly consolidated their position among the world's largest TNCs since 1995.

**Table III.1. The world's top 100 TNCs, ranked by foreign assets, 1997**  
(Billions of dollars and number of employees)

Ranking by Foreign assets	Transnationality Index <sup>a</sup>	Corporation	Country	Industry <sup>b</sup>	Assets		Sales		Employment		Transnationality Index <sup>a</sup> (Per cent)
					Foreign	Total	Foreign	Total	Foreign	Total	
1	84	General Electric	United States	Electronics	97.4	304.0	24.5	90.8	111 000	276 000	33.1
2	80	Ford Motor Company	United States	Automotive	72.5	275.4	48.0	153.6	174 105	363 892	35.2
3	44	Royal Dutch/Shell Group <sup>c</sup>	Netherlands/United Kingdom	Petroleum expl./ref./distr.	70.0	115.0	69.0	128.0	65 000	105 000	58.9
4	91	General Motors	United States	Automotive	0.0	228.9	51.0	178.2	...	608 000	29.3
5	29	Exxon Corporation	United States	Petroleum expl./ref./distr.	54.6	96.1	104.8	120.3	...	80 000	65.9
6	75	Toyota	Japan	Automotive	41.8	105.0	50.4	88.5	...	159 035	40.0
7	54	IBM	United States	Computers	39.9	81.5	48.9	78.5	...	269 465	53.7
8	50	Volkswagen Group	Germany	Automotive	...	57.0	42.7	65.0	134 815	279 892	56.8
9	4	Nestlé SA	Switzerland	Food and beverages	31.6	37.7	47.6	48.3	133 906	225 808	93.2
10	71	Daimler-Benz AG *	Germany	Automotive	30.9	76.2	46.1	69.0	219 442	300 068	44.1
11	39	Mobil Corporation	United States	Petroleum expl./ref./distr.	30.4	43.6	36.8	64.3	22 200	42 700	59.7
12	74	FIAT Spa	Italy	Automotive	30.0	69.1	20.2	50.6	94 877	242 322	40.8
13	16	Hoechst AG	Germany	Chemicals	29.0	34.0	24.3	30.0	...	137 374	76.5
14	2	Asea Brown Boveri (ABB)	Switzerland	Electrical equipment	...	29.8	30.4	31.3	200 574	213 057	95.7
15	9	Bayer AG	Germany	Chemicals	...	30.3	...	32.0	...	144 600	82.7
16	48	Elf Aquitaine SA	France	Petroleum expl./ref./distr.	26.7	42.0	25.6	42.3	40500	83 700	57.6
17	60	Nissan Motor Co., Ltd.	Japan	Automotive	26.5	57.6	27.8	49.7	...	137 201	51.1
18	5	Unilever <sup>d</sup>	Netherlands/United Kingdom	Food and beverages	25.6	30.8	44.8	46.4	262 840	269 315	92.4
19	56	Siemens AG	Germany	Electronics	25.6	67.1	40.0	60.6	201 141	386 000	52.1
20	10	Roche Holding AG	Switzerland	Pharmaceuticals	...	37.6	12.7	12.9	41 832	51 643	82.2
21	34	Sony Corporation	Japan	Electronics	...	48.2	40.3	51.1	...	173 000	62.8
22	78	Mitsubishi Corporation	Japan	Diversified	21.9	67.1	41.5	120.4	...	8 401	36.9
23	1	Seagram Company	Canada	Beverages	21.8	22.2	9.4	9.7	...	31 000	97.6
24	32	Honda Motor Co., Ltd.	Japan	Automotive	21.5	36.5	31.5	45.4	...	109 400	64.1
25	38	BMW AG	Germany	Automotive	20.3	31.8	26.4	35.9	52 149	117 624	60.7
26	31	Alcatel Alsthom Cie	France	Electronics	20.3	41.9	25.9	31.0	...	189 549	64.8
27	8	Philips Electronics N.V.	Netherlands	Electronics	20.1	25.5	33.0	33.5	206 236	252 268	86.4
28	21	News Corporation	Australia	Media	20.0	30.7	9.5	10.7	...	28 220	72.8
29	58	Philip Morris	United States	Food/Tobacco	19.4	55.9	32.1	56.1	...	152 000	51.1
30	42	British Petroleum (BP) *	United Kingdom	Petroleum expl./ref./distr.	19.2	32.6	36.5	71.3	37 600	55 650	59.2
31	57	Hewlett-Packard	United States	Electronics	18.5	31.7	23.8	42.9	...	121 900	51.1
32	20	Total SA	France	Petroleum expl./ref./distr.	...	25.2	23.4	31.9	...	54 391	73.2
33	68	Renault SA	France	Automotive	18.3	34.9	18.5	35.6	45 860	141 315	45.7
34	18	Cable and Wireless Plc	United Kingdom	Telecommunication	...	21.6	7.8	11.5	33 740	46 550	74.7
35	79	Mitsui & Co., Ltd.	Japan	Diversified	17.9	55.5	52.3	132.6	...	10 994	35.8
36	30	Rhone-Poulenc SA	France	Chemicals/pharmaceuticals	17.8	27.5	11.5	15.0	...	68 377	65.7
37	55	Vilag AG	Germany	Diversified	17.4	32.7	15.9	27.6	...	95 561	53.3
38	41	BASF AG	Germany	Chemicals	...	26.8	23.9	32.2	...	104 979	59.5
39	82	Itochu Corporation	Japan	Trading	16.7	56.8	48.7	117.7	2 600	8 878	33.3
40	76	Nissho Iwai Corporation	Japan	Trading	16.6	40.4	32.3	75.5	2 068	6 398	38.8

Table III.1. The world's top 100 TNCs, ranked by foreign assets, 1997 (continued)

(Billions of dollars and number of employees)

Ranking by Foreign assets	Transnationality index <sup>a</sup>	Corporation	Country	Industry <sup>b</sup>	Assets		Sales		Employment		Transnationality index <sup>a</sup> (Per cent)
					Foreign	Total	Foreign	Total	Foreign	Total	
41	72	Du Pont (E.I.)	United States	Chemicals	16.6	42.7	20.4	39.7	...	98 000	41.8
42	25	Diageo Plc	United Kingdom	Beverages	...	29.7	17.6	22.6	63 761	79 161	71.0
43	19	Novartis	Switzerland	Pharmaceuticals/chemicals	16.0	36.7	21.0	21.5	71 403	87 239	74.4
44	94	Sumitomo Corporation	Japan	Trading/machinery	15.4	43.0	15.1	95.2	...	8 694	25.9
45	88	ENI Group	Italy	Petroleum expl./ref./distr.	14.6	49.4	12.5	34.3	23 239	80 178	31.7
46	86	Chevron Corporation	United States	Petroleum expl./ref./distr.	14.3	35.5	13.8	40.6	8 610	39 362	32.1
47	52	Dow Chemical	United States	Chemicals	14.3	23.6	11.3	20.0	...	42 861	56.4
48	69	Texaco Incorporated	United States	Petroleum expl./ref./distr.	14.1	29.6	22.3	45.2	...	29 313	45.3
49	61	BCE Inc.	Canada	Telecommunication	13.6	28.2	15.5	23.2	...	122 000	50.9
50	65	Xerox Corporation	United States	Photo equipment	13.5	27.7	9.0	18.2	...	91 400	48.7
51	45	Saint-Gobain SA	France	Industrial material	...	22.7	9.5	18.3	...	107 168	58.7
52	3	Thomson Corporation	Canada	Printing and publishing	13.0	13.3	8.3	8.8	46 300	49 800	95.1
53	77	Peugeot SA	France	Automotive	12.9	30.8	16.1	31.2	32 100	140 200	38.7
54	26	Montedison	Italy	Chemicals/agribusiness	...	18.1	9.7	13.9	18 354	27 135	68.5
55	83	Matsushita Electric	Japan	Electronics	12.2	62.7	23.6	59.7	...	275 962	33.2
56	99	Hitachi, Ltd.	Japan	Electronics	12.0	76.6	19.8	63.8	58 000	331 494	21.4
57	63	Motorola, Inc.	United States	Electronics	11.7	27.3	17.4	29.8	70 000	150 000	49.3
58	90	Marubeni Corporation	Japan	Trading	11.6	55.9	38.5	103.3	2 827	8 868	30.0
59	85	Fujitsu Limited	Japan	Electronics	11.2	38.8	14.1	37.7	...	180 000	32.6
60	17	Imperial Chemical Industries (ICI) Plc	United Kingdom	Chemicals	10.6	15.2	14.7	18.1	51 400	69 500	75.0
61	92	Veba Group	Germany	Diversified	10.4	45.0	16.0	46.2	32 178	129 960	27.5
62	40	Volvo AB	Sweden	Automotive	...	20.7	21.5	24.1	29 250	72 900	59.7
63	46	RTZ Cra Plc <sup>e</sup>	United Kingdom/Australia	Mining	10.2	16.7	5.8	9.4	27 297	50 507	58.6
64	23	Lafarge SA	France	Construction	10.1	16.0	5.1	7.0	28 936	37 097	71.3
65	66	Procter & Gamble	United States	Chemicals/cosmetics	10.0	31.0	17.9	37.2	...	110 000	47.7
66	49	McDonald's Corporation	United States	Restaurants	10.0	18.2	6.8	11.4	...	267 000	57.2
67	36	Ericsson LM	Sweden	Electronics	10.0	18.2	15.4	20.7	55 414	100 774	61.3
68	93	AMOCO Corporation *	United States	Petroleum expl./ref./distr.	9.9	32.5	8.0	31.9	...	43 451	25.9
69	64	Johnson & Johnson	United States	Chemicals/pharmaceuticals	9.5	21.1	10.9	22.6	...	90 500	48.8
70	81	Mitsubishi Motors	Japan	Automotive	9.1	25.1	10.9	28.3	19 600	75 300	33.7
71	14	Glaxo Wellcome Plc	United Kingdom	Pharmaceuticals	...	13.6	12.1	13.1	...	53 068	78.2
72	53	Robert Bosch GmbH	Germany	Automotive	9.0	19.5	17.7	27.0	89 071	179 719	53.8
73	70	Petroleos de Venezuela S.A.	Venezuela	Petroleum expl./ref./distr.	9.0	47.1	32.5	34.8	11 849	56 592	44.5
74	7	Electrolux AB	Sweden	Electrical appliances	...	10.1	13.6	14.3	...	103 000	89.4
75	62	Daewoo Corporation	Korea, Republic of	Diversified	...	22.9	...	18.8	...	...	50.8
76	43	Michelin	France	Rubber and plastics	...	13.6	11.3	13.3	...	123 254	59.0
77	37	British American Tobacco Plc	United Kingdom	Food/Tobacco	8.1	84.8	26.2	34.5	115 000	117 339	61.1
78	33	Crown Cork & Seal	United States	Packaging	8.1	12.3	5.1	8.5	...	40 985	62.9
79	87	Merck & Co., Inc.	United States	Drugs, cosmetics & health	8.1	25.7	6.5	23.6	20 000	53 800	31.9

**Table III.1. The world's top 100 TNCs, ranked by foreign assets, 1997 (concluded)**  
(Billions of dollars and number of employees)

Ranking by Foreign assets	Transnationality Index <sup>a</sup>	Corporation	Country	Industry <sup>b</sup>	Assets		Sales		Employment		Transnationality Index <sup>a</sup> (Per cent)
					Foreign	Total	Foreign	Total	Foreign	Total	
80	95	Générale des Eaux	France	Diversified/utility	...	43.1	9.2	28.6	...	193 300	25.7
81	98	AT&T Corp.	United States	Telecomm./electronics	...	61.1	...	51.3	...	128 000	21.9
82	6	Solvay SA	Belgium	Chemicals/pharmaceuticals	...	8.5	8.0	8.4	...	34 445	92.3
83	15	L'Air Liquide Group	France	Chemicals	...	9.3	4.7	6.6	...	27 600	78.1
84	100	GTE Corporation	United States	Telecommunication	...	42.1	...	23.3	...	114 000	15.5
85	89	International Paper	United States	Paper	7.8	26.8	5.8	20.1	28 000	82 000	30.7
86	67	Mannesmann AG	Germany	Engineering/telecomm.	...	16.4	12.6	22.5	41 290	120 859	45.7
87	12	Akzo Nobel N.V.	Netherlands	Chemicals	...	10.6	11.4	12.3	51 300	68 900	79.5
88	47	Danone Groupe SA	France	Food and beverages	7.5	16.5	8.8	14.8	...	80 631	58.0
89	11	Holderbank Financiere Glarus AG	Switzerland	Construction materials	7.5	12.0	6.9	7.8	37 302	40 779	80.8
90	13	BTR Plc	United Kingdom	Plastics and foam	7.5	12.7	11.5	12.3	90 878	110 498	78.2
91	22	Royal Ahold NV	Netherlands	Retailers	7.4	9.9	18.2	26.6	148 872	209 591	71.5
92	97	Atlantic Richfield	United States	Petroleum expl./ref./distr.	...	25.3	3.5	18.6	4 400	19 600	23.3
93	51	Bridgestone	Japan	Rubber and plastics	7.2	13.3	9.8	16.7	...	13 049	56.4
94	24	Smithkline Beecham Plc.	United Kingdom	Drugs, cosmetics & health	7.1	13.4	11.5	12.9	...	55 400	71.1
95	35	LVMH SA	France	Diversified	7.1	16.3	6.5	8.0	...	33 511	62.1
96	59	Canon Electronics Inc.	Japan	Electronics	7.0	22.0	14.6	21.2	41 211	78 767	51.1
97	73	American Home Products	United States	Pharmaceuticals	6.9	20.8	6.1	14.2	...	60 523	41.3
98	96	Toshiba Corporation	Japan	Electronics	6.8	44.9	14.6	41.3	...	186 000	25.2
99	28	Gillette Company	United States	Drugs, cosmetics & health	6.8	10.9	6.4	10.1	31 600	44 000	65.9
100	27	Pharmacia & Upjohn, Inc.	United States	Pharmaceuticals	6.8	10.4	4.6	6.6	...	30 000	66.6

Source: UNCTAD/Erasmus University database.

<sup>a</sup> The index of transnationality is calculated as the average of three ratios: foreign assets to total assets, foreign sales to total sales and foreign employment to total employment.

<sup>b</sup> Industry classification for companies follows the United States Standard Industrial Classification as used by the United States Securities and Exchange Commission (SEC).

<sup>c</sup> Foreign assets, sales and employment are outside Europe.

<sup>d</sup> Foreign assets, sales and employment are outside the United Kingdom and the Netherlands.

<sup>e</sup> Part of the dual listed companies: Rio Tinto Lim. and Rio Tinto Plc. formerly known as RTZ CRA. Foreign assets, sales and employment are outside the United Kingdom and Australia.

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

\* Mergers between Daimler-Benz and Chrysler, resulting in Daimler-Chrysler and between British Petroleum and Amoco, resulting in BP-Amoco, are not documented yet as they took place in 1998.

Note: The list includes non-financial TNCs only. In some companies, foreign investors may hold a minority share of more than 10 per cent.



Here are the highlights:

- **Foreign assets.** Between 1996 and 1997, the total amount of foreign assets held by the 100 largest TNCs (\$1.8 trillion) did not change much. They registered a small decrease of 0.8 per cent (table III.3), largely explained by the decrease of foreign assets of some European companies, e.g. British American Tobacco (formerly known as BAT Industries Plc), Holderbank Financiere Glarus, Novartis, Philips Electronics and Royal Dutch Shell. Contrary to this decline is the expansion of such North American and Japanese firms as Seagram Company, Hewlett-Packard, Honda Motor, Sumitomo Corporation, Motorola and The News Corporation, all experiencing a rise in foreign assets of between 20 and 38 per cent.
- **Foreign sales.** Total foreign sales of the largest TNCs amounted to \$ 2.1 trillion and remained relatively unchanged between 1997 and 1996, registering a marginal decline of 0.7 per cent (table III.3). The largest increases in foreign sales were realized by TNCs from Japan: Honda Motor, Itochu Corporation, Sony, Fujitsu Limited and Mitsubishi Motors realized an increase in foreign sales of between 16 and 23 per cent.
- **Foreign employment.** The total number of foreign employees of the largest TNCs (estimated at six million) increased by just 0.7 per cent, while total employment

**Table III.3. Snapshot of the world's 100 largest TNCs, 1997**

(Billions of dollars, number of employees and percentage)

Variable	1997	1996	Change 1997 vs. 1996
<b>Assets</b>			
Foreign	1 791	1 808	-0.8
Total	4 212	4 200	0.3
<b>Sales</b>			
Foreign	2133	2 149	-0.7
Total	3 984	4 128	-3.5
<b>Employment</b>			
Foreign	5 980 740	5 939 470	0.7
Total	11 621 030	11 796 300	-1.5
<b>Average index of transnationality</b>	55.4	54.8	0.6 <sup>a</sup>

Source: UNCTAD/Erasmus University database.

<sup>a</sup> The change between 1996 and 1997 is expressed in percentage points.

**Table III.2(a). Newcomers to the world's top 100 TNCs, ranked by foreign assets, 1997**

Ranked by foreign assets	Corporation	Country
37	Viag AG	Germany
42	Diageo Plc <sup>a</sup>	United Kingdom
53	Peugeot SA	France
60	Imperial Chemical Industries (ICI)	United Kingdom
62	Veba Group	Germany
65	Lafarge SA	France
79	Merck & Co., Inc.	United States
83	L'Air Liquide Group	France
91	Royal Ahold N.V.	Netherlands
94	Smithkline Beecham Plc.	United Kingdom
95	LVMH	France
99	Gillette Company	United States

Source: UNCTAD/Erasmus University database.

<sup>a</sup> The merger of Guinness PLC and Grand Metropolitan PLC resulted in the new TNC Diageo.

**Table III.2(b). Departures from the world's top 100<sup>a</sup> TNCs, ranked by foreign assets, 1997**

Ranked by foreign assets	Corporation	Country
59	Broken Hill (BHP)	Australia
69	Grand Metropolitan <sup>b</sup>	United Kingdom
75	Hanson PLC.	United Kingdom
78	Nippon Steel	Japan
80	Chrysler Corporation	United States
82	Coca-Cola	United States
85	Northern Telecom	Canada
86	Petrofina SA	Belgium
88	Pepsico, Inc.	United States
92	Kvaerner ASA	Norway
99	Eridania Beghin-Say SA	France
100	Société au Bon Marché	France

Source: UNCTAD/Erasmus University database.

<sup>a</sup> This includes companies that could not be considered in 1998 because of the late arrival of a response to UNCTAD's questionnaire.

<sup>b</sup> The merger of Guinness PLC and Grand Metropolitan PLC resulted in the new TNC Diageo.

declined again in 1997 (table III.3). Hence, the trend observed during the past seven years since the list was published – declining overall employment and rising foreign employment – continued in 1997. Companies expanding the number of foreign employees operating mainly in the automobile or telecommunications industry: Daimler-Benz, Volvo, Volkswagen Group, Ericsson, Fiat, Motorola and Siemens. General Electric increased its foreign employment by almost 32 per cent. As might be expected, companies demonstrating a decline in foreign assets (see above) have also decreased the number of

foreign employees. British American Tobacco, Novartis and Royal Dutch Shell decreased their foreign employment by between 18 and 22 per cent. Chevron showed a significant decline in foreign employment of close to 30 per cent.

### Country and industry composition:

- The origin (or nationality) of the top 100 TNCs remains one of the stable factors in the ranking. No less than 89 per cent of the companies were headquartered in the Triad (table III.4). Since 1990, this percentage has always been between 85 and 87 per cent. Interestingly, contrary to what has been observed regularly between 1991 and 1996, the number of companies from the European Union increased from 41 to 45 between 1996 and 1997; this, however, is still below the number registered in 1990 (48). The shares of these firms in total foreign assets and foreign employment of the top 100 TNCs remained virtually unchanged, while their shares in sales registered a modest increase. The number of entrants from Japan and the United States remained almost stable.

**Table III.4. Country breakdown of the world's top 100 TNCs, by transnationality index, foreign assets, foreign sales and foreign employment, 1996 and 1997**

(Percentage)

Country	Average TNI		Foreign assets		Foreign sales		Foreign employment		Number of entries	
	1996	1997	1996	1997	1996	1997	1996	1997	1996	1997
European Union	64.8	62.5	41.0	40.9	40.1	41.8	51.2	51.4	41	45
France	59.7	58.4	9.2	9.8	7.6	8.3	10.2	10.1	11	13
United Kingdom <sup>a</sup>	71.2	70.8	11.4	11.2	11.7	12.1	13.6	13.8	10	11
Germany	56.9	55.7	10.9	12.7	11.3	13.8	13.4	15.0	9	11
Sweden	78.9	70.1	3.5	1.6	4.0	2.4	6.4	2.9	4	3
Italy	46.7	47.0	3.4	3.2	2.1	2.0	2.3	2.3	3	3
Netherlands <sup>a</sup>	77.9	77.7	7.8	7.3	7.7	8.3	10.5	12.3	4	5
Belgium	81.9	92.3	0.8	0.4	1.1	0.4	0.6	0.5	2	1
North America	47.8	47.9	35.0	35.1	29.7	27.5	29.5	27.7	32	30
United States	43.2	44.2	32.2	32.4	27.6	26.0	26.5	25.6	28	27
Canada	79.9	81.2	2.8	2.7	2.1	1.6	3.0	2.1	4	3
Japan	36.2	39.5	15.8	15.7	23.1	22.8	10.3	10.7	18	17
Remaining countries <sup>b</sup>	71.3	74.8	8.2	8.3	7.1	7.9	9.0	10.2	10	8
Total of all 100 listed TNCs	54.8	55.4	100	100	100	100	100	100	100	100

Source: UNCTAD/Erasmus University database.

<sup>a</sup> 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 they are counted only once. For 1996, RTZ CRA is counted as an entry for both the United Kingdom and Australia.

<sup>b</sup> Remaining countries are Australia, New Zealand and Norway (only in 1996), Republic of Korea, Switzerland and Venezuela.

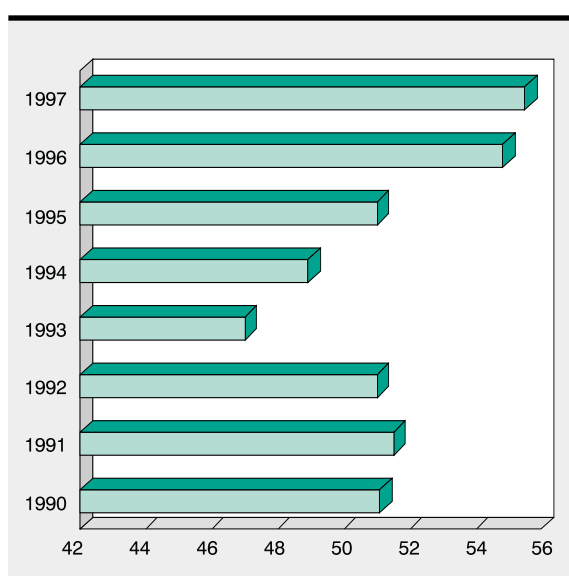
- As in previous years, the list is dominated by a few industries. In 1997, about two-thirds of the companies were from four industries – automotive, electronics and electrical equipment, petroleum, as well as the chemicals and pharmaceuticals industry. The latter, with more than 20 per cent of the entries, clearly now dominates the group (table III.5).

### *b. Degree of transnationality*

The index of transnationality compiled by UNCTAD since 1990 for the largest firms illustrates some aspects of the depth of a TNC's involvement abroad by comparing a firm's activities abroad and those in its home economy. Being a composite of three ratios – foreign assets/total assets, foreign sales/total sales, and foreign employment/total employment – it captures the importance of foreign assets, sales and employment in a firm's overall activities.<sup>1</sup>

Since 1990, the average transnationality index of the top 100 TNCs has increased from 51 per cent to 55 per cent (figure III.1), largely a result of the growing internationalization of assets especially between 1993 and 1996. The increase in the index was, however, much smaller in 1997 than in the three previous years, indicating a slowing down of the transnationalization of the companies in the list and largely reflecting a decline in the ratio of foreign to total assets of a number of these companies.

**Figure III.1. Average transnationality index of the world's 100 largest TNCs, 1990-1997**



Source: UNCTAD/Erasmus University database.

particularly prominently in the group of the 10 most transnationalized TNCs, which does not include any TNC from the United States and Japan. This reflects the wider phenomenon that TNCs originating in small domestic markets have on average a higher degree of transnationality (UNCTAD, 1998a, pp. 45-46). For instance, firms from countries such as Canada, Netherlands

**Table III.5. Industry composition of top 100 TNCs, 1996 and 1997**

(Number of entries and average TNI)

Industry			1997
	1996	1997	Average TNI
Chemicals and pharmaceuticals <sup>a</sup>	16	21	65.9
Electronics/electrical equipment	17	18	55.9
Automotive	14	14	46.7
Petroleum refining/distribution and mining	14	13	48.9
Food & beverages <sup>b</sup>	12	9	72.5
Diversified	4	7	42.3
Telecommunication/ utilities	5	4	40.7
Trading	4	3	34.0
Machinery & engineering	2	2	35.8
Metals	3	-	-
Construction	3	3	68.6
Media	2	1	72.8
Other	4	5	57.4
Total/average	100	100	55.4 <sup>c</sup>

Source: UNCTAD/Erasmus database

<sup>a</sup> Chemicals also includes Montedison

<sup>b</sup> Food and beverages also includes British American Tobacco, Phillip Morris and McDonalds.

<sup>c</sup> Average transnationality index for the world's largest 100 TNCs.

The list of the leading 10 corporations ranked by degree of transnationality changed very little as compared to last year (table III.6). The list is again led by the Canadian beverage and entertainment company Seagram. Holderbank Financiere Glarus of Switzerland and Michelin of France departed from the list of the 10 most transnationalized TNCs and Philips Electronics and Bayer AG – from, respectively, the Netherlands and Germany – entered it. TNCs originating in small industrial countries figure

**Table III.6. The world's top TNCs in terms of degree of transnationality, 1997**

Ranking by Transnationality Index <sup>a</sup>	Foreign assets	Corporation	Country	Industry	Transnationality Index <sup>a</sup> (Per cent)
1	23	Seagram Company	Canada	Beverages	97.6
2	14	Asea Brown Boveri (ABB)	Switzerland	Electrical equipment	95.7
3	52	Thomson Corporation	Canada	Printing and publishing	95.1
4	9	Nestlé SA	Switzerland	Food	93.2
5	18	Unilever N.V.	Netherlands	Food	92.4
6	82	Solvay SA	Belgium	Chemicals/pharmaceuticals	92.3
7	75	Electrolux AB	Sweden	Electrical appliances	89.4
8	27	Philips Electronics N.V.	Netherlands	Electronics	86.4
9	15	Bayer AG	Germany	Chemicals	82.7
10	20	Roche Holding AG	Switzerland	Pharmaceuticals	82.2

Source: UNCTAD/Erasmus University database.

and Belgium have averages ranging between 78 and 92 per cent (table III.4), firms from the European Union as a whole have an average transnationality index which, though slightly lower than in 1996, is still much above the average for the whole list (63 per cent against 55 per cent).

Media, food and beverages, construction, chemicals and pharmaceuticals and electronics and electrical equipments are the industries with the highest level of transnationality (table III.5).

### **c. Weight and economic significance of the 100 largest TNCs**

UNCTAD's list of the world's largest TNCs is one of the many rankings published each year on major companies in the world. Among these, the *Fortune Global 500* list is the oldest and a particularly well known listing.<sup>2</sup> The top 100 TNCs list is unique in that it ranks firms by foreign assets. A comparison between the two lists can be made in two ways: first, with the complete *Fortune Global 500* (financial and non-financial corporations); and then with the sub-set of the Fortune list composed of non-financial corporations only (371 firms in 1997) (table III.7). This sub-set is more comparable with the top 100 TNCs as the UNCTAD list consists of non-financial firms only. Of the biggest 100 non-financial corporations of the world, 56 are also among the list of top 100 TNCs. This means that more than half of the 100 biggest corporations in the world, in terms of revenues, are also the largest in terms of foreign assets.

An indication of the significance of the top 100 TNCs of the UNCTAD list can be obtained by comparing various aspects of these firms with those of the *Fortune Global 500* largest corporations: the total sales and employment of the top 100 TNCs are about one third of the sales and employment, respectively, of the *Fortune Global 500* (financial and non-financial).<sup>3</sup> Comparing with the non-financial corporations on the *Fortune Global 500*, the importance of the top 100 TNCs in terms of assets and sales is still more striking: their assets and sales are equivalent to about 45 per cent of the total assets and sales of the non-financial corporations of the *Fortune 500* list (table III.7). In terms of employment, the ratio is 36 per cent. The top 100 TNCs hence represent a group of transnationally operating corporations with substantial economic weight.

It is also interesting to compare the top 100 TNCs to the universe of TNCs, in terms of sales, assets and employment. Indeed, while these are only 100 out of a universe of about 60,000 TNCs, the shares of their foreign assets, sales, and employment in the foreign assets, sales and employment of the TNC universe are quite significant: they are estimated to be at about 15, 22, and 19 per cent, respectively.<sup>4</sup>

Finally, an indication of the significance of the top 100 TNCs in the world economy can be obtained by examining their contribution to world GDP. No data are readily available on the value added of these corporations. However, assuming that value added amounts to between 30 and 50 per cent of total sales, the largest 100 TNCs in the world account for between four and seven per cent of world GDP.<sup>5</sup>

**Table III.7. Comparison of the top 100 TNCs with Fortune Global 500, 1997<sup>a</sup>**

(Billions of dollars, thousands of employees and percentage)

Variable	Top 100 TNCs A	Fortune Global 500 <sup>a</sup> B	Fortune Global 500 Non-financial <sup>b</sup> C	Ratio (%) (A/B)	Ratio (%) (A/C)
Total assets	4 212	34 064	9 278	12.4	45.4
Total revenues/sales	3 984	11 454	8 794	34.8	45.3
Total employees	11 621	36 925	32 185	31.5	36.1

Source: UNCTAD/Erasmus University database.

<sup>a</sup> Fortune Global 500 as published in *Fortune*, vol. 15 (August 1998), including financial as well as non-financial corporations.

<sup>b</sup> Fortune Global 500 excluding the following: banks, insurance companies, securities and diversified financial companies.

## 2. The 50 largest TNCs from developing countries

The 1997 list of the top 50 non-financial TNCs from developing countries, ranked by foreign assets, once again features some of the best known enterprises from Africa, Asia and Latin America (table III.8). This year, Petroleos de Venezuela, S.A. (Venezuela) tops the list with about \$9 billion in estimated foreign assets, followed by Daewoo Corporation (Republic of Korea). These two corporations in this list also figure among the world's largest 100 TNCs. The next three largest developing-country TNCs have foreign assets ranging between \$5.6 and \$6.7 billion, not too far from those of the lowest-ranked TNCs in the top 100 list (with foreign assets in the range of \$6.8 billion). In general, however, the size (in terms of foreign assets) of the biggest TNCs from developing countries is relatively small, their median foreign asset holdings being some \$1.3 billion – far below the asset level of the first six companies in the top 50 list (\$5 to \$10.5 billion) and even further below the median of the top 100 group (\$13.3 billion). In terms of the degree of transnationality, the top five companies in the list of the largest TNCs from developing countries are from Asia (table III.9).

The mobility of firms entering the list and departing from it stabilized in 1997, with seven new entrants (and corresponding exits) compared to 12 in 1996. The seven newcomer companies were China Harbor Engineering Company and China National Foreign Trade Transportation Corp. (ranked 37 and 40 respectively) from the construction and transportation industries in China; Enersis and Gener (ranked 24 and 29 respectively) from Chile's electric services sector; Perez Companc S.A. from Argentina's energy sector (ranked 34 in the list), food and beverage company Want Want Holdings Ltd. from Singapore (ranked 38), and for the first time, a TNC from Saudi Arabia's chemical sector, SABIC-Saudi Basic Industries Corporation (ranked 47). On the other hand, not included in the list this year were Bavaria S.A. (Chile), Cathay Pacific Airways, (Hong Kong, China). Compania de Telecomunicaciones de Chile S.A. (Chile), Dairy Farm International (Hong Kong, China), Malaysian Airlines Berhad (Malaysia), Panamerican Beverages (Mexico) and Plate Glass and Shatterprufe Ind. (South Africa). As with last year's list, the mobility of firms within the list – firms changing ranking within the list – was fairly high in 1997.

A snapshot of the 50 largest TNCs from developing countries (table III.10) indicates a decrease in average transnationality index of about one percentage point compared with a growth of three percentage points the year before. Following years of significant increases in foreign assets and sales over 1993-1996, growth in these respects came to a halt in 1997.<sup>6</sup> Interestingly, total sales fell too, by a significant amount. Foreign employment declined substantially, while total employment was resilient. The slowdown in transnationalization in 1997 could in part be attributed to the negative impact of the financial crisis in Asia on the activity of TNCs from that region. It remains to be seen whether this is just a pause in the transnationalization process in developing countries.

Indeed, in spite of the dampening of the transnationalization process noted above, it remains true that, over the five-year period 1993-1997, the group of the top 50 TNCs from developing countries has become overall more transnationalized (figure III.2). The trend-lines for the ratios relating to transnationalization (foreign to total assets (FA/TA), foreign to total sales (FS/TS) and foreign to total employment (FE/TE) ratios) show marked increases over the period 1993-1996, with, however, a slowing down in their growth rates already starting in 1996.

Since it was first published in 1995, the list has been dominated by firms from a small group of economies: Hong Kong, China; Republic of Korea; China; Venezuela; Mexico and Brazil (in descending order: figure III.3), altogether accounting for about 80 per cent of the foreign assets of the group of top 50. By far the largest number of leading firms in the list were from economies in Asia, with firms from Hong Kong, China accounting for an estimated \$26 billion in foreign assets, followed by the Republic of Korea (\$19 billion). For the first time since its publication, the top 50 list includes a major TNC from Saudi Arabia: SABIC-Saudi Basic Industries Corp. with \$536 million of foreign assets. The three African TNCs to make the 1997 list were Sappi Limited (\$3.8 billion in foreign assets), Barlow Limited and South African Breweries plc.,<sup>7</sup> both with estimated foreign assets between \$600 and \$700 million.



**Table III.8. The top 50 TNCs from developing countries, ranked by foreign assets, 1997**  
(Millions of dollars and number of employees)

Ranking by Foreign assets	Transnationality index <sup>a</sup>	Corporation	Country	Industry <sup>b</sup>	Assets		Sales		Employment		Transnationality Index <sup>a</sup> (Per cent)
					Foreign	Total	Foreign	Total	Foreign	Total	
1	12	Petroleos de Venezuela S.A.	Venezuela	Petroleum expl./ref./distr.	9 007	47 148	32 502	34 801	11 849	56 592	44.5
2	10	Daewoo Corporation	Republic of Korea	Diversified	...	22 946	...	18 802	...	...	50.8
3	4	Jardine Matheson Holdings Limited <sup>c</sup>	Hong Kong, China/ Bermuda	Diversified	6 652	11 970	7 983	11 522	..	175 000	75.0
4	5	First Pacific Company Limited	Hong Kong, China	Electronics	6 295	11 386	7 416	8 308	40 400	51 270	74.4
5	9	Cenex, S.A.	Mexico	Construction	5 627	10 231	2 235	3 788	10 690	19 174	56.6
6	17	Hutchison Whampoa, Limited	Hong Kong, China	Diversified	4 978	15 086	1 899	5 754	17 013	37 100	37.3
7	7	Sappi Limited	South Africa <sup>d</sup>	Paper	3 830	4 953	2 419	3 557	9 492	23 458	61.9
8	29	China State Construction Engineering Corporation	China	Construction	3 730	7 230	1 530	5 420	5 496	258 195	27.3
9	14	China National Chemicals Import and Export Corporation	China	Diversified	3 460	5 810	11 240	17 880	625	8 905	43.1
10	23	LG Electronics Incorporated	Republic of Korea	Electronics and electrical equipment	3 158	15 431	5 175	17 640	32 532	80 370	30.1
11	35	YPF Sociedad Anonima	Argentina	Petroleum expl./ref./distr.	3 061	12 761	911	6 144	1 908	10 002	19.3
12	50	Petroleo Brasileiro S.A. - Petrobras	Brazil	Petroleum expl./ref./distr.	..	34 233	..	27 946	..	41 173	4.4
13	39	Sunkyoung Group	Republic of Korea	Diversified	2 561	24 572	9 960	31 692	2 600	32 169	16.6
14	15	Hyundai Engineering & Construction Co.	Republic of Korea	Construction	..	8 063	..	5 405	..	30 981	37.6
15	43	New World Development Co. Limited	Hong Kong, China	Construction	2 060	14 030	800	2 580	..	14 840	15.3
16	3	Guangdong Investment Limited	Hong Kong, China	Diversified	1 898	3 053	676	924	15 080	16 500	75.6
17	13	Citic Pacific Limited	Hong Kong, China	Diversified	1 834	8 733	912	2 154	8 262	11 800	44.5
18	30	PETRONAS - Petroliaam Nasional Berhad	Malaysia	Petroleum expl./ref./distr.	..	20 990	..	10 055	..	13 000	25.9
19	41	Shougang Corporation	China	Diversified	1 600	6 640	1 040	4 390	..	218 158	16.2
20	6	Fraser & Neave Limited	Singapore	Food and beverages	1 578	4 273	1 230	1 912	11 461	13 131	62.8
21	40	Samsung Electronics Co. Limited	Republic of Korea	Electronics and electrical equipment	..	16 301	..	13 050	..	57 817	16.3
22	16	Singapore Airlines Limited	Singapore	Transportation	1 546	9 111	3 454	4 727	2 957	13 258	37.4
23	21	Companhia Vale do Rio Doce	Brazil	Transportation	1 509	14 332	3 320	4 744	7 432	42 456	32.7
24	25	Energis S.A.	Chile	Electrical services	..	14 281	..	890	..	14 366	28.2
25	8	Acer Incorporated	Taiwan Province of China	Diversified	1 376	2 946	3 204	4 217	6 792	12 342	59.2
26	2	Orient Overseas (International) Limited	Hong Kong, China	Transportation	1 341	1 872	1 882	1 896	3 443	4 062	85.2
27	46	Companhia Cervejaria Brahma	Brazil	Food and beverages	..	3 854	106	2 490	..	10 955	12.5
28	28	China National Metals and Minerals Import and Export Corp.	China	Diversified	1 020	2 438	1 221	4 458	171	1 296	27.5
29	18	Gener S.A.	Chile	Electrical services	..	3 123	..	612	..	752	36.2
30	31	San Miguel Corporation	Philippines	Food and beverages	1 009	3 020	287	1 964	4 687	18 444	24.5

/...

Table III.8. The top 50 TNCs from developing countries, ranked by foreign assets, 1997 (concluded)

(Millions of dollars and number of employees)

Ranking by	Foreign assets	Transnationality index <sup>a</sup>	Corporation	Country	Industry <sup>b</sup>	Assets		Sales		Employment		Transnationality index <sup>a</sup> (Per cent)
						Foreign	Total	Foreign	Total	Foreign	Total	
31	26		Tatung Co.	Taiwan Province of China	Electronics and electrical equipment	..	3 850	..	2 155	..	19 570	28.1
32	48		Reliance Industries Limited	India	Chemicals and pharmaceuticals	..	6 175	..	1 982	..	17 375	7.7
33	38		Keppel Corporation Limited	Singapore	Diversified	889	4 490	346	2 078	1 700	11 300	17.2
34	45		Perez Companc S.A.	Argentina	Petroleum expl./ref./distr.	875	4 450	191	1 370	527	4 446	15.2
35	36		Empresas CMPC S.A.	Chile	Pulp and paper	799	4 531	257	1 204	1 495	10 345	17.8
36	49		Compania de Petroleos de Chile (COPEC)	Chile	Diversified	791	6 368	138	3 147	493	8 277	7.6
37	37		China Harbor Engineering Company	China	Construction	770	2 210	240	1 530	1 889	76 460	17.7
38	1		Want Want Holdings, Limited	Singapore	Food and beverages	757	779	395	409	9 390	9 400	97.9
39	33		Sime Darby Berhad	Malaysia	Diversified	754	15 340	2 314	5 294	7 917	36 513	23.4
40	22		China National Foreign Trade Transportation Corp.	China	Transportation	740	2 160	440	750	488	57 368	31.3
41	32		South African Breweries plc <sup>e</sup>	South Africa <sup>d</sup>	Food and beverages	..	3 757	1 923	5 244	8 579	47 902	24.3
42	20		Hong Kong and Shanghai Hotels Limited	Hong Kong, China	Tourism and hotel	654	3 242	85	356	3 247	6 008	32.7
43	24		Barlow Limited	South Africa <sup>d</sup>	Diversified	..	2 597	..	4 125	..	27 804	28.9
44	19		Dong-Ah Construction Ind. Co. Limited	Republic of Korea	Construction	..	3 926	..	1 785	..	6 403	34.8
45	34		Souza Cruz S.A.	Brazil	Diversified	..	2 157	620	1 692	..	8 250	21.8
46	11		Gruma S.A. de C.V.	Mexico	Food and beverages	565	1 696	736	1 344	6 676	12 384	47.3
47	47		SABIC - Saudi Basic Industries Corp.	Saudi Arabia	Chemicals and pharmaceuticals	536	18 187	2 011	6 406	300	14 238	12.1
48	42		Sadia S.A. Industria e Comercio	Brazil	Food and beverages	..	1 799	..	2 569	..	25 375	16.2
49	44		Vitro S.A. de C.V.	Mexico	Other	481	3 290	458	2 474	4 203	33 136	15.3
50	27		Wing On International Holdings Limited	Hong Kong, China	Diversified	461	1 406	65	369	1 066	3 165	28.0

Source: UNCTAD, FDI/TNC database.

<sup>a</sup> The transnationality index (TI) is calculated as the average of the sum of three ratios for each TNC: foreign assets to total assets, foreign sales to total sales and foreign employment to total employment.<sup>b</sup> Industry classification for companies follows the United States Standard Industrial Classification which is used by the United States Securities and Exchange Commission (SEC).<sup>c</sup> The company is incorporated in Bermuda and the group is managed from Hong Kong, China.<sup>d</sup> Within the context of this list, South Africa is treated as a developing country.<sup>e</sup> The company headquarters have recently relocated to the United Kingdom.

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

Note: The list includes non-financial TNCs only. In some companies, foreign investors may hold a minority share of more than 10 per cent.

Table III.9 The top five TNCs from developing countries in terms of degree of transnationality, 1997

Ranking by Transnationality index	Foreign assets	Company	Country	Industry	1997 Transnationality index (per cent)
1	38	Want Want Holdings, Limited	Singapore	Food and beverages	97.9
2	26	Orient Overseas (International) Limited	Hong Kong, China	Transportation	85.2
3	16	Guangdong Investment Limited	Hong Kong, China	Diversified	75.6
4	3	Jardine Matheson Holdings, Limited	Hong Kong, China/Bermuda	Diversified	75.0
5	4	First Pacific Company Limited	Hong Kong, China	Other	74.4

Source: UNCTAD, FDI/TNC database.

Table III.10 Snapshot of the top 50 TNCs from developing countries, 1997

(Billions of dollars, number of employees and percentage)

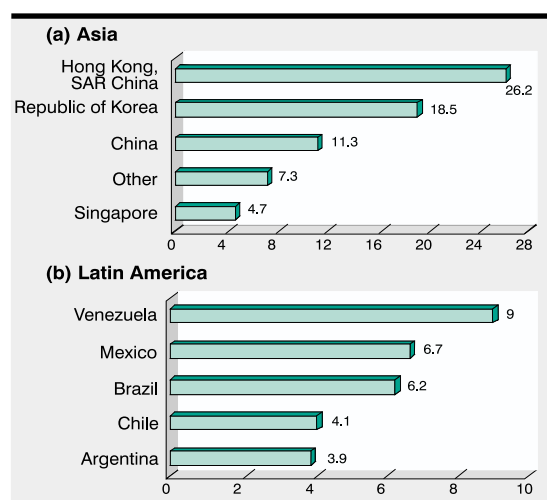
Variable	1997	1996	Change 1997 vs. 1996 <sup>a</sup>
<b>Assets</b>			
Foreign	103	106	-2.8
Total	453	457	-0.9
<b>Sales</b>			
Foreign	136	136	-0.4 <sup>c</sup>
Total	306	337	-9.1
<b>Employment</b>			
Foreign	483 129	538 767	-10.3
Total	1 737 756	1 583 558	9.7
<b>Average index of transnationality</b>	34.20	35.2	-1.0 <sup>b</sup>

Source: UNCTAD, FDI/TNC database.

- <sup>a</sup> Data were statistically treated to enable comparison between two periods. Specifically, the effect of distortion caused by comparing enterprises at different economic levels, e.g., the individual firm vs. the group, was controlled for in the comparison.
- <sup>b</sup> Change is expressed in percentage points.
- <sup>c</sup> Absolute figures are rounded.

Figure III.3. Foreign assets of biggest investors from developing countries, 1997

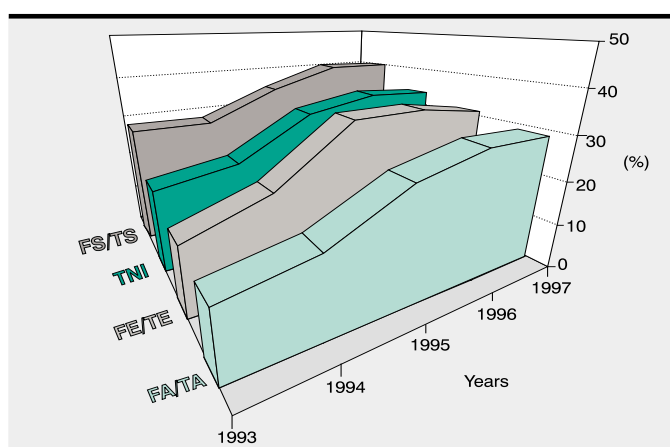
(Billions of dollars)



Source: UNCTAD, FDI/TNC database.

The industry composition of the top 50 remained relatively stable between 1996 and 1997. As in the past, diversified TNCs and those from the food and beverages and petroleum industries, as well as, this year, those from the construction industry, dominate the group (table III.11). The most transnationalized industries in the top 50 in 1997 are transportation, food and beverages and diversified industries (table III.11).

Figure III.2. Transnationalization trends of top 50 TNCs from developing countries, 1993 to 1997



Source: UNCTAD, FDI/TNC database.

TNI: Index of Transnationality

Table III.11. Top 50 TNCs from developing countries: Industry composition and transnationality index, 1997  
(Number of entries and percentage)

Industry	1997	Average transnationality
Diversified	16	35.8
Food and beverages	7	40.8
Construction	6	31.5
Petroleum expl./ref./distr.	5	21.8
Transportation	4	46.6
Electronics and electrical equipment	4	37.2
Chemicals and pharmaceuticals	2	9.9
Electrical services	2	32.2
Pulp and paper	2	39.8
Tourism and hotel	1	32.7
Other	1	15.3
<b>TOTAL/AVERAGE</b>	<b>50</b>	<b>34.2<sup>a</sup></b>

Source: UNCTAD, FDI/TNC database.

<sup>a</sup> Average index of transnationality of the top 50.

### 3. The 25 largest TNCs from Central Europe

For the first time, the *World Investment Report* this year publishes a list of the top 25 non-financial TNCs headquartered in Central Europe,<sup>8</sup> ranked on the basis of foreign assets. As only one firm from the Russian Federation responded to the survey undertaken for this purpose – Lukoil Oil Company (box III.1) – the list does not include TNCs from that country.

In both 1997 and in 1998, the same three enterprises occupied the top positions in terms of foreign assets (tables III.12 and III.13): Latvian Shipping Company (transportation), Podravka (Croatia; food and beverages/pharma-ceuticals) and Gorenje (Slovenia; domestic appliances). In 1997 the Hungarian software consultancy firm Graphisoft was the most transnationalized firms followed by two transportation firms: Adria Airways (Slovenia) and Atlantska Plavidba (Croatia). In 1998, the same three firms occupied the top positions in terms of trans-nationality, but in a reverse order.

- **Country composition.** The country composition of the top 25 list is quite diverse. It includes firms from 10 countries in 1998, compared to nine in 1997 (table III.14). Firms from Estonia, TFYR Macedonia and Ukraine remained too small to qualify for the top 25 list (table III.15). The number of firms from each country remained basically constant, except for Hungary where the number of companies decreased from six to four. Interestingly, the foreign assets of those four Hungarian companies were 39 per cent higher in 1998 than those of the six companies listed in 1997. By comparison, the foreign assets of Croatian, Czech and Slovenian companies (three other important home countries) grew between seven and 17 per cent only from 1997 to 1998.

It is noteworthy that, in the case of three countries (Latvia, the Republic of Moldova and Slovenia), the foreign assets of the firms in the list headquartered in these countries alone are bigger than the outward FDI stocks of those countries.<sup>9</sup> This may reflect reporting problems in outward FDI statistics. In a few other countries, especially Hungary and Poland, the ratio of foreign assets to outward FDI stock is, on the other hand, quite low.<sup>10</sup> It may well be that, in those countries, outward FDI is undertaken by many enterprises; that financial enterprises not covered in the top list account for a significant part of outbound FDI; and/or that foreign affiliates take up an important share in outward FDI. Also, it may well be that an important part of outward FDI is directed towards minority (10 to 49 per cent) stakes, which are not necessarily reflected in the consolidated financial statements of the reporting companies.

#### Box III.1. Lukoil Oil Company

Data for Lukoil confirm that the leading Russian TNCs are likely to be significantly bigger in size than the largest TNCs from Central Europe. Its 1997 level of foreign assets (at \$1.5 billion) is equivalent to that of the 24th company on the list of the top 50 TNCs from developing countries. In terms of foreign sales (\$517 million), the lead of Lukoil over Central European competitors was less marked: in this respect, it was overtaken by KGHM Polska Miedz (Poland) and Gorenje (Slovenia) in 1997. And in terms of foreign employment, it was surpassed by four Central European firms.

In 1998, in sharp contrast with the decline in domestic activities, the overseas activities of Lukoil soared, seemingly unaffected by the Russian crisis. While the 71 per cent devaluation of the ruble caused a 53 per cent drop in the dollar value of total assets, foreign assets rose by almost 50 per cent in 1998, to \$2.3 billion. A similar contrast prevailed in sales and employment: total sales declined by 10 per cent, while foreign sales swelled by no less than 400 per cent; total employment decreased by two per cent while foreign employment soared by 400 per cent (table III.15). As a result, Lukoil leads over all Central European firms in terms of foreign sales and foreign employment, and its transnationality index bounced from less than six per cent to more than 23 per cent.

The development of Lukoil may indicate the capacity of some Russian firms to switch from domestic to foreign markets – a trend not reflected in statistics on total outward FDI, which showed a sharp contraction in 1998 FDI outflows.

*Source:* UNCTAD.

**Table III.12. The top 25 TNCs based in Central Europe,<sup>a</sup> ranked by foreign assets, 1997**  
(Millions of dollars and number of employees)

Ranking by Foreign assets	Transnationality Index <sup>b</sup>	Corporation	Country	Industry <sup>c</sup>	Assets		Sales		Employment		Transnationality index <sup>b</sup> (Per cent)
					Foreign	Total	Foreign	Total	Foreign	Total	
1	4	Latvian Shipping Co.	Latvia	Transportation	455.0	593.0	160.0	242.0	2 868	3 716	73.3
2	10	Podravka Group	Croatia	Food and beverages/ pharmaceuticals	270.5	426.2	98.5	370.0	375	7 202	31.8
3	9	Gorenje Group	Slovenia	Domestic appliances	227.6	574.5	581.6	1 023.8	579	6 956	34.9
4	18	Skoda Group Plzen	Czech Republic	Diversified	162.4	1 077.0	82.0	1 078.9	1 237	24 247	9.3
5	3	Atlantiska Plovidba, d.d.	Croatia	Transportation	152.0	176.0	48.0 <sup>d</sup>	-	48.0	586	93.2
6	5	Motokov a.s.	Czech Republic	Trade	125.1	229.6	232.6	336.4	629	1 079	60.6
7	15	Petrol, d.d.	Slovenia	Petroleum and natural gas	107.0	668.2	166.3	960.4	7	3 521	11.2
8	2	Adria Airways d.d.	Slovenia	Transportation	88.6	98.4	85.7	85.7	-	593	95.0
9	24	VSZ a.s. Kosice	Slovakia	Iron and steel	84.0	1 680.0	0.2	1 063.0	60	27 956	1.7
10	11	Pliva Group	Croatia	Pharmaceuticals	69.2	661.0	240.1	393.3	1 533	6 852	31.3
11	7	Malev Hungarian Airlines Ltd.	Hungary	Transportation	59.4	143.6	213.8	280.1	48	3 405	39.7
12	17	Matador J.s.c.	Slovakia	Rubber and plastics	42.1	316.2	38.7	227.9	64	4 375	10.6
13	22	MOL Hungarian Oil & Gas Plc.	Hungary	Petroleum and natural gas	39.8	2 862.3	244.3	3 410.3	302	20 020	3.9
14	12	KGHM Polska Miedz S.A.	Poland	Mining and quarrying	39.4	1 403.3	817.7	1 247.1	12	21 948	22.8
15	16	TVK Ltd.	Hungary	Chemicals	36.0	459.0	118.0	476.0	21	5 632	11.0
16	20	Moldova Steel Works	Republic of Moldova	Iron and steel	30.3	338.1	0.7	17.6	7	4 511	4.4
17	14	Croatia Airlines, d.d.	Croatia	Transportation	29.4	105.5	5.3	112.1	32	799	12.2
18	1	Graphisoft	Hungary	Software consultancy	22.0	23.0	22.0	22.0	178	178	98.6
19	23	Elektrim S.A.	Poland	Trade and diversified	20.0	1 090.0	38.0	829.0	57	23 445	2.2
20	8	Budimex Capital Group	Poland	Construction	17.3	137.8	68.2 <sup>d</sup>	267.5	1 074	1 385	38.5
21	25	Petrom SA National Oil Co.	Romania	Petroleum and natural gas	14.0	3 130.0	52.0	2 300.0	310	90 000	1.0
22	19	Pilsner Urquell, a.s.	Czech Republic	Food and beverages	13.0	228.0	22.0	221.0	334	2 857	9.1
23	13	Iskraemeco, d.d.	Slovenia	Electrical machinery	13.0	75.0	18.0	110.0	100	2 200	12.7
24	6	Agrimex Trading Co. Ltd.	Hungary	Trade	12.6	15.1	28.5	93.3	-	1 026	57.0
25	21	Dunapack Paper & Packaging Ltd.	Hungary	Paper and pulp	12.5	133.7	1.9	167.5	41	1 701	4.3

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

Note: Includes non-financial TNCs only. In some companies, foreign investors may hold a minority share of more than 10 per cent.

<sup>a</sup> Based on survey responses received from Croatia, Slovenia, Hungary, Lithuania, Slovakia, Czech Republic, Macedonia (FYR), Rep. of Moldova, Romania and Ukraine.

<sup>b</sup> The index of transnationality is calculated as the average of three ratios: foreign assets to total assets, foreign sales to total sales and foreign employment to total employment.

<sup>c</sup> Industry classification for companies follows the United States Standard Industrial Classification as used by the United States Securities and Exchange Commission (SEC).

<sup>d</sup> Including export sales by parent company.



Table III.13. The top 25 TNCs based in Central Europe,<sup>a</sup> ranked by foreign assets, 1998

(Millions of dollars and number of employees)

Ranking by Foreign assets	Transnationality Index <sup>b</sup>	Corporation	Country	Industry <sup>c</sup>	Assets		Sales		Employment		Transnationality Index <sup>b</sup> (Per cent)
					Foreign	Total	Foreign	Total	Foreign	Total	
1	4	Latvian Shipping Co.	Latvia	Transportation	399.0	505.0	201.0	214.0	1 631	2 275	81.5
2	10	Podravka Group	Croatia	Food & beverages/ pharmaceuticals	285.9	477.1	119.4	390.2	501	6 898	32.6
3	9	Gorenje Group	Slovenia	Domestic appliances	256.4	645.9	642.2	1 143.3	607	6 717	35.0
4	5	Motokov a.s.	Czech Republic	Trade	163.6	262.5	260.2	349.1	576	1 000	64.8
5	1	Atlantska Plovidba, d.d.	Croatia	Transportation	152.0	167.0	47.0 <sup>d</sup>	47.0	-	528	95.5
6	8	Pliva Group	Croatia	Pharmaceuticals	142.1	855.1	334.3	463.0	1 616	6 680	37.7
7	17	Skoda Group Pízen	Czech Republic	Diversified	139.1	973.4	150.7	1 244.5	1 073	19 830	10.6
8	2	Adria Airways d.d.	Slovenia	Transportation	129.4	143.7	97.7	97.7	-	585	95.0
9	21	MOL Hungarian Oil & Gas Plc.	Hungary	Petroleum & natural gas	128.3	2 881.6	203.4	2 958.1	628	20 140	5.1
10	25	VSZ a.s. Koscice	Slovakia	Iron & steel	72.0	1 445.0	0.2	876.0	58	26 719	1.7
11	18	Petrol, d.d.	Slovenia	Petroleum & natural gas	70.6	634.2	112.4	706.0	10	3 349	9.1
12	7	Malev Hungarian Airlines Ltd.	Hungary	Transportation	64.5	148.1	236.5	314.9	48	3 396	40.0
13	16	Matador I.s.c.	Slovakia	Rubber & plastics	51.9	304.9	34.0	203.4	5	3 878	11.3
14	12	KGHM Polska Miedz S.A.	Poland	Mining & quarrying	34.7	1 419.8	694.3	1 047.8	20	19 968	22.9
15	13	TVK Ltd.	Hungary	Chemicals	33.0	543.0	133.0	401.0	181	6 099	14.1
16	3	Graphisoft	Hungary	Software consultancy	28.0	50.0	25.0	25.0	188	188	85.3
17	20	Croatia Airlines	Croatia	Transportation	27.6	211.4	9.8	121.2	40	846	8.6
18	23	Elektrim S.A.	Poland	Trade and diversified	21.0	1 228.0	42.0	874.0	62	26 475	2.2
19	19	Pilsner Urquell, a.s.	Czech Republic	Food & beverages	20.0	251.0	16.0	253.0	356	2 918	8.8
20	22	Moldova Steel Works	Republic of Moldova	Iron & steel	19.9	335.9	1.0	15.6	5	4 562	4.2
21	11	Budimex Capital Group	Poland	Construction	17.8	153.9	55.8 <sup>d</sup>	316.4	644	1 095	29.3
22	24	Petrom SA National Oil Co.	Romania	Petroleum & natural gas	17.0	3 790.0	128.0	2 700.0	140	88 350	1.8
23	15	Iskraeneco, d.d.	Slovenia	Electrical machinery	15.0	92.0	21.0	114.0	150	2 300	13.7
24	6	Lifosa j.s.c.	Lithuania	Chemicals	13.2	55.2	93.1	100.0	-	1 339	58.5
25	14	Krka, d.d.	Slovenia	Pharmaceuticals	12.5	490.4	82.1	300.3	375	3 253	13.8

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

Note: Includes non-financial TNCs only. In some companies, foreign investors may hold a minority share of more than 10 per cent.

<sup>a</sup> Based on survey responses received from Croatia, Slovenia, Hungary, Lithuania, Slovakia, Czech Republic, Macedonia (TFYR), Rep. Moldova, Romania and Ukraine.<sup>b</sup> The index of transnationality is calculated as the average of three ratios: foreign assets to total assets, foreign sales to total sales and foreign employment to total employment.<sup>c</sup> Industry classification for companies follows the United States Standard Industrial Classification as used by the United States Securities and Exchange Commission (SEC).<sup>d</sup> Including export sales by parent company.

Between 1997 and 1998, growth was the most salient feature of the top 25 list of TNCs from Central Europe, in particular in terms of foreign assets and sales (table III.16).

- **Foreign assets.** Between 1997 and 1998, the total foreign assets of the top 25 increased by eight per cent to \$2.3 billion. The average foreign assets of the listed TNCs were \$93 million. The median of foreign assets, at about \$52 million, compares with a median of \$1.3 billion for the top 50 from developing countries, clearly indicating a much smaller size (and the much lower degree of transnationalization) of TNCs in Central Europe. The Hungarian firm MOL Hungarian Oil & Gas plc was the leader in foreign assets growth, with an impressive 222 per cent rate, followed by two pharmaceutical companies – Pliva (Croatia) and Krka (Slovenia) – which both doubled their foreign assets.
- **Foreign sales.** The top 25 TNCs increased their foreign sales by more than 10 per cent to \$3.7 billion, while total sales registered a minor reduction. They increased most rapidly in chemicals and pharmaceuticals, transportation, and machinery and equipment,<sup>11</sup> while, except for Petrom SA National Oil Company (Romania), most of the companies in the petroleum and gas, and in the mining and quarrying industries, registered significant declines in foreign sales.
- **Foreign employment.** In contrast to firms from developing countries, the weakest point of internationalization of Central European TNCs is foreign employment, which in 1998 decreased by 10 per cent. Except for five companies, all firms in the list have a ratio of foreign to total employment of less than 12 per cent, which is clearly below the average ratio of the top 50 TNCs from developing countries.<sup>12</sup>
- **Transnationality index.** At slightly above 31 per cent in 1998, the average transnationality index, in spite of a small increase (0.5 percentage points), is quite low as compared with that of the top 50 TNCs from developing countries, not to mention the top 100. The median transnationality index, at 14 per cent, is much lower, suggesting that, even among the top 25 TNCs from the region, the majority of the firms are very little transnationalized.

The above data demonstrate that Central European firms are still in a nascent stage of transnationalization.<sup>13</sup> This is further illustrated by the fact that only one company in the list (Latvian Shipping Company) would have qualified in 1997 for inclusion in the list of the top TNCs from developing countries, and at one of the lowest ranks.

The newcomer status of Central European TNCs is further confirmed by other indicators. For example, in 1997 the combined foreign assets of the 25 biggest TNCs from developing countries accounted for 1.4 per cent of the total GDP of the developing world, while the combined foreign assets of the top 25 TNCs based in Central Europe accounted for 0.5 per cent of the combined GDP of their home countries. This newcomer status is not surprising given the short period of time since the start of the economic transition period and the fact that the foreign presence of Central European firms had previously been limited mainly to trade representative offices. Moreover, Central European firms have had little time to build up their ownership-specific advantages. In fact, enterprise restructuring may go against internationalization in the short run, as firms need to cut back their activities to core competencies at home, or are sold to foreign investors, becoming themselves affiliates of TNCs.

Table III.14. Countries of origin of the top 25 TNCs based in Central Europe, 1997 and 1998

Country	1997	1998
Slovenia	4	5
Croatia	4	4
Hungary	6	4
Czech Republic	3	3
Poland	3	3
Slovakia	2	2
Romania	1	1
Republic of Moldova	1	1
Lithuania	-	1
Latvia	1	1
Total	25	25

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

**Table III.15. Top TNCs of the Russian Federation, Estonia, Lithuania,<sup>a</sup> TFYR Macedonia and Ukraine, ranked by foreign assets, 1997 and 1998**  
(Millions of dollars and number of employees)

Year	Ranking in Central and European	Corporation	Country	Industry <sup>c</sup>	Assets		Sales		Employment		Transnationality index <sup>b</sup> (Per cent)
					Foreign	Total	Foreign	Total	Foreign	Total	
1997	- <sup>d</sup>	Lukoil Oil Co.	Russian Federation	Petroleum and natural gas	1 515.0	14 197.0	517.0	9 272.0	1 000	104 000	5.7
1997	26	Norma a.s.	Estonia	Automotive	10.0	34.0	0.5	40.0	16	1 419	10.6
1997	29	Lifosa j.s.c.	Lithuania	Chemicals	6.9	39.0	65.6	77.4	-	1 482	51.2
1997	33	Azovstal Iron and Steel Works	Ukraine	Iron and steel	2.9	18.7	-	1 055.2	-	24 789	15.6
1997	35	Alkaloid a.d.	TFYR Macedonia	Pharmaceuticals	1.0	82.0	18.0	58.0	60	1 796	11.9
1998	- <sup>d</sup>	Lukoil Oil Co.	Russian Federation	Petroleum and natural gas	2 266.0	6 609.0	2 590.0	8 393.0	5 000	102 000	23.3
1998	30	Norma a.s.	Estonia	Automotive	10.0	34.0	1.0	36.0	21	1 368	11.2
1998	37	Alkaloid a.d.	TFYR Macedonia	Pharmaceuticals	1.0	76.0	18.0	60.0	58	1 720	11.6
1998	38	Azovstal Iron and Steel Works	Ukraine	Iron and steel	0.5	10.7	-	775.4	-	24 850	4.5

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

Note: Includes non-financial TNCs only.

<sup>a</sup> In 1998, Lithuania's biggest TNC moved up to the top 25 list.

<sup>b</sup> The index of transnationality is calculated as the average of three ratios: foreign assets to total assets, foreign sales to total sales and foreign employment to total employment.

<sup>c</sup> Industry classification for companies follows the United States Standard Industrial Classification as used by the United States Securities and Exchange Commission (SEC).

<sup>d</sup> The only response received from the Russian Federation was not incorporated into the top 25 list.

**Table III.16. Snapshot of the top 25 TNCs from Central Europe, 1997 and 1998**

(Millions of dollars, number of employees and percentages)

Variable	1997	1998	Change 1998 vs. 1997
<b>Assets</b>			
Foreign	2 142	2 315	8.0
Total	16 644	18 064	8.5
<b>Sales</b>			
Foreign	3 384	3 740	10.5
Total	15 383	15 276	-0.7
<b>Employment</b>			
Foreign	9 865	8 914	-9.7
Total	266 190	259 388	-2.6
Average index of transnationality	30.8	31.3	0.5 <sup>a</sup>

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

<sup>a</sup> Change measured in percentage points.

Central European economies, which are poor in natural resources, but where firms from the primary sector have traditionally strong ownership advantages and are among the first to invest abroad. Interesting too is the very small share of trade in the industry distribution, suggesting that Central Europe is moving away from the “inherited” trading base of outward investment.

- **Industry composition.** The three most important industries in terms of the industry composition of the top 25 list are: transportation, chemicals and pharmaceuticals, and mining and petroleum (table III.17). The importance of mining (16 per cent of the companies in the list) is interesting as it reflects the particular situation of

**Table III.17. The industry composition of the top 25 TNCs based in Central Europe, 1997 and 1998**

(Number of firms)

Industry	Year	
	1997	1998
Transportation	5	5
Chemicals and pharmaceuticals <sup>a</sup>	3	5
Mining and petroleum	4	4
Food and beverages <sup>a</sup>	2	2
Metallurgy (iron and steel)	2	2
Machinery and equipment	2	2
Other or diversified manufacturing	3	2
Trade	3	2
Construction	1	1
Business services	1	1
Total	25	25

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

<sup>a</sup> Podravka was listed under both food and beverages, and chemicals and pharmaceuticals.

## B. Cross-border M&As

For the past several years, M&As involving firms located in different countries have increased significantly, reflecting a general increase in global M&A activity. Not surprisingly the world's largest TNCs are particularly active (see below). This has implications for the size and direction of FDI flows (chapter I), as well as for the extent and pattern of cross-border linkages established through the common ownership of assets for production. Cross-border M&As are primarily concentrated in developed countries, but there is also a trend towards an increase in such deals in some developing regions (chapter II). This section provides a brief account of recent trends in cross-border M&As and attempts to shed some light on the reasons for and the development impact of cross-border M&As.

### 1. Trends

The number and value of total cross-border M&As world-wide increased dramatically in 1998 over those in 1997, in parallel to the rates of growth of domestic M&As. As a result, the share of cross-border M&As in all M&As in 1998 was comparable to that in the past few years – about one quarter in terms of both value and number of deals (figure III.4). The absolute value of all cross-border M&A sales (and purchases) amounted to \$544 billion in 1998, representing an increase of about 60 per cent over that in 1997 (\$342 billion) (annex tables B.7-8). However, if only majority-owned cross-border M&As (transactions resulting in the acquisition of a more than 50 per cent equity share) are considered, the value in 1998 (\$411 billion) was nearly twice as large as that in 1997 (\$236 billion).<sup>14</sup>

Not all cross-border M&As are financed by FDI.<sup>15</sup> Even so, M&As are likely to account for a significant share of FDI flows, at least in developed countries. Although data are lacking to establish a clear relationship between FDI and cross-border M&As, there are data showing that, for example, new investment by foreign direct investors through M&As in United States enterprises accounted for 90 per cent of total investment expenditures in foreign affiliates in 1998, compared to an already high ratio of 82-87 per cent during 1993-1997 (figure III.5).<sup>16</sup>

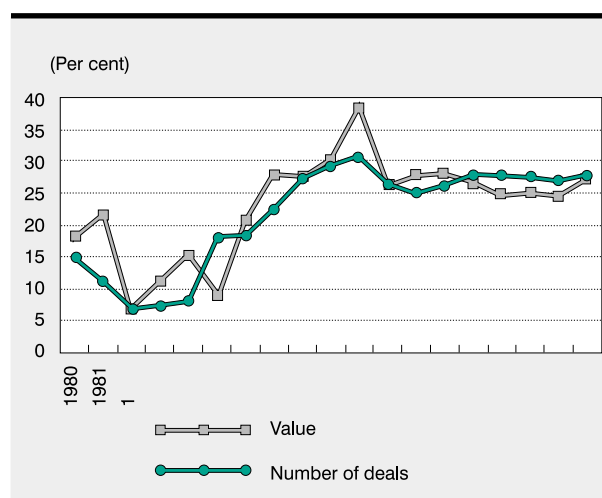
Cross-border M&As in 1998 were characterized by greater geographical concentration and a larger number of exceptionally large transactions than in the previous years. The United States and the United Kingdom continued to be the countries

**Figure III.5. Share of M&As in investment expenditures by foreign direct investors<sup>a</sup> in United States businesses, 1980-1998**  
(Percentage)

Source: UNCTAD, based on United States, Department of Commerce, various issues c and various issues d.

<sup>a</sup> The data refer to investment outlays by foreign direct investors to acquire or establish new United States businesses regardless of whether the invested funds are raised in the United States or abroad. The data cover United States business enterprises that have total assets of over \$1 million or that own at least 200 acres of United States land. A United States enterprise is categorized as "acquired" (in this context "M&As") if the foreign parent or its existing United States affiliate obtains a voting equity interest in an existing United States business enterprise; or purchases a business segment or an operating unit of an existing United States enterprise that it organizes as a new separate legal entity or merge into the affiliate's own operations. The data do not include a foreign parent's acquisition of additional equity in its United States affiliates or its acquisition of an existing United States affiliate from another foreign investor, nor include expansions of existing United States affiliates. Sell-offs or other disinvestment are not netted against the new investment. Reinvested earnings are not included.

**Figure III.4. Cross-border M&As as a percentage of all M&As in the world,<sup>a</sup> 1980-1998**



Source: UNCTAD, based on data provided by Securities Data Company, Inc. (New York).

<sup>a</sup> On an announcement basis.

with the largest sales and purchases (with the United Kingdom taking over the first position in purchases from the United States). Together, in 1998, they accounted for nearly half of the total value of all cross-border M&As: 53 per cent of the world's total cross-border M&As in terms of sales and 46 per cent in terms of purchases, compared to 35 per cent and 33 per cent, respectively in 1997 (annex tables B.7 and B.8). In 1998, there were 89 "mega" cross-border M&A deals, each with more than \$1 billion in transaction value (annex table A.III.1), compared to 35 such deals in 1995, 45 in 1996 and 58 in 1997. These mega deals accounted for nearly three-fifths of the total of all cross-border M&As in 1998. Four of such mega deals announced in 1998 were larger than the largest cross-border M&A deal in the past, which was the \$18 billion purchase by Zürich Versicherungs GmbH (Switzerland) of BAT Industries Plc-Financial (United Kingdom) recorded in 1997; the largest two of these four deals include the acquisitions of Amoco (United States) by British Petroleum (United Kingdom) for \$55 billion, and Chrysler (United States) by Daimler-Benz (Germany) for \$41 billion. In both sales and purchases in large cross-border M&As, countries on either side of the Atlantic were significant players. In particular, United Kingdom or United States firms appeared as either sellers or purchasers in as many as 63 out of the 89 mega deals in 1998 (annex table A.III.1). In 1998 about 14 of the world's 100 largest TNCs (as



identified in this year's list) were involved as buyers in the mega M&A (i.e. over \$1 billion) announced during that year, accounting for about 40 per cent of the total value of deals announced. Mega deals are continuing in 1999 (table III.18).

Many of the recent large cross-border M&As did not involve monetary payments. Exchanges of stocks between acquiring and acquired firms have become a popular means for accomplishing M&As. This involves the issue of new stocks of the acquiring firms to the stockholders of the acquired firms in return for the releases of their stock. Thus, even mega M&As can be concluded with a minimum of funds. Daimler-Chrysler and British Petroleum-Amoco are typical examples. Such mega M&As would be virtually impossible on the basis of cash payment simply because of their sheer size. Of all cross-border M&As with United States firms by foreign firms, some 100 cases used this stock-exchange method in 1998, accounting for about one fifth of the total in terms of the number of deals, but for nearly two-thirds of the total value of these deals (JETRO, 1999). In comparison, cash-based cross-border M&As accounted for three-quarters of the total value in 1990, with 90 per cent of the total cases.<sup>17</sup>

Developing countries provided 11 of the 89 mega deals in 1998. Most of them were related to privatizations. For instance, six of the seven mega deals in Brazil were related to the privatization programme of the telecommunications industry, including Telebrás and other telecommunication services companies. One mega deal in Malaysia was also related to privatization in the telecommunications industry. From developing countries, only one firm from Hong Kong, China and one from Singapore was a mega purchaser in 1998, in contrast to the past few years when firms from several developing countries (such as Thailand, Malaysia and the Republic of Korea) were involved as purchasers in mega M&As as well.

**Table III.18. The 10 largest cross-border M&A deals, announced in 1998 and 1999 <sup>a</sup>**

<b>1998</b>	
<b>Deal</b>	<b>Value (\$billion)</b>
British Petroleum Co PLC (United Kingdom) - Amoco Corp. (United States)	55.0
Daimler-Benz AG (Germany) - Chrysler Corp. (United States)	40.5
ZENECA Group PLC (United Kingdom) - Astra AB (Sweden)	31.8
Hoechst AG (Germany) - Rhone-Poulenc SA <sup>b</sup> (France)	21.2
Scottish Power PLC (United Kingdom) - Pacifi Corp. (United States)	12.6
Total SA (France) - Petrofina SA (Belgium)	11.5
Universal Studios Inc. (United States) - PolyGram NV (Philips Electronics) (Netherlands)	10.3
Deutsche Bank AG (Germany) - Bankers Trust New York Corp. (United States)	9.1
Northern Telecom Ltd(BCE Inc) (Canada) - Bay Networks Inc. (United States)	9.0
Texas Utilities Co. (United States) - Energy Group PLC (United Kingdom)	8.8
<b>1999 <sup>a</sup></b>	
AirTouch Communications (United States) - Vodafone Group PLC (United Kingdom)	65.9
US WEST Inc (United States) - Global Crossing Ltd. (Bermudas)	51.1
ARCO (United States) - BP Amoco PLC (United Kingdom)	33.7
Hoechst AG (Germany) - Rhone-Poulenc SA <sup>c</sup> (France)	28.5
YPF SA (Argentina) - Repsol SA (Spain)	17.1
British Aerospace (United Kingdom) - Marconi Electronics <sup>d</sup> (United States)	13.0
Frontier Corp (United States) - Global Crossing Ltd. (Bermudas)	12.5
TransAmerica Corp (United States) - Aegon NV (Netherlands)	10.8
ASDA Group PLC (United Kingdom) - Wal-Mart Stores Inc. (United States)	10.7
Case Corp (United States) - New Holland (New Holland Hldg) (Netherlands)	8.7

*Source:* UNCTAD, based on annex table A.III.1 and data provided by Thomson Financial Securities Data Company, Inc. (New York).

<sup>a</sup> January - June only.

<sup>b</sup> Merged with life science divisions in each company.

<sup>c</sup> Merged with chemicals and fibres divisions in each company.

<sup>d</sup> Part of General Electric Company.

### a. Sales

There are several noteworthy trends on the sales side of cross-border M&As. The three countries with the largest sales values in 1997 – the United States, the United Kingdom and Germany – remained in the same rankings in 1998 (annex table B.7). Belgium assumed the fourth position, due mainly to large acquisitions of Belgian oil and financial firms. Continued privatization pushed Brazil to the position of fifth largest seller country in the world, with sales of \$25 billion in 1998 – twice the value of its M&A sales in 1997 (annex table B.7) – dwarfing the value of M&A sales in other developing countries. Despite this increase in Brazil, however, the absolute value of M&A sales by developing countries as well as their share declined considerably, the latter from 28 per cent to about one tenth of total cross-border M&As in 1998 (annex table B.7). This surprisingly steep decline in 1998 is largely due to the slowing down of the privatization process – the prime force behind M&As in developing countries – in several countries.

Since 1995, Australia has become a relatively large seller country when it comes to cross-border M&As. One reason seems to be that with the weakening Australian dollar acting as an advantage for investors, coupled with declining commodities prices, the attractiveness of Australia as a resource-rich nation has re-emerged. There were three mega deals worth more than \$1 billion in 1998, two of which were in resource-based or related industries (annex table A.III.1). Firms in resource-based industries accounted for one tenth of the total value of M&As in Australia.<sup>18</sup>

Other notable trends in cross-border M&A sales relate to Japan and South, East and South-East Asia. In 1998, Japan became the 10th largest seller in the world, the highest ranking achieved in this respect so far by that country, by selling seven times as much as in 1997 (box III.2 and annex table B.7). While a large imbalance between FDI inflows to, and FDI outflows from Japan persists, interestingly, inward cross-border M&As were almost balanced with outward cross-border M&As in value in 1998 for the first time (annex tables B.7 and B.8).

#### Box III.2. Why cross-border M&As have become popular in Japan.

Increases in cross-border M&A sales in Japan may indicate fundamental changes in Japanese corporate culture, structure and strategies. M&As are becoming acceptable business transactions among Japanese firms which had long tended to resist such transactions. Indeed, the popular view among Japanese firms was that M&As were predatory actions that did not bring benefits to the acquired firms<sup>a</sup>. Not many firms were engaged in such activities, least of all in hostile takeovers. However, as Japanese firms themselves have utilized this mode for entering foreign markets, in particular in the United States since the late 1980s, this type of business transaction has now apparently become more acceptable in the corporate culture. In addition to cultural difficulties, cross-share-holdings among Japanese firms, in particular among the *keiretsu* firms, have traditionally made M&As structurally difficult. Firms or investors could not simply take over other firms. However, with declining profits in the current recession, Japanese firms have had to re-evaluate their structures of *keiretsu* or related firms. Examples abound. When Yamaichi Securities went bankrupt in 1998, no related firms of the Fuyo business group to which that company belonged attempted a rescue. The major part of it was acquired by Merrill Lynch (United States). Sales of cross-holding stocks owned between banks and industrial companies in Japan were at record levels in 1998.<sup>b</sup>

There are still institutional problems and difficulties in transacting M&As in Japan. M&As also have been, at least until recently, a difficult option for firms. Although there has been encouragement by the Government of Japan to implement the stock-exchange option for M&As, firms virtually could not use this option as the stockholders of the acquired firms had to pay taxes immediately when receiving new issues from the acquiring firms, in accordance with the Japanese tax system until 1999. There are, as yet, few mega cross-border M&As involving sales of Japanese firms: there was only one mega deal in Japan in 1998 – the acquisition of Nikko Securities by Salomon Smith Barney Holdings of the United States, ranked 85th in the league table of world-wide M&A sales (annex table A.III.1); and only two such cases in all so far.<sup>c</sup>

Source: UNCTAD.

<sup>a</sup> In fact the word “takeover” is translated into Japanese as “hijacking”.

<sup>b</sup> *Nihon Keizai Shimbun*, 25 December 1998. The share of the stocks of industrial firms owned by banks in total stocks declined to 40 per cent by 1998, compared to 44-45 per cent in the early 1990s. Similarly, stocks of banks owned by industrial firms decreased its share from 16.5 per cent to 15 per cent during the same period.

<sup>c</sup> The other case is the acquisition of Rocket Systems Corp. by General Motors in 1996 for \$1 billion.

In the developing countries of South, East and South-East Asia, the value of majority-owned cross-border M&A sales increased, but that of all cross-border M&As declined in 1998, after continuously high levels over the past several years (annex table B.7). The largest declines in cross-border M&A sales (both all and majority-owned) were in China, Hong Kong (China) and Indonesia. In the five countries most affected by the financial crisis of 1997-1998 as a group, the value of cross-border M&As in 1998 was higher than in 1997, largely due to increases in cross-border M&As in the Republic of Korea and Thailand. In the case of Malaysia, where FDI inflows in 1998 were almost comparable to those in 1997, the situation is ambiguous: while majority-owned cross-border M&As increased, all cross-border M&As (including portfolio M&As) declined.<sup>19</sup>

The decline in total cross-border M&As in the Asian region as a whole may be temporary. It is probably not caused by a decreased interest of foreign firms in Asian firms or a lower number of Asian firms up for sale, but rather by a time lag before firms potentially up for sale are put on the market. The countries in this region have only recently begun to restructure their banking industry. Many of those banks are creditors of firms that seek purchasers. As the restructuring of the banks proceeds, a number of firms may be up for sale in the M&A market.<sup>20</sup> In Asia, this institutional factor – together with some loss of attractiveness of firms after the financial crisis in certain countries – has played a role in the decline in cross-border M&As.

## ***b. Purchases***

Trends are also significant on the purchase side of cross-border M&As. The largest purchaser country in 1998 was the United Kingdom, replacing the United States in that position for the first time since 1990 (UNCTAD, 1998a and annex table B.8). Three of the seven transactions with more than a \$10 billion acquisition value announced in 1998 involved United Kingdom firms. This momentum has continued well into 1999 and has led to other mega deals such as the acquisition of AirTouch (United States) by Vodafone for \$66 billion and of General Electric Company's Marconi Electronics (United States) by British Aerospace for \$13 billion (table III.18). The strong pound has been a factor. More importantly, however, United Kingdom firms, like those in other European countries find that, in the industries in which the country's comparative advantages are threatened (such as oil, telecommunications and utilities), consolidation with other large firms is the only feasible way of maintaining and improving their competitiveness. Because of this, their M&As were in most cases concluded with relatively highly competitive firms in the same industries in the United States: 12 out of 17 mega deals made by United Kingdom firms targeted United States firms (annex table A.III.1).

These deals between United Kingdom and United States firms contrast sharply with those by continental European firms. Only one tenth of cross-border deals by United Kingdom firms were with other European firms in 1998.<sup>21</sup> Continental European firms have tended to conclude more cross-border M&As among themselves than with United Kingdom or United States firms. Even among mega deals which, almost by their very nature, tend to include United States firms because of their sheer size, 18 out of 43 cross-border M&As made by continental European firms in 1998 were concluded with firms from other continental European countries (annex table A.III.1). Compared to other European firms, those based in the United Kingdom have not opted for consolidation within Europe. A trans-Atlantic consolidation (United States – United Kingdom) may scuttle a pan-European solution to the restructuring in various European industries faced by declining competitiveness, such as the defence and oil industries. As the largest investor in the European Union as well as a large economy accounting for about 15 per cent of the European Union's GDP, the involvement of United Kingdom firms in that process could be crucial.

The share of continental Europe in all world cross-border M&As was stable between 1997 and 1998, but declined in majority deals in 1998 (annex table B.8). Higher competition drove up the prices of potential targeted firms, which reduced interest among possible acquirers.<sup>22</sup> Some of them were, of course, still concluded because of strategic reasons arising from the completion of the monetary union and the introduction of the Euro. The industries in which M&As are taking place in continental Europe vary widely, from petroleum to financial

services, reflecting the diversity of comparative advantages of the countries and the competitive advantages of their firms.

Cross-border M&As by Japanese outward-investor firms declined in 1998; Japan was the only country among major home countries with such a decrease in M&A activity. Moreover, for Japanese TNCs, M&As continue to be a less preferred mode of entry than greenfield FDI, although in some host regions (such as North America and Western Europe), the share of cross-border M&As in total cases of investment by Japanese TNCs increased (table III.19). Although the recent decrease in FDI outflows from Japan seems to be due more to a decline in cross-border M&As rather than in greenfield FDI, cross-border M&A investments from Japan are likely to grow again in 1999 (chapter II).

### c. *Industry composition*

Recent cross-border M&As have been concentrated in industries that are losing comparative advantages; are faced with over-capacity or low demand (e.g. automobiles and defence); high R&D expenditures (e.g. pharmaceuticals); changes in modes of competition as a result of new technological orientation (e.g. oil and chemicals); or, yet, that have gone through liberalization and deregulation (e.g. financial services and telecommunications).

The industry that recorded the largest cross-border M&As by value in 1998 was the oil industry (accounting for 14 per cent of the total), followed by the automobile industry and the banking and telecommunication industry (annex table B.9). The non-petroleum mining and refining industries also experienced a record year (box III.3). Cross-border M&As in the automobile industry showed the most dynamic growth in 1998, and more big deals seem to be in the pipeline (UNCTAD, 1998a).<sup>23</sup> Large M&As in the banking and financial services industry over time – more than in any other industry – point to an ongoing and long restructuring process that is still provoking further deals in this industry. Liberalization and privatization of telecommunications assets in many countries have also begun to attract large deals. The significant increase in cross-border M&As in the latter industry in developing countries in 1998 was due mainly to the privatization of the Brazilian telecommunications industry. The chemical industry (including pharmaceuticals) is also an industry with a rising incidence of M&As.

The production and distribution of electricity, as well as other utilities, are another industry group poised to involve an increasing number of cross-border M&As, reflecting the liberalization and deregulation of the industries involved: in the United Kingdom and the United States, dramatic increases in the value of M&A deals (annex table B.9) and in the number of mega deals (annex table A.III.1) have already occurred. As other countries liberalize these industries, more M&As are likely to occur. Another notable area in which M&As are likely to proliferate in the near future involves firms in high and rapidly-changing technologies such as software (classified in business services in annex table B.9). As typified by the case of Microsoft, these types of firms have normally taken an organic pattern of growth, relying on in-house R&D and technology building. However, as technology changes make possible the interfaces between hitherto separate industries, M&As are likely to be used by firms in order to become technology giants (chapter III.C).<sup>24</sup> Microsoft has begun to use M&As as a corporate strategy, investing \$500 million in NTL (United Kingdom) and \$300 million in United Pan-European Communications (Netherlands) in 1999.<sup>25</sup>

**Table III.19. The significance of M&As as a mode of entry for Japanese FDI, by region, 1983 and 1995<sup>a</sup>**

(Percentage of total number of Japanese affiliates abroad)

Region/country	1983	1995
Developed regions <sup>bc</sup>	15.7	16.5
North America	12.6	14.9
United States	11.0	14.6
Europe <sup>b</sup>	16.5	18.0
European Union	12.9	18.0
Oceania <sup>c</sup>	27.1	19.5
Developing regions	17.1	7.7
Africa <sup>d</sup>	23.3	5.0
Latin America and the Caribbean	17.2	8.2
South, East and South-East Asia	17.1	7.7
ASEAN	15.7	6.7
West Asia	5.9	4.8
World	16.5	11.8

Source: Japan, MITI, 1986 and 1998a.

a Fiscal year ending March in the following year.

b Includes Central and Eastern Europe.

c Includes the developing Pacific.

d Includes South Africa.



**Box III.3. M&As in the metal mining and refining industries: a record year in 1998**

Over \$12 billion were spent on cross-border M&As in the metal mining and refining industries world wide in 1998. This was the second consecutive year of strong growth in M&As in these industries. The increase becomes more significant when compared to the present decline in exploration expenditures. Exploration expenditures world wide were estimated to be in the order of \$4-5 billion in 1998, falling by some 30 to 40 per cent as compared with 1997. M&As, whether cross-border or domestic ones, have become the most favoured way of growth and expansion in the mining industry. Most M&As target gold companies and gold mines. Aluminium/bauxite, lead/zinc and nickel follow. The bulk of the investments, approximately half, has gone to developed countries with a stable political environment: Canada, United States, Australia and Western Europe. The wave of M&As has also reached industrial minerals and coal mining.

There are a number of reasons for the continued M&A frenzy in the industry, some of them mining-industry specific, others of more general relevance in today's global economy:

- Continued low metal prices and concomitant low share values make it relatively cheap to buy operating companies and mines.
- The economic downturn in the mining industry in general necessitates restructuring to restore profitability.
- The political and economic changes in South Africa have set in motion a series of structural changes that not only shake the domestic mining houses to their foundations, but also the mining industry world-wide.
- More and more exploration work is initially made by juniors – small and independent companies. A transition phase has to follow, when a deposit is transferred from a junior to a larger mining company with enough capital to exploit the potential mine. These projects will hence be regularly offered for sale.
- M&As offer a way of avoiding the costly, risky and long exploration phase of a mine project. The deeper and more remotely new ore-bodies are located, the riskier this phase becomes; M&As become more attractive to companies that can afford them.
- A premium is put by investors on growth in the industry. Linked to this is also a less important but still common wish of the top executives to lead a larger company and also, potentially, the largest one.

There are also some factors running counter to those that encourage M&As:

- Local political opposition and trade unions that fight to retain local enterprise ownership and jobs.
- Anti-trust legislation and anti-trust watchdogs especially in Europe and North America.
- The poor profits made on some M&As.
- During the early and mid-1990s privatizations have been an important driver for M&As; but this factor has lost its importance by now.

In spite of the high level of M&A activity during the past two years, M&As in the mining industry are dwarfed by the deals currently made in other industries. Indeed, the level of concentration in most branches of metal mining is low compared to other industries. Therefore, even though the pace of M&As has slowed down somewhat in early 1999, it could pick up again, even if at a lower pace than before. The need to restructure increases further if metal prices do not recover quickly enough.

*Source:* Raw Materials Group (1999).

## **2. Reasons**

The present wave of M&As is quite different from that which took place during the 1980s. The earlier wave mainly involved manufacturing firms and was facilitated by leveraged buy-outs and the development of new financial instruments. The current wave is broader, includes many cross-border deals and is propelled by a different set of forces. The possibility of financing deals through an exchange of stock between acquired and acquiring firms has



facilitated this process. In this new context, firms are driven by a combination of forces and motivations, including in particular the following:

- As markets open up due to the liberalization of trade, investments and capital markets, to deregulation, especially of services, the privatization of state-owned enterprises, and the relaxation of controls over M&As in a number of countries, opportunities for M&As widen. At the same time, the pressure of competition brought about by globalization and technological change intensifies. Under these conditions, managing a portfolio of locational assets becomes more important to the firm, enabling it to take advantage of resources and markets world-wide. The speed with which it builds such a portfolio is itself a competitive advantage and the fastest way to establish a presence in the world's principal markets and obtain both access to resources – from natural resources to created assets – is through M&As.
- In a globalizing economy, size is a crucial parameter. It facilitates expansion abroad and creates financial, managerial and operational synergies that reduce the vulnerability of firms to economic shocks in any one regional or country market at the same time as it opens possibilities for the exercise of market power within these markets. Size is also a critical factor in creating economies of scale, particularly in industries faced with heightened competition or with contracting markets and excess capacity. In the current wave of M&As, firms not only seek size but also focus on core activities and rationalize operations across their global production network.
- Perhaps more importantly, size puts firms in a better position to keep pace with an uncertain and rapidly evolving technological environment, a crucial requirement in an increasingly knowledge-intensive economy, and to face soaring costs of research. In some industries (especially high-technology industries), the possibility for successful companies with complementary technologies to extend their reach is also a powerful motivation.<sup>26</sup> In addition, the impact of technology has led to a redefinition of boundaries in a number of industries (see chapter III.C), forcing firms to reconsider their strategies.

Other motivations include efforts to attain a dominant market position, and, in some cases, the search for short-term capital gains in terms of stock value. All the factors mentioned above play out differently in different industries. But once the established equilibrium in an industry is disturbed by the move of one firm, and under conditions of strategic interdependence under uncertainty, rival firms react through countermoves to protect their oligopolistic positions *vis-à-vis* other major competitors (Schenk, 1999). This sort of imitation may easily develop into a cascade. Even firms that might not want to pursue this course may be forced into it for fear of becoming an acquisition target themselves. Moreover, if they do not move early enough, they may have fewer options to find a suitable partner. Since large size is a more effective barrier against takeovers than profitability, firms may therefore pursue M&As for no other reason than to defend themselves against its effects and to create “strategic comfort” (Schenk, 1999). By doing so, they fuel the merger boom. This latter factor in particular explains partly why the number of M&As increased significantly in recent years, notwithstanding the fact that a number of these deals do not result in increased performance.<sup>27</sup>

### 3. Impact on development

Cross-border M&As change not only the ownership but also the nationality of the acquired firms. In other words, these transactions involve a transfer of ownership of assets from the country in which the acquired company resides to the country in which the acquiring company resides. This means that, among other things, the post-acquisition benefits from the operations of the acquired firms no longer accrue exclusively to the country in which they take place.

There are several differences between cross-border M&As and greenfield FDI in terms of the benefits they bring to a host country (UNCTAD, 1998a, pp. 212-214). However, it is almost impossible to assess in general terms the impact of M&As on host economies. Some of

the effects of M&As are likely to differ between developing countries, transition economies and developed countries. Several economic effects emerge only indirectly, depending on corporate strategies and the microeconomic motivations that make firms engage in M&As. Short-term effects provide an incomplete picture, or may even give rise to ill-conceived perceptions of M&As. Taking long-term effects into account, the differences between M&As and greenfield FDI may be less striking than is frequently suggested.

Most developing countries prefer greenfield FDI over M&As. The primary reason for this preference is that M&As merely involve a change in ownership of the acquired assets, and there is no new addition to the capital stock or production capacity of the host country, at least in the first round. Since capital formation is a key prerequisite for development, greenfield investments that establish new production facilities are preferred. In addition, the fact that all or part of the profits from the operations of the acquired firms now accrue to the new foreign owners and no longer to local investors is also considered a disadvantage.

Nevertheless, developing host countries can derive gains from M&As. Even though M&As do not create new assets directly, they involve cross-border capital transfers that can increase total investible funds available to host countries. The benefit to capital-constrained host countries are still greater if M&As induce sequential and associated FDI by the acquiring companies and their suppliers – which is often the case (UNCTAD, 1995a, p. 146). M&As, like greenfield projects, can offer access to technologies that local firms do not possess. As greenfield projects too, they may introduce innovative management practices in the host country and/or render it easier to become part of global sourcing and marketing networks of the acquiring TNC, thereby improving opportunities to penetrate international markets.

M&As can be valuable for host countries when they prevent potentially profitable assets from being completely wiped out. This is relevant, for example, in the context of privatization-related M&As in transition economies and sales of firms in financially distressed developing countries. The transition to a market system may leave loss-making state-owned companies with no alternative but to declare bankruptcy, unless a private investor – foreign or domestic – with sufficient resources is willing to revitalize the ailing company. Frequently, the resources have to come from abroad, given the serious financial and technological constraints facing firms in early stages of economic transition. For example, transition economies in Central and Eastern Europe lacked the financial and technological resources to modernize former state-owned companies in service industries such as telecommunications. Basically the same thing applies to a number of developing countries in which communication, transport, energy and financial systems are privatized, or in which, under adverse economic circumstances, financially distressed firms are forced to seek buyers for their assets. M&As in the latter situation tend to be particularly contentious because they frequently involve a difficult trade-off; on the one hand, sales to foreign investors can prevent bankruptcies of solvent, though illiquid, domestic companies; on the other hand, they may amount to giving away assets at very low prices. This risk can be contained, however, if the relevant assets are offered for sale to competing bidders, e.g. through auctions.

The precise nature of the post-acquisition impact of M&As depends, of course, on the firm-specific motivations underlying them. If, as in the case of many privatizations in developing economies and economies in transition, they are driven by the need for an infusion of capital into the enterprise being offered (fully or partly) and by a quest for markets on the part of the buyer, a transfer of capital to the host country is most likely to take place. That it will be accompanied by other benefits such as a transfer of improved technology and knowledge cannot be taken for granted. Much depends on whether the acquired firm operates in a competitive market. In the case of a monopoly industry, contributions over and above the initial infusion of capital may occur only as a result of conditions negotiated with the highest bidder.

Furthermore, it is not necessarily always the host country, i.e. the country in which the acquired firm resides, that benefits from transfers of technology and knowledge. Transfers may take the opposite way. A reverse transfer of resources and capabilities from the host country is

most likely if the acquiring firm resorts to M&As in order to draw on the unique competitive advantages that the acquired firm possesses. Such advantages can relate to both tangible and intangible assets of the acquired firm such as technical competence, established brand names and suppliers and distribution networks. Such reverse transfers are, however, less likely to occur from firms acquired in developing countries to acquiring firms in developed countries.

In addition to the question of additions to resources and capital stock that are especially important for developing countries, concerns regarding the economic impact of M&As shared by both developing and developed countries include the following:

- Consolidation and rationalization typically result in employment reduction, at least in the short run (table III.20). As many as 73,000 persons were laid off in 1998 from companies involved in M&As, both domestic and cross-border, in the United States, accounting for 11 per cent of total job losses of that country in that year.<sup>28</sup>
- M&As may reduce competition in the host country and/or the home country. This risk tends to be greatest in those industries in which shrinking demand and excess capacity are important motivations for M&As, and in countries where competition policy does not exist or where its implementation is weak. However, the actual impact on competition depends upon the situation with respect to freedom of entry and effective competition policy. (See also section C below).
- M&As could induce fiercer tax competition between developed countries. Cross-border M&As make it easier to shift profits to the country with the lowest tax rates.

From a long-term perspective, one of the most important factors affecting the impact of M&As on host country development relates to the productivity of the merged or acquired firms. It is difficult to measure quantitatively the impact of cross-border M&As on productivity. One way is to compare the productivity of the acquired firms before and after M&As. At the individual company level, there is some evidence on this for United States firms acquired by Japanese TNCs (UNCTAD, 1995a, p. 183).<sup>29</sup>

At the aggregate level, a survey on Japanese TNCs in 1989 (the most recent available year) shows that less than one half (47 per cent) of firms acquired by Japanese TNCs improved their profitability or kept it constant (Japan, MITI, 1992). There are some regional differences, though: in North America only 37 per cent of Japanese affiliates acquired through M&As improved profitability, but in Asia this share was as high as 70 per cent. In all regions, however, profitability of some one fifth of firms acquired by Japanese TNCs declined by more than 10 percentage points. Interestingly, however, in firms acquired in Asia or Latin America where, in more than one half of the cases, Japanese executives replaced the old management, the profitability improved compared to those firms in which the old management remained to stay (two-thirds of the cases in North America).

On the whole, experience suggests that productivity-enhancing effects of M&As cannot be taken for granted. The failure of many M&As to improve productivity can sometimes be attributed to the difficulties of combining different management styles and corporate cultures.<sup>30</sup>

For governments in host and home countries, the critical question obviously is whether the positive economic effects that M&As may induce indirectly and in the longer run outweigh the negative effects that may be connected immediately with M&As.

**Table III.20. Employment cuts in selected cross-border M&As**

M&A deal	Industry	Year of deals	Number of job losses
Astra-Zeneca	Pharmaceuticals	1998	6000
BMW-Rover	Automobile	1994	3000 <sup>a</sup>
British Petroleum-Amoco	Oil	1998	6000
Goodyear-Sumitomo			
Rubber Industries <sup>b</sup>	Tyre maker	1999	2800
Hoechst-Rhône-Poulenc	Pharmaceuticals	1998	10000

*Source:* UNCTAD, based on various newspaper accounts.

<sup>a</sup> Planned in 1999.

<sup>b</sup> Strategic alliance.

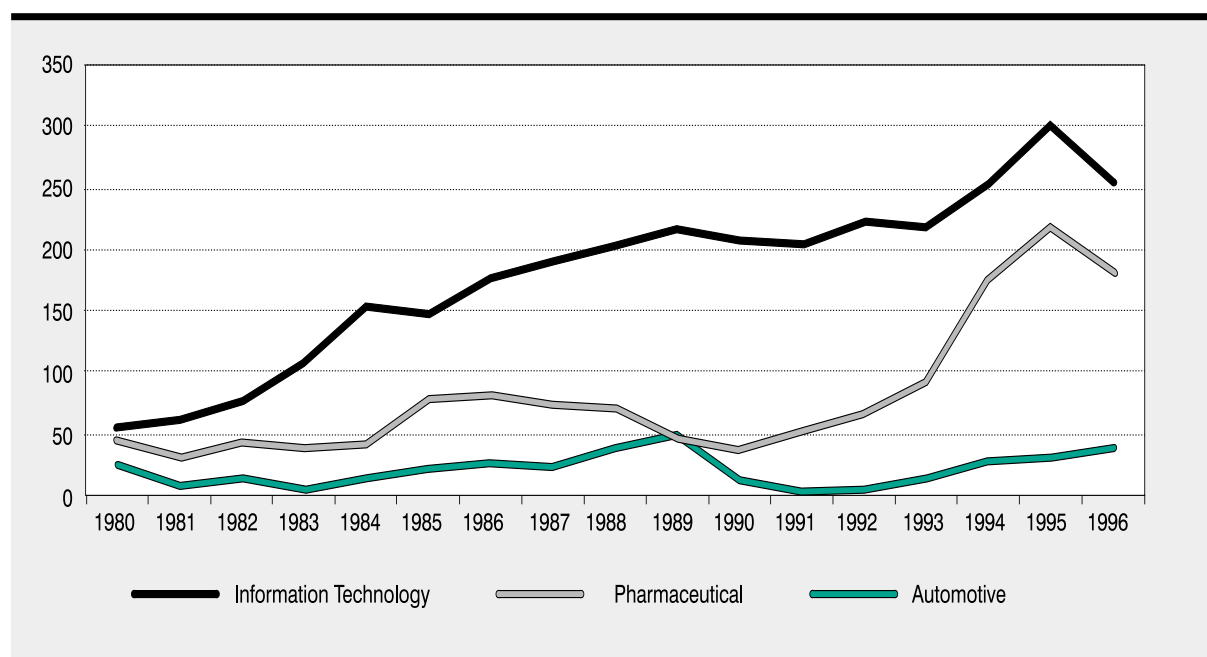
This depends on various factors, including the circumstances in which firms sell their created assets to foreign buyers and the alternatives that they face. Under special conditions in which infusions of capital into state-owned enterprises earmarked for privatization or into private firms facing bankruptcy or financial problems are critical, M&As clearly have a role to play simply as providers of finance for the survival of established firms and assets already created. In the long-run, and in normal times, the successful integration of merged companies, leading to productivity improvements, is what matters most.

### **C. Strategic partnering, M&As and their implications for the competitive environment**

The growth of strategic partnering (UNCTAD, 1998a), coupled with the accelerated pace of M&As in the 1990s, both cross-border and between domestic firms, has given rise to questions concerning their implications for the competitive environment. Attention has been drawn in particular to the information and communications technologies and the pharmaceutical and automobile industries because of their global reach and the role that technological and organizational innovations are playing in shaping the rules of competition within them.

As competition is globalizing and becoming more innovation based, firms in these industries have intensified their search for ways to reduce the costs, risks and uncertainties associated with a process of continuous innovation. Strategies such as vertical integration and M&As have traditionally been used to reduce costs and to manage risks and uncertainties, notably by creating size barriers to entry. Strategic partnerships, though they tend to be contractual in nature with little or no equity involvement by the participants have also proven to be effective here and in addition confer the flexibility needed to adjust to changing competitive conditions. The strategic importance of flexibility can be seen in the rising number of technology partnerships that have been formed in the information technology, pharmaceutical and automobile industries during the 1990s (figure III.6).

**Figure III.6. Number of inter-firm technology agreements, by selected industry, 1980-1996**  
(Percentage)



Source: Merit/UNCTAD database.

This does not mean that size has ceased to be an important critical asset of firms. The intensification of competition in markets around the world during the late 1980s and early 1990s has led to the renewed salience of size considerations, even in industries, such as the information technology and automobile industries, in which a process of deverticalization has been underway. This is evident in the sharp increase in the number of M&As (domestic and cross-border) that have taken place over the past decade in these two industries. These rose from an annual average of 2,437 deals in the first half of the 1990s to 6,229 deals per year in 1995-1998.<sup>31</sup> In the first four months of 1999 alone, a total number of 2,751 M&As were announced. Of the 947 deals for which a value was known, 103 were in the communications industry, 420 in computer software, supplies and services and 31 in automotive products and accessories<sup>32</sup>.

## 1. Concentration and the formation of traditional oligopolies

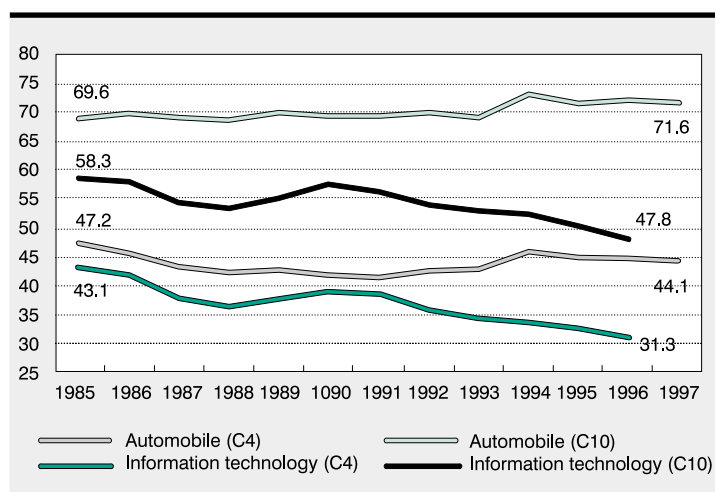
For the most part, competition authorities focus on the extent to which M&As might lead to the creation of a monopoly or contribute to oligopolistic market behaviour. Concentration ratios are one indicator of the possible emergence of monopolistic or traditional oligopolistic market behaviour within a given industry. Provided that the industry in question has relatively stable boundaries, the shares of the top one, four and 10 companies in industry output can be calculated. The assumption here is that size, as reflected in a firm's market share, confers market power over prices and enables large firms to take advantage of static size barriers to entry. These can be found, for example, in the cost of advertising and after-sales services in the automobile industry and clinical testing and certification in the pharmaceutical industry.

Rising numbers of M&As over the 1990s and the particularly sharp increases in the number of M&As during 1995 - 1997 would normally be expected to lead to higher levels of concentration, especially in industries such as information technology where M&A activity was most intense. However, concentration ratios for the top four firms in the information technology industry<sup>33</sup> fell from a high of 43 per cent in 1985 to 31 per cent in 1997 (figure III.7). There was also a modest decline in the 10-firm concentration ratios in this industry over the same period. In the case of the automobile industry,<sup>34</sup> the four-firm ratio shows a small decline, from 47 per cent in 1985 to 44 per cent in 1997. But the 10-firm ratio shows a small increase.

Two factors stand out as possible explanations for the variability reflected in the data on industry concentration. First is the role that strategic partnerships play along side M&As in strengthening the market power of large firms within and across national markets. Traditional tools used to analyse the emergence of oligopolistic market structures do not take such partnerships into consideration. Second is the way in which the boundaries of industries are being redefined, often through a combination of strategic partnering activity and M&As. This blurring of industry boundaries makes it more difficult to interpret changes in concentration ratios and relate them to competitive conditions in a given industry. A closer look at the automobile and the information and communications industries will illustrate these points.

Enterprises have always tried to keep an eye on their close competitors. This is simply good competitive practice. But

**Figure III.7. Concentration ratios of the top four and top 10 companies in the information technology and automotive industries**



Source: Merit/UNCTAD database.



oligopolistic market theory suggests that, as firms encounter each other across multiple product markets, the opportunities for learning each other's strategies increase and so, too, do the incentives for collusion. By analogy, if encounters across many markets are conducive to collusion, meetings across multiple strategic partnerships might have a similar effect. Some early evidence for this hypothesis emerged in a study of the European Strategic Programme in Research and Development on Information Technology (ESPRIT), a programme to promote R&D partnerships among European information technology firms where the latter were defined narrowly to include computer, semiconductor and software companies.<sup>35</sup> During its first two phases which covered the years 1983-1991, Europe's big 12 information technology firms were able to build the bases for a "defensive oligopoly" through their high rates of participation in the ESPRIT programme and the multiple encounters across the 561 R&D projects that were created in this period (Mytelka, 1995). Firms like Thomson, Siemens, Bull and Philips were each involved in over 70 of these R&D consortia and encountered each other in many of the core technology projects of the period.

Data on research joint ventures<sup>36</sup> in the United States registered with the United States Department of Justice and the Federal Trade Commission show a similar pattern of intensive multiproject interaction within standard industrial classification categories. Over the period 1985-1995, a total of 575 new research joint ventures were registered. Telecommunications was the largest single technical area in which such ventures were created, accounting for 23 per cent of the total<sup>37</sup> (Vonortas, 1997, p. 581). Technologies of relevance to the automobile industry variously classified under the headings of environmental, advanced materials, energy and transportation technologies accounted for the second largest group of research joint ventures. Although some two-thirds of the participants were involved in only one research joint venture, 10 companies were involved in 50 or more of these alliances. Five of these were oil companies. But United States firms from the automobile and information technology industries that participated most actively were also among those most involved in multiproject encounters. These included GM, IBM and AT&T (box III.4). The frequency with which large diversified corporations meet in research joint ventures in the United States and their multiple encounters in product markets "...strengthens the possibility of collusive play [and,] if the problem was pervasive, the long-term results could be felt in the form of lower economic competitiveness and loss in consumer welfare" (Vonortas, 1999, p. 13). Not only did large American firms meet each other with considerable frequency through research joint ventures within the United States but they also encountered their principal Japanese and European rivals (box III.4)<sup>38</sup>. Capturing this dimension is one of the keys to the identification of new forms of oligopolistic market structures on a global scale.

#### **Box III.4. Research joint ventures in the United States**

Since the passage of the National Cooperative Research Act (NCRA) in 1984 and its amended version, the National Cooperative Research and Production Act (NCRPA) in 1993, the number of research joint ventures in the United States has increased dramatically. Many of these agreements are in the information, communications and automobile industries.

Through research joint ventures (RJVs), dominant firms in these industries encounter each other in a multiplicity of different research joint ventures. GM, the world's top automobile manufacturer, with nearly 15 per cent of world production, participated in 105 research joint ventures, encountering Ford in 33 of these and Chrysler in 21. Ford and Chrysler encountered each other in 19 research joint ventures. IBM, the top firm in the information technology industry with 17 per cent of the world market, was a partner in 69 research joint ventures. It met Digital Equipment (DEC), in 32 projects and Hewlett-Packard (HP) in 26, both of which are among the top 10 firms in the global information technology industry. AT&T, the leading firm in telecommunications, was involved in 75 research joint ventures, meeting DEC in 27 of these and Hewlett-Packard in 23. DEC and HP met each other in 27 research joint ventures. AT&T met IBM in 31 projects.

Within the United States, leading American firms also encounter their Japanese and European rivals. IBM, for example, encountered Fujitsu (Japan) in 15 RJVs, Siemens (Germany) in 14, Groupe Bull (France) in 12, Thomson-CSF (France) in 11 and Hitachi (Japan) and Alcatel (France) in 10 each. Similarly, AT&T encountered Northern Telecom (Canada) in 18 RJVs, Fujitsu and NEC (Japan) in 15 RJVs each, Siemens in 14, Groupe Bull in 13, Hitachi in 12 and L.M. Ericsson (Sweden) in 10. Through United States-based RJVs, European and Japanese firms have also met each other frequently. Siemens, for example, participates in 35 RJVs in the United States. In addition to its RJVs with United States firms, it meets Fujitsu and NEC in 13 RJVs, Groupe Bull in 11, Alcatel and British Telecom in 10.

*Source:* Vonortas, 1997.

## 2. Strategic partnerships, M&As and the creation of knowledge-based networked oligopolies

A second key to the identification of new forms of oligopolistic market structures on a global scale is to examine the nature of changes in the boundaries of industries and of the rules of competition within them. The formation of traditional oligopolies, as described above, is based on three relatively static pillars: the ability to identify a small number of competitors, mainly other domestic firms, among whom mutual interdependence and forbearance are practised; the set of products or the industry within which oligopolistic competition takes place; and the technological trajectory which these products will follow. The globalization of knowledge-based competition has made it increasingly more difficult to identify potential rivals in distant markets. Even more difficult to predict in this period of rapid technological change are one's competitors when these may emerge from other industries as a result of a technological discontinuity or through the combination of hitherto unrelated generic technologies. Digitalization in the data processing industry leading to what became known as the information technology and later the information and communications technology industry is one such example.

At their origin, all computer manufacturers were vertically integrated companies that produced their own hardware, proprietary operating systems (software) and the semiconductors that made computing possible. IBM dominated the field. When digital Equipment Corporations (DEC) sold its first mini-computer without software bundled-in, it broke with this tradition and created an opportunity for software producers to emerge on this new horizontal segment. A new market niche for alternatives to the mainframe computer also now opened. Over the next decade semiconductor manufactures formed a second horizontal segment in the data processing industry and the introduction of the personal computer by Apple in 1997 led to further differentiation among end products in the data processing industry. The development of workstations and new microprocessors based on reduced instruction set computing (risc) designs further widened the field of competition in the information technology industry as a whole. Within it, however, a variety of knowledge-based networked oligopolies began to form.<sup>39</sup> They share four principal characteristics (Mytelka and Delapierre, 1999):

- They are knowledge-based, i.e. involve collaboration in the generation and use of or control over the evolution of new knowledge. As a result, the new knowledge-based oligopolies are dynamic, seeking to organize, manage and monitor change as opposed to rigidifying the status quo.
- Their focus is less on creating static size barriers to entry than on shaping the future boundaries of an industry and the technological trajectories, standards and rules of competition within them which themselves are a source of dynamic entry barriers. In the 1990s, these new rules included:
  - innovation-based competition with rapid movement down the performance/cost curve,
  - equally rapid movement down the manufacturing learning curve in order to ensure higher yields, rapid ramp up in volume to reduce costs, but
  - speed and flexibility in changing over to new product generations as the product life cycle shortened and
  - increased use of M&As to extend product variety, assure brand-name recognition of products with the same basic functionality and gain market share in principal markets around the globe,
  - increased use of strategic partnering to reduce the high costs and risks of R&D needed to maintain the pace of innovation, speed up the innovation process and shape the technological trajectory within an emerging industry or industry segment, and
  - efforts to maintain positions within the core group of firms in knowledge-based networked oligopolies through which the industry's future is increasingly shaped.

- They are composed of networks of firms rather than of individual companies. Alliances thus form the basic structure and building-blocks of the global oligopoly.
- In terms of their organization, the new oligopolies can form within or across industry segments and sometimes do both at the same time. They are moving and reshaping to include new actors when the assets these actors bring to the network are complementary and eliminating others whose resources are no longer critical. The electrical and information technology industries exemplify the differences between the traditional and the new knowledge-based networked oligopolies (figure III.8).

**Figure III.8. A comparison of the principal characteristics of a traditional and a knowledge-based networked oligopoly: the electrical and the information technology industries**

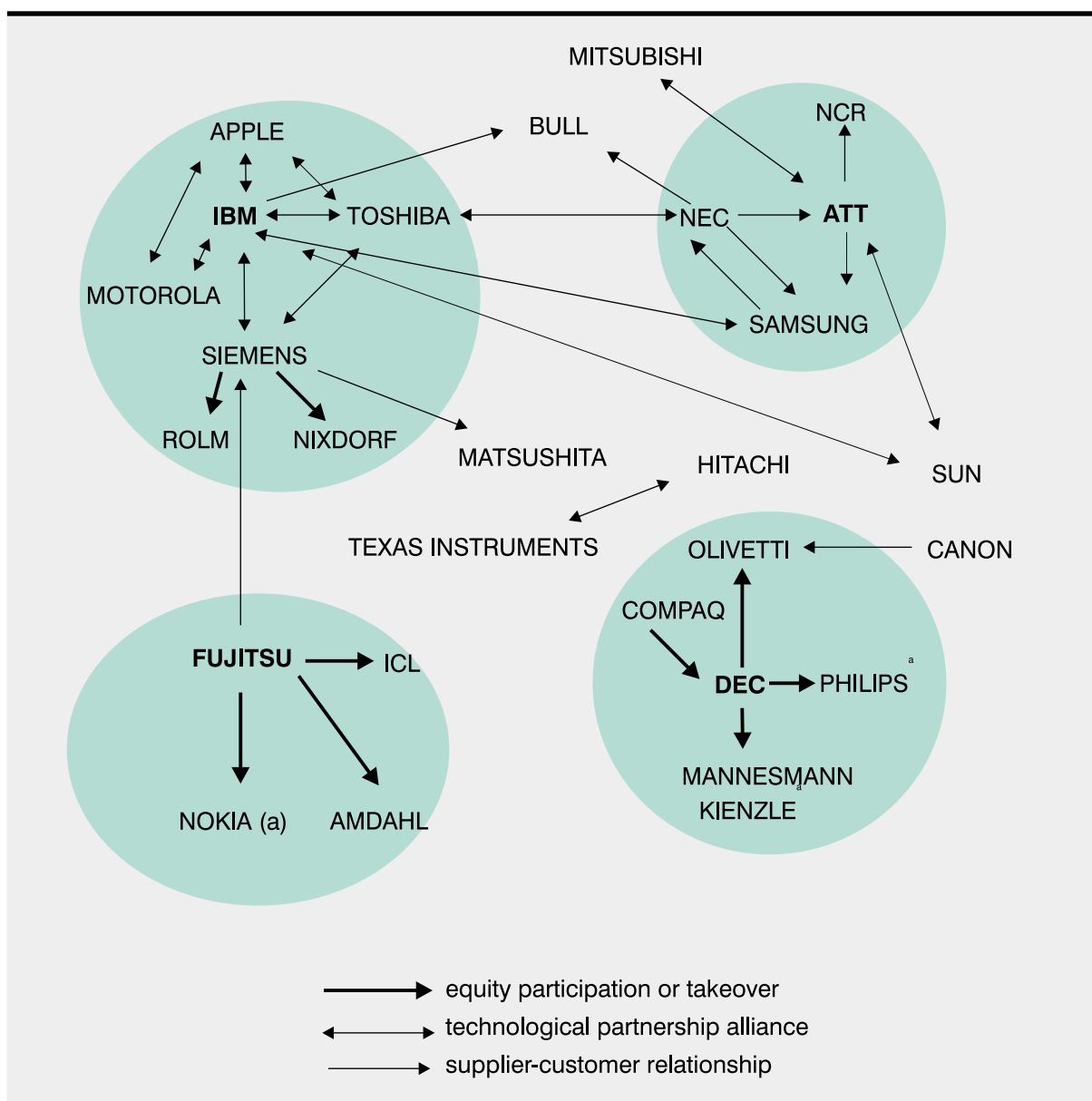
Traditional oligopolies		Knowledge-based networked oligopolies
Foundation	Size.	Knowledge.
Basis of competition	Costs and market shares nationally and globally.	Continuous innovation at the global level, although more traditional oligopolistic rivalry may exist within segments of the industry and in national markets which are relatively closed.
Basis of regulation	The ability to manage the <i>stocks</i> of competencies as embodied in patents which are pooled and allocated in function of the position held by the firms within the oligopoly.	The ability to manage the <i>flow</i> of knowledge through the use of knowledge-producing and sharing alliances in R&D, production and marketing.
Means of regulation	Negotiated arrangements including cross licensing among leaders of the "technology cartel", patent pooling through joint ventures, allocation of markets geographically. Patent pooling allows the leaders to oblige licensees to acquire whole packages of patents thus creating a cost-barrier to entry, enables them to select which firms can become licensees, to impose restrictive clauses on the use of such licenses and ensure that such firms do not seek recourse through the legal system to obtain better conditions for the use of these patents thereby reducing the likelihood that licensing will create future rivals. The welfare consequences are felt immediately in the form of higher prices.	Informal and formal arrangements are concluded through which research is undertaken jointly, thus creating research barriers to entry, orchestrating the pattern of diversification in the industry and shaping the direction of R&D which in turn influences the standards for new products, the timing of their commercialization and the price at which they will be offered on the market. R&D alliances among competitors for example potentially lock out rivals, while R&D alliances with users lock in potentially large clients, monopolizing downstream or upstream markets as effectively as vertical integration has done in the past. Through technological lock-in, moreover, the welfare consequences, in terms of future opportunities and constraints on technological change, are potentially enormous.

Source: Mytelka and Delapierre, 1999, p. 134.

The global range of partners and the complementary use of M&As and strategic technology partnerships that characterized the knowledge-based networked oligopoly in the semiconductor industry that emerged during the 1990s can be illustrated for data processing (figure III.9). Its various nodes were constituted around traditional oligopolistic firms, thus permitting their survival and dominance within the traditional configuration of the data processing industry, formed mainly through linkages between software, semiconductor and hardware producers.

From the mid-1985, the growing use of digital switches in the telecommunications industry made a merger of information and communications technology industries possible. Initially larger firms from both industries sought to acquire a foothold in each other's industry but this strategy failed to overcome a number of obstacles raised by the specific nature of computing and telecom functions as well as by the modes of interaction with their respective users.<sup>40</sup> Over the next 10 years, the focus of the information technology and the tele-communications industries blurred and competition intensified as the terrain became populated by new players operating on wholly new segments, many of which were focused on the internet.<sup>41</sup> They have

Figure III.9. The main nodes in the data processing networked oligopoly during the 1990s



Source: Delapierre and Mytelka, 1998, p. 87.

since been joined by service and content providers from other industries in challenging the established core players in the earlier information and communications industries.

To a large extent this blossoming of competition was a consequence of the multiplicity of ways in which the technologies needed for internet access, for the transmission of data at high speeds and for the user interfaces could be combined.<sup>42</sup> Within each of these segments, however, M&As were strengthening the position of frontrunners. AOL, for example, acquired rival Compuserve and then took over Netscape. Cisco bought 25 smaller firms between 1993 and 1996 and nearly 10 every year in the two following years in a bid to survive on its horizontal segment as an independent player much as Intel and Microsoft had done in microprocessors and operating systems. But the new rules of competition required firms in this industry to innovate continuously, to extend product variety and to provide complete solutions to the telecommunications operators. This has led the world's largest telecommunications equipment firms to move rapidly towards the incorporation of the network system segment. Lucent Technologies acquired Livingstone and later Ascend Communications, Alcatel bought DSC Communications and Northern Telecom merged with Bay Networks.

M&As alone, however, have not served to define the boundaries of the new industry, and jockeying for power and position continues. For both traditional oligopolists and potential newcomers, the blurring of boundaries between the telecommunications, information technology and media industries is creating new difficulties in identifying not only who one's rivals are, but what is the relevant market on which to compete. In this process strategic partnerships are playing a critical role in the creation of rival knowledge-based networks of firms that cut across these previously distinct industries and position themselves on these rival market possibilities (box III.5). Within each of these networks, larger firms are attempting to shape the boundaries of these new markets by setting the standards, selecting the core technologies and establishing the new rules of competition within them.

In contrast to the information and communications technology industry, the boundaries of the automobile industry are still relatively stable, through they have extended from the national to the global. The changing nature of competition within the industry, however, is accelerating the pace of concentration within each of its two main horizontal segments, auto parts and assemblers, and leading to the creation of new forms of partnership between them. These changes have contributed to the development of aggressive market entry strategies for the new auto parts system integrator firms into major markets around the world, adding to the globalization of this industry and altering the competitive environment within it.

The rules of competition in the automobile industry closely parallel those in the information technology industries described above. Competition is increasingly innovation-based, and product differentiation takes place through a process of continuous innovation and through M&As that enable the automobile assemblers to position themselves across a wide

**Box III.5. Knowledge-based networks reshape the information and communications technology industries**

M&As alone have not been able to redefine the boundaries of a new information and communications technology industry. In combination within strategic partnerships, however, they are blurring the boundaries between these two industries and drawing into the emerging industry a variety of new potential players. The new knowledge-based networks are focused on four distinct outcomes. The PC/TV link would preserve the dominant role of AT&T in the telecommunications industry and of the Wintel (Intel-Microsoft) configuration in the information technology industry by extending both to their interface with the internet. As part of this strategy AT&T has sought to reach users through the acquisition of two major cable companies, Tele-Communications Inc. and MediaOne Group. Microsoft has pursued a similar route through investments in cable companies in Europe and through a new alliance with AT&T that would put Windows CE into the TV set-top boxes of up to five million of AT&T's new cable subscribers.

To this vision of the future shape of an information and communications technology industry is opposed several others. The PC/internet connection is centred on an alliance between IBM, Oracle and Sun. The latter, a computer workstation manufacturer, has developed Java, a new software system that is able to work with any kind of computer, from small PCs to large mainframes. Its adoption would help computer manufacturers to resist the threat posed by the continuous upgrading of PCs which has contributed to the dominance of the Wintel Alliance over the past two decades. This network is seeking to promote Java as an internet software standard. The interactive TV network is the initiative of AOL and with AT&T's acquisition of that company has become a means for AT&T to hedge its bets on the future shape of the market. AOL has forged its interactive TV alliance around the provision of AOL's internet services through a satellite link, rather than through cable. DirecTV will provide the digital TV broadcasts and transmit AOL's interactive services; Hughes Network System will manufacture dual purpose, TV/Internet receiver units. Philips Electronics will develop the advanced set-top boxes that will enable users to process the interactive services and Network Computer will provide the software for these services. The interactive game console brings electronics firms such as Sony and Fujitsu into the emerging industry alongside telecommunications and computer company partners. Sega is thus marketing its Dreamcast game console with internet connection in alliance with British Telecom and Fujitsu. Sony has yet to produce its new Playstation II, but publicity bills it as a radically new approach to interactivity.

*Source:* Mytelka, 1999.



spectrum of end market products. All major automobile assemblers have used M&As to transform themselves into generalists with a presence in most dynamic product markets (UNCTAD, 1998a, p. 26).<sup>43</sup> During the 1990s, strategic partnerships with preferred “first tier” suppliers were formed for the purpose of sharing the risks and costs of designing principal components and subsystems. By reducing the number of suppliers and of distinct components and parts, these partnerships have accelerated the pace at which new products are designed. Shared platforms, modularized production, long-term contracts with a global scope and the bringing of first tier suppliers within the assembler’s own factory have further reduced costs and the uncertainties associated with a process of continuous change.<sup>44</sup>

M&As have also accelerated in the auto parts industry. Of the 620 automotive deals that were concluded in 1998, 320 involved parts suppliers.<sup>45</sup> These have taken two forms. Concentration has increased within product categories and new horizontal segments are forming as “system suppliers” extend their production to cover whole sub-assemblies. On each of these modularized segments consolidation is resulting in a relatively small number of top players. Car interiors were the first sub-assembly to be sub-contracted and today Lear Seating (box III.6), Johnson Controls and Forecia, each of which is the product of multiple M&As along with captive suppliers, Delphi (GM) and Visteon (Ford) dominate this segment. In the engineering sector the market has similarly consolidated with Bosch, Denso, Dana, Magna and TRW as the principal independents alongside Delphi and Visteon in the manufacture of axles, steering and braking systems.

Through M&As, auto parts manufacturers have increased their size, making it possible for them to take on a larger share of the design and manufacturing process and to extend the geographical scope of their activities.<sup>46</sup> This has further reinforced the links between first tier suppliers and their clients. The size barriers implicit in modularization and in the volume of purchases, the knowledge barriers resulting from the transfer of design to auto parts manufacturers and the long-term and global nature of their contracts with automobile assemblers are becoming formidable barriers to entry for potential newcomers and for the survival of local independent suppliers throughout the world.

#### **Box III.6. Lear Seating: becoming a preferred first tier supplier**

In 1993 Lear Seating secured its position in the United States seat systems business by acquiring the North American seat cover and seat systems business of Ford Motor Company. As part of the deal, Ford entered into a five-year supply agreement with Lear and the latter assumed primary engineering responsibility for Ford’s seating systems. Three years later Lear and Ford opened a joint research centre in Dearborn, Michigan. In 1994, a similar process enabled Lear to gain entry into the Italian market and to obtain preferred first tier supplier status with Fiat around the world. It also acquired a research centre in Turin. As the market advanced, Lear purchased Dunlop Cox Ltd. (United Kingdom) for its ability to design and manufacture automobile electronic and manual seat adjusters.

A series of M&As and greenfield investments in South America in 1996 and 1997 further established Lear as a global player in the seating system market, reinforcing its links to Ford and Fiat. At the same time, its acquisition of Keiper, a leading automotive vehicle seat systems supplier on a just-in-time basis for the VW group, Porsche and Mercedes-Benz, opened new markets in Brazil, South Africa, Germany, Hungary and Italy.

As modularized production of whole sub-assemblies became increasingly the norm, Lear Seating also moved to acquire assets in cockpit-related components. In 1995 it bought Automotive Industries Holding, thus acquiring the design and manufacturing capability to produce high quality interiors. In 1996 it took over Masland Corporation primarily for its floor and acoustic systems technologies and its technical centre in Plymouth, Michigan, for acoustics testing, design, product engineering, systems integration and production management and Borealis A.B. for its ability to design and manufacture instrument and door panels. Today Lear is able to fill the role of systems integrator and to manage the design, purchasing and supply of the total automotive interior.

*Source:* Securities Exchange Commission 10K form.

\* \* \*

As these two case studies have shown, in both the automobile and the information and communications technology industries, traditional size barriers have been reinstated — but with a major difference. They are no longer static but dynamic barriers in which knowledge production and the ability to undertake a continuous process of innovation are critical attributes. M&As thus add not only to the range of products and markets in which a firm can be present; but, by bringing within the firm new R&D, design and engineering capabilities, M&As contribute to the flexibility with which firms can provide new solutions to their clients in the longer term.

In a period characterized by technological, organizational or public policy ruptures, the future boundaries of an industry, however, are not certain and uncertainty clouds the ability of firms to identify clients and competitors. Knowledge-based networked oligopolies have a major role to play in reducing such uncertainty and in extending the ability of large firms to influence the shape of future industries and markets. Oligopolistic market competition, under contemporary conditions, thus depends less on the sheer number of firms in an industry as a whole than on their ability to manage a portfolio of strategic partnerships that enables them to network across industry segments. Through these knowledge-based networks, therefore, new markets can be created by establishing boundaries around new sets of standards and new combinations of technologies. While size continues to play an important role in shaping competitive conditions, the market power of dominant firms today is also a result of their ability to define the relevant market.

## Notes

- <sup>1</sup> For details on the measurement of transnationality, see UNCTAD, 1998a, box II.2 (pp. 43-44). As underlined in *WIR98*, the transnationality index measures only one aspect of a firm's involvement abroad. It does not, however, provide any information on the extent of geographical diversity of a firm's activities abroad, neither does it illustrate the degree of integration into the host economy nor the type of functions that are transnationalized. An analysis based on the number of countries in which the top 100 TNCs operate suggested last year that, while these firms are quite transnationalized, they do not exhibit a broad geographical spread (*ibid*, p. 44).
- <sup>2</sup> The *Fortune Global 500*, although having changed its name several times, has been published since 1955. Other lists include for instance *Forbes 500*, *Business Week 1,000* and the *Financial Times 1,000*. The latter two rank corporations by market capitalization, while the former two rank corporations by total revenues.
- <sup>3</sup> The lower percentage for total assets indicates the large share of total assets of financial corporations in the *Fortune Global 500*.
- <sup>4</sup> These estimations are based on the estimates on the sales, assets and employment of foreign affiliates of TNCs, as provided in table I.2 of this report. These ratios - especially those relating to sales and assets, have to be dealt with cautiously, as the data on the foreign assets and sales of the top 100 TNCs, mostly obtained through a questionnaire filled out by firms, may not necessarily correspond exactly to the definition of foreign assets and sales used in table I.2.
- <sup>5</sup> Estimations of the ratio of value added to total sales vary, usually from 30 per cent to 40 and 50 per cent (Lochsley and Ward, 1979). (See also annex tables A.I.5 and A.I.6).
- <sup>6</sup> The 1996 data on foreign sales and foreign employment published in WIR 1998 should be corrected to read respectively: \$136 billion, and 538 700.
- <sup>7</sup> South African Breweries plc relocated its headquarters to the United Kingdom in 1999.
- <sup>8</sup> The survey took place in April-May 1999. The answers enabled UNCTAD to obtain 1998 data - which was neither possible for the top 100 TNCs (a much bigger survey undertaken in January-February 1999), nor in the case of the top 50 TNCs from developing countries (a survey undertaken in February-March 1999).
- <sup>9</sup> In Latvia, Republic of Moldova and Slovenia, the ratios of foreign assets of the top TNCs from those countries to the FDI outward stock of those countries are 1.4, 1.1 and 1.1, respectively.
- <sup>10</sup> Those ratios for Hungary and Poland are 0.2 and 0.1, respectively.
- <sup>11</sup> Data for metallurgy and for business services are not shown here because they are either very low or concern a single company.
- <sup>12</sup> The average ratio of the top 50 TNCs from developing countries was about 35 per cent (table III.10).
- <sup>13</sup> Before the Second World War, there were a few international firms located in Central Europe. Some of

- them, such as Skoda Plzen (Czech Republic) reappear in the top 25 list (table III.13). Others, like Hungary's Tungsram (bought by General Electric) became affiliates of foreign TNCs. Finally, some of them such as Czech Bata, changed nationality (Bata became a Canadian-based TNC) (Simai, 1999, p. 3).
- 14 Due to data limitations, it is impossible to extract M&A transactions that correspond to the FDI definition (i.e. involve 10 per cent or more foreign control) from those that are portfolio investment (less than 10 per cent) (see definitions and sources in Annex B). In this section of the *WIR99*, cross-border M&A data refer to either total M&As or majority-owned M&As; references to "M&As" refer to all M&As; references to "majority-owned M&As" refer to such M&As only. The data are from KPMG Corporate Finance and the Securities Data Company (SDC). There are some differences in the figures provided by these companies due to different criteria used by each on the deal selection. But both sets of figures show similar trends. Although differences between them are usually small, in some years, notably 1998, the difference is large: cross-border M&As in the world reported by KPMG for 1997 and 1998 are \$342 billion and \$544 billion, respectively, while \$399 billion and \$655 billion, respectively, are reported by SDC. SDC registers all announced deals, including those that are not necessarily realized; KPMG imposes certain restrictions (i.e. exclusion of management buy-outs, requirements of definite agreement between the two parties etc.). As only the data provided by KPMG are further broken down into majority-owned cross-border M&As and others, the data relating to cross-border M&As used in this section of this chapter are from this company.
- 15 The data on cross-border M&As include not only purchases financed by portfolio investments but also those financed from domestic and international capital markets. Furthermore, the data are based on the announcement date of deals. However, if United States data are any indication, announced cross-border M&As resulting in acquisitions of United States firms and actual investment expenditures by foreign investors (foreign direct investors outside the United States and foreign affiliates in the United States) in United States business entities through acquisitions are very close: for the former, the values were \$62.9 billion in 1995, \$70.9 billion in 1996 and \$65.1 billion in 1997 (UNCTAD, 1998, p. 413), while those for the latter were \$47.2 billion, \$68.7 billion and \$64.3 billion, respectively (Fahim-Nader and Zeile, 1998, p. 42). This suggests that there is a relationship between announced cross-border M&As and actual investment in foreign affiliates.
- 16 Investment expenditures in foreign affiliates are not the same as FDI. For details, see note a in figure III.5. See also chapter I.
- 17 These stock-exchange M&As result in large, but almost entirely offsetting, capital flows in the balance of payments: the inflow of capital that results from the foreign direct investor's acquisition of stock in the acquired firm is offset by the outflow of capital recorded in the portfolio investment account, that results from the distribution to the shareholders in the acquired country of the stock in the newly established foreign parent companies.
- 18 Gwen Robinson, "Australia sees merger and acquisitions boom", *Financial Times*, 19 January 1999, p. 8.
- 19 It should be noted that in Malaysia, short-term capital transactions in stock markets have been restricted since September 1998, which partly explains this situation.
- 20 "Unconsummated lust", *The Economist*, 9 January 1999, p. 20.
- 21 The remaining balance is essentially with United States firms. *Nihon Keizai Shimbun*, 25 January 1999. Also see Jane Martinson and Lucy Smy, "UK companies top cross-border takeover league ahead of US", *Financial Times*, 18 January 1999, p. 6. The largest deal made by United Kingdom firms with European firms was the \$4.1 billion takeover of Castorama Dubois (France) by B&Q Plc (Kingfisher Plc), ranked as the 23rd in the league table (annex table A.III.1), less than one tenth of the largest deal by United Kingdom firms (British Petroleum-Amoco).
- 22 Katharine Campbell, "Continental European buy-outs decline", *Financial Times*, 23 November 1998, p. 23.
- 23 For example, a 34 per cent equity stake of Nissan Motor, one of the largest auto makers in the world, was acquired by Renault (France) in 1999.
- 24 See, e.g. the fusion of telecommunication and Internet technologies, brought together, for example, by the merger between Northern Telecom of Canada and Bay Networks of the United States, ranked 9th in value among cross-border M&As in 1998 (annex table A.III.1).
- 25 Jeremy Gray and Paul Taylor, "Microsoft buys stake in second European cable group", *Financial Times*, 27 January 1999, p. 15.
- 26 This was particularly the case in high technology industries such as the software industry (Rodriguez, 1999).
- 27 See for instance, Dickerson, Gibson and Tsakalotos (1997); Schenk (1999); Rodriguez (1999); "How to make merges work", *The Economist*, 9 January 1999, pp. 13-14 and 19-21.
- 28 *Nihon Keizai Shimbun*, 20 January 1999, p. 9.
- 29 The productivity of Firestone, Inc. of the United States acquired by Japanese Bridgestone Corp. in 1988

increased by more than 200 per cent, if sales per employee between 1986 and 1992 are compared. Similarly, productivity rose significantly in the case of the acquisition of National Steel Corporation (United States) by NKK Corp. (Japan) in 1984. However, not all cases are successful. MCA, Inc. of the United States which was acquired by Matsushita Electric Industrial of Japan in 1990 was eventually resold to Seagram of Canada because of a decline in productivity.

30 “How to merge”, *The Economist*, op. cit..

31 These data are from Mergerstat, “More than 30 years of M&A activity”, on-line at mergerstat.com, 26 February 1999.

32 Mergerstat, on-line at mergerstat.com, 8 May 1999.

33 Concentration ratios are calculated on the basis of ranking of the IT companies in terms of their annual data processing sales revenue. The company ranking is determined by calculating the share of its sales to the total sales of the top 100 companies.

34 Concentration ratios are calculated on the basis of a ranking of the automobile manufacturers in terms of the total number of vehicles they produce each year. The concentration ratio is thus the share of its annual vehicle production in the global production of all automobile manufacturers.

35 Telecommunications equipment manufacturers, for example, had their own programme, RACE.

36 Research joint ventures are defined as “organization[s], jointly controlled by two or more parent institutions whose purpose is to engage in research and development activities” (Vonortas, 1997, p. 577). Data on research joint ventures in the United States exist since the mid-1980s.

37 Bellcore ranked first among the most active companies with 115 research joint ventures. Before its division into three separate companies in 1996, AT&T (now Lucent Technologies) ranked first among the world’s top telecommunications equipment manufacturers and first among the world’s largest international carriers. In this database AT&T (Lucent Technologies) came sixth among the most active companies.

38 Data on technology partnerships from the Merit/UNCTAD database confirm the rise of multiproject encounters among the world’s largest enterprises in the information technology and the automobile industries around the globe (UNCTAD, 1998).

39 Knowledge-based networked oligopolies have formed in Drams and HDTV (Delapierre and Mytelka, 1998), in workstations and risc chips (Gomes Casseres, 1993).

40 AT&T, for example, entered the computer field through the purchase of shares in Olivetti and the acquisition of NCR. IBM bought Rolm, a PABX manufacturer and in the United Kingdom, STC, a telecommunications equipment company, took over ICL, the largest British computer manufacturer. Subsequently, IBM sold its share in Rolm to Siemens, a telecom equipment manufacturer; STC abandoned ICL to Fujitsu and AT&T withdrew from Olivetti and spun off NCR.

41 These included network system companies such as Cisco, 3COM and Bay Networks, Internet Portals, AOL, Compuserve and Yahoo and specialized software firms such as Netscape.

42 The user interface, for example, might be a computer, a television receiver equipped with a set-top box to process interactive services or even a game machine. The transmission system might involve cable, telephone wires, wireless systems or satellites. To run such systems, the software might be provided by new network companies, electronics firms or more established software producers. Within each of these segments, M&As strengthen the position of frontrunners and broaden their ability to provide multiple solutions to each of these combinatory possibilities.

43 Computer manufacturers similarly produce a PC for every purse or purpose.

44 In the information and communications technology industry, Hewlett Packard has begun to imitate this model.

45 “Major auto mergers drive sweeping change in the parts industry according to PricewaterhouseCoopers survey”, [www.investing.lycos.com](http://www.investing.lycos.com), 29 March 1999.

46 Robert Bosch has bought a controlling interest in several firms in the Republic of Korea. Mahle of Germany acquired Metal Leve of Brazil and thus gained access to both the large Brazilian automobile market and the design facilities of Metal Leve in the United States.

# CHAPTER IV

## INVESTMENT POLICY DEVELOPMENTS

### A. National policies

Since the mid-1980s, and in the context of rapid changes in the global economy and broader market-oriented reforms, most countries in all regions that until then had maintained widespread restrictions and controls on FDI undertook substantial revisions in their investment regimes, with a view towards incorporating FDI more fully into their economic development and growth strategies. They engaged in an unprecedented process of liberalization of previous FDI impediments and adopted a host of positive measures aimed at attracting FDI. These trends continued in 1998.

More specifically, of a total of 145 regulatory changes relating to FDI made during 1998 by 60 countries,<sup>1</sup> 94 per cent were in the direction of creating more favourable conditions for FDI, and 6 per cent in the direction of greater control (table IV. 1). During the period 1991-1998 as a whole, 94 per cent of the FDI regulatory changes were in the direction of creating a more favourable environment for FDI, in both developed and developing countries. The majority of liberalization measures in 1998 related to operational conditions (figure IV. 1). In contrast with previous years, fewer new industries were opened up, and these related mainly to telecommunications, retail and wholesale trading. Investment promotion efforts also intensified during 1998. In terms of regional distribution, it is worth noting that the Asian financial crisis triggered significant efforts to attract FDI by the countries in the region, both in terms of the number of measures (51) and the number of countries (16) involved.

**Table IV.1. National regulatory changes, 1991-1998**

Item	1991	1992	1993	1994	1995	1996	1997	1998
Number of countries that introduced changes in their investment regimes	35	43	57	49	64	65	76	60
Number of regulatory changes	82	79	102	110	112	114	151	145
of which:								
More favourable to FDI <sup>a</sup>	80	79	101	108	106	98	135	136
Less favourable to FDI <sup>b</sup>	2	-	1	2	6	16	16	9

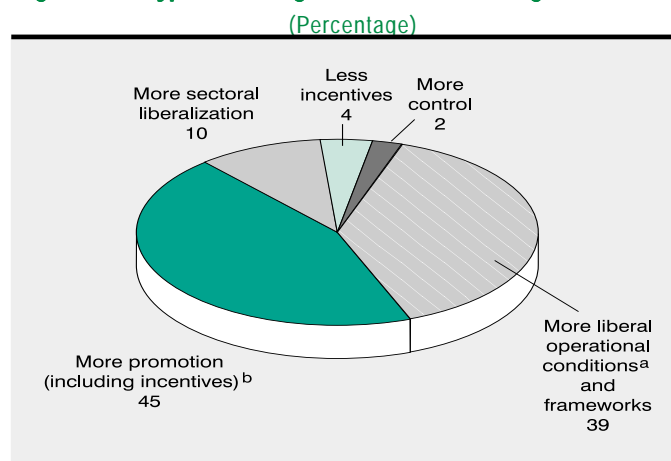
*Source:* UNCTAD, based on national sources.

<sup>a</sup> Including liberalizing changes or changes aimed at strengthening market functioning, as well as increased incentives.

<sup>b</sup> Including changes aimed at increasing control as well as reducing incentives.



Figure IV.1. Types of changes in FDI laws and regulations, 1998



Source: UNCTAD, based on national sources.

<sup>a</sup> Includes performance requirements as well as other operational measures.

<sup>b</sup> Includes free-zone regulations.

These trends at the national level have been complemented and reinforced through developments at the international level. Indeed, international investment and investment-related treaty-making activity at all levels has continued to be intense (table IV. 2), primarily in the direction of investment protection and liberalization.

Table IV.2. International investment policy trends: developments in 1997-1998 <sup>a</sup>

Title	Status
<b>Regional</b>	
<b>Asia</b>	
Framework Agreement on the ASEAN Investment Area	Concluded
SAARC Agreement on Regional Investment Promotion and Protection	Under negotiation
Free Trade Arrangement between BIMSTEC Countries <sup>b</sup>	Under discussion
Indian Ocean Rim Association for Regional Cooperation Trade and Investment Agreement	Under discussion
Agreement on Promotion and Protection of Investments among ECO member States	Under negotiation
<b>Sub-Saharan Africa</b>	
CEMAC Community Charter on Investment	Under negotiation
UEMOA Community Code on Investment	Under negotiation
SADC Protocol on Finance and Investment	Under negotiation
Agreement for the Creation of a Free Trade Area between the COMESA member countries <sup>b</sup>	Under discussion
Treaty Establishing the East African Community (EAC) <sup>b</sup>	Under negotiation
<b>North Africa and West Asia</b>	
Unified Agreement for the Investment of Arab Capital in Arab Countries	Under revision
Agreement on Investment and Free Movement of Arab Capital among Arab Countries	Under revision
<b>Western Hemisphere</b>	
Protocol Amending the Treaty Establishing the Caribbean Community Protocol III: Industrial Policy	Concluded
Memorandum of Understanding on Trade and Investment between the Governments of Canada, Costa Rica, El Salvador, Guatemala, Honduras and Nicaragua	Concluded
Free Trade Agreement between Central American countries and the Dominican Republic <sup>b</sup>	Concluded
Framework Agreement for the Creation of a Free Trade Area between the Andean Community and MERCOSUR <sup>b</sup>	Concluded
Trade and Investment Cooperation Arrangements between Canada and MERCOSUR	Concluded
Protocol Amending the Treaty Establishing the Caribbean Community. Protocol II: Establishment, Services, Capital	Concluded
Agreement Between the Governments of Bolivia, Colombia, Ecuador, Peru and Venezuela, Member Countries of the Andean Community, and the United States of America Concerning the Establishment of a Trade and Investment Council	Concluded
Trade and Investment Cooperation Arrangements between Canada and MERCOSUR	Concluded
Free Trade Area of the Americas (FTAA) <sup>b</sup>	Under negotiation
Free Trade and Investment Agreement between Mexico, on the one hand, and Guatemala, Honduras and El Salvador, on the other	Under negotiation

/...

Table IV.2. International investment policy trends: developments in 1997-1998 <sup>a</sup> (concluded)

Title	Status
<b>Europe</b>	
Resolution on EU Standards for European Enterprises Operating in Developing Countries Towards a European Code of Conduct	Adopted
Council of Europe Criminal Law Convention on Corruption	Concluded
<b>Interregional</b>	
ACP-EU Fifth Convention of Lomé	Under negotiation
<b>OECD</b>	
OECD Council Recommendation on Counteracting Harmful Tax Competition	Adopted
OECD Council Recommendation Concerning Effective Action Against "Hard Core Cartels"	Adopted
OECD Multilateral Agreement on Investment (MAI)	Discontinued
OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions	Entered into force
OECD Principles of Corporate Governance	Adopted
OECD Guidelines for Multinational Enterprises	Under review
<b>Multilateral</b>	
ILO Declaration on Fundamental Principles and Rights at Work	Adopted
WTO Working Group on the Relationship between Trade and Investment	Ongoing
<b>Civil society</b>	
International Agreement on Investment (draft of 10 June 1998) (CUTS)	Adopted
Making Investment Work for People (Regulation Paper) (WDM)	Adopted
ICC [Revised] Rules on Conduct to Combat Extortion and Bribery	Reviewed

Source: UNCTAD.

<sup>a</sup> Not including bilateral treaties.

<sup>b</sup> Including rules on investment.

## B. Developments at the international level

### 1. Bilateral treaties

At the bilateral level, the network of bilateral investment treaties (BITs) has expanded further, the total number of treaties having reached 1,726 by the end of 1998 (compared to 1,556 by the end of 1997). Of these, 434 were concluded between developing countries. In 1998 alone, 39 per cent of the 170 treaties concluded were between developing countries (figure IV. 2). The number of countries that have signed BITs has increased from 169 in 1997, to 174 in 1998. BITs have traditionally been seen primarily as an instrument to signal to TNCs that a country is

Figure IV.2. BITs concluded in 1998,<sup>a</sup> by country group  
(Percentage)

Source: UNCTAD, database on BITs.

<sup>a</sup> A total number of 170 BITs were concluded in 1998.

“open for business”, especially by protecting foreign investment (UNCTAD, 1998b). This function, including the encouragement it gives to FDI flows among developing countries, remains important (box IV.1). However, in the light of the increasing treaty-making activity in the investment area in general, these treaties are also becoming important in terms of indicating what countries expect to see in international investment agreements in general. While there is considerably commonality among BITs (UNCTAD, 1998b), some BITs go further. A recent example is the BIT between Bolivia and the United States signed in 1998 which provides, among other things, for national treatment at the pre-establishment stage (i.e. right of establishment) and prohibits certain performance requirements; the preamble also mentions “respect for internationally recognized worker rights” and that the objectives of the BIT can be achieved “without relaxing health, safety and environmental measures” (box IV. 2). Some of the features -- which are found not only in BITs but in other recent IIAs -- may put local firms at a competitive disadvantage vis à vis their foreign counterparts. For example, the prohibition to impose certain performance requirements on foreign firms might have such effect if the host country imposes these performance requirements on all other firms. Similarly, allowing foreign investors interim injunctive relief pending resolution of an investment dispute, may have the effect of preventing production or export by other firms while a claim affecting them goes through the full legal process. This may take a very long time, and when such firms are SMEs, they may be unable to rapidly find new markets for their production, and might even fail.

The number of bilateral treaties for the avoidance of double taxation (DTTs) has also increased from 1,792 at the end of 1997 to 1,871 at the end of 1998. During that year, 71 countries were involved in concluding 79 DTTs. Among these countries, 39 were developing countries (six from Africa, 26 from Asia, four from Latin America and the Caribbean and three from developing Europe) (figure IV. 3). Developing countries signed 26 DTTs with developed countries and 12 with countries in Central and Eastern Europe. They also concluded 17 DTTs between themselves.

#### **Box IV. 1. BIT negotiations between members of the Group of Fifteen**

Developing countries are increasingly viewing the conclusion of BITs among themselves as a means of enhancing South-South cooperation on foreign investment, and, in particular, of promoting FDI flows. This was the purpose sought with the initiative taken by the Group of Fifteen (G-15)<sup>a</sup> when it asked the Secretary-General of UNCTAD to assist members of the Group in the negotiation of BITs in order to promote economic cooperation among themselves.

The negotiations were held in Glion-sur-Montreux, Switzerland, during January 1999. Seven member countries of the G-15 participated in the bilateral negotiations, namely, Egypt, India, Indonesia, Jamaica, Malaysia, Sri Lanka and Zimbabwe, and eight bilateral negotiations were held respectively between India and Zimbabwe, Sri Lanka and Zimbabwe, Egypt and Jamaica, Jamaica and Malaysia, Jamaica and Sri Lanka, Indonesia and Jamaica, India and Jamaica, and Jamaica and Zimbabwe. These negotiations added to the BITs already concluded among participating countries.

The G-15 saw a number of advantages in bringing negotiators together in a place where they could concentrate on the task at hand and which allowed the combination of economies of scale (negotiating a BIT typically involves several trips between negotiating countries with the average cost of a negotiation having been calculated at up to \$50,000) (Rich, 1991) with capacity building (the very fact that intense negotiations between countries with different approaches, combined with the possibility to exchange information among negotiators and with resource persons, helped enhance the BIT negotiating capacity of the participants).

UNCTAD – with the financial support of the Government of Switzerland and the Special Unit for Technical Cooperation among Developing Countries of UNDP – played a facilitating role by making it possible to assemble a number of chief negotiators with authority to negotiate in a place near Geneva and by facilitating preparatory consultations and providing substantive and logistic support. In the words of the Jamaican negotiator, “What we have done here in one week would otherwise have taken two years – if not more” (UNCTAD, 1999d, p. 2).

*Source:* UNCTAD.

<sup>a</sup> The members of the G-15 are Algeria, Argentina, Brazil, Chile, Egypt, India, Indonesia, Jamaica, Kenya, Malaysia, Mexico, Peru, Senegal, Sri Lanka, Venezuela and Zimbabwe.

### Box IV. 2. The BIT between Bolivia and the United States

Signed in April 1998, the BIT between Bolivia and the United States reflects recent practice of the United States with respect to BITs. Some provisions that are seldom found in BITs in general include the following:

1. The Preamble provides as follows:

“Agreeing that a stable framework for investment will maximize effective utilization of economic resources and improve living standards;  
Recognizing that the development of economic and business ties can promote respect for internationally recognized worker rights;  
Agreeing that these objectives can be achieved without relaxing health, safety and environmental measures of general application.”

2. A broad asset-based definition that covers virtually every type of investment (although this approach can be found in many BITs). Article I (d) defines “investment” as:

“every kind of investment owned or controlled directly or indirectly by that national or company, and includes investment consisting or taking the form of:

- (i) a company;
- (ii) shares, stock, and other forms of equity participation, and bonds, debentures, and other forms of debt interests, in a company;
- (iii) contractual rights, such as under turnkey, construction or management contracts, production or revenue-sharing contracts, concessions, or other similar contracts;
- (iv) tangible property, including real property; and intangible property, including rights, such as leases, mortgages, liens and pledges;
- (v) intellectual property, including:
  - copyrights and related rights,
  - patents,
  - rights in plant varieties,
  - industrial designs,
  - rights in semiconductor layout designs,
  - trade secrets, including know-how and confidential business information, trade and service marks, and trade names; and
- (vi) rights conferred pursuant to law, such as licenses and permits. (The list of items in (i) through (vi) above is illustrative and not exhaustive.)”

3. Unlike most other BITs, United States BITs clauses on national and most-favoured-nation treatment cover not only post-establishment but also pre-establishment, with a number of exceptions. Article II.1 states:

“With respect to the establishment, acquisition, expansion, management, conduct, operation and sale or other disposition of covered investments, each Party shall accord treatment no less favorable than that it accords, in like situations, to investments in its territory of its own nationals or companies (hereinafter “national treatment”) or to investments in its territory of nationals or companies of a third country (hereinafter “most favored nation treatment”), whichever is most favorable (hereinafter “national and most favored nation treatment”).”

4. A number of performance requirements are prohibited by Article VI of the treaty:

“Neither Party shall mandate or enforce, as a condition for the establishment, acquisition, expansion, management, conduct or operation of a covered investment, any requirement (including any commitment or undertaking in connection with the receipt of a governmental permission or authorization):

- (a) to achieve a particular level or percentage of local content, or to purchase, use or otherwise give a preference to products or services of domestic origin or from any domestic source;
- (b) to restrict imports by the investment of products or services in relation to a particular volume or value of production, exports or foreign exchange earnings;
- (c) to export a particular type, level or percentage of products or services, either generally or to a specific market region;

/...

**(Box IV. 2, concluded)**

- (d) to restrict sales by the investment of products or services in the Party's territory in relation to a particular volume or value of production, exports or foreign exchange earnings;
- (e) to transfer technology, a production process or other proprietary knowledge to a national or company in the Party's territory, except pursuant to an order, commitment or undertaking that is enforced by a court, administrative tribunal or competition authority to remedy an alleged or adjudicated violation of competition laws; or
- (f) to carry out a particular type, level or percentage of research and development in the Party's territory.

Such requirements do not include conditions for the receipt or continued receipt of an advantage."

5. Although under the BIT investors have to choose between the courts or administrative tribunals of the host country and international arbitration, the investor-State dispute settlement clause nevertheless gives investors an additional protection tool by allowing an investor that has submitted a dispute to arbitration to seek interim injunctive relief in the host country tribunals. Article IX 3.(b) provides as follows:

"A national or company, notwithstanding that it may have submitted a dispute to binding arbitration under paragraph 3 (a), may seek interim injunctive relief, not involving the payment of damages, before the judicial or administrative tribunals of the Party that is a party to the dispute, prior to the institution of the arbitral proceeding or during the proceeding, for the preservation of its rights and interests."

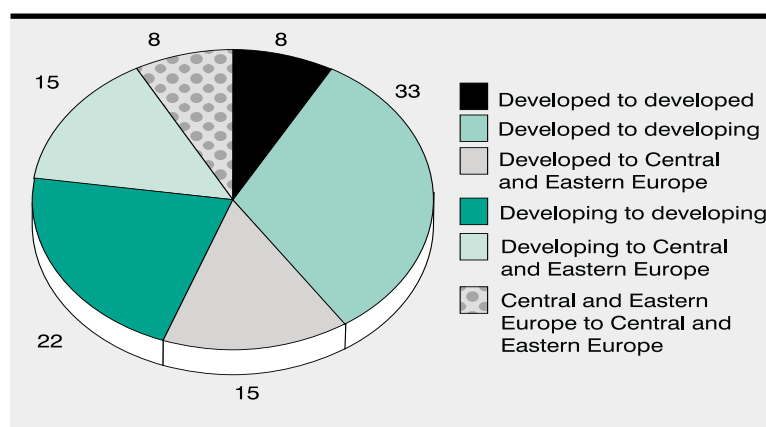
6. The treaty is not applicable to taxes except in the case of expropriation. Article XIII. 1 provides that:

"1. No provision of this Treaty shall impose obligations with respect to tax matters, except that:

- (a) Articles III, IX and X will apply with respect to expropriation; and
- (b) Article IX will apply with respect to an investment agreement or an investment authorization."

Source: OAS, 1998a.

**Figure IV.3. DTTs concluded in 1998, by country group<sup>a</sup>**  
(Percentage)



Source: UNCTAD, FDI/TNC database.

<sup>a</sup> A total number of 79 DTTs were concluded in 1998.



## 2. Regional developments

At the regional level, a number of discussions and negotiations on investment and investment-related instruments were initiated during 1998 and early 1999, others that had started in previous years continued, and several new instruments were concluded or came into force. The most significant developments are summarized below.

- In **Asia** the members of ASEAN concluded, on 7 October 1998, the Framework Agreement on the ASEAN Investment Area (UNCTAD, forthcoming d).<sup>2</sup> The purpose of this instrument is to create a competitive investment area within ASEAN with a more liberal and transparent investment environment and thus increase substantially the flow of investment into ASEAN from both ASEAN and non-ASEAN sources (ASEAN, 1998) (box IV. 3). Moreover, at the sixth ASEAN Summit held on 14-15 December 1998 in Hanoi, Viet Nam, the ASEAN leaders announced a package of “bold measures” to help enhance the attractiveness of the region for investment. These included the acceleration of the AFTA (box IV. 3), a package of incentives in the manufacturing sector which each ASEAN country agreed to extend in addition to new incentives offered by individual ASEAN countries; a waiver of the 30 per cent national equity requirement under the ASEAN Industrial Cooperation Scheme, to provide for greater scope for industrial cooperation in the region; and the launching of a second round of services negotiations, to cover all services sectors and all modes of supply (ASEAN, 1998).

At the seventh meeting of the Committee on Economic Cooperation of the South Asian Association for Regional Cooperation,<sup>3</sup> held in 1996, the Council of Ministers agreed to initiate specific steps to promote and protect investment and joint venture efforts. Pursuant to that decision, a meeting on Promotion and Protection of Investment was held in New Delhi on 29-30 September 1997 during which modalities for increasing intra-regional investment were considered and a draft “SAARC Agreement on Regional Investment Promotion and Protection” was circulated. At the eleventh meeting of the Committee (Dhaka, February 1999) it was decided to convene a second meeting on Promotion and Protection of Investment in India to examine the draft investment agreement and deliberate on the possibility of establishing a SAARC Arbitration Council. The meeting was expected to take place in 1999.<sup>4</sup>

### Box IV. 3. Main features of Framework Agreement on the ASEAN Investment Area

The main elements of the ASEAN Investment Area (AIA) include the following (article 4):

- development of a coordinated ASEAN investment cooperation and promotion programme that will generate increased investments from ASEAN and non-ASEAN sources;
- provision of national treatment to ASEAN investors by the year 2010 and to all investors by the year 2020,<sup>a</sup> subject to the exceptions provided for in the agreement;
- opening all industries to ASEAN investors by the year 2010 and to all investors by the year 2020, subject to the exceptions provided for in the agreement;<sup>b</sup>
- assigning a larger role to the business sector in the cooperation efforts in relation to investment and investment-related activities; and
- ensuring a freer flow of capital, skilled labour and professionals, and technology among ASEAN members.

These broad undertakings are given effect in a number of provisions, key among which are:

**Definition of investment:** the agreement covers direct investment<sup>c</sup> and excludes explicitly portfolio investments as well as matters relating to investments covered by other ASEAN agreements, such as the ASEAN Framework Agreement on Services (articles 1 and 2).

**General obligations:** these include commitments to ensure that measures under the agreement are undertaken on a fair and mutually beneficial basis; to provide for transparency and consistency in the application and interpretation of investment laws and administrative practices, in order to create a /...

In the context of the Bangladesh, India, Myanmar, Sri Lanka and Thailand Economic Cooperation (BIMSTEC) a Business Forum was created in order to enhance private sector cooperation among the countries of the region. At its second ministerial meeting held in Dhaka in December 1998, investment was identified as one of the areas for cooperation and, in addressing the future directions of BIMSTEC, the ministers resolved to strive to develop BIMSTEC into a free trade arrangement and to focus, among others, on activities that increase investment (including the removal of constraints) and facilitate trade in services (BIMSTEC, 1998).

The Indian Ocean Rim Association for Regional Cooperation (IOR-ARC) held discussions at the third meeting of the Committee of Senior Officials (Maputo, Mozambique, March 1999) on the need for IOR-ARC to develop a coherent trade and investment policy agenda. A Sub-

**(Box IV. 3, concluded)**

predictable investment regime in ASEAN; to take appropriate measures to enhance the attractiveness of the investment environment in ASEAN; and to take reasonable actions to ensure observance of the AIA provisions by the regional and local governmental authorities (article 5).

**Opening up of industries and national treatment:** the agreement provides for the immediate opening up of all its industries to ASEAN investors and to accord immediately national treatment to all ASEAN investors and investments in all industries and measures affecting investment, including its admission, establishment and acquisition. This provision is of special interest in that it grants a right of establishment to ASEAN investors in all industries as well as rights of entry on the basis of national treatment (article 7).

**Negative lists:** the agreement allows for exceptions to the obligations on right of establishment and national treatment, with regard to industries or measures on which the relevant host country is unable to grant such rights. These industries or measures are to be submitted in a "temporary exclusion list" and in a "sensitive list" within six months after the date of signing the agreement. The temporary exclusion list is to be reviewed every two years and to be phased out by the year 2010 by all members (except the least developed countries of ASEAN).

**Most-favoured-nation treatment** is to be granted unconditionally to all member countries of ASEAN (article 8).

**Transparency:** all relevant measures that affect the operation of the agreement are to be made available through publication or any other means to the AIA Council (article 11).

**General exceptions** apply for reasons of national security, public morals, protection of life and health, safety, prevention of fraudulent practices and protection of privacy of individuals (article 13).

**Emergency safeguard measures** and measures to safeguard the balance of payments in the event of serious external financial difficulties are permitted (articles 14 and 15).

**The Protocol on Dispute Settlement Mechanism for ASEAN** applies in relation to disputes or differences between the member States concerning the interpretation or application of this agreement (article 17); there is no provision in the agreement for the settlement of investor-to-State disputes (article 17).<sup>d</sup>

*Source:* UNCTAD.

<sup>a</sup> At the first ASEAN Investment Area Ministerial Council Meeting on 5 March 1999, in Phuket, Thailand, the ministers agreed that the timeframe for opening up industries and granting national treatment to all investors should be shortened from the original date of 2020. The Council asked senior officials to look into this matter and make recommendations to the next Council Meeting in late September 1999 in Singapore.

<sup>b</sup> Among the "bold measures" announced in December 1998, there was a decision to shorten the timeframe on the implementation of the Agreement from 2010 to 2003 for the manufacturing sector. This included the progressive phasing out of the exclusions by the year 2003. Myanmar would join the six ASEAN countries to phase out progressively the exclusions by the year 2003 instead of 2015. Viet Nam and Lao People's Democratic Republic would make best efforts to do so by no later than 2010, instead of 2013 and 2015, respectively.

<sup>c</sup> The sectors covered include manufacturing, mining, agriculture, fishery, forestry and (currently under negotiation) services incidental to manufacturing operations (e.g. electroplating, printing).

<sup>d</sup> Under the 1996 Protocol Amending the 1987 ASEAN Agreement for the Promotion and Protection of Investments, a provision was made to cover investor-to-State dispute settlement.

Committee was created to prepare a set of recommendations on the question. In this respect, the importance was stressed of developing a modest, practical and outcome-focused trade and investment policy action plan, incorporating the three pillars of liberalization, facilitation and technical cooperation (Indian Ocean Rim Association for Regional Cooperation, 1999).<sup>5</sup>

- In **Central and West Asia**, the Economic Cooperation Organization<sup>6</sup> prepared a draft regional agreement for the promotion and protection of investment within the ECO region which was proposed for signature by all member States (Economic Cooperation Organization, 1999). The proposed provisions are intended as minimum standards to be used in dealing with investments coming from members States and in order to stimulate the mobilization and optimum utilization of their economic resources to serve the development of the region. The substantive provisions of the draft agreement are contained in two chapters, the first chapter dealing with general provisions (including safe transfer of capital, investment opportunities, investment incentives, most-favoured-nation treatment and public order) and the second with investment guarantees (ownership, free transfer of capital, freedom of sale, compensation for damage, equality with national investors, resort to national judicial systems and conciliation and arbitration).

- In **sub-Saharan Africa**, the Central African Economic Community and Monetary Union (CEMAC)<sup>7</sup> in 1998 began work on a Community Charter on Investment which, by May 1999, had reached an advanced state (CEMAC, 1999). The Charter is intended to replace the previous Common Convention on Investment, which had been in force since 1965 and became obsolete since the member countries decided to implement a programme of regional reforms in 1993. Planned as a general investment framework for the region, the draft Charter sets out policy measures aimed at improving the investment climate, and promoting the development of the private sector through local and foreign investment. It defines the new role of the State in facilitating FDI and sets out the basis for the provision of guarantees for a stable and secure business environment, including national treatment; a common fiscal regime, including incentives; and the creation of support services and special treatment for priority industries. The Charter was expected to be concluded by July 1999 and was identified as one of the key elements of the common market to be launched in January 2000.

The West African Economic and Monetary Union (UEMOA)<sup>8</sup> completed a draft of a Community Code on Investment in early 1999 which is intended to replace the individual codes of its member countries and thus harmonize the diversity of national rules. The draft Community Code guarantees, among other things, the legal protection of private property and the transfer of capital and payments; provides for special incentives and support services; and states a number of general obligations for all enterprises, including the protection of the environment (UEMOA, 1998).

The Southern African Development Community (SADC)<sup>9</sup> drafted a Protocol in March 1998 setting out basic principles on investment policy on the basis of the conclusions and recommendations of a study prepared for that purpose. These included, inter alia, a recognition that the pace of privatization in the region should be increased, and private-public partnerships encouraged; that foreign and domestic investors should have equal access in the relevant areas; that simple, transparent and non-discriminatory procedures for the approval, entry, and operation of investments needed to be established; and that investment promotion agencies should shift attention from incentives measures towards policy and administrative reform in order to attract investment. At the ministerial meeting in July 1998 it was decided that the Protocol will be a framework document setting out basic principles. In recognition of the fact that more difficult and controversial issues will take time to negotiate, additions to the Protocol will be made in the form of annexes and memoranda of understanding. The former will be legally binding while the latter will not. The draft Protocol was expected to be completed by July 1999, when it would be submitted to SADC finance ministers for approval (SADC, 1999). In the meanwhile, trade and investment cooperation contacts between SADC and the United States intensified. The two parties agreed to explore negotiations on a regional trade and investment framework agreement between them. The framework agreement (which would be non-binding), should facilitate mutual

understanding between the two parties regarding ways to deal with investment issues, including the protection of intellectual property rights (Panafrican News Agency, 1999).

Discussions were also under way for a Trade and Investment Framework Agreement between ECOWAS and the United States, as part of several recent United States initiatives with various regional and subregional African groupings aimed at stimulating FDI in Africa.

In the Common Market for Eastern and Southern Africa (COMESA)<sup>10</sup> deliberations started on June 1999 with a view towards creating a free trade area in the region by October 2000, as a step towards attaining COMESA's common goals regarding free movement of capital and people and rights of establishment (Africa News online, 1999).

A treaty establishing the new East African Community (EAC)<sup>11</sup> was drafted in 1998 and was expected to be ratified in July 1999. The EAC Treaty should establish a single market and investment area for the region, with the main objectives of providing for free movement of capital and services, promotion of economic growth and development and attracting increasing flows of FDI. If ratified, the Treaty would bring about the revival of the Community, which collapsed in 1977 (Panafrican News Agency, 1998).

Finally, substantial progress was made in the business law harmonization process undertaken under the Treaty on the Harmonization of Business Law in Africa (OHADA)<sup>12</sup> – which calls for the development of simplified and modern common business laws adapted to the economic situation of the countries involved, and for the promotion of arbitration as a means of settlement of business disputes.<sup>13</sup> As of May 1999, uniform laws had been adopted on general commercial law, law on commercial companies, securities, simplified procedures for recovery and enforcement of claims, insolvency and arbitration. Uniform regulations relating to labour, accounting system, sale and transportation are under preparation. These efforts are expected to contribute to the creation of a stable and predictable legal environment to encourage business confidence in the region (OHADA, 1998).

- In **North Africa and West Asia**, the Unified Agreement for the Investment of Arab Capital in Arab Countries adopted in 1980, was being revised to make it more effective and responsive to the needs of the Great Arab Free Trade Area (GAFTA), under the auspices of the League of Arab States.<sup>14</sup> The Agreement on Investment and Free Trade Movement of Arab Capital among Arab Countries, adopted in 1970, is also being looked into and discussions have started in the Council of Arab Economic Unity to revise the current text.<sup>15</sup>

- In the **Western Hemisphere**, the negotiations to create the Free Trade Area of the Americas (FTAA), which were launched in April 1998, moved on. The Negotiating Group on Investment held an organizational meeting in September 1998 and its second and third meetings in February and April 1999, respectively. During these meetings, the Group discussed the items that had been identified for possible discussion in an investment chapter (UNCTAD, 1998a, box III.3). Other issues identified by individual countries or groups of countries were also on the agenda for discussion, without prejudice to their possible inclusion in an investment chapter. These included transparency, the relationship between investment and environment and between investment liberalization and core labour standards; technology transfer; the relationship between investment and competition policy; investment promotion; investment incentives; measures to promote the growth of small and medium-sized enterprises; and conditions to level the “playing field” for smaller countries. The Group was to meet again in August 1999 with a view towards drafting the annotated outline to be presented to ministers in Toronto in November 1999.<sup>16</sup>

In addition, several free trade agreements were concluded during 1998 and early 1999 containing rules for the liberalization, protection and promotion of investment, thus expanding the network of trade agreements already in existence. A free trade agreement was signed by the Central American countries and the Dominican Republic on 16 April 1998 (OAS, 1998b). The free trade agreement between Chile and Mexico was expanded into new areas, including investment rules (OAS, 1998c). The Andean Community decided, at its last Presidential Council (May 1999), to work towards new common rules regarding foreign investment as well as double



and indirect taxation (Andean Community, 1999). Moreover, the Andean Community and MERCOSUR signed on 21 April 1998 a Framework Agreement for the Creation of a Free Trade Area, which includes, among its main objectives, the establishment of a normative framework for the promotion of investment between the two subregions (UNCTAD, forthcoming d). Free trade and investment agreements presently under negotiation, such as between Mexico on the one hand and Guatemala, Honduras and El Salvador on the other, are also meant to address investment issues (Mexico, Office of the President, 1998). Moreover, on 30 October 1998 the countries members of the Andean Community and the United States agreed to establish a Trade and Investment Council with the purpose, among other things, of identifying and proposing mechanisms to facilitate trade and investment, identifying and working towards the elimination of restrictions on trade and investment, and exchanging and reviewing information on investment relations and conducting periodical evaluations (UNCTAD, forthcoming d). On 31 May 1999, a "trade and investment cooperation arrangement" was signed between Canada and the Andean Community (Canada, 1999); a similar arrangement was signed with MERCOSUR on 16 June 1998 (Canada, 1998a). Moreover, the Governments of Canada, Costa Rica, Nicaragua, El Salvador, Honduras and Guatemala signed a memorandum of understanding on trade and investment on 18 March 1998 (Canada, 1998b). The Caribbean Community for its part amended the CARICOM Agreement with the adoption of two new Protocols: the Protocol on Establishment, Services and Capital (24 June 1997) strengthened rights of establishment, the provision of services and capital movement within the Community; and the Protocol on Industrial Policy (30 June 1998) gave effect to the new objectives and market orientation of the Community's industrial policy (UNCTAD, forthcoming d).

- In **Europe**, The European Parliament adopted a resolution on 15 January 1999 on a European Union Code of Conduct for European Enterprises Operating in Developing Countries (UNCTAD, forthcoming d). The resolution includes the following main elements: encouragement of voluntary codes of conduct by business and industry, trade unions and coalitions of NGOs, while emphasizing that such voluntary codes of conduct cannot replace national or international rules (see chapter XII); a proposal for the development of a European multilateral framework governing company operations worldwide and comprising minimum existing international standards; a proposal for the provision of development cooperation and technical and financial assistance to developing countries to help ensure that international standards are incorporated in their laws; suggestions for the improvement of consultation and monitoring mechanisms of European company operations in third countries, and the development of a system of incentives for companies complying with the relevant international standards; and a recommendation that, in the negotiation of investment agreements, the European Union should contribute to establishing not only rights for TNCs but also duties in the field of environment, labour and human rights. This resolution can be expected to make an input into the review of the OECD Guidelines for Multinational Enterprises being undertaken by the OECD.

Another significant development took place on 27 January 1999, when the Council of Europe opened for signature the Criminal Law Convention on Corruption. The Convention aims at a coordinated criminalization of a wide range of corrupt practices, including bribery of foreign public officials in international business transactions (UNCTAD, forthcoming d).

- Regarding **negotiations between developed and developing countries** an important development was the initiation of negotiations, in September 1998, for a new relationship between the European Union (EU) and its 15 country members on the one hand, and the 71 African, Caribbean and Pacific (ACP) countries on the other, to succeed the present Fourth Convention of Lomé (Lomé IV) which expires on 29 February 2000. In preparation for the negotiations, the European Commission issued its Green Paper "Relations between the European Union and the ACP countries on the eve of the 21st century: challenges and options for a new partnership" (European Commission, 1996), setting out its goals for the negotiations. In respect to investment, the mandate for the negotiations included the strengthening of commitments of the Community in favour of ACP countries in order to improve the attractiveness of countries that have not received sufficient FDI flows in spite of the IV Lomé Convention investment promotion provisions. It was also contemplated that the provisions of IV Lomé Convention dealing with foreign investment promotion, protection, financing and support, current payments, capital



transfers and treatment of business entities would be strengthened (European Commission, 1996). As for the ACP countries, their negotiating objectives and mandate were reflected in the Libreville Declaration (ACP General Secretariat, 1998). As regards FDI, the Declaration asserted the ACP countries' commitment to enforce macro-economic policies that could stimulate intra-regional investment and attract FDI flows. However, specific cooperation mechanisms were needed for improving the competitiveness of their economies. EU assistance was sought in particular for the development of services industries and possibly for the creation of an investment guarantee agency which could operate in synergy with the Multilateral Investment Guarantee Agency (MIGA). With respect to investment, the negotiating mandate given on 30 September 1998 to the ACP negotiations focused mainly on the provision of incentives to stimulate FDI flows, including investment guarantees; private sector development through linkages with European firms; and harmonization of investment rules. An ACP-EU Joint Assembly Resolution on the future of ACP-EU, reflecting a harmonized approach on the negotiating objectives of ACP and European Union countries, called inter alia for "an investment protection mechanism, which will encourage foreign investment while providing for environmental impact assessments and promoting acceptable social standards" (European Commission, 1999, paragraph 31). Civil society groups have also expressed their views on the future Lomé agreement both in the European Parliament (Liaison Committee of Development NGOs to the European Union, 1997) and in ACP countries (ACP NGO Conference on Future EU-ACP Cooperation, 1997). In general, they have called for the new agreement to respect the sovereignty of States in the regulation of business activities, and to take into account the need to enhance both domestic and foreign investments as a key source for sustainable development in ACP countries.

New association agreements recently concluded between the EU and a number of countries in Central and Eastern Europe and in Northern Africa combine free trade and investment objectives (UNCTAD, forthcoming d). The new wave of Northern African association agreements were the offspring of the Barcelona Declaration<sup>17</sup> which gave new impetus to investment relations between the EU and the countries of Northern Africa. The Declaration called inter alia for the development of a free trade area and the strengthening of economic cooperation based on the recognition that economic development must be supported by FDI. In this respect, it stressed in particular the importance of creating an environment conducive to investment through the progressive elimination of obstacles to such investment. Negotiations were under way between the European Union and Egypt for a new Euro-Mediterranean Agreement establishing a partnership between the European Union and its member countries on the one hand, and Egypt on the other hand.

### **3. Developments in OECD**

#### ***a. Policy developments***

Work in OECD proceeded on several investment-related initiatives. The OECD Convention on Combating Bribery of Foreign Public Officials (UNCTAD, forthcoming d) entered into force on 15 February 1999. The OECD members intend to monitor closely the effective implementation of the Convention and to promote its objectives worldwide (box IV. 4).

Furthermore, following the 1998 Ministerial Meeting, the Committee on International Investment and Multinational Enterprises launched a review of the Guidelines for Multinational Enterprises with a view to update and improve them.<sup>18</sup> The call for a new review was prompted by a number of important developments that had taken place since the previous one, notably a widespread recognition of the role of FDI in economic and social development and growth; the liberalization of investment regimes which had reduced controls regarding the entry and operations of TNCs in host countries; and the intense negotiating activity on investment-related rules in recent years which brought to the forefront the concerns of a number of stakeholders in these negotiations – in particular, the MAI negotiating process provided a platform for NGOs and other stakeholders to call for consideration of certain standards of corporate social responsibility in devising international investment rules. These and similar considerations

#### **Box IV.4. The OECD Convention on Combating Bribery of Foreign Officials enters into force**

##### **Ratification**

The OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions entered into force on 15 February 1999. The Convention will permit OECD and other countries to move in a co-ordinated manner to adopt national legislation making it a crime to bribe foreign public officials. The Convention has been signed by all 29 OECD member countries and by 5 non-members (Argentina, Brazil, Bulgaria, Chile and the Slovak Republic), and 12 countries have already deposited their instruments of acceptance, approval, or ratification.<sup>a</sup> Work on ratification and implementation of the Convention is advancing in other countries. Ratification is imminent in a few countries, while others have completed drafting of implementing legislation and are taking steps to complete the legislative process. In the remaining countries, the legislative process is still lagging, and approval by parliaments is not expected before the end of the year.

At the same time, significant progress has been achieved on the issue of tax deductibility of bribes. It is expected that by the end of 1999, bribes will not be deductible in any country that has signed the Convention.

##### **Monitoring**

Monitoring the Convention's ratification and implementation follows a two-stage process, as agreed by the OECD Working Group on Bribery. Phase 1 began in April 1999 with the examination of three countries that have ratified the Convention: Germany, Norway, and the United States. Its purpose is to evaluate whether the legal texts through which participants implement the Convention meet the standard set by the Convention. Phase 1 involves a self and mutual (peer review) evaluation based on replies to a questionnaire on how a country's legal system implements the Convention. Phase 2 focuses on the assessment of effective application and enforcement. In this phase, the Working Group will assess how each country, in practice, provides for the effective application and enforcement of its national laws implementing the Convention. It will also monitor more fully implementation of the non-criminal aspects of the 1997 Revised Recommendation. This phase will involve visits by the Secretariat and lead examiners in order to prepare a thorough review of the country concerned. Phase 2 should begin in the second half of 2000, in order to finish a cycle of examinations of all participants by no later than 2005.

##### **Further work on corruption**

The Working Group on Bribery has examined on a priority basis a number of issues:

- acts in relation with foreign political parties;
- advantages promised or given to any person in anticipation of that person becoming a foreign public official;
- bribery of foreign public officials as a predicate offence for money laundering legislation;
- the role of foreign subsidiaries in bribery transactions, and
- the role of offshore centres in bribery transactions.

As part of its work programme the working group will continue to examine these issues in light of the experience gained by the process of self and mutual evaluation. The Working Group also intends to conduct work on other issues relating to bribery in international business transactions, i.e. civil and administrative remedies, solicitation of bribes and bribery of commercial agents. As concerns offshore centres, the OECD will address the obstacles in international co-operation, together with other fora.

##### **Accession of non-OECD countries**

Accession of the non-OECD countries is sought. On the occasion of the signing of the Convention, Ministers of participating States declared their intention to seek to secure the accession of non-OECD countries to the Convention. The 1997 Recommendation on Combating Bribery in International Business Transactions also mandates the Working Group to carry out a programme of outreach to non-participating countries. Israel's request to join the Convention and take part in the Working Group on Bribery has been approved by the OECD Council. Other countries have requested information on conditions for joining the Convention.

In the context of its outreach programme, the Secretariat is organizing events in Paris and in non-member countries.

*Source:* OECD.

<sup>a</sup> Bulgaria (22 December 1998), Canada (17 December 1998), Finland (10 December 1998), Germany (10 November 1998), Greece (5 February 1999), Hungary (4 December 1998), Iceland (17 December 1998), Republic of Korea (4 January 1999), Japan (13 October 1998), Norway (18 December 1998), the United Kingdom (14 December 1998), and the United States (8 December 1998).

suggested that individual chapters of the Guidelines might need substantive review in order to bring them up to date with international developments and national practice, and to make them more relevant as a point of reference for foreign investment/host country relations. The Committee's discussions on the review in November 1998 and February 1999 were accompanied by consultations with member countries, as well as contributions from the OECD's Business and Industries Advisory Council and Trade Union Advisory Council. The review may be concluded by the ministerial meeting of 2000.

Also during this period a set of OECD Principles of Corporate Governance (UNCTAD, forthcoming d) were developed and endorsed by the OECD Council at ministerial level on 26-27 May 1999 (OECD, 1999e). The Principles are intended to assist members and non-member Governments in their efforts to evaluate and improve the legal, institutional and regulatory framework for corporate governance in their countries, and to provide guidance to stock exchanges, investors, corporations and other parties that have a role in the process of developing good governance practice. The issues addressed concern the rights of shareholders; the equitable treatment of shareholders; the role of shareholders in corporate governance; disclosure and transparency; and the responsibilities of the board of directors. Of particular relevance in this respect is the relationship between corporate governance practice and the increasingly international character of investment. The message of this instrument is: if countries are to reap the full benefits of the global capital market, and if they are to attract long-term capital, corporate governance arrangements must be credible and well understood across borders.

A year earlier, on 28 April 1998, the OECD Council had adopted a Recommendation Concerning Effective Action Against 'Hard Core' Cartels. In recommending a number of coordinated measures, (e.g. effective sanctions, enforcement procedures with adequate powers to detect and remedy hard core cartels, consultation, sharing documents and information) the Council emphasized that effective action against hard core cartels was particularly important from an international perspective because of their distortion of world trade markets, waste, and inefficiency in countries whose markets would otherwise be competitive. Effective action in this area was particularly dependent upon cooperation because these cartels generally operated in secret, and relevant evidence may be located in many different countries (UNCTAD, forthcoming d).

Finally, a set of recommendations concerning domestic tax legislation and practices were proposed to the 1999 meeting of the Council at ministerial level, addressing the problem of harmful tax practices from various angles, and representing, together, a comprehensive approach for dealing with the problems of harmful tax competition created by tax havens and harmful preferential tax regimes, including the problem of tax evasion and avoidance (UNCTAD, forthcoming d). The Council welcomed in particular the establishment of the Forum on Harmful Tax Practices and the progress made in this area. Further work is to proceed on the identification of tax havens.

## ***b. The MAI***

Perhaps the most important development in OECD in 1998 was that the negotiations on a Multilateral Investment Agreement (MAI), which had begun in 1995, "are no longer taking place" (OECD, 1998a, p. 1). The decision not to continue the negotiations was preceded by a six-month period of assessment to reflect and consult with civil society (UNCTAD, 1998a), after it became clear during the OECD Council meeting at ministerial level in 28 April 1998 that the MAI negotiations, which had been scheduled to be concluded on that date (a year later than originally planned),<sup>19</sup> were encountering significant difficulties, and after France announced that it would no longer send its delegation to participate in the negotiations.<sup>20</sup> The following is a brief discussion of what caused the MAI to fail.

### ***(i) Objectives of the MAI***

Originally, the stated main purposes<sup>21</sup> of the MAI negotiations were to consolidate what the OECD had achieved so far on investment rules<sup>22</sup> in a single instrument, to allow for a

more structured dynamic for the liberalization process, to make some of these rules legally binding (e.g. the national treatment instrument) and to make the legally-binding nature of the rules clear by adding provisions for the settlement of investment disputes arising out of the agreement.<sup>23</sup> The negotiations were preceeded by several years of preparations in the Committee on International Investment and Multinational Enterprises (CIME) and the Committee on Capital Movements and Invisible Transactions (CMIT). This allowed member countries to agree on the main elements that should feature in the negotiations (box IV.5). In May 1995, the OECD Council at the ministerial level announced “the immediate start of negotiations in the OECD aimed at reaching a Multilateral Agreement on Investment (MAI) by the Ministerial meeting of 1997” (OECD, 1995a, p. 3). According to the mandate for the negotiations the MAI was to:

- “provide a broad multilateral framework for international investment with high standards for the liberalization of investment regimes and investment protection and with effective dispute settlement procedures;
- be a free-standing international treaty open to all OECD members and the European Communities, and to accession by non-OECD member countries, which will be consulted as the negotiations progress” (OECD, 1995a, p. 3).

At the time the negotiations were suspended, a number of substantive issues remained to be resolved; these are discussed in section (ii).<sup>24</sup> The reasons for the suspension of the negotiations also had much to do with the broader political context; these are discussed in section (iii).

#### Box IV.5. Structure of the MAI

The MAI Negotiating Text as of 24 April 1998 was structured as follows:

#### **I. General Provisions**

Preamble

#### **II. Scope and Application**

Definitions

Investor

Investment

Geographical Scope of Application

Application to Overseas Territories

#### **III. Treatment of Investors and Investments**

National Treatment and Most-Favoured-Nation Treatment

Transparency

Temporary entry, stay and work of Investors and Key Personnel

Nationality Requirements for Executives, Managers and Members of Boards of Directors

Employment Requirements

Performance Requirements

Privatization

Monopolies/ State Enterprises/ Concessions

Entities with Delegated Governmental Authority

Investment Incentives

Recognition Arrangements

Authorization Procedures

Membership of Self-Regulatory Bodies

Intellectual Property

Public Debt

Corporate Practices

Technology R & D

Not Lowering Standards

Additional Clause on Labour and Environment

/...

**(Box IV.5, concluded)**

**IV. Investment Protection**

- General Treatment
- Expropriation and Compensation
- Protection from Strife
- Transfers
- Information Transfer and Data Processing
- Subrogation
- Protecting Existing Investments

**V. Dispute Settlement**

- State-State Procedures
- Investor-State Procedures

**VI. Exceptions and Safeguards**

- General Exceptions
- Transactions in Pursuit of Monetary and Exchange Rate Policies
- Temporary Safeguards

**VII. Financial Services**

- Prudential Measures
- Recognition Arrangements
- Authorization Procedures
- Transparency
- Information Transfer and Data Processing
- Membership of Self-regulatory Bodies and Associations
- Payments and Clearing Systems/ Lender of Last Resort
- Dispute Settlement
- Definition of Financial Services

**VIII. Taxation**

**IX. Country-Specific Exceptions**

- Lodging of Country-Specific Exceptions

**X. Relationship to Other International Agreements**

- Obligations under the Articles of Agreement of the International Monetary Fund
- The OECD Guidelines for Multinational Enterprises

**XI. Implementation and Operation**

- The Preparatory Group
- The Parties Group

**XII. Final Provisions**

- Signature
- Acceptance and Entry Into Force
- Accession
- Non-Applicability
- Review
- Amendment
- Revisions to the OECD Guidelines for Multinational Enterprises
- Withdrawal
- Depositary
- Status of Annexes
- Authentic Texts
- Denial of Benefits

*Source:* OECD, 1998b; reprinted in UNCTAD, forthcoming d.



## ***(ii) Main outstanding substantive issues<sup>25</sup>***

### ***Definition of investment***

*The MAI Negotiating Text envisaged an asset-based broad and open-ended definition of investment covering every kind of asset. The definition included an illustrative list of assets covered.*

Although there was broad support for an asset-based definition of investment, a few delegations argued for the exclusion of portfolio investment from the MAI coverage and a few others found it difficult to accept an open definition. To deal with such difficulties, it was generally agreed that a broad definition called for appropriate safeguard provisions (e.g. a balance-of-payments derogation). Moreover, a number of issues were identified whose appropriate treatment in the MAI needed further consideration, namely, indirect investment, intellectual property, concessions, public debt and real estate. With respect to the inclusion of intellectual property rights, the prevailing view was that the provisions of the MAI should not interfere with the provisions of the relevant WIPO Agreements (see below).

### ***National and most-favoured nation treatment***

*The MAI Negotiating Text provided for rights of entry and establishment on the basis of national and most-favoured-nation (MFN) treatment. These standards would apply also to all aspects of the operation of an investment after entry in a host country.*

*The contracting parties were allowed to lodge country-specific exceptions to the application of national treatment, MFN and other provisions of the MAI to be determined. List A was intended to include any existing non-conforming measures that a country would wish to maintain and any amendments thereto, provided these did not increase the restrictive nature of the measure. The MAI Negotiating Text did not impose rollback obligations, although future rounds of negotiations on liberalization were envisaged.*

*A provision in brackets contemplated the inclusion of a second list of specific country-exceptions (list B) which would include a number of limited but as yet unspecified matters (among those being discussed were, for example, the question of preferential economic policies for aboriginal people and minorities, culture and incentives) to be excepted from the application of national and MFN treatment.*

The formulation of the standards of national and MFN treatment covering pre- and post-establishment were agreed upon, except for a few aspects. The negative list approach to exceptions on these standards and other provisions of the MAI was not controversial *per se*. But one delegation insisted that the schedules of country exceptions that parties would wish to file should be discussed and negotiated before the completion of the Agreement. Its position was that “up-front liberalization” would offer greater opportunities for increased investment flows than an as yet unspecified rollback mechanism. Most other delegations were sceptical about negotiating away proposed exceptions before an agreement on the text would have been reached. But they agreed to a proposal by the Chairperson in early 1997 to table their exceptions. This produced a considerable number of exceptions, with the quantity and the character of the exceptions varying greatly between countries, raising the question of the balance of commitments. A number of them may have been of a tactical nature, i.e. they were meant to be removed in exchange for concessions. Other exceptions were added for prudential reasons, reflecting uncertainty as to the actual effect of some of the agreed provisions. More generally, agreeing on a common methodology for scheduling negative lists remained an open question until the end. The wide differences in the character of the exceptions listed made it difficult to compare them and raised questions of legal certainty.

The fact that even otherwise liberal countries had tabled many exceptions to liberalization commitments suggested the possibility that the liberalization process under MAI would not go beyond what had already been achieved through the OECD Liberalisation Codes; for delegations seeking better market access, this was discouraging. Others found the current level of

liberalization under the OECD Codes sufficient since they sought to establish a framework within which further liberalization could be achieved progressively.

Another outstanding matter related to the inclusion of a list B of exceptions. There were different views with respect to this draft article which would allow new non-conforming measures to be introduced after the Agreement came into force. One view was that the unspecified and potentially open-ended nature of the exceptions allowed in such provision might undermine the MAI disciplines. Another view was that such a provision would allow for flexibility and thus would make it easier to preserve the high standards in the Agreement.

During the last stages of the negotiations before they were suspended, several proposals were made with a view towards easing the strict application of the standstill principle while maintaining the overall level of liberalization. One such proposal called for the imposition of compensatory adjustments on an MFN basis with respect to non-conforming measures.

#### *Subnational authorities*

Regarding the question of the application of the MAI to subnational authorities, the lists of exceptions tabled by one delegation appeared to exclude sub-national authorities in practice from many MAI obligations. Another delegation made the question of binding subnational authorities conditional upon a satisfactory balance of rights and obligations. A potential solution of this matter lay along the GATT lines which imposes an obligation upon federal States to take all reasonable measures to ensure compliance with its terms by sub-national authorities.

Moreover, the application of the MAI to subnational authorities raised the question of whether the standard would be met if the investor would be accorded "in state" treatment, or it would be sufficient to apply the treatment accorded to investors in any other state or province. A proposal was made that foreign investors should be accorded "in state" treatment.

#### *The REIO clause*

*A regional economic integration organization exception (REIO clause), as proposed by the European Union, would have provided for the possibility of granting preferential treatment to some partners without having to extend it to all the parties to the MAI. It would apply to measures taken in the context of such regional economic integration organizations.*

Some delegations argued that the REIO clause ran counter to some of the main objectives of the MAI which was to achieve non-discriminatory market access and post entry treatment within the MAI area. Indeed, one of their main negotiating purposes was to ensure for their investors market access to regional economic integration organizations on a par with access by investors of these organizations to their countries. In defence of their proposed REIO clause, the European Union argued, however, that the treatment extended by members of an integration group to each other depended on their acceptance of far-reaching decision-making mechanisms, including majority voting, which other countries had not accepted. In addition, the mutually accorded treatment within the REIO extended to fields not covered by the MAI non-discrimination clauses, such as the mutual recognition of diplomas or standards, or positive discrimination (i.e. the better treatment of other member States operators compared with a member State's own investors). According the benefits of such a regional integration schemes fully and automatically to countries not committed to those principles of integration would be very difficult.

A compromise on this matter was explored along the approach taken in other agreements, notably GATT Article XXIV/GATS article V.<sup>26</sup> However, the divergence of views remained to the end, in particular over how broad or narrow a REIO clause, if at all acceptable, should be. The broader such a clause, the more it was perceived as upsetting the balance of obligations.

### Intellectual property<sup>27</sup>

At the time of the discontinuation of the negotiations, the status of the discussions on intellectual property were that the MAI would include a separate provision on this subject which would explicitly exclude the application of national and MFN treatment obligations in this area beyond those in existing intellectual property agreements, notably the Paris Convention and the WTO TRIPs Agreement.

### Cultural exception

*A general cultural exception clause proposed by one delegation stated that “nothing in this agreement shall be construed to prevent any Contracting Party to take any measure to regulate investment of foreign companies and the conditions of activity of these companies, in the framework of policies designed to preserve and promote cultural and linguistic diversity.”*

Several delegations proposed from the outset that cultural industries should be exempted from the MAI coverage. The above-mentioned general exception clause was not discussed because the concept of a general cultural clause was not acceptable to some delegations. One possible solution might have been the inclusion of carefully defined cultural exceptions in the List B of exceptions; another might have been to adopt a bottom-up approach instead of a top-down one to cultural industries by including specific obligations for culture that the parties would accept in a separate schedule, subject to transparency commitments.<sup>28</sup>

### Performance requirements

*The MAI would have prohibited the imposition of a number of performance requirements, namely, a) trade-related: ratio of exports to total sales, domestic content, local purchases, ratio of local sales to exports; b) transfer of technology; c) location of headquarters; d) research and development; e) employment of nationals; and f) minimum and maximum level of equity participation. Trade-related investment measures listed under a) were prohibited whether mandatory or linked to incentives. All other requirements were allowed if voluntary and linked to advantages. The list was closed.*

Although the issue of performance requirements was not a major controversial one for most OECD countries, its negotiation took more time than expected, mainly because negotiators realized the complexity of the obligations imposed. In particular, the fact that the MAI provision on performance requirements imposed absolute obligations, as opposed to relative obligations of national and MFN treatment, caused some delegations to take a cautious approach. Moreover, it was one of the issues NGOs identified in the MAI as having the effect of potentially eroding the regulatory capacity of host countries, and thus contributed to the public debate.

Delegations had agreed to consider a proposal that the provision on performance requirements was without prejudice to the rights and obligations of contracting parties under the WTO rules. Exceptions to protect the environment and to ensure that the parties' regional and SME policies would not be undermined, were also being considered.

### Incentives

*The MAI addressed incentives indirectly as part of provisions on national and MFN treatment, performance requirements and transparency. There was a preliminary understanding to include this matter in the in-built agenda of the MAI after its adoption.*

After some initial discussions on whether or not incentives should be addressed explicitly in the MAI, it was decided to postpone negotiations on further disciplines on incentives aimed at avoiding excessive incentive competition. Such disciplines would have encountered opposition by subnational authorities with constitutional powers on foreign investment matters, as they continued to rely on incentives as an instrument to attract foreign investment away from other

regions. Indeed, the provisions on national treatment were seen by some subnational authorities as a threat to their authority to formulate inward investment policy (see above). Some delegations argued that incentives were best dealt with on a regional or world-wide basis.

#### Labour and environmental issues

*A labour and environmental package was proposed by the Chairperson which commanded considerable support: the preamble would make express reference to the parties' commitment to the relevant labour and environmental instruments such as the Rio and Copenhagen Declarations; in addition, the MAI would include a provision to prevent the lowering of labour, environmental or health standards as incentives in relation to a particular inward investment project.<sup>29</sup> It was also agreed towards the end of the negotiations that the OECD Guidelines for Multinational Enterprises would be associated to the MAI.*

There were early discussions among delegations on including a reference in the Preamble of the MAI to sustainable development and the relevant conventions on labour and the environment, and associating the (non-binding) OECD Guidelines to the MAI in some way, as well as including provisions on labour and the environment. The idea of including provisions on not lowering labour and environmental standards developed later in the negotiations, in response to concerns for social and environmental impact raised by NGOs and trade unions. The issue remained controversial with some countries opposing any reference to lowering standards. Negotiations also focused on whether the commitment not to lower standards would be binding on governments or remain a hortatory statement. This issue remained unresolved. The above mentioned compromise package by the Chairperson which included legally-binding language on not lowering standards (with the possibility that this clause might be submitted only to State-to-State settlement of disputes) was proposed towards the end of the negotiations.

#### Right to regulate vs. regulatory takings

*The provision of the MAI on expropriation covered not only direct but indirect takings as well. Accordingly, any measures taken by a host country having an effect equivalent to expropriation might need to be accompanied by prompt, adequate and effective compensation.*

The coverage of indirect takings under expropriation provisions had been consistently followed in BITs and other international investment agreements, and it was thought to be a rather innocuous matter. However, it faced strong opposition in the MAI negotiations, especially after some cases raised under the investor-State provisions of NAFTA in the United States and Canada (e.g. the Ethyl case)<sup>30</sup> led NGOs to think that property rights of individuals could be given precedence over the right of society to regulate for environmental purposes.<sup>31</sup> More generally, NGOs argued that this provision could be interpreted to mean that any regulation that had the effect of limiting the profit-making capacity of an investment could be challenged as an act of indirect expropriation. NGOs argued that such an interpretation would effectively nullify many regulatory acts of governments. As a result, this issue provoked much debate.

A proposal was made by the Chairperson to resolve this question, as part of his package of proposals on environment and related matters and on labour.<sup>32</sup> It suggested the inclusion of an interpretative note for the expropriation and general treatment articles. The proposal was in response to an agreement reached among delegations that the note should make it clear that the MAI would not inhibit the exercise of normal regulatory powers of governments and that the exercise of such powers would not amount to expropriation.

#### Settlement of disputes

*The MAI Negotiating Text included clauses on the settlement of investment disputes that provided for consultations, conciliation, State-to-State and investor-to-State means of dispute resolution, the latter allowing for the possibility that such disputes be submitted to third-party international arbitration.*

The main outstanding issue related to the settlement of investor-to-State disputes through third-party international arbitration. This means of resolving investor-to-State disputes was not a traditional feature of customary international law, but it has become a standard feature in international investment agreements, notably in BITs (however, out of some 1,700 BITs, less than ten per cent are between OECD countries), NAFTA,<sup>33</sup> MERCOSUR and the Energy Charter Treaty. Therefore, objections on this clause came as a surprise in the MAI negotiations. One delegation objected to the clause as a matter of principle, as it would give foreign investors special privileges, not available to domestic investors, to challenge host country decisions regarding compliance with the MAI outside the relevant country's jurisdiction. Moreover, the argument was taken up by some NGOs as one of their main objections to the MAI. An additional argument was that this clause would give foreign investors and their lawyers too much control over systemic policy issues and the law-making process emerging from the application of the MAI rules.

Some countries that did not object to investor-to-State dispute resolution in principle, but did raise objections regarding the extension of such a system to the pre-establishment phase, i.e. how to give non-investors the *locus standi* to file a claim against a potential host country.

Failure to resolve this matter would have thrown into question one of the main pillars of the MAI. Thus, there was a proposal for the creation of a standing appeals body to entertain both investor-to-State and State-to-State disputes, similar to the WTO appeals system. Such an appeals body would have been relatively easy to construct for State-to-State disputes. However, the issue raised technical difficulties with respect to investor-to-State, which were not examined in detail before the negotiations ended.

*Extraterritorial application of national laws  
and secondary investment boycotts*

*A proposal existed for a draft article on conflicting requirements which would prevent a party to prohibit outside its territory an investor from another party from acting in accordance with the latter party's laws, regulations or express policies, unless those laws, regulations or express policy were contrary to international law.*

*Another draft article on secondary investment boycotts was tabled which would prohibit parties from taking measures that impose liability on investors from another party, or to prohibit, or impose sanctions for, dealing with investors of another party, because of investments an investor of another party makes, owns or controls, in a third country in accordance with regulations of such third country.*

This issue emerged out of the debate generated by the Helms-Burton Act (Muchlinski, 1999). It raised important long-term technical questions regarding the extraterritorial application of national laws – an issue that had been dealt with by the OECD for quite some time – and led many delegations to ask for additional safeguards against extraterritoriality.

A separate understanding was reached in 1997 between two delegations which envisaged the development of disciplines governing transactions in so-called illegally expropriated property, and on extraterritorial measures, and a provision on conflicting requirements to be eventually incorporated in the MAI.

*Taxation*

There were some initial discussions as to whether taxation, an issue of importance in investor location decisions, should be included in the MAI. This would have made taxation matters subject to national and MFN treatment, with country-specific exceptions. The discussions took place in a special working group of tax and investment experts and was a controversial issue during the first year. However, most delegations agreed to carve taxation out of the MAI negotiations, except for expropriation and transparency commitments, in order to avoid any potential clashes with the many bilateral agreements on the avoidance of double taxation.



### ***(iii) The broader political context***

Independently of difficulties regarding the main outstanding issues in the MAI, a number of factors of a broader political nature intervened to bring about the MAI's demise. Different opinions have been expressed as to what caused the MAI to fail, each reflecting its own side of the debate, and it is perhaps premature to draw definitive conclusions on the matter.<sup>34</sup> Time and perspective will write the final story. But there is one thing on which most commentators seem to agree, namely, that the fate of the MAI was the result of a convergence of forces of a political, policy, social and economic nature not all of which were foreseen when the negotiations began. Some of the main reasons that have been advanced in this respect are outlined below.

One reason for the failure of the MAI was a change in the political climate during the course of the negotiations and the emergence of a backlash against globalization. The new centre/left governments in a number of influential OECD countries brought in new political priorities, while the Asian crisis and its aftermath called for new caution regarding capital mobility. In 1995, when the negotiations began, it was generally believed among negotiators that the MAI exercise was primarily a task of assembling the technical elements from various already existing international investment agreements into a rational whole and that the resulting agreement would have substantial systemic benefits which would engage their political constituencies. Three years later, a technical exercise had become a political one – and politicians tended to focus more on its costs.

Another important reason was that, although consultations with capitals and stakeholders had taken place during the preparatory process, negotiators underestimated the intensity of the public debate the MAI would provoke in some countries. (This had however been foreshadowed by public discussions in North America in connection with NAFTA, especially regarding the importance of labour and environmental issues.) Indeed, NGO influence – often through direct links to parliamentarians – brought about unexpected developments at a relatively late stage of the negotiations, which appeared to have caught negotiators by surprise. This was so, in particular, with respect to the issues of indirect expropriation and investor-to-State dispute settlement, issues that initially had been perceived to be relatively easy to deal with, as they had already been included in numerous international investment agreements. The NGOs' use of the INTERNET brought a new dynamic to the negotiating process, particularly when negotiating texts were distributed instantaneously.<sup>35</sup> In part, that was a reaction to what was perceived by NGOs as lack of appropriate consultations with key stakeholders in the framework of a process they considered to be closed and opaque (Dymond, 1999; Kobrin, 1998). But NGOs argued that their fears were just as much the result of real concern over the underlying philosophy and approach of the MAI, its structure and objectives, as well as a number of substantive issues; its failure to deal with competition, corruption and investor behaviour; the increase in investor rights as regards the definition of investment; pre-establishment protection; performance requirements and expropriation (WWF, 1999).

The business community (which, along with trade unions, was associated with the negotiations through their advisory committees to the OECD), was initially an important constituency behind the MAI negotiations. However, it appeared to have lost interest as negotiations progressed, especially after it became clear that taxation provisions would be carved out of the MAI,<sup>36</sup> provisions on the environment and labour would be added and no significant new liberalization would be gained immediately.<sup>37</sup>

An added difficulty (pointed out especially by NGOs) was that the developing countries were not able to make a *direct* input into the negotiations. This was all the more important as the MAI was ultimately intended to be open to accession by all countries. The concerns of these countries were therefore not brought directly to the table, except through those developing countries that had obtained observer status.<sup>38</sup>

Thus, on the one hand, from the perspective of national decision-makers there were no truly compelling problems of investment protection in the OECD area;<sup>39</sup> they needed to consider the possibility that the MAI might lower the protection standards that had already been accepted

in BITs (with the possible effects that this might have on the negotiation of future BITs); they were uncertain as to whether many developing countries would join an agreement (which, considering that the OECD was already largely liberalized, was seen by some as the real payoff of an agreement); and they realized that an agreement would not necessarily lead to improved market access in the OECD area (at least in the short term). On the other hand, national decision-makers saw no strong support from the business community; faced broad opposition from NGOs, who saw the MAI as “a metaphor for all that was to be feared from globalization” (Sauvé, 1998, p. 5), and (in some countries) even expected difficulties within their own coalition governments. On balance, therefore, a political cost/benefit calculation suggested to some governments that the value-added of the MAI was limited. In an organization that decides on the basis of consensus, the declared desire of even one government not to proceed was sufficient to bring about an end to the negotiations.

#### 4. Multilateral developments

At the multilateral level, the General Conference of the **International Labour Organization** (ILO) adopted, on 18 June 1998, the ILO Declaration on Fundamental Principles of Rights at Work and its Follow-up (UNCTAD, forthcomingd). The Declaration reaffirmed that all ILO members, even if they had not ratified the relevant Conventions, have an obligation to respect, promote and realize the principles concerning the fundamental rights of freedom of association and the effective recognition of the right to collective bargaining; the elimination of all forms of forced or compulsory labour; the effective abolition of child labour; and the elimination of discrimination in respect of employment and occupation. These principles have been referred to in, notably, the ILO Tripartite Declaration of Principles concerning Multinational Enterprises and Social Policy and the OECD Guidelines for Multinational Enterprises (UNCTAD, 1996c), as basic minimum standards governing employment and labour relations by foreign investors in their host countries. The Declaration establishes the universality of the principles set out in the relevant ILO Conventions. The follow-up measures to the Declaration are aimed at encouraging member countries to promote the principles of the Conventions.

In the **WTO**, discussions on investment-related matters took place mainly in the context of the Council for Trade in Services, the TRIMs Committee and of the Working Group on the Relationship between Trade and Investment. In the Council for Trade in Services, discussions increasingly focused on the preparation of a new round of comprehensive services negotiations. These discussions took place in light of article XIX of the GATS, which provides that members shall enter into successive rounds of negotiations, beginning not later than five years from the date of entry into force of the WTO Agreement and periodically thereafter, with a view towards achieving a progressively higher level of liberalization. This process of liberalization is meant to take place with due respect for national policy objectives and the level of development of individual members, both overall and in individual sectors (UNCTAD, 1996c, vol. I, article XIX). The Committee on Trade-Related Investment Measures discussed issues relating to notifications submitted under Article 5.1 of the TRIMs Agreement. In addition, there has been informal consideration of when and how to initiate the review of the TRIMs Agreement pursuant to article 9 which is to take place not later than five years after the date of entry into force of the WTO Agreement, i.e. not later than 1 January 2000. As of June 1999, no formal decision to start this review had been taken. In this regard, the view was expressed by some delegations that, before considering possible steps under article 9 of the TRIMs Agreement, the outcome of the ongoing study processes in the working groups on the Relationship Between Trade and Investment and on the Interaction Between Trade and Competition Policy should be awaited.

The WTO Working Group on the Relationship between Trade and Investment on its part submitted, on 8 December 1998, a report to the General Council of WTO pursuant to paragraph 20 of the Singapore Ministerial Declaration (December 1996) that the Council will keep the work of the Group under review and will determine, after two years, how it should proceed (WTO, 1998a). The Working Group recommended to the General Council that it decide that the Working Group:

shall continue the educational work that it has been undertaking on the basis of the mandate contained in paragraph 20 of the Singapore Ministerial Declaration. The work of the Working Group, which shall be reviewed by the General Council, shall continue to be based on issues raised by Members with respect to the subjects identified in the Checklist of Issues Suggested for Study. It is understood that this decision is without prejudice to any future decision that might be taken by the General Council, including in the context of its existing work programme (WTO, 1998a, paragraph 227).

The Council extended the mandate of the working group, and work has proceeded on the basis outlined in the recommendation (box IV. 6).

**Box IV. 6. Checklist of issues suggested for study by the WTO Working Group on the Relationship between Trade and Investment**

It was widely recognized that the Working Group's work programme should be open, non-prejudicial and capable of evolution as the work proceeds. It was also emphasized that all elements, not only category I, should be permeated by the development dimension. Particular attention should be paid to the situation of least-developed countries. In pursuing the items of its work programme, the Working Group should avoid unnecessary duplication of work done in UNCTAD and other organizations.

**I. 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.

In this work, the Working Group should seek to benefit from the experience of Members at different stages of development and take account of recent trends in foreign investment flows and of the relationship between different kinds of foreign investment.

**II. 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.

**III. 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.

**IV. 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.

*Source:* UNCTAD, forthcoming d.

As the third WTO Ministerial Meeting – scheduled to take place in Seattle from 30 November to 3 December 1999 – approaches, the question of what activities, if any, should be undertaken on investment issues in the WTO was still open in June 1999.

In **UNCTAD**, the Commission on Investment, Technology and Related Financial Issues convened an expert meeting in March 1999 to examine concepts allowing for a certain flexibility in the interest of promoting growth and development. The expert meeting reviewed the ways and means by which existing international investment agreements provide for flexibility for the purpose of promoting growth and development and discussed pertinent experiences, including various concepts applied by investment instruments at different levels. The experts concluded that flexibility, including with regard to a Government's normal ability to regulate, can be reflected, *inter alia*, in the objectives, content, implementation and structure of investment agreements. They noted also that a key issue involves finding the proper balance between flexibility on the one hand, and predictability and security on the other, and thus stressed the role international investment agreements can play as one of the factors contributing to confidence-building in investment relations (UNCTAD, 1999d). There was a sense through the discussions that the potential for unravelling the possibilities of flexible mechanisms to ensure maximum benefits and minimum negative effects from international investment agreements for all parties had not yet been entirely tapped, and further study was needed on this topic in order to understand fully the various possibilities available.

Other activities of UNCTAD of an educational and consensus-building nature included the organization of regional symposia for decision-makers on key concepts and issues in international investment agreements and their implications for developing countries. Regional symposia were held for Asian countries (July 1998), the Caribbean (September 1998), the Andean Group (November 1998) and the Arab countries (May 1999); each symposium was followed by an event for representatives of civil society. The Geneva seminar series for delegates (which was undertaken in cooperation with the WTO) came to its conclusion with the organization of a seminar in April 1999. Designed for interested UNCTAD and WTO delegates in Geneva, these seminars provided an opportunity for in-depth examination of the economics of FDI and they provided a forum to discuss important concepts and issues in international investment agreements. As part of its goal to involve all stakeholders, UNCTAD continued its organization of round table events with interested groups from civil society thereby providing a forum for public-private sector dialogue on issues related to international investment agreements. Events of this nature were organized in New Delhi, Geneva, Lima, Buenos Aires and Cairo. A series of seminars on international investment agreements for representatives of non-governmental organizations is also being developed. Finally, UNCTAD released the first papers in a Series of Issues Papers on International Investment Agreements. The series examines key concepts and issues in international investment agreements and presents them in a manner that is easily accessible to end-users, with particular attention being given to the needs and concerns of developing countries. Eight papers have been published so far. They cover the topics of foreign direct investment and development (UNCTAD, 1999o); scope and definitions (UNCTAD, 1999j); admission and establishment (UNCTAD, 1999l); national treatment (UNCTAD, 1999k); most-favoured-nation treatment (UNCTAD, 1999p); fair and equitable treatment (UNCTAD, 1999q); investment-related trade measures (UNCTAD, 1999r); and transfer pricing (UNCTAD, 1999s).

## 5. Civil society

Civil society<sup>40</sup> has continued to provide inputs into investment discussions on themes of concern to it. The World Development Movement, for example, issued in early 1999 a set of "core standards" it believed should be observed by TNCs, their subsidiaries and sub-contractors in all their operations (UNCTAD, forthcoming d). The stated purpose of the standards is to give the business community a stable, agreed international framework for their operations, and enable countries and their people to maximize the benefits and minimise the costs of TNC operations. The list of standards is not exhaustive but rather provides the basis for further debate. They deal with basic human rights, working conditions, equality, consumer protection, the environment, local communities, business practices, and sovereignty and development strategies.



Given the complex nature of the issues involved in investment rule-making, the approach of the World Development Movement was to propose a regulatory framework rather than a single international agreement, trying as far as possible to strengthen existing mechanisms rather than inventing new procedures. This initiative follows another text of an international agreement on investment prepared by the Consumer Unity & Trust Society (CUTS) in 1998 (CUTS, 1998; UNCTAD, forthcoming d). Among other things, the CUTS proposal, intended as an alternative to the MAI Negotiating Text, excludes a number of assets from an otherwise broad definition of investment (notably, financial assets, public debt, derivatives, real estate movable and immovable property acquired for personal use); includes the principles of national and most-favoured-nation (MFN) treatment at the pre- and post-establishment stages of the investment, but provides for a number of broad exceptions to the effect that these standards shall not apply to measures adopted by a contracting party for compelling reasons connected with its national interest; prohibits a number of performance requirements, unless the contracting party has compelling social or economic reasons to impose them; provides for best efforts to reduce restrictive measures, including those regarding transfer of funds; and introduces provisions on human rights, consumer protection, restrictive business practices and labour relations. Other NGOs, drawing lessons from the MAI negotiating process (see section 3.b. above), elaborated a set of priorities for future negotiations on investment (WWF, 1999). In their view, the main priority for international negotiations is not liberalization, but setting a framework to ensure that international investment promotes sustainable development and real economic efficiency. Specific priority areas for rules included investor behaviour and transparency, competition and restrictive business practices, regulation of investment incentives, and support for least developed countries to enable them to attract high quality investment. At the same time, least-developed countries could potentially benefit from multilateral rules that provided for transparency of regulation, investor certainty, protection against corruption and proactive mechanisms for improving regulatory systems, technology and skill transfer.

The International Confederation of Free Trade Unions (ICFTU) – which has long advocated a comprehensive set of rules to govern the activities of TNCs and has followed closely the OECD negotiations on the MAI – reiterated the view that only a comprehensive approach, in terms of both geographical reach and issues, could command the political legitimacy to ensure an effective and balanced international regime to regulate the role of TNCs in world development. Therefore, if negotiations were to commence in WTO, they should aim at creating a strong international framework to maximize the impact of increased international trade and investment. Such a framework should incorporate binding clauses that ensure commitments to respect core labour standards, and be informed by the ILO Tripartite Declaration of Principles on Multinational Enterprises and Social Policy. Furthermore, according to ICFTU, any discussions on a “development clause” for developing countries should be backed up by a regular multilateral review process such as the one already operating in WTO. Due attention should be given also to the problems of competition and restrictive business practices, including corruption and transfer pricing by TNCs (ICFTU, 1998).

Regarding the business perspective, the Union of Industrial and Employers Confederations of Europe (UNICE) made its position clear on how WTO should deal with investment in a statement dated 6 May 1999 (UNICE, 1999). It attached high priority to the establishment of a global regime for FDI that is non-discriminatory, transparent, stable and liberal, and strongly advocated that negotiations on an investment agreement should be launched by the forthcoming WTO ministerial meeting in Seattle in late 1999. UNICE believed that appropriate provisions on FDI would be in the interests of WTO members at all levels of development and proposed a number of specific negotiating objectives. These include notably:

- a general statement of support of FDI, its contribution to sustainable development and respect for national sovereignty and applicable international law;
- the definition of investment should cover all forms of direct investment and the possibility of covering short-term capital flows to be examined with a view to setting international standards and ensuring transparency;
- a legal right for foreigners to invest on an MFN basis in those sectors of a national economy publicly recognized as being open for such investment;



- no discrimination between domestic and foreign-owned companies in the application of national laws, including taxation; the national treatment clause should be binding on all levels of government, and exceptions should be limited and transparent;
- national provisions on rights of entry and post-investment operations should be publicly available and bound, with new provisions subject to scrutiny and appeal; there should be no interference in the management and operation of investment projects (thus, restrictions on post-investment operations through TRIMs should be progressively eliminated);
- the scope of incentives should be reduced and there should be no lowering of standards to attract individual investors;
- expropriation provisions should cover “creeping expropriation” and provide for prompt, adequate and effective compensation;
- an effective mechanism for dispute settlement, preferably linked to the existing WTO procedures and maintaining rights under the International Centre for Settlement of Investment Disputes (ICSID), between investors and host countries; such a mechanism is seen as a basic requirement of an agreement to protect the interests of all concerned.

For UNICE, the agreement should add value to existing BITs by embodying the most comprehensive provisions they contain. It should not encroach on governments’ right to regulate on areas of policy, such as labour or environmental standards which should be, and are being, tackled on their own merits in appropriate forums.

The International Chamber of Commerce (ICC), in the context of its strategic priorities for a new round of multilateral trade negotiations, urged governments to seize the opportunities of a new round to push forward the process of creating within the WTO high-standard multilateral rules to protect and liberalize FDI (ICC, 1999a). Also in 1999, the ICC updated the 1996 version of the Rules of Conduct to Combat Extortion and Bribery (UNCTAD, 1996c; UNCTAD, forthcoming d). The Rules set out a series of principles for enterprises to follow when devising an anti-corruption policy. The first version of the Rules adopted in 1977 represented the first effort by a world business organization to prepare detailed guidelines on this issue. The Rules of Conduct were accompanied by a “Corporate Practices Manual” (ICC, 1999c) to provide practical guidance for company managers. The Manual contains case studies, texts of relevant corporate codes of conduct and recommendations for company practice, and aims at facilitating implementation of corporate codes of conduct in the light of the OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions and other initiatives (ICC, 1999b).

### C. Conclusions: lessons

Several observations emerge from the foregoing review of international policy developments. Countries have pursued various bilateral and regional negotiating initiatives. Treaty-making continues to be very active, with new elements being introduced in a number of cases. Since the effective end of the MAI negotiations in the OECD, work among developed countries has shifted towards policy related analysis of key issues for investment regimes worldwide, and the review of standards for the behaviour of firms.

At the same time, in terms of issue-specific instruments, the question of bribery of government officials in international business transactions has been a recurrent topic in recent years; they aim not only at prohibiting such transactions and making them subject to criminal action in their relevant jurisdictions, but also at preventing them by introducing improved transparency and accountability mechanisms in administrative practices and increasing co-operation among the relevant authorities; Transparency International has a leading role in this area (box IV. 7).

It must be recognized that each individual negotiation of an international investment agreement has its own dynamics; it is therefore difficult to discern general negotiating principles. However, the intense activity that has taken place in recent years regarding international co-operation and rule-making in the area of FDI allows for some lessons of a general nature to be drawn from these experiences. They include:

#### **Box IV.7. Transparency International**

Transparency International (TI) is a non-governmental organization dedicated to increasing governmental accountability and curbing international and national corruption. TI is the only global non-profit and politically non-partisan movement with an exclusive focus on corruption.

Founded in 1993, TI is active in more than 70 countries and in the international arena, with a small secretariat in Berlin. TI national chapters form the core of the global anti-corruption movement. Among other things, they monitor national developments. National chapters are financially and institutionally independent and are called upon to observe the TI guiding principles of non-investigative work and independence from government, commercial and partisan political interests.

TI defines corruption as the abuse of public office for private gain. This effectively means the taking of decisions are taken to serve private interests, rather than for the public good. TI believes that combating corruption effectively is only possible by involving all stakeholders in a society: the State, civil society and the private sector.

Corruption often transcends the national level and is beyond the reach of national governments alone. TI works to ensure that the agendas of international organizations – both governmental and non-governmental – give high priority in their programmes to curbing corruption. TI also seeks to shape public policy discussions in various fora – such as the Council of Europe, the European Union and the Organization of American States – to criminalize transnational corruption in an internationally coordinated manner. It also strives to develop coherent international norms to fight and prevent corruption, e.g., in the fields of auditing or international finance. TI national chapters promote the TI concept of “Integrity Pacts” in order to curb corruption in the area of public procurement.

During the past few years, one of the most important initiatives for tackling the problem of international corruption has been undertaken by the OECD, with the Convention on Combating Bribery of Foreign Public Officials in International Business Transactions (see above).

*Source:* Transparency International.

#### *Global and policy context*

The processes of economic globalization and the new orientation of many governments' economic policies make international investment agreements instruments that contribute towards establishing a predictable environment for the promotion, protection and treatment of FDI. Indeed, a number of common elements may now be found among such agreements. At the same time, given that FDI issues are closely interwoven with domestic policy matters, international investment agreements are subject to particular scrutiny.

#### *Negotiating approaches*

The complexity of negotiations increases as more and more countries are involved. By the same token, the more countries are involved, the more it may be advisable to take a modest and incremental approach. This raises questions of how broad the agenda of any particular set of negotiations should be, and how ambitious parties want to be concerning the nature of commitments. Too ambitious investment negotiating agendas at the international level may have a lesser likelihood of success than more modest and incremental propositions. In any event, the success of negotiations also depends upon the clarity with which each participant perceives the aims and objectives of the negotiations as a whole, as well as the forum in which negotiations take place. Given the complexity of negotiations, pre-negotiation preparation by the parties, and careful preparatory work on the substantive provisions, is therefore important.

Moving from the bilateral to the regional level, and from the regional to the multilateral level, involves not only quantitative changes (in terms of numbers of countries involved) but also qualitative changes (in terms of the nature of the agreements involved). In particular, while investment agreements, be they bilateral, regional or multilateral, by definition are legally binding, multilateral agreements are often perceived as having a more extensive international

legislative character, whereas bilateral agreements are seen more as creating special law between the parties. Therefore, the existence of a network of BITs can not be assumed to signal the preparedness of countries to move to another level, in spite of a convergence of perspectives in certain substantive areas as signified by existing BITs. At the same time, investment rule-making, which takes place in a framework that allows for broader trade-offs between the parties may prove easier, whether this is at the bilateral, regional or multilateral level. In the final analysis, the desirability and effect of any particular agreement depends on its content.

### *Content*

The negotiation of international investment agreements includes interrelated, difficult policy issues that touch upon, at least in principle, a whole range of domestic concerns, including increasingly, social and environmental matters. Indeed, such agreements reflect increasingly the growing internationalization of the domestic policy agenda. Failure to take related issues of national policy properly into consideration and to reflect a certain balance between rights and responsibilities – either by including them within the same instrument or by establishing bridges with other binding and non-binding international instruments – might affect the overall acceptability of a particular investment agreement.

While international investment agreements, by definition, contain obligations that, by their very nature, limit to some extent the autonomy of participating parties, the need for a certain degree of flexibility to allow countries to pursue their development objectives in light of their specific needs and circumstances must be addressed (see also chapter XI). The more investment agreements go beyond promotion and protection issues and in particular attempt to include commitments to liberalize, the more complicated their negotiation becomes. Where liberalization is sought, progressive liberalization of investment regulations (going beyond “standstill”) may be more acceptable than up-front and all-embracing commitments to liberalize.

### *Procedures*

Transparency in the conduct of investment negotiations plays a key role in securing the necessary support and legitimacy for international investment agreements. The awareness, understanding and input of civil society from both developed and developing countries is important. The involvement of all interested parties from the initial stages of discussions or negotiations, through appropriate mechanisms, may prove crucial for the success of negotiations.

## Notes

- <sup>1</sup> The legislative changes referred to in this chapter are not always clear-cut isolated measures of liberalization or promotion but rather are often part of a package which include liberalization and promotional measures, and can also have some requirements attached to them.
- <sup>2</sup> The present members of ASEAN are Brunei Darussalam, Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, the Philippines, Singapore, Thailand and Viet Nam.
- <sup>3</sup> The South Asian Association for Regional Cooperation (SAARC), created on 8 December 1985, comprises Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka. The idea of having SAARC address intra-regional investment aspects originated at the sixth meeting of the Committee on Economic Cooperation. It was then agreed to conduct a study on promotion of intra-regional investment and establishment of joint ventures catering to national and regional markets.
- <sup>4</sup> Based on information provided by the SAARC secretariat.
- <sup>5</sup> The members of the Indian Ocean Rim Association for Regional Cooperation are Australia, India, Indonesia, Kenya, Madagascar, Malaysia, Mauritius, Mozambique, Oman, Sri Lanka, Singapore, South Africa, United Republic of Tanzania and Yemen.
- <sup>6</sup> The members of the Economic Cooperation Organization are Afghanistan, Azerbaijan, Islamic Republic of Iran, Kazakhstan, Kyrgyz Republic, Pakistan, Tajikistan, Turkey, Turkmenistan and Uzbekistan.
- <sup>7</sup> The members of the Central African Economic Community and Monetary Union are Cameroon, Central African Republic, Chad, Democratic Republic of Congo, Gabon and Equatorial Guinea.

- 8 The members of the West African Economic and Monetary Union are Benin, Burkina Faso, Côte d'Ivoire, Guinea Bissau, Mali, Niger, Senegal and Togo.
- 9 The Southern African Development Community comprises fourteen countries, namely, Angola, Botswana, Democratic Republic of Congo, Lesotho, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Swaziland, United Republic of Tanzania, Zambia and Zimbabwe.
- 10 The 21 members of the Common Market for Eastern and Southern Africa are: Angola, Burundi, Comoros, Democratic Republic of Congo, Djibouti, Egypt, Eritrea, Ethiopia, Kenya, Madagascar, Malawi, Mauritius, Namibia, Rwanda, Seychelles, Sudan, Swaziland, United Republic of Tanzania, Uganda, Zambia and Zimbabwe.
- 11 The founding members of the East African Community were Kenya, United Republic of Tanzania and Uganda.
- 12 The Treaty of OHADA was signed in Port-Louis (Mauritius) on 17 October 1993. The current members are Benin, Burkina Faso, Cameroon, Central African Republic, Chad, Comoros, Democratic Republic of Congo, Côte d'Ivoire, Gabon, Guinea Bissau, Equatorial Guinea, Mali, Niger, Senegal and Togo. However, according to article 53 of the Treaty, adhesion is open to all member States of the Organization of African Unity.
- 13 Pursuant to the Treaty, a "Common Court of Justice and Arbitration" was established with headquarters in Abidjan, composed of nine judges from different member countries. The Court has wide competence on disputes which may arise between member States regarding interpretation and enforcement of the provisions of the Treaty and also regarding business disputes which the parties wish to submit to the OHADA arbitration system.
- 14 Based on information provided informally by the League of Arab States Secretariat.
- 15 Based on information provided informally by the Council of Arab Economic Unity.
- 16 Based on information provided informally by the chairperson of the Negotiating Group on Investment.
- 17 The Barcelona Conference brought together the 15 member States of the EU and Mediterranean non-member countries (Algeria, Cyprus, Egypt, Israel, Jordan, Lebanon, Malta, Morocco, Syria, Tunisia, Turkey) and the Palestinian Authority (European Commission, 1995).
- 18 The Guidelines are recommendations by the OECD Governments to TNCs regarding their behaviour in their host countries. They are an integral part of the OECD Declaration on International Investment and Multinational Enterprises adopted in 1976 (UNCTAD, 1996c). Previous reviews were undertaken in 1979, 1982, 1984 and 1991.
- 19 The original intention was to complete the negotiations by April 1997 (OECD, 1995a).
- 20 In his speech to the National Assembly announcing that France was no longer taking part in the MAI negotiations in the OECD, the Prime Minister of France explained among other things that the process of consultations and evaluation of the negotiations led to the conclusion that there were some fundamental problems with the draft MAI as it placed private interests above State sovereignty. France, he noted, would propose the fresh start of new negotiations in a forum where all actors, notably the developing countries, could be associated (France, Le Premier Ministre, 1998).
- 21 For a detailed discussion of the rationale for the MAI, see Witherell, 1996.
- 22 The MAI was preceded by a number of OECD instruments on investment, notably the Codes of Liberalisation of Capital Movements and Current Invisible Transactions, the Declaration and Decisions on International Investment and Multinational Enterprises which, in turn, encompasses decisions on National Treatment, Incentives and Disincentives and Conflicting Requirements, and Guidelines for Multinational Enterprises, the Convention on Combating Bribery of Foreign Officials, and the draft OECD Convention on the Protection of Private Property, which sets out standards for the treatment and protection of foreign investors in host countries (the Convention was approved by the OECD Council but never opened for signature; it had a major influence on the development of BITs which OECD countries negotiated with developing countries in order to protect their investors against non-commercial risks) (UNCTAD, 1996c).
- 23 Taken together, and through their various review processes, the OECD instruments presently provide for pre- and post-establishment national treatment; free repatriation of profits and capital; transparency of regulations; a mechanism for consultation to deal with problems; peer review to promote rollback of remaining restrictions; and voluntary guidelines for the behaviour of transnational corporations, notably with respect to adherence to economic and social objectives of host countries, environmental and consumer protection, competition and restrictive business practices, corporate governance, accounting and reporting, taxation, conditions of labour, and science and technology.
- 24 For a brief account of the highlights of main provisions of the MAI and the MAI negotiating process, see UNCTAD, 1998a, chapter III.
- 25 The texts of the provisions discussed in this section are those contained in the MAI Negotiating Text, as of 24 April 1998 (OECD, 1998b; reprinted in UNCTAD, forthcoming d). There were many country proposals

- for the draft text. These were included in annex 1. Annex 2 contained the Chairperson's package proposal including texts on, among other things, on environment and related matters and on labour.
- 26 Article V of GATS dealing with economic integration, provides that the GATS shall not prevent any of its members from being a party to or entering into an agreement liberalizing trade in services between or among the parties provided that certain conditions are met. In evaluating whether these conditions are met, consideration may be given to the relationship of the agreement to a wider process of economic integration or trade liberalization among the countries concerned (GATS, Article V, 1.2.).
- 27 For an in-depth discussion of the issues raised in the MAI negotiations with respect to intellectual property, see Gervais and Nicholas-Gervais, 1999.
- 28 On completion of the Uruguay Round, only three OECD countries (Japan, New Zealand and the United States) undertook specific commitments in the audio-visual industry; the other OECD countries, including the European Union and its members, did not agree to a standstill commitment with respect to mode 3 of the GATS – establishment and commercial presence – in this industry. In fact, out of 134 countries participating in the GATS negotiations, only 13 countries undertook specific commitments.
- 29 See Chairperson's Proposals, MAI Negotiating Text of 24 April 1998, annex 2, *op. cit.*
- 30 The United States-based Ethyl Corporation sued the Government of Canada for damages when the Canadian parliament prohibited the importation of, and inter-trade between Canadian provinces with a fuel additive produced by Ethyl for environmental and health reasons. The Ethyl Corporation claimed that Canada had violated its NAFTA commitments on expropriation and compensation, performance requirements and national treatment (Kobrin, 1998). In the end, the parties agreed to settle the case.
- 31 On regulatory takings see Graham, 1998.
- 32 See MAI Negotiating Text, annex 2, "Chairman's proposals on environment and related matters and on labour". There was also a contribution by one delegation on a package of additional proposals on environment, including new language for an interpretative note on "in like circumstances" in the national and MFN treatment articles (UNCTAD, forthcoming d).
- 33 In early 1999, Canada sought to introduce interpretative changes to the NAFTA to restrict the ability of private companies to seek compensation for government regulations that damage their business.
- 34 Indeed, the failure of the MAI has already inspired considerable literature. See, among others, Canner, 1998; Dymond, 1999; Gervais and Nicholas-Gervais, 1999; Graham, 1998; Henderson, 1999; Huner, 1998; Kline, 1999; Kobrin, 1998; Lalumière et al., 1998; Muchlinski, 1999; Picciotto, 1998; Sauvé, 1998, 1999; WWF, 1999. For sources of information on the MAI and arguments in favour and against it, see the OECD website on the MAI (<http://www.oecd.org/daf/cm/mai/negtext.htm>); for links to other websites access ([www.foreignpolicy.com](http://www.foreignpolicy.com)).
- 35 For a discussion of the impact of an electronic global civil society on political authority and power, see Rothkopf, 1998; and Mathews, 1997.
- 36 The business community was interested in an additional national treatment tool and access to investor-to-State dispute settlement procedures on this issue.
- 37 Parts of the business community had suggested investment negotiations in the WTO; see, ICC, 1996.
- 38 The following non-OECD countries participated in the negotiations as observers: Argentina, Brazil, Chile, Estonia, Hong Kong (China), Latvia, Lithuania and the Slovak Republic. In addition, the OECD secretariat carried out an outreach programme.
- 39 According to a negotiator, for example, "the success of the negotiations would have the same result as their failure" for Canada. (Dymond, 1999).
- 40 For a review of the role of civil society and especially NGOs in the negotiation of international investment agreements, see UNCTAD, 1998a, ch. III.





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## **Part Two**

# **Foreign Direct Investment and the Challenge of Development**

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# CHAPTER V

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## THE CONTEXT AND ITS CHALLENGE

Economic development remains an urgent global need. Globalization - which links countries closer than ever before with each other (UNCTAD, 1994, chapter III) - reinforces this need. Although many countries have achieved impressive increases in income, over a billion people in more than a hundred countries still live in poverty. Economic inequalities within countries remain large, and there is little sign of convergence in incomes across countries (UNCTAD, 1997b). In fact, a number of developing countries face increasing marginalization.

Globalization accentuates the increasing importance of the international economy for developing countries. Flows of finance, information, skills, technology, goods and services between countries are increasing rapidly. FDI is one of the most dynamic of the increasing international resource flows to developing countries. FDI flows are particularly important because FDI is a package of tangible and intangible assets, and because the firms - TNCs - deploying them are now important players in the global economy. TNCs can affect development, by complementing domestic investment and by undertaking trade and transfers of knowledge, skills and technology. However, TNCs do not substitute for domestic effort: they can only provide access to tangible and intangible assets and catalyse domestic investment and capabilities. In a world of intensifying competition and accelerating technological change, this complementary and catalytic role can be very valuable. Since globalization has its dangers, countries need to prepare their own capabilities to harness its potential, including through FDI. However, FDI on its own cannot counteract the marginalization of developing countries.

Part Two of *WIR99* examines the development impact of FDI in the context of globalization and in the light of the changing circumstances of the global economy. It analyses if and how TNCs assist or hamper developing host countries in achieving their development objectives, and outlines options for domestic and international policies to enhance the positive and mitigate the negative aspects of the impact of TNCs. In dealing with development, *WIR* uses the United Nations definition of “sustainable human development”, a definition that encompasses economic, social, political, environmental and other dimensions (box V.1). While it focuses on economic development - where FDI can make the most difference - it also considers the social and environmental effects of TNCs.

### **Box V.1. Evolution of approaches to development**

A comprehensive view of development is at least as old as the United Nations Charter of 1944. The Charter mentioned development in the context of economic and social progress and higher standards of living as well as cultural, educational and health matters.

But another approach, centred on economic growth, has predominated much of the thinking and practice related to development since the early years of development cooperation. It focused on resources for investment (initially coupled with the requirements of reconstruction in war-devastated economies) to increase production or incomes and, thereby, consumption levels, and on the provision of basic goods and services. This approach remained influential in development co-operation until the late 1980s. The discussion on development in the United Nations continued, becoming occasionally a subject of East-West ideological disputes, but nonetheless contributing to a better understanding of the complex nature of development. For example, during the 1960s, the useful concept of basic needs was introduced (Gasper, 1996).

With the end of the East-West divide in the early 1990s, the discussion was freed from political power play. Over the past decade, the notion of development has evolved into one that emphasizes sustainable and human development. Environmental soundness, social justice, political freedom, gender equality and, most recently, social inclusion have become integral development considerations. The Programme of Action of the 1995 World Summit for Social Development, for example, embraces a concept of development that includes both developed and developing countries, and deals with eradicating absolute poverty, expanding employment, and enhancing social integration (UNRISD, 1995).

These development objectives are also found in the preambles of development strategies, development plans and other types of policy statements of developing countries, and in selected international policy instruments. Governments stress in their policy statements a broad concept of development. For instance, the ninth Five Year Plan of India, entitled *Growth with Social Justice and Equity*, states as its objectives improved quality of life, generation of productive employment, regional balance and self-reliance (India, Government of India, 1997). In the same tradition, most regional, plurilateral and multilateral trade (and investment) agreements use a notion of development that encompasses growth, efficiency, employment and social justice (UNCTAD, 1996a).

A broad consensus is now emerging that development and development co-operation focusing only on economic growth are not sufficient. It is also important to advance the social and institutional aspects of development (World Bank, 1999a; Stiglitz, 1998b). The Agenda for Development, debated by the General Assembly for four years, pulled together the development aspirations voiced at the major United Nations conferences of the 1990s, to arrive at the concept of sustainable development (United Nations, 1997).

It has become increasingly recognized that there are many different paths to development and that there is no single, fixed definition of "development". The goals of development vary, and there are many ways of reaching those goals (Sachs, 1992). Development is increasingly seen as an open-ended process and indeed, defined very loosely as a "broadening of people's choice's" (UNDP, 1998).

In spite of these differences, however, one thing is clear: development is much more than economic growth and economic development. It encompasses social and other aspects of human advancement although there may be differences of opinion on the precise contents and direction of the latter. In retrospect, the United Nations Charter of 1944 has proven to be quite a visionary document.

*Source:* UNCTAD.

## **A. The changing context of development**

The factors that propel sustained economic development have not changed over time. They include the generation and efficient allocation of capital and labour, the application of technology and the creation of skills and institutions. These factors determine how well each economy uses its endowments and adds to them. They also affect how flexibly and dynamically each country responds to changing economic conditions. However, the global context for development has changed enormously over the past three decades. These changes affect not only the role of FDI in host countries, but also government policies on FDI. The following three are of particular significance.



- ***The nature and pace of knowledge - and, particularly, technological knowledge - change.*** The creation and diffusion of productive knowledge have become central to growth and development (Mytelka, 1987; Dunning, 1997; World Bank, 1998). “Knowledge” includes not only *technical* knowledge (research and development, design, process engineering), but also knowledge of organization, management and inter-firm and international relationships. Much of this knowledge is tacit. Today, the resources devoted to such knowledge exceed investment in tangible machinery and equipment in many of the world’s most dynamic firms, and the costs of generating new knowledge are rising constantly. The importance of knowledge is not limited to modern or high-tech activities but pervades all sectors and industries, including traditional activities in the primary sector (for instance, vegetable and flower exports), manufacturing (such as textiles, clothing and footwear), and services (such as tourism and banking). As a result, achieving development objectives is, more than ever, a continuous learning process.

The sheer pace of technological change, in particular, is unprecedented and is accelerating. This means that enterprises that want to be competitive internationally need both the knowledge to use technologies efficiently and to keep pace with developments. Innovators need to invest more in creating new knowledge, but even followers need the capacity - difficult to acquire - to access and use this new knowledge, or in fortuitous circumstances, to identify windows of opportunity for technological leaps. The skills required for this are changing concomitantly, as are institutions and their relations with productive enterprises; one development is the closer linking of science with technology-generation in industry. An important result of this new “technological paradigm” (Freeman and Perez, 1988) is that research-intensive activities are growing more rapidly than others in production and trade; thus, sustained economic growth calls increasingly not just for the application of new technology to existing activities, but also for a shift of activities up the value-added chain.

The most profound technological changes today emanate from a merger of communications and information processing technologies (World Bank, 1998). While the telegraph, telephone and computer were significant technological achievements, they pale in comparison with emerging technologies based on the interface between microprocessors and telecommunications. These are generic technologies that affect practically the whole range of economic and even social and cultural activities. Information can now be transmitted across the globe at very low cost. For example the cost of sending a million bits one kilometer via optical fibre today is less than 10 per cent of what it was in 1975 (World Bank, 1998). The processing of information and trade in information-intensive services is one of the most important occupations in today’s knowledge-intensive economy.

- ***Shrinking economic space and changing competitive conditions.*** Technical progress in transport and communications has caused economic space to shrink dramatically. Countries now face much more intense and immediate competition than ever before. This leads to a significant restructuring of their comparative advantages and activities. The nature of competition itself is changing, with the rapid introduction of new products, shorter product cycles, flexibility of response to demand, and customer interaction becoming more important than traditional forms of competition based on lower costs (Best, 1990). At the enterprise level, this calls for new management and technical skills and organizational forms. In many instances, it leads to flatter hierarchies and greater use of networking and cooperation between related firms and also competing firms (for instance, component suppliers now play a much more direct role in new technology development). At the national level, it requires countries to be more open to international flows of information, and to improve national capabilities to absorb and use that information: to develop new skills, institutions and innovative capacities. Countries that can do that - either generally or in niche markets - can move up the value-added ladder.
- ***Changing attitudes and policy regimes.*** Most developing and transition countries have moved to market-oriented and private sector led economies. This shift reflects

disillusionment with past strategies and growing difficulties in pursuing them in the new technological and competitive setting. The shrinking of economic space has itself rendered elements of traditional strategies obsolete, while the flow of information has made governments more aware of policies and performance in other countries. Policy benchmarking in all areas is becoming more common which, in turn, puts more pressure on countries to innovate in the policy arena. There is widespread reduction and removal of trade barriers, deregulation of internal markets, privatization and liberalization of technology and investment flows at the national level. At the international level, regulation has intensified and is being harmonized. For instance, the TRIPS agreement of the Uruguay Round has introduced a common, more rigorous, system of intellectual property protection; the TRIMs agreement has established disciplines over certain performance requirements; and quality requirements such as ISO standards are becoming prerequisites for participating in international production and trade. Thus, in a sense, some regulation is shifting to the international plane.

Perhaps nowhere is the policy change more striking than in the changing attitude of governments to TNCs (box V.2). Twenty years ago or so, many governments saw TNCs as part of the “development problem”. Today, TNCs are seen as part of the “solution”. Indeed, if anything, expectations are sometimes too high, as FDI plays in most instances only a complementary and at best a catalytic role. Reflecting this change of attitude, FDI is now not just permitted - it is avidly sought by governments and, indeed, many sub-national public sector entities at all levels, from provinces to individual communities. Apart from active promotion (which has led to the establishment of investment promotion agencies in a great number of countries, having at their disposal an array of incentives), policy liberalization is the principal tool.

In particular, entry and operational conditions have been liberalized and standards of treatment of foreign affiliates have been strengthened. Liberalization has been extended to such service industries as telecommunication, transportation and power generation and distribution, previously closed to foreign investors. Many developing countries and economies in transition have concluded bilateral treaties to protect FDI and avoid double taxation. A number of regional schemes (notably the European Union, NAFTA, ASEAN and MERCOSUR) have reduced barriers to FDI or are in the process of doing so, facilitating intra-regional investment and trade flows. At the multilateral level, the General Agreement on Trade in Services has contributed to the liberalization of FDI in services, and the TRIMs Agreement has restricted the use of certain performance requirements. The FDI global regime that has emerged after these changes, though uneven, is much more friendly towards foreign investors than in the past.

#### **Box V.2. Why have governments changed their attitudes to TNCs?**

There are several reasons for the change in attitudes towards TNCs and the intensification of competition for FDI. Governments recognize that TNCs can provide a package of external resources that can contribute to development. There is also now an increasing number of TNCs from developing countries, reflected in the fact that the share of developing countries in FDI outflows has increased from about two per cent at the beginning of the 1980s to approximately 15 per cent of a much higher total in the mid-1990s (figure I.12); their home governments want access for their firms to foreign markets and locations. At the same time, many governments have improved their administrative capabilities and feel more comfortable in dealing with TNCs. Efficient FDI screening has been “difficult even for countries with sophisticated bureaucracies, given the need to relate it to changing country and sectoral advantages, changing firm strategies and competition, and political pressures from other countries” (Safarian, forthcoming). On the aggregate level, external financing has shifted from official to private sources, especially towards FDI (box figure I.1). Finally, the liberalization of FDI (and trade) policy is often part of the conditionality in IMF and World Bank adjustment programmes, and is promoted by many leading aid donors.

*Source:* UNCTAD.

## B. The changing context for TNCs

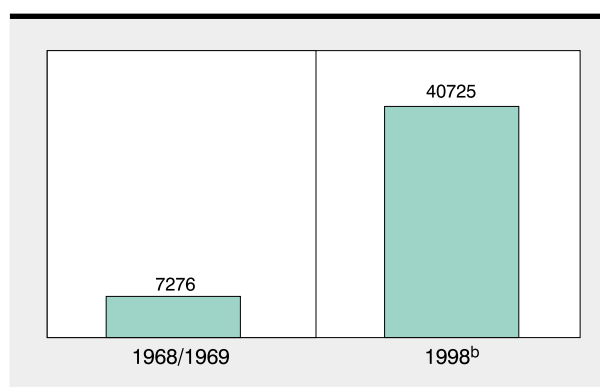
Knowledge-intensive production, technological change, shrinking economic space and greater openness have also changed the context for TNCs. There are new opportunities - and pressures - to utilize them. The opening of markets creates new geographical space for TNCs to expand in and access tangible and intangible resources. It also permits wider choice in the methods firms can use (FDI, trade, licensing, subcontracting, franchising, partnering and so on) to operate in different locations. At the same time, advances in information, communication and transportation technologies, as well as in managerial and organizational methods, facilitate the transnationalization of many firms, including SMEs. The combination of better access to resources and a better ability to organize production transnationally increases the pressure on firms to utilize new opportunities, lest their competitors do so first and gain a competitive advantage. Competition is everywhere - there are fewer and fewer profit reservations and market niches that remain protected from the fierce winds of competition. Indeed, a portfolio of locational assets - allowing firms to combine their mobile advantages most effectively with the immobile tangible and intangible resources of specific locations - is becoming an increasingly important source of corporate competitiveness (UNCTAD, 1995a).

Firms have reacted accordingly. A highly visible group of large “traditional” TNCs continues to grow (see figure III.1), often with turnovers larger than the national incomes of many developing countries. There are also many new entrants, such as large firms from developed countries that had confined themselves previously to domestic operations (e.g., telecommunications operators). Many are smaller firms from these countries that find it necessary to invest overseas to exploit their ownership advantages or to seek new advantages and alliances. An increasing number are firms from developing countries, both small and large (see table I.1). And some are large and small firms from economies in transition, countries that previously had isolated themselves largely from international investment (see table III.13). As a result, the number of TNCs has increased substantially, having reached at least 60,000 at the end of the 1990s (table I.1). Between the end of the 1960s and the end of the 1990s, the number of TNCs in 15 of the most important developed home countries had increased from 7,000 to 40,000 (figure V.I). FDI inflows mirror this expansion: from a level of \$56 billion worldwide at the beginning of the 1980s, they reached \$166 billion to developing countries alone, and \$644 billion worldwide, in 1998. Their growth rate was faster than that of both trade and domestic production (table I.2).

The changing context and the quest for a portfolio of locational assets has also brought about a change in corporate strategies. The following developments are particularly noteworthy:

- A shift from stand-alone, relatively independent, foreign affiliates to integrated international production systems relying on specialized affiliates to service the entire TNC system (UNCTAD, 1993a). Within the framework of this international intra-firm division of labour, any part of the value-added chain of an enterprise can be located abroad while remaining fully integrated into a corporate network. Corporate strategies of this kind

**Figure V.I. Number of parent TNCs in selected major home developed countries,<sup>a</sup> 1968/1969 and 1998<sup>b</sup>**



Source: UNCTAD, based on United Nations, 1973 and table I.1.

a Fifteen countries namely: Austria, Belgium, Denmark, France, Germany, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, the United Kingdom and the United States.

b 1993 for Netherlands: 1995 for Italy and Switzerland: 1996 for Austria, France, Germany and the United States: 1997 for Belgium, Norway, Portugal and the United Kingdom. Luxembourg is not included.

seek to exploit regional or global economies of scale and a higher degree of functional specialization.

- This shift broadens the range of resources sought by TNCs in host countries, making firms more selective in their choices. However, it can also encourage FDI in countries that cannot provide a wide range of resources but have some specific assets that are sought by TNCs (e.g. accounting or software skills).
- A shift towards greater use of non-equity and cooperative relationships with other enterprises, such as alliances, partnerships, management contracts or subcontracting arrangements. These arrangements serve a variety of corporate objectives. They can provide better access to technologies or other assets allowing firms to share the cost and risk of innovatory activities. They can reduce the production cost of labour-intensive products.
- Emergence of a network type of organization. This expands the scope of interactions between TNCs and enterprises from host countries, and also the forms of these interactions.

These changing corporate strategies bring with them a different pattern of international economic integration. Originally, this involved the integration of markets through arm's length trade – “shallow” integration. Integrated international production moves this integration to the level of production in all its aspects – “deep” integration (UNCTAD, 1993a). In the process, a significant part of international transactions becomes internalized, i.e. takes the form of transactions between various parts of transnational corporate systems located in different countries. It is estimated that more than one-third of world trade and some four-fifths of technology flows are internalized within TNCs. The share of world production under the common governance of TNCs is estimated at about one-quarter.

The ability of firms to allocate their economic assets internationally, and the international production system created in the process, have become themselves a part of the new context. As a result, TNCs have indeed become important actors in the world economy and, hence, the development process - a fact reflected in the competition of all countries for FDI. Indeed, increasingly, the decision where to locate production facilities of any kind becomes crucial for development, because the decision where to locate becomes a decision where to invest and from where to trade. And it becomes an FDI decision if the location chosen is abroad (UNCTAD, 1996a).

### **C. The challenge**

This, then, is the panorama at the end of this century, and the challenge that it entails for the next.

More large and small firms, from more countries, in virtually all industries are investing abroad, be it through the expansion of existing facilities, greenfield projects, M&As, the acquisition of assets in the framework of privatization programmes or through various forms of non-equity relationships. All countries, and increasingly their provinces and individual municipalities, seek to attract FDI. The world market for FDI is global, and it is characterized - and driven - by competition: competition between firms and competition between countries. Perhaps as many as 6,000 national, regional and local public sector entities compete each year for the various investment projects undertaken each year by TNCs.

The policy challenge for countries - and especially developing countries and economies in transition - is two-fold:

- To guard themselves, in their eagerness to attract FDI, against engaging a financial incentives-competition race towards the sky; a fiscal incentives-competition race towards zero; or a policy-competition race towards the bottom. There are many indications that such races are under way (UNCTAD, 1996a, d). “Incentive wars” take place both between countries and within countries.
- To pursue policies, and implement policy measures, that help countries *attract* FDI and

especially to *benefit* from it as much as possible - in short, to maximize the contribution that FDI can make to development.

As the first of these challenges has been partially addressed elsewhere (UNCTAD, 1996a, d), the focus of *WIR99* is on the second challenge.

In the ideal scenario, countries have something to offer that TNCs need to increase their profitability and competitiveness: a portfolio of locational assets that includes access to markets and immobile tangible and intangible resources. Similarly, firms can offer things that countries need to advance their development: a package of mobile tangible and intangible assets that includes capital, technology, know-how, skills, brand names, organizational and managerial practices, access to markets, competitive pressures, and environmentally sound technologies and managerial practices. FDI statistics capture these assets only very imperfectly (see chapter I). But developments over the past decade and a half suggest that the global supply of FDI is quite elastic, and its limits are unclear. FDI world-wide represented only eight per cent of gross domestic capital formation (10 per cent for the developing countries as a group) in 1997. It is quite possible that FDI could reach substantially higher levels and proportions. This does not mean, however, that FDI flows will be evenly distributed across countries or regions, or reflect their relative needs - another reason why the emphasis of policy makers needs to remain on domestic enterprise development.

However, it needs to be recognized that the basic objectives of TNCs and governments are not the same: governments seek to spur *development* - within a *national* context. TNCs seek to enhance their *competitiveness* in an *international* context. Not all FDI is, therefore, always and automatically in the best interest of host countries. Some can have an adverse effect on development. TNCs seek to enhance their own competitiveness, not to develop host economies. Their needs and strategies may differ from the needs and objectives of host countries. The presence of TNCs in a host country may conflict with building strong national firms. Or, a host country may seek new technologies while a foreign affiliate may wish to use mature technologies. Or again, a TNC may find it efficient to close an affiliate in the face of import liberalization or shifting comparative advantage while a host country wants to preserve employment. TNCs may seek stronger protection for intellectual property rights, while a host country may favour weak intellectual property rights to permit greater diffusion of technology. There are many situations in which strategies and needs can differ between TNCs and host countries - and, one may add, between TNCs and home countries, be they developed or developing.

Still, there is a considerable overlap between the objectives of host countries and TNCs. Indeed, to a large extent an investment (including FDI)-friendly policy framework is also a development-friendly policy framework. Since the overlap is incomplete, it is to the advantage of governments not only to try to attract FDI, but also to try to maximize its net contribution to development. Policies matter - perhaps more than ever. TNCs, like other firms, respond to government policies. However, they are better equipped than national firms to escape the constraints of policies that they find inconvenient. They can move their activities abroad more easily, or use internal channels (e.g. transfer pricing) not open to national firms. On the other hand, they can also respond to policy signals in a differentiated manner: a TNC can simultaneously have import-substituting and export-oriented facilities in different host countries. Under certain conditions, they may contribute more than national firms because of their greater access to a whole range of resources. For instance, when an economy opens up to trade, TNCs can restructure their affiliates to reach international levels of technology and productivity.

FDI policies have also changed. In the past, governments of developing countries used ownership rules, operational restrictions, performance requirements and the like to influence TNCs in desired directions. These tools are increasingly difficult (if not impossible) to use in the new investment and trade policy frameworks. Governments now focus more on improving the broader setting in which TNCs operate - macroeconomic management, infrastructure provision, human capital, competition policy, and the like. In short, they seek to entice TNCs to do what they would like to see done, as opposed unilaterally to seeking to impose their objectives on them. The line between "imposing" and "enticing" is a fine one and impossible to draw in a general manner. More often than not, it is a matter of the right policy mix of carrot and stick,



reflecting, of course, the specific attributes and objectives of countries and companies.

Most importantly, good FDI policies must recognize that FDI can complement domestic efforts to meet development objectives. For this to happen, FDI policies cannot be pursued in isolation. Instead, they must be inextricably linked with policies in core areas of economic development, aimed at:

- increasing domestic financial resources for development, to supplement domestic savings and investment and, more basically, fostering enterprise development, as the creation of an efficient domestic supply capacity requires competitive economic agents;
- enhancing the technology, skill and knowledge base, given that these intangible resources are increasingly at the heart of the development effort;
- boosting trade competitiveness, as internationally competitive firms can contribute better to development by reaping the benefits of economies of specialization and scale, by broadening the demand base;
- maintaining competitive markets, to ensure that former statutory obstacles to investment and trade are not replaced by anticompetitive practices of firms; and
- protecting the natural environment, to maintain the basis for future growth and development.

This Part of *WIR99* focuses on the extent to which FDI can make a contribution in each of these core areas of economic development and how this contribution can be enhanced: investible financial resources (chapter VI); technological capabilities (VII); trade competitiveness (VIII); employment and the skill base (IX); and the environment (X). These issues are analysed separately, for analytical purposes only. They are then drawn together in a chapter (XI) which makes an overall assessment of the impact of FDI on economic development and discusses in an integrated manner policies to maximize the positive, and minimize the negative, aspects of this impact. A chapter addressing the social responsibilities of TNCs concludes this Part.

The following five chapters have a common structure:

- a brief discussion of the role of each area in development and salient changes that have altered the context for development and FDI;
- a brief review of the role of TNCs in the area, how it has changed and how their strategies may matter for the role of that area for development;
- a conceptual and empirical analysis of the impact of FDI on host developing countries and how this impact differs from that of national firms;
- policy measures for enhancing the positive and minimizing the negative impacts of FDI on development.

In addition, each chapter addresses, where relevant, some cross-cutting issues. These include effects on developing countries at different levels of development and especially the concerns of developing countries in each area.

\* \* \*

The world in which governments and TNCs operate is in a state of considerable flux. There is much greater interest in FDI issues than before - and not only on the part of governments at all levels, but also on the part of a range of civil society stakeholders. Non-governmental organizations in particular have entered the political and economic scene as actors with strong concerns - and means of voicing them - about various aspects of TNC strategy and impact. It is therefore vital to understand the nature of the role of TNCs in development, in the interest of an informed debate and proper policy making at sub-national, national, regional and multilateral levels.

### Note

<sup>1</sup> Data provided by *Corporate Location* magazine.

# CHAPTER VI

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## INCREASING FINANCIAL RESOURCES AND INVESTMENT

### A. The importance of investment for development

Investment is a key factor in economic growth. Practically all empirical studies of inter-country differences in growth rates suggest that high growth is associated with high investment rates. Recent endogenous growth theories also reinforce the link between investment and growth.<sup>1</sup> They postulate that, when investment is taken in a broad sense, to include not only expenditures on capital goods but also expenditures on technology enhancement (chapter VII) and human capital formation (chapter VIII), there may well not exist diminishing returns to investment. Therefore, countries that devote a high proportion of output to investment may sustain more rapid growth than countries that invest less. Investment, today as much as yesterday, remains crucial to growth.

In a closed economy, with no access to foreign savings, investment is financed solely from domestic savings. However, even in open economies, it remains an empirical regularity that countries that have achieved a high rate of investment also have high rates of domestic savings. This implies that, in most countries with superior investment performance, foreign savings normally play a complementary role in the provision of financial resources for development. They permit domestic investment in a country to exceed its own savings. They may permit the maintenance of consumption or capital formation in countries heavily dependent on particular crops (or other primary products), when crops fail or prices fall drastically. On the other hand, large inflows of foreign savings, especially if raised in international portfolio capital markets or through bank lending, can create problems of financial and macroeconomic stability or debt.

FDI has come to play a growing role during the 1990s within international flows of capital, as shown in Part One. The objective of this chapter is, first, to look at those aspects of TNCs' financial behaviour that may matter for development; secondly, to examine the role of FDI in the supply of financial resources for development and to compare FDI with other private sources of finance; and thirdly, to analyse the impact of FDI, both direct and indirect, on total investment in host countries and to discuss policy options in this regard. This chapter does not distinguish between FDI dollars as regards their different technological content and other positive or negative qualities. In this chapter — and for the purpose of this analysis only — each FDI dollar is assumed to be equal; only its quantitative impact is considered.

## **B. The financial behaviour of TNCs**

TNCs, like other firms, finance their activities internally or externally. Internal resources are profits not distributed as dividends but retained and reinvested. External resources are raised by issuing shares or bonds or taking loans from banks. When choosing modes of financing, TNCs are guided, as all firms are, by cost, control and risk considerations. For example, as regards the cost of financing, debt is normally cheaper than the issue of equity: rates of return on equity capital tend to be higher than international interest rates. However, debt carries its own risks, since it involves interest and amortization payments regardless of the financial results from the use of borrowed funds. The issuance of shares links the payment of dividends to performance. Occasionally, when share prices are high, this may be the most advantageous from the point of view of cost of finance. However, it always involves a dilution of control. For a number of reasons TNCs face a different set of transaction costs, risks and opportunities than domestic companies do. These include geographical dispersion of assets (and liabilities) across countries, and knowledge of, and access to, capital markets of different countries with variable exchange rates and differing regulations as well as to international markets. Consequently, the financial and investment behaviour of TNCs can differ from that of domestic firms.

The financial strategies of TNCs are a complex matter. They reflect the interaction of foreign exchange management, choice of form and source of financing, short- versus long-term financing and needs of financial reporting. Not all components of these strategies are relevant for this chapter. What is relevant concerns primarily the parent company-foreign affiliate relationship as regards finance and the financial behaviour of affiliates. TNCs make their investment and financial decisions on a global basis: they not only produce goods and services globally (or regionally), but also fund themselves globally. In other words, they tend to borrow “wherever in the world funds are cheapest and invest them wherever expected returns are highest” (Caves, 1996, p. 160). They can also direct funds generated internally anywhere in the system to maximize returns. This implies that foreign affiliates are not autonomous in their financial decisions but do their financing within system-wide strategies; indeed, the finance function is typically one of the most centralized functions in TNCs.

TNCs are able to mobilize financial resources from a wide variety of sources. One of these is their own corporate systems. In order to finance an investment in a particular country, a TNC can move excess liquidity from anywhere to anywhere in its corporate system. TNCs also have access to borrowing on international financial markets at low spreads. They also borrow in the financial markets of their home and host countries. Borrowing can take the form of bond issues or long-term bank borrowing. They also can exercise the option of issuing new shares in a number of national markets. The shares issued can be those of a particular affiliate or those of the parent or a holding company. Thus the financing options open are numerous, especially to large TNCs, and their number varies positively with their services

Table VI.1. Sources of financing<sup>a</sup> of foreign affiliates of Japanese TNCs, 1989, 1992 and 1995

(Millions of dollars and percentage)

Host country/region and year	Funds raised in host countries			Total financing <sup>b</sup>	Share of host country sources in total financing
	Bonds <sup>c</sup>	Loans <sup>d</sup>	Total		
	Millions of dollars			Percentage	
1995					
Developing countries	771	10 775	11 546	46 428	24.9
Latin America	139	1 104	1 242	14 867	8.4
Asia	633	8 850	9 483	27 886	34.0
China	4	582	586	1 611	36.4
ASEAN <sup>e</sup>	49	3 768	3 817	12 071	31.6
Newly industrialized economies <sup>f</sup>	569	4 309	4 878	13 470	36.2
West Asia <sup>g</sup>		646	646	654	98.8
Africa <sup>h</sup>	0	174	174	3 021	5.8
Developed countries	28 390	23 037	51 427	92 878	55.4
North America	19 999	16 122	36 121	58 289	62.0
United States	19 514	14 911	34 425	55 073	62.5
Europe	7 824	5 956	13 780	30 174	45.7
European Union	7 824	5 948	13 772	29 911	46.0
Oceania <sup>i</sup>	567	959	1 526	4 415	34.6
Total	29 161	33 812	62 973	139 306	45.2
1992					
Developing countries	1 047	9 591	10 638	25 203	42.2
Latin America	84	235	319	3 114	10.3
Asia	963	8 315	9 278	19 154	48.4
ASEAN <sup>e</sup>	38	3 601	3 639	7 775	46.8
Newly industrialized economies <sup>f</sup>	912	4 445	5 357	10 571	50.7
West Asia <sup>g</sup>		528	528	949	55.7
Africa <sup>h</sup>		512	512	1 986	25.8
Developed countries	18 494	20 819	39 313	61 540	63.9
North America	11 931	13 605	25 536	37 981	67.2
United States	11 669	12 883	24 552	36 330	67.6
Europe	6 495	6 320	12 815	19 580	65.4
European Community	6 494	6 263	12 757	18 724	68.1
Oceania <sup>i</sup>	68	895	962	3 980	24.2
Total	19 541	30 410	49 951	86 743	57.6
1989					
Developing countries	1 391	6 352	7 743	17 715	43.7
Latin America	588	895	1 483	4 575	32.4
Asia	803	5 273	6 076	10 639	57.1
ASEAN <sup>e</sup>	31	1 195	1 226	3 481	35.2
Newly industrialized economies <sup>f</sup>	747	3 935	4 681	6 812	68.7
West Asia <sup>g</sup>		147	147	1 540	9.5
Africa <sup>h</sup>		38	38	960	3.9
Developed countries	11 717	21 339	33 056	54 075	61.1
North America	6 658	13 565	20 223	29 680	68.1
United States	6 641	13 024	19 665	28 047	70.1
Europe	5 057	7 229	12 286	20 974	58.6
European Community	5 057	7 121	12 178	19 883	61.2
Oceania <sup>i</sup>	2	546	548	3 422	16.0
Total	13 108	27 691	40 799	71 790	56.8

Source: UNCTAD TNC/FDI data base.

<sup>a</sup> Financing refers to funds raised by foreign affiliates excluding the financing of equity by parent companies and reinvested earnings.<sup>b</sup> For 1992, equals only bonds plus long-term loans. Stocks figures (which are thought to be very small) are not available.<sup>c</sup> All bonds issued by foreign affiliates. It can be assumed that most of these bonds were issued in host-country financial markets.<sup>d</sup> Including also loans from Japanese institutions located in host countries.<sup>e</sup> Association of South-East Asian Nations (ASEAN) includes Indonesia, Malaysia, Philippines and Thailand.<sup>f</sup> Newly industrialized economies include Hong Kong, China; Republic of Korea; Singapore and Taiwan Province of China.<sup>g</sup> Including Israel in developing countries.<sup>h</sup> South Africa is included in developing countries.<sup>i</sup> Australia, New Zealand and developing countries of Oceania.

Network-wide strategies, greater flexibility in financing, lower risk-adjusted cost of capital and borrowing from host-country and international markets give TNCs considerable potential to affect, in various ways, the financing of investment of host-countries. TNCs can therefore also be more responsive to investment opportunities and incentives than are other firms (Caves, 1996, p. 159). They can undertake projects for which domestic investors do not have capabilities, or projects considered too risky for host-country firms (Kogut, 1993, pp. 222-223). They can outcompete domestic firms in host-country financial markets. Substituting retained earnings and funds raised outside a host-country for local funds can put them on a collision course with contractionary host country policies. By manipulating transactions that are internal for them (but would be at arm's length for national firms), TNCs can, to some extent, choose where to declare profits to minimize their tax burden. Also, with the liquid financial means TNCs have available, they can engage in hedging transactions against exchange-rate movements with possible implications for balance of payments (UNCTAD, 1999e).

The impact of FDI on investment in a host country depends on each host country's conditions. Therefore, it will, for example, be different in countries with abundant savings and other forms of capital than in countries without enough capital relative to their investment needs or demand. It also depends on the financial and other aspects of the behaviour of foreign affiliates: their mode of entry (M&As or greenfield investment), the activities they undertake (existing or not existing in a host country), their sources of finance (as noted earlier), ways of financing FDI (reinvested earnings, intra-company loans or equity capital from parent companies) and ways in which they affect activities of domestic companies. These impacts and factors determining them are examined in the next section.

## **C. The impact of FDI on financial resources and investment**

### **1. Financial resources**

External capital flows to developing countries have undergone fundamental changes during the past three decades. More recently they have been influenced by rapid liberalization of financial markets and privatization of economic activity in developing countries. The private sector has become the principal borrower in international capital markets and recipient of other private financial flows. FDI inflows have increased in importance during the 1990s, becoming the single most important component of total capital flows to developing countries: their share in total flows increased from 28 per cent in 1991 to 56 per cent in 1998 (box figure I.1).

FDI inflows include, however, only part of the financing of foreign affiliates in host countries. They are *internal* to a TNC system, originating from a parent company or from retained earnings. Affiliates can also raise funds (through bonds, loans, etc.) from sources *external* to their corporate system including domestic capital markets of host countries and international markets. To the extent that these sources are in international capital markets, they increase the inflow of foreign financial resources for development. As data for United States TNCs suggest, these additional resources may well be almost as high as FDI inflows themselves: in 1991-1996, the ratio of their total value to that of total FDI outflows from the United States amounted to 85 per cent. In other words, the flow of external resources to host countries due to the presence of foreign enterprises was nearly double that of FDI flows alone (figure I.2). This is broadly confirmed by United States stock data (table VI.2). Stock data also throw some light on inter-country differences in this regard. In particular, host developing countries appear to be largely dependent on finance from parent companies (and retained earnings), as a comparison of Brazil and Mexico on the one hand with France and Germany on the other suggests (table VI.2).<sup>4</sup>

As regards the contribution of FDI flows to external financing, one of the three components of FDI, retained earnings, requires special attention. Retained or reinvested earnings may be viewed — based on a residence principle and in the absence of transfer from abroad — not as an infusion of fresh capital from abroad (Vernon, 1999), but as domestic savings.<sup>5</sup> Without retained earnings, the contribution of FDI inflows to the supply of foreign resources to



**Table VI.2. Sources of financing of foreign affiliates of United States TNCs, on a stock basis,<sup>a</sup> 1994**

(Millions of dollars and percentage)

Sources	All countries		Brazil		Mexico		France		Canada		Germany	
	Millions of dollars	Per cent	Millions of dollars	Per cent	Millions of dollars	Per cent	Millions of dollars	Per cent	Millions of dollars	Per cent	Millions of dollars	Per cent
External to host countries	1 028 834	58	18 648	64	20 181	70	43 017	54	96 390	56	54 772	46
FDI	651 413	37	16 878	58	17 830	62	27 522	35	81 621	48	34 816	29
Parent companies <sup>b</sup>	420 196	24	9 891	34	9 239	32	18 081	23	49 377	29	24 676	21
Retained earnings <sup>c</sup>	231 217	13	6 987	24	8 591	30	9 441	12	32 244	19	10 140	8
Non-FDI financing	377 421	21	1 770	6	2 351	8	15 495	19	14 769	9	19 956	17
Home country	30 698	2	223	1	929	3	496	1	5 958	3	320	0
Other international	346 723	20	1 547	5	1 422	5	14 999	19	8 811	5	19 636	16
Internal to host countries	741 425	42	10 557	36	8 500	30	36 478	46	74 745	44	64 687	54
Total financing position	1 770 259	100	29 205	100	28 681	100	79 495	100	171 135	100	119 459	100
Ratio of non-FDI external financing to FDI financing, per cent	58		10		13		56		18		57	

Source: United States Department of Commerce, 1998c.

<sup>a</sup> Financial position of majority-owned foreign affiliates including their external financial position and reinvested earnings.

<sup>b</sup> Equity capital and loans from parent companies.

<sup>c</sup> The parent company's share in retained earnings and other reserves.

developing countries in the 1990s falls by between one fifth and one quarter (figure I.1). Based on ownership principle, however, retained or reinvested earnings are included in FDI inflows; the assumption here is that the parent firm could have repatriated the funds, but, instead, decided to reinvest them. Retained earnings are not the only transaction where a movement of financial resources is registered, even though such a movement did not take place in practice. Contributions in kind by parent companies to the capital of foreign affiliates are registered as an equity capital inflow (one of the components of FDI) into a host country, even though their actual transfer of financial resources never takes place (although the transfer of physical capital does).

FDI not only adds to external financial resources for development but is also more stable than other types of flows. FDI is typically based on a longer-term view of the market, the growth potential and the structural characteristics of recipient countries. It is thus less prone to reversals in adverse situations (if these are perceived to be short term) than bank lending and portfolio flows. The risk of "herd" behaviour is also less likely than in the case of other flows. Divestment and reversibility are more difficult for FDI than for portfolio investment. The latter can be disposed of more easily in financial markets (UNCTAD, 1998a, pp. 14-16). This is certainly true if compared with those parts of FDI that are embodied in physical capital. However, FDI flows can also include components that can be used for financing current activities or be invested in short-term securities in host-country financial markets. FDI flows can therefore include a component of portfolio flows. Most studies examining this issue have found that FDI is less volatile than non-FDI private flows. From a purely financial perspective, this trait makes FDI useful as a means of supplementing domestic sources of financing investment (box VI.1).

A good part of FDI does not create debt: <sup>6</sup> profits are repatriated only when a project yields return. Part of the profits may be reinvested in the host country (although royalty payments, for example, are not conditional on a foreign affiliate making a profit). This has marked advantages over bank lending, which must be repaid with fixed interest regardless of the performance of the project for which it was used, or of macroeconomic conditions affecting all undertakings in the borrowing country.

Nominally, FDI appears to be a more expensive source of foreign finance than other sources. The rates of profit of foreign firms, especially in developing countries, normally exceed the rate of interest on sovereign loans or other types of international loans (table VI.3). However,

### Box VI.1. Testing the volatility of capital flows

Most studies conclude that FDI is a relatively stable type of capital flow.

Studies, especially for developing countries such as Argentina, Chile, Mexico, and the East Asian countries during the current financial crisis, suggest that FDI is more stable than other types of private flows (Agosin and Ffrench-Davis, 1997; and Radelet and Sachs, 1998). Tests comparing the volatility of FDI flows with other private flows into developing countries as a group also found that, during the period 1992-1997, commercial bank loans displayed the highest volatility, as measured by the coefficient of variation, followed by total portfolio investment and FDI. A further test for 12 major developing economies and countries in transition for the same period, based on annual data, has confirmed, with a few exceptions, greater volatility of foreign portfolio investment than FDI (UNCTAD, 1998a, pp. 14-15).

One study, however, found that FDI can be just as volatile as other short-term flows (Claessens et al., 1995). The different results obtained in this study might have been due to the choice of countries and data. For the countries that were chosen (mostly developed countries), FDI flows are small relative to total flows. Fluctuations of small numbers tend to be larger than fluctuations of large ones. Moreover, in developed countries, most FDI takes the form of M&As. In addition, the results may have been influenced by the use of quarterly data; FDI, being lumpy, can be volatile from quarter to quarter.

A test was conducted for *WIR99* as to whether FDI is more or less stable than *all* other forms of capital inflows in developing countries for which capital account data were available, on an annual basis for 1980 to 1997. The test focused on countries for which FDI inflows were above \$100 million in the most recent year available (usually 1996 or 1997).<sup>a</sup> In addition, the real value of FDI and other flows was estimated by deflating nominal dollar values by the United States price index for capital goods. The coefficient of variation chosen for the test is the standard deviation divided by the absolute value of the mean.

In spite of the fact that the "other flows" category includes a number of different items with very different patterns of behaviour, the standard deviation of flows other than FDI is, on average, considerably higher than the standard deviation of FDI (box table VI.1). A test of equality of means shows that the standard deviation of other flows is significantly higher than the standard deviation of FDI flows, for both the 1980s and 1990s, at the one per cent level of significance.

**Box table VI.1. Coefficients of variation of real FDI and other capital inflows<sup>a</sup>**

(Standard deviation divided by absolute value of mean)

Region and country	1980-1989		1990-1997 <sup>b</sup>	
	FDI	Other flows	FDI	Other flows
Africa	1.09	1.29	0.73 <sup>c</sup>	0.87 <sup>c</sup>
Egypt	0.35	2.90	0.49	1.09
Ghana	0.77	0.44	0.86	0.38
Morocco	0.65	0.81	0.36	1.05
Nigeria	1.57	1.59	0.45	0.66
Tanzania, United Republic of	..	1.23	1.05	7.33
Tunisia	0.71	0.56	0.60	0.37
Uganda	..	7.41	0.93	1.82
Zimbabwe	2.48	1.25	1.42	0.78
Asia	0.65 <sup>d</sup>	1.29 <sup>d</sup>	0.61	1.10
China	0.64	1.51	0.64	2.10
India	..	0.70	1.33	0.72
Indonesia	0.45	0.54	0.69	1.13
Korea, Republic of	1.03	32.11	0.58	1.51
Malaysia	0.43	2.65	0.23	1.77
Pakistan	0.47	0.47	0.41	0.38
Philippines	1.47	1.48	0.69	0.56
Singapore	0.40	2.72	0.36	0.83
Sri Lanka	0.38	0.29	1.01	0.53
Thailand	0.93	0.69	0.22	1.43
Latin America	0.95 <sup>e</sup>	1.96 <sup>e</sup>	0.58	2.18
Argentina	0.66	2.41	0.32	3.30
Bolivia	0.80	2.19	0.83	0.70
Brazil	0.49	2.53	0.64	2.60

/...

**(Box VI.1, concluded)****Box table VI.1. Coefficients of variation of real FDI and other capital inflows<sup>a</sup> (concluded)**

(Standard deviation divided by absolute value of mean)

Region and country	1980-1989		1990-1997 <sup>b</sup>	
	FDI	Other flows	FDI	Other flows
Chile	0.79	15.49	0.91	0.64
Colombia	0.53	0.95	0.72	1.97
Costa Rica	0.31	1.03	0.30	0.87
Dominican Republic	0.52	2.19	0.42	1.06
Ecuador	0.45	2.16	0.47	5.18
Guatemala	0.73	1.75	0.36	0.57
Honduras	0.65	1.05	0.24	8.51
Jamaica	3.72	1.17	0.36	0.71
Mexico	..	5.72	0.46	1.92
Paraguay	1.08	1.43	0.33	1.64
Peru	1.85	2.12	1.11	1.90
Trinidad and Tobago	..	9.79	0.54	0.31
Uruguay	2.03	1.25	0.85	3.86
Venezuela	0.87	1.08	0.97	1.46
Unweighted average	0.94 <sup>f</sup>	1.96 <sup>f</sup>	0.63	1.76

*Source:* UNCTAD Secretariat, based on International Monetary Fund, *International Financial Statistics, 1998 Yearbook*<sup>a</sup> Nominal United States dollar figures deflated by United States price index for capital goods.<sup>b</sup> For some countries, not all years available.<sup>c</sup> Excluding United Republic of Tanzania.<sup>d</sup> Excluding Republic of Korea.<sup>e</sup> Excluding Chile.<sup>f</sup> Averages for countries for which pair wise comparisons were possible.

It is interesting that the difference between the coefficients of variation is small in Africa. This may be because in this region other flows tend to be dominated by official development assistance flows, and private flows other than FDI, which tend to be the more volatile, are not an important component of the capital account. On the other hand, the difference in variability between FDI and non-FDI flows is very sharp for Asia and Latin America, regions in which portfolio investments and bank lending have become important sources of foreign capital inflows over the past 20 years. In the case of Latin America, the difference in variability between FDI and non-FDI flows seems to have risen considerably in the 1990s, in line with the sharp fluctuations in bank lending and in portfolio capital that this region has undergone during the present decade.

These tests have dealt with volatility of capital flows measured by sudden changes in their *size*. But volatile flows can not only change their size but turn from inflows into a host country into outflows exacerbating a host country's financial problems. This has been examined in a test asking how often net flows to or from a country change signs conducted for 52 countries during 1980-1995 (Lipsey, 1999b). The test confirmed the relative stability of FDI compared to other flows: for FDI the average number of reversals was the lowest and the average run in one direction the longest (box table VI.2).

**Box table VI.2. Frequency of sign changes in capital flows,<sup>a</sup> 1980-1995**

Capital flows	Number of sign changes	Average frequency of sign changes	Average duration of run, in years
Foreign direct investment	130	2.50	4.29
Portfolio investment	187	3.60	3.26
Other capital flows	217	4.17	2.90

*Source:* Lipsey, 1999 and additional information provided by the author.<sup>a</sup> For 52 host countries.*Source:* UNCTAD.<sup>a</sup> One reason was to eliminate countries with smaller flows which depend more on official flows. Another was that the smaller FDI flows the more volatile they are.

**Table VI.3. The financial cost of sources of foreign financing: FDI<sup>a</sup> and long-term international bank loans, 1983-1997**

(Percentage and number of years)

All countries	All developing countries			Asia and the Pacific			Latin America and the Caribbean			Sub-Saharan Africa			West Asia and North Africa		
	FDI rates of return Per cent	FDI rates of return Per cent	International bank loans from private creditors Interest Per cent	International bank loans from private creditors Maturity (years)	FDI rates of return Per cent	International bank loans from private creditors Interest Per cent	International bank loans from private creditors Maturity (years)	FDI rates of return Per cent	International bank loans from private creditors Interest Per cent	International bank loans from private creditors Maturity (years)	FDI rates of return Per cent	International bank loans from private creditors Interest Per cent	International bank loans from private creditors Maturity (years)	FDI rates of return Per cent	International bank loans from private creditors Interest Per cent
1983	13.0	14.9	10.4	9.1	27.6	9.3	10.0	7.0	11.5	7.5	17.7	9.7	8.4	9.7	12.4
1984	14.3	17.3	10.5	9.3	26.1	9.6	11.0	9.9	12.4	9.2	23.7	8.7	8.7	9.5	8.5
1985	12.6	13.4	8.9	8.4	18.1	8.4	11.2	9.5	10.0	9.4	17.3	9.1	9.0	8.9	9.8
1986	12.2	10.9	7.4	9.8	13.0	6.7	11.7	10.3	8.4	8.0	5.6	8.2	9.3	7.9	10.0
1987	13.4	13.2	7.6	9.5	20.3	7.0	11.9	9.5	7.9	10.7	15.5	8.1	8.3	7.7	7.6
1988	15.5	16.5	8.0	9.0	22.4	7.6	11.2	14.2	9.1	8.9	13.9	7.0	10.0	7.8	7.0
1989	14.8	17.8	8.5	9.5	23.3	8.1	12.2	15.7	9.6	9.6	17.4	7.9	8.4	8.3	8.8
1990	14.3	17.2	8.5	13.7	27.6	8.4	13.6	13.0	9.0	10.6	24.2	8.1	11.6	8.9	7.4
1991	11.6	15.9	7.8	9.6	23.8	6.9	13.0	12.1	8.2	8.1	30.6	7.7	8.9	7.2	7.8
1992	10.4	17.2	6.7	9.6	22.6	6.6	13.4	14.3	7.7	6.9	28.4	7.4	5.9	5.9	9.7
1993	11.1	16.9	6.3	9.2	20.7	5.6	11.2	14.9	7.2	8.2	25.8	6.0	7.8	5.7	8.6
1994	11.7	16.5	6.3	8.3	18.4	5.5	11.5	15.3	6.9	4.9	24.6	6.7	8.1	6.1	6.7
1995	13.3	15.8	6.6	7.5	20.2	6.3	9.7	13.1	7.1	4.5	35.3	7.1	7.5	7.4	7.6
1996	12.5	15.3	7.3	8.1	19.3	7.6	9.4	12.8	7.3	7.2	34.2	6.1	12.2	7.3	8.1
1997	12.3	14.0	7.2	10.0	16.2	6.4	10.8	12.5	7.8	10.9	25.3	6.0	8.7	7.1	10.6

Source: UNCTAD based on World Bank, Global Development Finance, various issues and UNCTAD, 1999i, p. 18.

<sup>a</sup> The rates of return on United States outward FDI.

<sup>b</sup> Rates of return are for all Africa, excluding South Africa.

in many cases, domestic firms would be unable to carry out the same projects as foreign firms, or they would have to incur additional costs to acquire technology, skills or market access. In some countries, particularly lower-income ones, domestic firms are also unable to borrow internationally at any rate of interest.

To the extent that profits are repatriated, they constitute a financial outflow that has to be set against the net annual contribution of FDI inflows to external financial flows to developing countries.<sup>7</sup> Still, as the data show, for all developing countries every dollar of outflow in the form of repatriated earnings during 1991-1997 occurred side by side with three dollars of FDI inflows. For some developing country regions the ratio was smaller (table VI.4). However, foreign affiliates participate, of course, in many other international transactions, intra-firm (e.g. buying management services from the parent company) or arm's length (e.g., exports and imports of goods), some of them adding to and some of them subtracting from, external financial flows of host countries.

This leads to the broader question of the balance-of-payments effects of FDI. This issue was of considerable interest in the early 1970s, when most developing countries faced stringent foreign exchange constraints (see, e.g. Reuber *et al.*, 1972; Lall and Streeten, 1977).<sup>8</sup> These constraints are less stringent today, when many developing countries are integrating themselves

**Table VI.4. Comparison of repatriated earnings<sup>a</sup> and FDI inflows, 1991-1997**

(Millions of dollars and percentage)

Region	1991	1992	1993	1994	1995	1996	1997	1991-1997 (Annual average)
<b>All countries</b>								
Repatriated earnings	52 480	62 189	63 228	75 569	98 179	111 894	108 589	81 733
FDI inflows	115 837	128 600	179 820	192 785	274 487	282 671	351 530	217 962
<i>Ratio of earnings to FDI inflows, per cent</i>	<i>45.3</i>	<i>48.4</i>	<i>35.2</i>	<i>39.2</i>	<i>35.8</i>	<i>39.6</i>	<i>30.9</i>	<i>37.5</i>
<b>Developed countries</b>								
Repatriated earnings	37 898	45 317	44 508	53 882	65 438	74 332	74 627	56 572
FDI inflows	84 931	88 002	119 685	110 463	181 284	171 902	211 271	138 220
<i>Ratio of earnings to FDI inflows, per cent</i>	<i>44.6</i>	<i>51.5</i>	<i>37.2</i>	<i>48.8</i>	<i>36.1</i>	<i>43.2</i>	<i>35.3</i>	<i>40.9</i>
<b>Developing countries</b>								
Repatriated earnings	14 539	16 820	18 644	21 524	32 281	36 970	33 021	24 828
FDI inflows	29 444	39 036	56 844	77 838	81 698	101 984	129 913	73 823
<i>Ratio of earnings to FDI inflows, per cent</i>	<i>49.4</i>	<i>43.1</i>	<i>32.8</i>	<i>27.7</i>	<i>39.5</i>	<i>36.3</i>	<i>25.4</i>	<i>33.6</i>
<b>Africa</b>								
Repatriated earnings	1 574	1 803	2 791	3 132	3 134	3 434	2 899	2 681
FDI inflows	2 358	2 868	3 149	4 759	3 468	3 767	4 742	3 587
<i>Ratio of earnings to FDI inflows, per cent</i>	<i>66.8</i>	<i>62.9</i>	<i>88.6</i>	<i>65.8</i>	<i>90.4</i>	<i>91.2</i>	<i>61.1</i>	<i>74.7</i>
<b>Asia and the Pacific</b>								
Repatriated earnings	8 398	9 548	9 259	10 213	20 342	22 675	15 842	13 754
FDI inflows	14 027	21 621	40 204	44 731	48 087	56 558	64 445	41 382
<i>Ratio of earnings to FDI inflows, per cent</i>	<i>59.9</i>	<i>44.2</i>	<i>23.0</i>	<i>22.8</i>	<i>42.3</i>	<i>40.1</i>	<i>24.6</i>	<i>33.2</i>
<b>Latin America and the Caribbean</b>								
Repatriated earnings	4 559	5 455	6 574	8 146	8 732	10 781	14 200	8 350
FDI inflows	12 983	14 397	13 321	28 068	29 784	41 148	60 277	28 568
<i>Ratio of earnings to FDI inflows, per cent</i>	<i>35.1</i>	<i>37.9</i>	<i>49.4</i>	<i>29.0</i>	<i>29.3</i>	<i>26.2</i>	<i>23.6</i>	<i>29.2</i>
<b>Central and Eastern Europe</b>								
Repatriated earnings	43	51	76	163	460	592	941	332
FDI inflows	1 462	1 561	3 290	4 484	11 505	8 786	10 347	5 919
<i>Ratio of earnings to FDI inflows, per cent</i>	<i>3.0</i>	<i>3.3</i>	<i>2.3</i>	<i>3.6</i>	<i>4.0</i>	<i>6.7</i>	<i>9.1</i>	<i>5.6</i>

Source: FDI/TNC database based on the June 1999 IMF balance of payments CD ROM.

<sup>a</sup> Balance-of-payments item "dividends and distributed branch profits".



more closely into international goods and financial markets and adjusting their macroeconomic and exchange-rate policies accordingly. However, the balance-of-payments issue is still relevant for many countries and countries are often concerned with the balance-of-payments effects of FDI (box VII.3).

The net present value in terms of direct foreign exchange effects of any profitable FDI project ought to be negative, if all profits are repatriated. Unless the investing firm expects to earn over the life of the project, a larger sum than it puts in (discounted at the market rate of interest), the investment is not profitable and so not worth undertaking. In this sense, any profitable FDI project, with profits realized in foreign exchange, will have a more adverse balance-of-payments impact than an identical national project financed from national sources. However, this begs the question as to whether the project could have been undertaken (at equivalent levels of efficiency) in the absence of FDI. Moreover, FDI in tradable activities generates foreign exchange (export projects) or saves it (import-substituting projects). Unless there are high tariffs, overvalued exchange rates or other disincentives to trade, TNCs will also do this efficiently. If they use their special ownership advantages to access world markets, they can often do it more effectively than local firms (chapter VIII). Even projects in non-tradable sectors can enhance the competitiveness of tradable activities; for instance, FDI in telecommunications or infrastructure (roads, ports or airports) could remove bottlenecks affecting export logistics in many developing countries.

These indirect effects have to be taken into account in assessing the balance-of-payments impact of FDI. Moreover, the economic value of an investment cannot be assessed by looking only, or mainly, at direct balance-of-payments effects. As long as the investment's social benefits exceed its social costs, the management of the balance-of-payments is a matter of macroeconomic policy management. In a well-managed regime, investments will tend to have beneficial economic effects on the host economy. These will show up in higher growth, and the balance of payments will adjust, given appropriate exchange rates.

While FDI may bring various benefits not normally available from national firms or other sources of external financing, it may also influence the division of financial benefits between TNCs and host countries which may have balance-of-payments implications. The possibility arises because of a large variety of intra-firm transactions that take place between foreign affiliates and their parent firms. These transactions run the gamut of intra-company trade, payments of interest on intra-company loans, payments for services provided by personnel from the parent company or from another affiliate and payments for technology. For several of these items, there really is no market or arm's-length price – for example, in the case of technology payments or payment for specialized consultancy services. TNCs have considerable freedom in fixing prices of goods and services in these transactions – transfer prices – which, in distinction from prices for arm's-length transactions, are not transparent and cannot be checked easily. TNCs can use transfer pricing to their own benefit, affecting the amount of profit reported in host countries, which in turn affects the tax revenue of both host and home countries.<sup>9</sup>

In every transaction involving abusive transfer pricing there is a country in which less taxes are being paid (presumably a country with, for example, a higher tax rate) and a country in which more taxes are being paid (the country with a lower tax rate). Winners and losers can be either host or home countries, developing or developed. Whether a country is a winner or loser depends not only on its tax rates but also on other factors such as tariffs and capital transfer regulations. For example, in the 1960s and 1970s, transfer pricing was a means of overcoming restrictions on transferring profits abroad which existed in many developing countries (Lall, 1979; Vaitos, 1974). Since that time, profit remittances have been generally liberalized and taxes have declined all over the world. Double taxation treaties (see chapter IV) between host developing countries and home countries should also have led to less transfer pricing abuses deleterious to host developing countries.

However, this does not mean that the problem has disappeared. It remains a concern not only among developing countries, but also among developed countries, better equipped to tackle the issues raised by transfer pricing. For example, 84 per cent of the developing countries participating in an UNCTAD survey estimated that the affiliates they hosted shifted income to their parent companies to avoid tax liabilities and 61 per cent thought that their own TNCs were engaging in income shifting. In 1994, for example, the United States tax authority made income adjustments of \$2 billion and \$1.5 billion for 236 non-United States-controlled and 156 United States-controlled TNCs, respectively. In 1997, in Japan, 78 adjustments to reported income were made due to transfer pricing assessments totalling \$330 million (UNCTAD, 1999s, pp. 31-32). These figures indicate that the issue continues to exist and should be dealt with not only in national legislation but also be a subject for consideration in international arrangements.

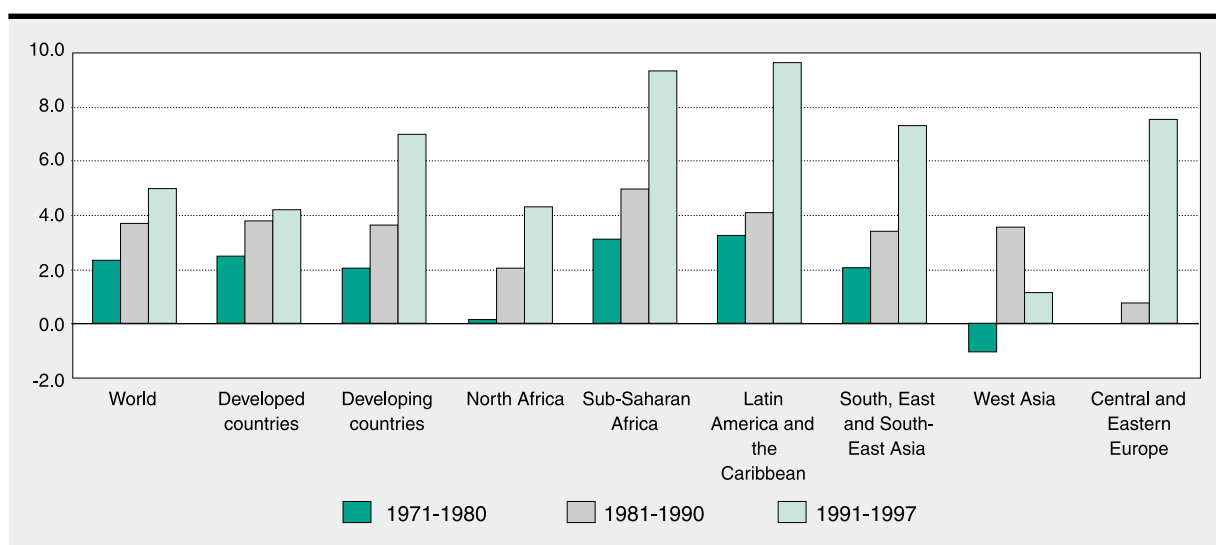
## 2. Investment

In distinction from other sources of capital, such as bank loans, bonds or even portfolio equity capital (which represent externalized forms of foreign savings that are used for investment by local firms), FDI is the only source that internalizes foreign savings, that is, firms bringing these savings undertake investment. TNCs can thus affect investment in host countries directly through their own investment activities, and indirectly, by affecting investment by host country firms. These two impacts are examined separately.

### a. *Direct impact*

An examination of the direct contribution of foreign affiliates to host countries' total investment requires, ideally, that the investment of these affiliates be compared with the investment of domestic firms. But countries typically do not disaggregate their investment expenditures accordingly. FDI inflows are used therefore as a proxy, though an imperfect one,<sup>10</sup> for measuring investment by foreign firms. Based on this measure and gross fixed capital formation (GFCF) as a measure of total investment in host countries, the following trends as regards the direct contribution of FDI to this investment over time emerge (figure VI.1 and table VI.5):

**Figure VI.1. The ratio of FDI inflows to gross fixed capital formation, by region, annual average, 1971-1980, 1981-1990 and 1991-1997**  
(Percentage)



Source: UNCTAD TNC/FDI data base.

Table VI.5. The relative importance of FDI inflows in gross fixed capital formation, by countries, 1971-1997

Percentage ratio (x)	Economy <sup>a</sup>		
	1971-1980	1981-1990	1991-1997
x ≥ 20 per cent	Bahamas, Botswana, Antigua and Barbuda, Seychelles	Liberia, Saint Kitts and Nevis, Antigua and Barbuda, Singapore, Seychelles, Vanuatu, Chad	Equatorial Guinea, Angola, Vanuatu, Trinidad and Tobago, Saint Vincent and the Grenadines, Guyana, Dominica, Fiji, Hungary, Bolivia, Singapore, Estonia, Belgium and Luxembourg, New Zealand, Kyrgyzstan, Grenada, Saint Kitts and Nevis, Panama, Chile
15 ≤ x < 20 per cent	Swaziland, Singapore, Uruguay, Trinidad and Tobago	Swaziland, Dominica, Angola, Papua New Guinea, Zambia, New Zealand, Grenada	Seychelles, Sweden, Nigeria, Colombia, Namibia, Liberia, Republic of Moldova, Swaziland, Malta, Costa Rica, Ireland, Antigua and Barbuda, Gambia, Nicaragua, Malaysia, Peru
10 ≤ x < 15 per cent	Cyprus, Malaysia, Angola, Grenada, Malta, Fiji, Papua New Guinea	Fiji, Belgium and Luxembourg, Botswana, Saint Vincent and the Grenadines, Chile, Saudi Arabia, Belize, United Kingdom, Equatorial Guinea, Malaysia, Hong Kong (China), Netherlands, Costa Rica	Chad, Venezuela, Netherlands, Papua New Guinea, Poland, Ecuador, China, Madagascar, Mexico, United Kingdom, Dominican Republic, Belize, Uganda, Ghana, Bahamas, Yemen
5 ≤ x < 10 per cent	Guatemala, Canada, Togo, Central African Republic, Sierra Leone, United Kingdom, Egypt, Oman, Niger, Panama, Jamaica, Congo, Rwanda, Dominican Republic, Democratic Republic of Congo, Barbado, Belgium and Luxembourg, Haiti, Ireland, Tunisia, New Zealand, Belize, Senegal, Costa Rica, Saint Kitts and Nevis, Malawi, Netherlands, Zambia, Ecuador, Cameroon, Australia	Gambia, Guatemala, Australia, Spain, Nigeria, Cyprus, Trinidad and Tobago, Malta, Colombia, Comoros, Portugal, Bahrain, Mexico, Oman, Greece, Tunisia, Gabon, Rwanda, United States, Egypt, Bolivia	Djibouti, Zambia, Bulgaria, Côte d'Ivoire, Czech Republic, Australia, Paraguay, Argentina, Cape Verde, Tunisia, Jamaica, Denmark, France, Cyprus, Spain, Morocco, Honduras, Philippines, Portugal, Hong Kong (China), United Republic of Tanzania, Uruguay, Mali, Malawi, Egypt, Norway, Belarus, Canada, Pakistan, Indonesia, Sri Lanka, Barbados, United States, TFYR Macedonia, Switzerland, Slovenia, Senegal, Finland, Israel

Source: UNCTAD, based on IMF, International Financial Statistics, May 1999 CD-ROM.

<sup>a</sup> Within each cell, countries are ranked by order of descending value in each bracket category.

- During the past three decades, the importance of FDI relative to total investment has consistently increased in all country groups – developed, developing and countries in Central and Eastern Europe. In the 1990s, this importance has become for the first time higher in developing countries and economies in transition than in developed countries, with the ratios of FDI inflows to GFCF for the three groups amounting to seven per cent, 7.5 per cent and 4.2 per cent, respectively, during 1991-1997 (figure VI.1).
- The ratio of FDI to total investment has also increased consistently over time for almost all developing country regions and sub-regions (except West Asia). In the 1990s, the ratios in Africa, Latin America and the Caribbean and South, East and South-East Asia were more than two times higher than in the 1980s.
- In spite of its rapidly growing importance, FDI still plays, on average, a modest role in domestic investment in all country groups, indicating perhaps potential for further growth in importance. In most countries (66 per cent in 1991-1997), the ratio does not exceed 10 per cent. On the other hand, the number of countries with relatively high ratios – equal to, or above, 15 per cent – increased between the 1970s and the 1990s from seven per cent to almost a quarter of all countries (57 countries): all of them, with two or three exceptions, developing countries or countries in transition (table VI.5).

The ratio of FDI to host country investment does not distinguish between countries with good or poor overall investment performance. It captures only the role of FDI in total investment, regardless of the investment rates in the economies of host countries. Therefore, it includes both situations in which good FDI performance enhances good domestic investment performance as well as situations in which the ratio of FDI to total investment is high, but the performance of both FDI and domestic investment is poor, with that of the former being less poor than that of the latter. A case in point may be sub-Saharan Africa, where FDI performance lagged behind that of other developing country groups (see Chapter II) but the FDI/GFCF ratio was consistently higher than the developing country average and the ratio in, for example, South, East and South-East Asia (figure VI.1). While during most of the 1970s this ratio reflected good FDI performance accompanied by good overall investment performance, during the 1980s and the 1990s it resulted mainly from a substantial fall in, and a low level of, domestic investment, accompanied by FDI that, while not rising significantly, held up better than domestic investment and, hence, total investment.

As mentioned earlier when discussing the *source* of funds, FDI flows are not a perfect measure of the external finance mobilized by TNCs for host countries. The same applies when it comes to investment *expenditures* (table VI.6). Using United States data,<sup>11</sup> investment expenditures of foreign affiliates in all host countries were 60 per cent higher than FDI inflows during the period 1989-1996. In developed countries, foreign affiliates invested even more (70 per cent) while in developing countries, they invested one third more than the amount TNCs brought in as FDI. A disaggregation of the data by region indicates that this pattern holds for both developed and developing countries.<sup>12</sup>

This is entirely consistent with what had been discussed earlier about the financing of foreign affiliates. FDI flows underestimate total investment of foreign affiliates in host countries. The difference between the two measures (foreign affiliate investment expenditure and FDI) can be attributed to two factors. One is that foreign affiliates can finance their investment expenditures from sources other than FDI inflows. The second factor is that FDI inflows include components that are not used for the financing of their investment expenditures.

**Table VI.6. Foreign affiliates<sup>a</sup> of United States TNCs: total investment<sup>b</sup> and FDI flows, 1989-1996**

(Billions of dollars and ratio)

Host country/region	Total investment of affiliates	FDI inflows <sup>c</sup>	Ratio of investment to FDI
All countries	711	444	1.6
Developing countries	184	137	1.3
Latin America	87	91	0.95
South and Central America <sup>d</sup>	80	62	1.3
Asia	84	44	1.9
South, East and South-East Asia	73	41	1.8
West Asia	12	4	3.5
Africa	12	1	12.6
Developed countries	522	304	1.7
Western Europe	345	241	1.4
Japan	46	8	5.6
Other	126	55	2.3

*Source:* United States Department of Commerce, *US Direct Investment Abroad*, various issues.

<sup>a</sup> Non-bank affiliates of non-bank parents.

<sup>b</sup> Capital expenditures of affiliates. Data on capital expenditures of minority-owned foreign affiliates are available only for 1989 and 1994. For other years they were estimated on the basis of the ratio of capital expenditures of minority-owned affiliates to capital expenditures of majority-owned affiliates in 1989 and 1994.

<sup>c</sup> Excluding banking.

<sup>d</sup> Excluding Panama.

Investment expenditures can be financed from sources external to the TNC system. These sources are the capital markets of the host countries and international financial markets. As indicated in section B, the share of funds raised in both host country markets and international capital markets in the total financing of affiliates is quite significant and, if one can assume a similar composition of the investment financing (data on the financing of investment expenditures only are not available), this explains a large part of the difference between total investment expenditures of foreign affiliates and FDI flows. One would expect that this difference should not be large in host developing countries, because borrowing costs in these countries tend to be higher than costs in developed countries and in international financial markets. But data on funds raised by foreign affiliates of Japanese TNCs (excluding own funds of affiliates and funding of equity by parent companies and other firms) do not confirm this: although the share of funds raised in the financial markets of host developing countries in the financing from all sources was generally lower than in developed countries, the difference was not that large in 1989 and 1992, and the share in developing countries was high — over 40 per cent in both years (table VI.1). It decreased by 1995, but it still amounted to one quarter, a level too high to say that foreign affiliates avoid financing from the local market. Apparently exchange rate and country risk considerations, mentioned earlier, play a great role in financing decisions. There were also big interregional differences: the share in Latin America (8.4 per cent, down from the level of 32 per cent in 1989) was much lower than in Asia (34 per cent, down from 57 per cent in 1989). United States data (available on a stock basis for Mexico and Brazil in 1994) provide the same picture: a high share of local financing in total financing from sources external to TNCs, not different from the share in all countries or individual host developed countries.<sup>13</sup> This is not to say that the high cost of borrowing (and underdeveloped financial markets) in many developing countries do not discourage TNCs from local financing, but rather that the picture is much more complex and that there can be developing countries in which the situation is more similar to that in developed countries. And, if these countries are large, they may influence the developing country average to such an extent that it gets closer to that in developed countries.

From the point of view of the impact on the size of investment by foreign affiliates, the disaggregation of the funds external to a TNC system into those raised in the host country and those in other countries does not matter. It matters, however, for foreign financing. From this viewpoint it is preferable that foreign affiliates use international sources of financing. It also may matter as regards the indirect investment impact of foreign affiliates, that is, the impact on investment by domestic companies in host countries, discussed in the next section.

As regards the second factor explaining the difference between investment of foreign affiliates and FDI inflows generated by them, the latter may include flows for M&As which — representing a change of ownership of existing assets — as such do not contribute to a host country's capital formation at the moment of entry. Another non-investment component are intra-company loans. Although M&As are not investment in new productive assets at the moment of entry, they may lead to investment in the future through sequential investment (chapter III). It can not be ruled out that loans, or at least part of them, are used to finance investment in fixed capital.<sup>14</sup>

The importance of these components for FDI flows varies. As regards loans, the data available for selected countries show that they accounted for 18 per cent of total FDI inflows in these countries in 1990-1998. There was no difference between developed and developing countries in this regard (figure I.1). There was also no clear trend. Rather, the share of loans in total inflows fluctuated from year to year, within a range of eight per cent to 38 per cent in developed countries and three per cent to 25 per cent in developing countries. As regards M&As, they appear to be a dominant component of FDI inflows in developed countries, while, at least until recently, greenfield projects were the dominant mode of entry of TNCs into developing countries. Recently, there is a trend towards an increase of M&As in some developing countries (chapter III). Many of these deals relate to privatization and therefore are likely to lead to sequential investment (UNCTAD, 1995a, pp. 77-78, 103-104 and 106-107; Agosin, 1996; Chudnovsky, López, and Porta, 1996;). Although M&As do not have a direct impact on a host country's investment at the moment of entry, they may have an indirect impact on this investment.



***b. Indirect impact: does FDI “crowd out” or “crowd in” domestic investment?***

Apart from the impact on investment in host countries through their own investment activities, foreign affiliates may also affect investment by domestic firms (and that by other foreign affiliates). If their investment crowds out investment by domestic firms, then an increase in investment of foreign affiliates by one dollar will lead to an increase of total investment in the host country smaller than one dollar. In the extreme case, a dollar of foreign investment may crowd out more than a dollar of domestic investment, reducing total investment. In the case of crowding in, total investment increases by more than the increase in investment by foreign affiliates. If the effect is neutral, any increase in affiliates' investment is reflected in a dollar-for-dollar increase in total investment.

Crowding out (or crowding in) can take place in either financial markets or product markets.

If TNCs finance their investment by borrowing in the host country under conditions of scarcity of financial resources, and hence cause a rise in domestic interest rates, they may make borrowing unaffordable for some domestic firms.<sup>15</sup> Were TNCs to finance their investment, instead, from funds raised abroad, total investment in the host country could be higher by the amount of domestic investment not undertaken due to higher interest rates: this amount is thus crowded out. It is important to underline that this type of crowding out cannot be triggered by FDI inflows per se, as these, by definition, comprise only financing internal to the TNCs system. If there is domestic financial repression (when domestic firms already face difficulties in raising funds in the local financial markets), FDI inflows are almost certain to add to the supply of financial resources (directly through M&As and indirectly through greenfield investment). The possibility of financial crowding out of domestic firms under such conditions is low. On the other hand, if these inflows are large relative to the size of the host country's financial market, they may lead to an appreciation of the exchange rate, making a host country's exports less competitive and discouraging investment for export markets. In this case, the potential of an adverse effect is greater in the case of M&As (especially those on the border of portfolio investment) than in the case of greenfield investment: the chances that proceeds from the acquisition will find their way to host-country financial and foreign exchange markets (thus increasing the supply of foreign currencies) is much greater than in the case of new investment where a part of the invested capital, quite likely, will be spent outside of the host-country, on imports of capital goods.

Crowding out in financial markets can take place regardless of the industry. Foreign affiliates in services can outcompete domestic firms in manufacturing in securing finance. Crowding out of product markets takes place when firms are from the same industry. It can take place at the stage of the investment decision, through the mechanisms of the financial market described above. It can also take place regardless of the impact of FDI on conditions in financial markets or the exchange rate, because domestic firms give up investment projects to avoid the prospects of competing with more efficient foreign competitors. The net effect on total host-country investment depends on what happens to the released resources: if they go to other activities in which local firms have greater competitive advantages, there will be no crowding out of investment in the economy as a whole. It may also be that FDI forces local competitors to raise their efficiency and so leads to raising their investment and profitability. To make any generalization about crowding out, all these dynamic second-round effects need to be taken into account.

Crowding in takes place when investment by foreign affiliates stimulates new investment in downstream or upstream production by other foreign or domestic producers or increases the efficiency of financial intermediation. In the case of foreign firms (e.g. supplier firms from a home country), this represents associated FDI and reinforces the direct effects of FDI on total investment. In the case of domestic firms, the effect on investment is indirect. Thus the existence of backward or forward linkages to local companies from the establishment of foreign investors

is a key consideration for determining the total impact of FDI on capital formation. In many cases, the development of domestic subcontractors would not be possible without foreign affiliates, which provide stable long-term markets as well as access to technological information. It may happen, though, that foreign affiliate-established linkages lead to crowding in after the foreign affiliate has crowded out its direct competitors: then, the net effect on the host country's investment will depend on the relative strengths of the two effects.

Foreign affiliates that introduce new goods and services to a domestic economy (financed from funds raised outside of the host country) are more likely to have favourable indirect effects on capital formation than foreign investments in areas where domestic producers already exist. In the former case, the effects on capital formation will be positive because domestic producers may not have the knowledge required to undertake these activities. If FDI enters the economy in industries in which there are competing domestic firms, the very act of foreign investment may take away investment opportunities that were open to domestic entrepreneurs prior to the foreign investments. In other words, such FDI may well reduce domestic investments that would have been undertaken, if not immediately, then perhaps in the future, by domestic producers.

But even in new activities beyond the current reach of domestic investors, conditions conducive to domestic firms may be established in the future. In such cases, FDI may preempt investments by domestic firms that, with proper nurturing, could enter the industry successfully. If in place, such policies can be an important factor determining the size of the indirect investment effects of FDI in the host country economy.

What does the evidence show as regards the indirect impact of FDI on a host country's investment? Systematic analysis based on rigorous statistical testing adds the possibility of neutral effects (that is a dollar of FDI leading to an increase of investment by just one dollar). In such testing, crowding in and neutral effects seem to prevail, although crowding out is not uncommon (box VI.2). Nevertheless, these results (including those reported in box VI.2) should be interpreted with caution. The variables used are far from perfect (e.g. FDI flows underestimate the total value of investment of foreign affiliates), there are secondary effects that are impossible to measure (but which may compensate for the negative effects of crowding out by gains in efficiency, if crowded out enterprises are inefficient) and there is no consensus as to which methodology is most appropriate. It should also be kept in mind that, in most cases, crowding out does not mean an absolute reduction in total investment, but rather that its increase is not proportionate to FDI inflows. A general conclusion can be drawn that crowding out cannot be ruled out, but it does not appear to be the general case.

#### **Box VI.2. Evidence for crowding in and crowding out**

##### **Industry and country examples**

Recent experience provides examples of these effects at the industry level. Crowding in has taken place in the case of Argentina's telecommunications privatization, where the development of domestic subcontractors was part and parcel of the privatization agreement with foreign investors and appears to be working well (Chudnovsky, Lopez and Porta, 1996). The recent decision of Intel to build a large microprocessor plant in Costa Rica will undoubtedly contribute to domestic capital formation. Obviously, this investment as such will not displace local entrepreneurs, because they do not exist, even potentially. There are estimates that the Intel affiliate, which operates under EPZ status, will give rise to investments by about 40 local suppliers, and that locally-produced goods and services will generate about 15 per cent of the value of total output, almost all of which will be exported (ECLAC, 1998, pp. 48-49). On the other hand, there are already complaints by local business people that Intel's investment crowds them out of the labour market by absorbing skilled programmers.

Examples from countries in East Asia – Indonesia, Malaysia, and Thailand – that have relied heavily on FDI show that it may take some time for indirect effects on domestic investment to take place. TNCs have invested in new industries of the economies of those countries, mainly microelectronics-related, but also toys and other consumer goods for export markets (Jomo, 1997). In

/...

**(Box VI.2, concluded)**

the absence of TNCs, it is unlikely that these investments would have been made at all. Initially, however, many of the foreign affiliates were essentially assemblers with few linkages to the rest of the economy. Over time, domestic suppliers of services and inputs have emerged.

Mining or other raw material extraction projects typically generate few linkages, backward or forward, and therefore their indirect effects on domestic investment are negligible, if they exist at all. In countries that do not have the required know-how or access to capital (as is the case, for example, with several African countries), FDI may contribute to capital formation directly through investments in foreign affiliates. In countries with competitive domestic firms operating in the same industries and markets, however, FDI may have crowding-out effects. This might have been the case with recent foreign investments in copper in Chile. It is quite likely that the national copper company (CODELCO), which is the largest copper mining enterprise in the world and operates with state-of-the-art technology, was in a position to undertake further investment in this sector (Riveros, Vatter, and Agosin, 1996; Agosin and Benavente, 1998).

There are also examples of economies that have chosen to stimulate domestic investment in new activities rather than to rely on FDI. This was the rationale for limiting FDI in certain high-technology industries in the Republic of Korea and Taiwan Province of China (chapter VII). In these cases, the vision by policy makers that domestic firms could in fact emerge paid off. In many cases, however, the emergence of successful domestic producers in a new, technologically-advanced industry is unlikely or might take a long time with uncertain results. An example of a costly intervention in favour of domestic firms in high-technology industries is the Brazilian informatics policy of the early 1980s, which involved restrictions on FDI in information technology activities.

**Statistical tests**

What, then, is the empirical evidence on crowding in or crowding out at the country level?

In an early example, relating to Canada, of the few studies addressing this question, some regression coefficients, taken at face value, implied that "...\$1 of direct investment led to \$3 of capital formation" (Lubitz, 1966, pp. 97-98). A later study of FDI in Canada (Van Loo, 1977), with somewhat different methods, a slightly longer time span and annual rather than quarterly data, found a positive direct effect on capital formation greater than the amount of the FDI. That is, in addition to FDI effect on investment, there was some complementary effect on fixed investment by domestic firms. However, when indirect effects through impacts on other variables, such as exports (negative), imports (positive) and consumption (negative), operating through the accelerator were added, the addition to total capital formation was much smaller, a little over half the inflow. A recent study of the impact of FDI on economic growth, utilizing data on FDI flows from developed countries to 69 developing countries on a yearly basis from 1970 to 1989, has found, among others, that FDI has stimulated domestic investment: "a one dollar increase in the net inflow of FDI is associated with an increase in total investment in the host economy of more than one dollar. The value of the point estimates place the total increase in investment at between 1.5 and 2.3 times the increase in the flow of FDI" (Borensztein, *et al.*, 1995, p. 3).

An econometric exercise carried out to investigate this issue is described in an annex to this chapter. It covers a longer period of time (1970-1996) than the previous test cited, but a smaller number of countries (39 countries, mostly developing ones but including also two European developing countries and one country in transition). It uses total FDI flows as a variable, that is, it includes, in addition to inflows from developed countries, inflows from developing countries and countries in transition. The results with respect to the effects of FDI on investment by individual countries show that neutral effects dominate while the number of crowding in and crowding out cases were equal: the former were found in 19 countries and the latter in 10 countries each. As regards regional patterns, out of the 12 Latin American countries included in the test, none was in the group with crowding-in effects and none of the 12 Asian countries was in the crowding-out group: while neutral and crowding in effects prevailed in Asia, neutral and crowding out effects prevailed in Latin America. African countries are found in all three groups (table A.VI.2 in annex to this chapter).

*Source:* UNCTAD.

## **D. Conclusions and policy implications**

As is evident from the preceding analysis, FDI inflows can supplement domestic financial resources for development and can add, directly or indirectly, to domestic investment in host developing countries. They bring foreign exchange that adds to host countries' balance-of-payments receipts. TNCs can undertake investment projects that may be beyond the reach of domestic investors. But they can also have a number of negative effects, such as crowding out domestic investors and, through transfer pricing, shifting funds out of the host country. In distinction from national enterprises, TNCs may remit profits they earn on investment projects in a host country in the form of dividends (rather than reinvesting them), adding to a country's balance-of-payments expenses. While all developing countries try to attract FDI for the purpose of supplementing their domestic financial resources, FDI inflows still do not have a major influence on total investment in most developing countries: in fact for all developing countries the ratio of FDI to gross domestic capital formation averaged only seven per cent over the 1991-1997 period, although it is higher in the manufacturing sector.

This section deals with measures that countries use to attract FDI inflows, to maximize external financial resources that TNCs make available for development and the total investment in a host country.<sup>16</sup> It also addresses the question of how some of the negative effects can be reduced. Subsequent chapters analyse the ways of increasing the quality of FDI in terms of the principal non-capital components of the FDI package, especially technology transfer, diffusion, and generation; export development; job- and skill-creation and upgrading; and environmental sustainability.

To attract FDI and benefit from it, governments take a range of measures. One of the first things governments wishing to attract FDI can do (and should do) is to establish an enabling policy framework for FDI. Of course, they need to recognize that the FDI policy framework is but one of the factors that attract FDI inflows. It is a necessary but not a sufficient condition to influence locational decision. Business facilitation measures – the efficiency and efficacy of the administrative system that impinges on the entry and operations of TNCs, as well as investment promotion (including incentives available to foreign investors) – can also influence FDI inflows. Once a regulatory framework is enabling, however, TNCs are attracted primarily by economic factors such as the size and growth of the domestic and regional markets and the availability and cost of resources, ranging from natural resources through unskilled, semi-skilled and skilled labour to physical infrastructure (UNCTAD, 1998a).

There is no “one-size-fits-all” best-practice FDI policy framework that is appropriate for all countries. The subsequent text discusses briefly a number of issues relating to the main components of the FDI policy framework: policies and regulations on FDI; their implementation; promotional measures; and targeting. Each of these three components affects the attractiveness of host countries to foreign investors and hence the flows of FDI.

### **1. The framework**

#### ***a. The regulatory framework***

Developing countries' FDI policies, as well as those of countries in transition, in the past two decades have been characterized by a trend towards unilateral liberalization, with a view towards creating more favourable conditions for FDI (see table IV.1). Governments have gradually made entry and establishment easier by reducing – but by no means abandoning – sectoral restrictions on FDI, either by expanding the positive list of industries in which FDI is permitted or by reducing the negative list of industries closed to FDI, notably in services industries and (increasingly) in infrastructure. Privatization programmes are often open to foreign investors. Foreign equity participation restrictions and compulsory joint ventures, once a common policy

tool in many developing countries, have been removed in most industries open to private investment. Control restrictions, beyond those related to equity restrictions, such as golden shares, are less common than in the past, although they continue to be used particularly in large investments, in activities of strategic importance for the local economy, or in cases of privatization of public enterprises. Minimum amounts of equity investment requirements have also been reduced or abolished, thus removing an obstacle to FDI inflows from SMEs. Screening and authorization requirements tend to be replaced by simple registration on the basis of minimum and generally-applicable requirements. Screening continues in specific industries, especially in sensitive activities, or where FDI entry takes place through M & As. Some types of operational restrictions, such as restrictions on the entry of professional and managerial personnel, are being relaxed in some countries, subject to emigration law requirements. Outright performance requirements are less prevalent than in the past as they tend to lose their compulsory character; often they are combined with incentives. There is also a relaxation of foreign exchange controls, although countries reserve the right to impose temporal exchange control restrictions in the event of balance-of-payments crises.

The reduction of obstacles to FDI inflows is being complemented, at the national level, by the strengthening of standards of treatment of foreign affiliates. In particular, most countries today provide guarantees of legal protection, national treatment, fair and equitable treatment and most-favoured-nation (MFN) treatment, along with the free transfer of profits and repatriation of capital and dispute settlement. To ensure the proper functioning of markets, furthermore, a growing number of countries have adopted competition laws.

During this liberalization trend, many host countries have adopted FDI-specific laws<sup>17</sup> in one form or another, spelling out the main features of their FDI regimes. These laws have been superseded or amended over the years, and new laws have been adopted to reflect policy changes as outlined above. Moreover, in the course of liberalization, some countries have reduced the scope of their FDI laws, placing relevant provisions into other laws, dealing with specific issues that are in developed market economies typically covered by general business and commercial laws, e.g. taxes, foreign exchange, company statutes and competition issues. The logic of this trend is that foreign investors are increasingly treated in the same manner as domestic companies.

To complement and strengthen national policies and regulatory measures, countries have concluded great numbers of bilateral treaties for the promotion and protection of FDI (BITs), as well as for the avoidance of double taxation (chapter IV). The latter treaties not only reduce the risk of double taxation but also the scope for transfer pricing. BITs, on the other hand, are aimed at attracting FDI by providing general treatment and protection standards (UNCTAD, 1998b), in particular national, fair and equitable and MFN treatment after admission, guarantees against expropriation and recourse to international means for the settlement of investment disputes. Liberalization is proceeding most intensely within regional groups, typically in the context of regional integration agreements that are being signed in increasing numbers in all developing regions (see chapter IV). In addition, most developing countries are parties to a number of multilateral conventions dealing with investment related issues such as ICSID, MIGA and the WTO agreements on trade in services, trade-related investment measures and trade-related aspects of intellectual property.

Putting into place a state-of-the-art FDI regulatory framework appropriate for a particular country is not a simple matter. Often governments are confronted with difficult decisions regarding the pace and nature of FDI liberalization. Notwithstanding the trends described above, national laws continue to provide for state control and discretion over entry and establishment, even in more “open-door” economies. At the international level, although market access provisions in investment agreements are common, they do not uniformly display commitments that offer foreign investors completely unrestricted or full rights of entry and establishment (UNCTAD, 1999e). These issues continue to be sensitive matters in international negotiations.



Depending on the concrete characteristics and circumstances of each country, different industries and activities might need to be approached differently. In particular, the process of reducing barriers and introducing non-discrimination standards needs to occur simultaneously with strengthening the supervision of the market to ensure in particular that public restraints (on, e.g. market entry) are not replaced by private restraints (e.g. restrictive business practices). Countries also need to take measures to protect themselves against other negative effects. Indeed, many of the restriction on FDI that remain are meant to prevent undesirable effects of FDI, such as an adverse impact on the balance of payments and crowding out of domestic firms (especially SMEs). In addition, countries may need to take measures to monitor transfer pricing (UNCTAD, 1999e), limit access to local financial markets by foreign companies and, of course, monitor M&As.

The key to attracting FDI is not only to design appropriate regulatory framework at a particular time. It also involves the timely review and constant monitoring of results, and the ability to change policies and adapt them to new circumstances. One way of assisting developing countries in this respect is to undertake investment policy reviews (box VI.3 ). At the same time, policies should not be changed arbitrarily or too frequently as investors attach importance to stable regimes. When changes are envisaged, it is good practice to consult existing investors and business associations.

### **Box VI.3. UNCTAD's Investment Policy Reviews**

Many countries have significantly liberalized their FDI regimes, and governments are keen to know how well their reforms are working: Is there new FDI? Is it of the right kind? What more should be done? With the dismantling of traditional monitoring systems, policy makers may lack a mechanism to generate feedback on the impact of investment measures which are typically implemented by various government bodies and not coordinated. UNCTAD's Investment Policy Reviews (IPRs) are intended to fill this void: to provide government officials with a means of reviewing FDI in a liberal environment.

The IPRs are conducted by UNCTAD, following a standard format and involving staff, international and national experts and inputs from governments and the private sector. The reviews are presented and discussed in national workshops involving public officials and other stakeholders. They are also considered at an international commission in Geneva. The final reports are widely disseminated.

The reviews are undertaken on request. The assumption is that governments are ready to receive independent feedback and to engage in open dialogue with investors and peers. Their expectation is that a transparent and objective presentation of their country's investment policies and opportunities will put their country on the radar screen of international investors. The first round of reviews included Egypt, Peru, Uganda and Uzbekistan. The pipeline of requests includes Ecuador, Kenya, Mauritius, Pakistan, the Philippines and Zimbabwe.

The reviews have a common format of three sections examining: the country's objectives and competitive position in attracting FDI; the FDI policy framework and administrative procedures; and policy options. The reviews go beyond an examination of how well FDI policies look on paper and probe how well those policies work in practice in achieving stated national objectives. Since investor response is based on both policy and non-policy factors, a key feature of the reviews is to survey actual investors on how they perceive current investment conditions and opportunities. Potential investors are also surveyed. Based on an analysis of investor perceptions and of relevant FDI trends at the regional and global levels, the reviews assess the country's core competencies in attracting FDI, and then gauge the effectiveness of policies in leveraging the competitive strengths of a country (relative to other countries) and in ameliorating potential weaknesses. The policy options and recommendations are practical, and are geared to decision-makers in investment promotion agencies. They include technical assistance proposals and follow up. Although having a country focus, the reviews proceed in a global context, comparing a country's policies, strengths and weaknesses in relation to other countries, particularly in the region. The reviews are underpinned by the data and analysis of UNCTAD's *World Investment Reports*.

IPRs are funded primarily through extra-budgetary resources. Individual country projects are funded on a cost-sharing basis by UNDP, the Government of Switzerland, host government institutions and, as appropriate, the local and transnational private sector (to sponsor individual workshops or provide in-kind support, such as technical studies or industry experts).

*Source:* UNCTAD.

## ***b. Contracts***

While the regulatory provisions relating to FDI in most developing countries and economies in transition are set out in general laws, they need to be augmented in certain categories of foreign investment – and, in some cases may, in practice, be overshadowed – by contractual provisions to which the government or a government agency is a necessary party. This is increasingly true for economies in which agreements are used, e.g. to short-circuit anomalies of the tax system or in which the legal system may be well established, but there is no long track record of successful dealing with foreign investors in very large projects.

This contractual nexus is of critical importance in the natural resources sector and in major infrastructure projects, including those involving power generation and the construction of pipelines. Indeed it is probably true to say that there is at present no prospect of a major investment in mining or petroleum in a developing country (or an economy in transition) without contractual commitments by the government or a government agency covering a wide range of important issues. In a quite different context, contracts negotiated between TNCs and government agencies relating to the construction and management of hotels are often a focal point for the development of a tourist industry.

TNCs involved in such projects typically have a long experience in formulating contract terms and conducting contract negotiations to ensure that their legitimate interests as investors are properly guaranteed and protected. They may employ in-house lawyers for that purpose. In more complex cases, particularly where project finance is a component, they may engage major law firms with specialist knowledge to act on their behalf. The cost for companies of legal work of this kind is considerable. But where a project goes forward, much of the expenditure will be recoverable; and, where a company borrows on a limited recourse basis, the expenditure typically is included in the capital costs funded by borrowing and secured on the project.

What then is the position on the other side of the negotiating table? If fair and stable contract terms are to be negotiated, the government or a government agency concerned should be able to confront, on equal terms, legal expertise fielded by the investors. Otherwise delays occur or contracts run a risk of not being stable.

How can that be done? In many developing countries — and especially in LDCs — the foreign exchange cost of engaging international lawyers of a professional standing comparable to those employed by investors could prove to be a financial burden. The complexity of the transactions involved, and the need to match the expertise of the prospective investors, is generally well understood in the ministry directly concerned with a project. But quite often there is some scepticism about the need for such expenditure in the Ministry of Finance, particularly when working under budgetary constraints. Fortunately, there is sometimes a provision in World Bank credits for funding appropriate legal advice. However, that is by no means always the case. And even where World Bank funding is available in principle, the appropriate credit may not be in effect and available for draw down at the time when legal advice is most urgently required. Similar difficulties may arise in securing assistance from other international institutions.

Against this background a case can be made for examining the possibility of establishing a facility that would help to ensure that expert advice in contract negotiations is more readily available to developing (especially least developed) countries (and economies in transition) as and when it is required (box VI.4). In that context, the starting point should be a realistic appreciation, now certainly shared by major TNCs, that in important contract negotiations proper legal advice for the government side is of benefit to the investor as well as to the government itself. In purely practical terms, delay and confusion, adding substantially to transaction costs, may result from the inexperience of government negotiators confronted by a well-organized investor team. In any event, the short-term advantage for a TNC of having a *de facto* monopoly of high-level legal knowledge is generally outweighed by the importance, particularly in the natural resources sector and large-scale infrastructure projects, of a well-balanced stable contract which has a fair chance of running the course in a long term project.

#### **Box VI.4. Funding contractual negotiations with TNCs**

If it is right to see a balance of legal know-how as being in the interest of investors as well as governments, one could consider that developing countries, in appropriate cases, require a prospective investor to advance, at the outset of negotiations, the cost of legal advice for the government. Where a project goes forward under an agreement negotiated with the government or a government agency, the amount advanced would normally be recoverable against income tax; in the case of production-sharing in the petroleum industry the relevant agreement could make such costs specifically cost recoverable. For the investor, the risk – significantly reduced by proper legal advice for government – would be the possibility that no agreement is reached at the end of the negotiating cycle.<sup>a</sup>

While it is not unreasonable to envisage TNCs making advances to meet legal costs to be incurred by a host country government in contractual negotiations, in the absence of any established institutional structure for handling such payments there could be significant problems. The old adage *"he who pays the piper calls the tune"* could result in some reservations affecting both the investor and the government concerned. In particular:

- For the government there could be serious political repercussions if it appeared that it had not received independent legal advice, but had accepted cash payments to fund what would appear as a collusive arrangement with a prospective investor. It would therefore always be necessary for the government to have some way to make clear to the public that, whoever was paying the bill, it had made its own choice in appointing a legal adviser.
- Corresponding concerns would affect the investor. A major TNC could suffer serious damage to its reputation if it appeared to have used cash payments to undermine the integrity of the negotiating process, particularly where an investment was to be made in a competitive context. Indeed United States companies would need to be very certain that funding legal advice for government or government agencies would not breach the provisions of the Foreign Corrupt Practices Act.
- Assuming that arrangements were in place to ensure that transnational funding was not used for any improper purpose, an investor would want some assurance that it was getting reasonable value for its money. If a government had the right to choose its own advisers, the investor would want to know that the advisers chosen were technically competent to handle the business on hand.
- The government would need an assurance that the budget offered by the investor was adequate for the purpose, or in the event of a shortfall would be replenished. A government that found that funds committed for legal advice were likely to run out before the negotiations were over, could be in a very difficult position and under pressure to resolve outstanding issues against its better judgement.

All these problems are in different degrees serious. However, they could for the most part be resolved by creating a facility to legitimize and regulate funding procedures. One possible approach would be for an international institution to create a trust to administer funds put up by prospective investors. (There are cases in which prospective investors have, indeed provided financial resources for the government to enable it to obtain competent legal advice.) The trustees would need to be independent persons of some standing with a practical working knowledge of contract negotiations. However, the role of the trustees would be strictly limited. Where in the context of some major development a government or an agency of the government had agreed with a prospective investor that the investor would advance money to enable the government side to secure specialist legal advice, the role envisaged for the trustees could be as follows:

- To take receipt of the sums advanced and to disperse them against invoices submitted by the firm engaged by the government. A procedure can be envisaged similar to procedures now followed by the World Bank in dispersing the proceeds of an International Development Agency credit to meet lawyers' fees and expenses incurred by government or a government agency.
- To certify that the firm selected by the government to be its legal adviser has the technical competence and experience required for the job. If the government so desires, the trustees could also propose qualified firms from a roster of firms that could be established for this purpose.

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**(Box VI.4, concluded)**

- To consider the budget proposed and to ensure that the sum committed by the investor is adequate for the purpose and cannot be withdrawn or reduced because the prospective investor does not like the way that the negotiations are going. Generally that would involve requiring payment into an escrow account or the provision of some other security for payment regarded as satisfactory to the trustees.

It is important to appreciate that, under the scheme envisaged, the trustees would have no role in the contractual negotiations. They would only administer the funds under their control. They would not be required, or permitted, to adopt a view about any matters at issue between the parties to the negotiations.

Naturally, such procedures would need to be worked out in detail. Consideration could also be given to including in the terms of reference of such a facility provisions for the training of local lawyers to develop the necessary skills in order to provide in the future comparable services to those of foreign established firms.

*Source:* UNCTAD.

- <sup>a</sup> In mining and petroleum there would also be the possibility that the results of grass-roots prospecting or exploration might be negative and there would then be no commercial development against which legal costs could be charged. However, that is a risk that many oil companies are already prepared to assume in respect of the payment of signature bonuses which are now, to a large extent, a common form in exploration and production agreements, or at least are relatively uncontroversial.

## 2. Implementation

A regulatory or contractual framework is only as good as its implementation. The existence of appropriate government institutions for FDI policy administration, coordination and problem resolution is an important ingredient of a country's investment climate. Notwithstanding the regulatory liberalization trend described above, most host countries still have many regulations that require TNCs to obtain a number of permits, licences, approvals, and so on in order to invest and to operate over time. Administrative barriers can discourage foreign (and domestic) investors, especially those who may not be politically connected, operate under strict internal corporate guidelines, do not have local partners, or simply have limited financial resources to hire legal and economic advisors. They can also provide an opening for bribery. All in all, they can increase the transaction costs of investment and operations significantly (table VI.7). For example, one cheese manufacturer in Kyrgyzstan had to obtain

**Table VI.7. Illustrative list of transaction costs related to the legal and regulatory environment**

Area of operation	Transaction	Enterprise exposure	Effects on
Business entry	Registration	Monetary costs to firm	Rate of new business entry
	Licensing	Time costs (including compliance and delays)	Distribution of firms by size, age, activity
	Property rights	Facilitation costs	Size of shadow economy
	Rules	Expert evaluations of rules and their functioning	Rate of domestic investment
	Clarity	Number of rules and formalities	FDI inflows, quantity and quality
	Predictability		Investment in R&D
	Enforcement		
	Conflict resolution		
Business operation	Taxation	Cost of compliance	Business productivity
	Trade-related regulation	Higher costs of operation	Export growth
	Labour hiring/firing	Costs of conflicts and conflict resolution	Size of shadow economy
	Contracting	Search costs and delays	Growth of industries with specific assets or
	Logistics	Insufficient managerial control	long-term contracting
	Rules	"Nuisance" value	Rate of innovation and R&D
	Clarity	Problems in making contracts	Rate of business expansion
	Predictability	Problems in delivery	Rate of investment in new equipment
	Enforcement		Subcontracting
	Conflict resolution		

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**Table VI.7. Illustrative list of transaction costs related to the legal and regulatory environment (concluded)**

Area of operation	Transaction	Enterprise exposure	Effects on
Business exit	Bankruptcy	Rate of change of rules	Rate of exit (and entry)
	Liquidation	Changes in costs and number of rules	Prevalence of credit
	Severance/layoffs	Availability of rules and documents to firms	Distribution of profitability of corporations
	Rules	Rates of compliance and/or evasion	
	Clarity	Use of alternatives to formal institutions	
	Predictability		
	Enforcement		
	Conflict resolution		

*Source:* World Bank, Business Environment Division, Private Sector Development Department.

over 150 licences, permits and approvals in order to invest and operate — with over half of them needing to be renewed yearly. Best-practice administrative systems directly related to foreign investment have certain common characteristics: they are clear, simple, fast and efficient. A “red tape” analysis can be of help here (box VI.5).

#### **Box VI. 5. Administrative barriers to FDI: the red tape analysis**

To assist governments in their efforts to remove or streamline administrative barriers, an increasing number of countries undertake a “red tape” analysis, as offered by the Foreign Investment Advisory Service (FIAS), a joint service of the International Finance Corporation and the World Bank.<sup>a</sup> The red tape analysis consists of identifying the major obstacles and their subsequent impact on the investment climate. The approach is voluntarily pragmatic and consists of documenting, in precise detail, the administrative requirements for establishing a business enterprise and making it operational. This includes all licences, approvals, registrations, permits, or other formalities required to be in full compliance with existing laws and regulations. In addition, data on the delays associated with each step, the costs and the forms of information required are gathered during the process. The views of government officials are compared with the experience of private investors, with a greater attention to foreigners when necessary. Last but not least, an international comparison is generally provided to point out the need for continued reforms as well as international best practices or benchmarks.

The administrative obstacles faced by investors are generally classified into four categories, roughly corresponding to the chronological process of making an investment:

- general approvals and licences required of all firms;
- specialized or sectoral approvals required of firms in particular industries;
- securing and developing land for business facilities;
- licences or other requirements needed to make the firms operational.

In the first category, the greatest delays are due to excessive controls (such as screening process for approval of FDI projects or detailed feasibility studies), duplicative procedures, and the lack of transparency or information. A simple but important source of delay can be that private investors have to comply with the same requirements to different government agencies (registrar of commerce, tax authorities, statistical agencies, etc.) because they do not share information. Other major obstacles have been found in countries that require special approvals and award fiscal incentives for qualifying investment. The lack of coordination between local and central governments can also be a major source of delays for registration and tax procedures.

An additional layer of scrutiny and evaluation of projects by governments is applied for certain industries, typically tourism, mining, fisheries, infrastructure, and agriculture. Here, concession procedures can be particularly non-transparent, especially in infrastructure and tourism. In some countries, governments prescribe management structures and qualifications requirements that often limit FDI, often contradicting stated policy in general laws.

It is in buying or leasing land, construction facilities and securing utilities services that the greatest delays are encountered. Poor policy formulation, cumbersome and non-transparent procedures for /...



**(Box VI. 5, concluded)**

making land available for commercial use, and strict approval procedures can be among the causes of significant delays. In one country, for example, three separate documents are required to validate completion of construction, all requiring multiple inspections and signatures. In another country, officials routinely charged tens of thousands of dollars for securing leases of land. Getting connections to utilities services can also take months due to antiquated services and the limited capacity of national services. Bribes may be involved.

Once operational, companies face a different series of interactions with government agencies. These are typically regulations and controls on foreign trade, foreign exchange, labour and social security. Not only are procedures complicated and duplicative but there is also much to be done in adapting former control-oriented institutions to a role of selective monitoring and enforcement. In many countries, controls and import licences are still required even though the government has in principle abandoned them in its general trade reforms.

Taken individually, administrative procedures may appear to be not an important obstacle to investment. When added together, however, the whole maze of procedures can mean delays of up to two years to get an investment approved and operational. In one country, for example, a private investor has to prepare 23 different files and go to 31 government agencies (of which at least six require multiple formalities). Government efforts to reduce or remove these obstacles can be a daunting task, as they cover a broad range of policy, administrative and institutional issues and problems. However, once investment procedures are mapped out, it is easier to identify areas of duplication, excessively complex and intrusive requirements, or ineffectual implementation. Recommendations typically focus on areas in which administrative procedures can be simply eliminated, streamlined or otherwise improved to ensure they are not constraints. Where regulatory controls or informal requirements are maintained, the emphasis of recommendations is often on improving implementation. This often means changing government agency perspectives from one of control and distrust to service provision and facilitation, along with ensuring compliance.

**Lessons from experience**

Documenting administrative barriers can help a government address administrative constraints in a comprehensive manner by providing a global picture and, thereby, increasing awareness of the reality that faces private investors. Still, implementing the appropriate reforms is generally a long and difficult process. The FIAS experience in a range of developing countries has helped to identify the three following lessons for success:

*Open dialogue and transparency.* The study of administrative barriers is a tool to encourage governments to reconsider current practices and shift to a more service-oriented mentality. In this process, dissemination of the main findings is essential in order to generate interest and exchange of opinions among the political and business communities. Organizing workshops has proved to be useful to discuss the findings, and hopefully to reach consensus on how to proceed with reforms. In particular, they allow hearing the feedback from concerned agencies and increasing their responsibility for making reforms.

*Political commitment and leadership.* An impartial analysis can serve as a catalyst, drawing on experience elsewhere to provide alternative approaches to meeting legitimate concerns. However, national leaders must take the initiative in the reform process, pressuring often-reluctant agencies to alter their ways of doing business. Strong leadership is needed, and “champions” have to be designated to oversee and assist the reform effort across the range of agencies. In practice, investment promotion agencies can be very effective in supporting this process, serving as advocates for potential investors the country is otherwise losing.

*Priorities.* Governments cannot address all problems simultaneously. Not only do they not have the institutional and administrative capacity to carry forward all the reforms, but they also will have to convince multiple operators and mid-level bureaucrats of their benefits. Efforts need to focus on the agencies that are willing to experiment with reform, and engage in fundamental changes. Their initial success can serve as models for some of the more recalcitrant agencies. Supporting this effort with additional inputs of technical expertise and in some cases financial resources can be very productive.

*Source:* Emery and Spence, forthcoming.

<sup>a</sup> FIAS has provided assistance in Bolivia, Ghana, Jordan, Latvia, Lesotho, Madagascar, Mali, Mauritania, Mozambique, Namibia, Senegal, Swaziland and Uganda.

### 3. Promotion

The accelerated process of FDI liberalization has provided TNCs with an ever-increasing choice of locations. As a result, they have become more selective and demanding as regards the investment climate. Competing intensely with one another for FDI and finding that liberal policies are no longer enough, host countries have increasingly adopted proactive measures to attract FDI.

To attract FDI flows, a number of countries may need, first of all, to improve their image as a favourable location for FDI projects, or, quite simply, to put themselves on the “map” of investors. Investment promotion through image building is particularly important for countries that are small, remote, have strongly discouraged FDI in the past, or have suffered from adverse publicity. Countries in Africa, for example, are suffering from an undifferentiated image, as a result of which many of them do not make it on the “long list” of potential investment sites, let alone the “short list” (box VI.6).

Image changing, to be effective, needs to be accompanied by the dissemination of information. This may consist of general information about the country and its investment opportunities (e.g. economic data, industry profiles, lists and descriptions of potential joint venture partners, privatization programmes, suppliers). It may also cover legal information about the laws and regulations governing FDI and private companies in the country, investment incentives and administrative structures and procedures relevant to foreign investors. Information about investment opportunities and the regulatory framework is particularly important as, without such information, a country may simply not be considered in investment location decisions for a range of projects. Such information is typically sought by TNCs from international consultancy firms, in the form of such firms’ investor guides. But, typically, they focus on more promising countries. Thus, for instance, a survey of such guides prepared by the biggest international consultancy firms showed that, out of 261 guides, only three covered LDCs (UNCTAD, 1999e). In other words, LDCs need to make an extra effort to inform investors about investment opportunities and the regulatory framework governing them.<sup>18</sup> International organizations can help in this respect (box II.3).

#### Box VI.6. Changing the image of Africa

More than any other developing region, Africa has an image problem that adds to other difficulties the continent has to attract FDI. In order to help bring about a more differentiated picture of Africa, UNCTAD joined hands with the ICC, MIGA and UNDP to disseminate information about Africa’s investment potential. One result of this collaborative effort has been the production of *Focus on the New Africa: Fact Sheet on Foreign Direct Investment* (www.unctad.org). It lists interesting facts for foreign direct investors. These facts which represent a summary of the findings in the UNCTAD booklet *Foreign Direct Investment in Africa: Performance and Potential* (UNCTAD, 1999i) include the high profitability of FDI in Africa, the increasing number of home countries from which FDI flows into Africa, and the considerable share of FDI in Africa that goes into non-traditional industries, in particular manufacturing and services. The main message of the Fact Sheet is: “Do not miss out on Africa! Look at it closely, country by country, industry by industry, and opportunity by opportunity. Your competitor may well be there already.” Thus, the Fact Sheet suggests to foreign companies not to overlook Africa’s investment potential and to differentiate among the more than 50 countries of the continent. The fact sheet is being disseminated worldwide to reach the principal target audience — foreign direct investors.

Source: UNCTAD.

In many instances countries feel that, apart from providing information to foreign investors, they need to give positive inducements in the form of financial, fiscal or other incentives, especially to compensate for inadequate economic conditions or to shift the balance of location attractiveness in individual projects. Incentives have increased rapidly since the mid-1980s (UNCTAD, 1996d). Countries, provinces and local authorities offer them. However, there is evidence that, overall, incentives are not among the various factors that determine inward FDI. Once, however, a decision has been made to undertake FDI in a given region or a given country, incentives may have an impact on influencing the precise choice of location within the region or country. If one country in a region or one locality in a country offers incentives and others do not, then – other things being equal – incentives can influence locational decisions,

tilting the balance in favour of the incentive provider. Apart from the costs and benefits of incentives as such, there is also the question of what types of incentives may be more efficient. Financial incentives are up-front incentives that are given without a guarantee that the investment project will be fully realized. Fiscal incentives do not require an immediate cash expense; they come only into play once a project is successful. Some other incentives – e.g. infrastructure – may be of benefit to domestic investors as well. Countries seeking to attract FDI need therefore to be careful in weighing the costs and benefits of offering incentives, and the type of incentives they offer.

The promotion effort does not end once some, or even a significant number, of foreign investors have established themselves. At this point, after investment services come into play. An important aspect of effective after-investment services is to reduce the “hassle costs of doing business” for established investors so as to attract even more potential investors. These services can involve, for example, assisting foreign investors in obtaining all permits required to operate a project beyond the initial approval of an investment; and acting as the contact point for foreign investors who have problems – problems with joint venture partners, suppliers and purchasers of their products, the tax authorities, customs authorities, visas and work permits for expatriate personnel, etc. As part of these services, foreign investment promotion agencies can also explore with existing investors ways in which their existing investments can be leveraged into further investment. The additional investment may be by the existing investor itself (sequential investment), through increased capacity or increased domestic value added at its current output capacity. Foreign investors can also provide information on the potential for attracting upstream suppliers to invest in the host country, or downstream purchasers of their products (associated investment). Some of these activities can be facilitated by developing an investor tracking system. Such a system not only tracks the foreign investor through the approval process, but follows performance after an investment has been implemented. An investor tracking system has several advantages: it can be used to provide information to future investors concerning the current investors in their industries; and for follow-up investors to encourage sequential investment, linkages to domestic suppliers, and further investment by foreign suppliers.

#### 4. Targeting

The more successful investment-attraction programmes target specific types of investors. Targeting can aim at increasing FDI inflows in general and, specifically, at bringing investors with certain types of technology or other characteristics in which a host country is interested. Targeting helps in several ways: to take due account of overall national objectives for FDI (e.g. priorities for specific sectors, industries and /or sub-regions); to identify potential investors who are most likely to be attracted by the locational advantages the country has to offer; to fine-tune promotion efforts to the interest of specific investor groups; and to make the use of limited investment promotion budgets more efficient.

There are about 60,000 TNCs: where does one start? To begin with, one should look at companies and home countries that are already investing in the host country: are they reinvesting their earnings? Could they invest more? Could they upgrade into more value-added activities? Next, one could look at the types of FDI entering other host countries with similar locational advantages: why are they investing there and not here? Should there be a focus on regional investors?<sup>19</sup> Answers to such questions provide feedback on the effectiveness of investment policies and procedures, and where their functioning can be improved to reach best practices.

Most aggressive targeting strategies focus on “footloose” industries and “sunset” industries. Footloose industries are industries that are not location-dependent (either resources or markets) and are usually export-oriented. Firms in these industries locate strategically, according to where they can secure a competitive advantage *vis-à-vis* other firms in specific regional or global markets. For example, textile manufacturers may locate facilities in countries with special trade privileges to otherwise closed third-country markets. Thus, some countries have successful investment attraction strategies by positioning themselves as gateways to specific regional markets. Sunset industries are industries that face slowing sales in mature markets and

growing sales in world markets. While firms in these industries do not necessarily relocate plants, they do expand operations globally through FDI, which is often market-seeking. Such firms, with long-term corporate strategies to expand abroad, are therefore suitable for investment targeting, particularly by large host countries.

Developing countries with small markets are likely to be more successful in targeting intra-industry activities, particularly component manufacturing. The spread of integrated international production has also created functional niches for developing countries in fields such as accounting, data processing and the programming of software applications. Regional groupings, such as ASEAN, have collectively targeted complementary intra-industry activities. For example, in the automobile industry, engine manufacturing has been located in one country and transmission manufacturing in another. Such complementation schemes have been implemented on a brand-to-brand basis, targeted at specific companies at a subregional level.

Yet another approach is to identify gaps in domestic industries, and to target foreign firms that could complement domestic firms through backward and forward linkages, thereby strengthening national technological capabilities and production capacities in core industrial clusters.

In conclusion, targeting involves a number of decisions revolving around industries, firms, activities, and home countries. It requires extensive research to identify firms that are likely candidates to invest in a country, and ways in which those investments can be made to meet investor needs and development objectives. A recent example of targeting a single investor in an export-oriented high-technology industry is Costa Rica's success in attracting a \$300 million investment by Intel Corporation (box VI.7). While having a competitive investment climate is of course important, the importance of the personal skills in marketing a country and understanding the needs of foreign investors should not be underestimated. This speaks for the need for investment promotion agencies in developing countries to ensure that their staff possess appropriate skills and training.

#### **Box VI.7. Attracting high technology investment: Intel's Costa Rica plant**

In November of 1996, Intel Corporation announced plans to construct a \$300 million assembly and test plant in Costa Rica. The announcement came as a triumph to Costa Rican authorities and to its private-sector based investment promotion agency, CINDE, both of whom had worked for months to attract the United States-based technology firm. It also aroused considerable interest in the broader foreign investment community. With annual revenues of over \$20 billion, Intel is one of the world's largest corporations and a major force in the global electronics industry. Costa Rica, meanwhile, is a small country. With a population of 3.5 million and only limited development in electronics and other high technology industries, it was in many ways an unlikely choice for Intel.

Why, and how, did Intel choose Costa Rica? What did Costa Rica do to beat out several larger and, by some measures, more qualified competitors? And finally, what lessons, if any, can be drawn from this experience to guide other developing countries seeking to attract world class foreign investors?

##### **Intel's site selection process**

The decision that ultimately brought Intel to Costa Rica was more of an ongoing process than a discrete event. Because Intel expands capacity so frequently, it is essentially always in the midst of reviewing possible sites and evaluating investment alternatives. Early in 1996, Intel executives decided to research sites for a new assembly and test plant. Regional diversification was a threshold factor, reflecting management's decision to avoid concentrating more than 30 per cent of its revenues from any one product category at any facility or in any single geographic region. This consideration brought the Central and Latin American region into play.

Assembly and test plants are one of the two types of facilities that constitute Intel's manufacturing base. The other, a fabrication plant, is where the heart of the microprocessor is produced. Compared

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**(Box VI.7, continued)**

to fabrication plants, assembly and test plants are relatively inexpensive and labour-intensive. Assembly and test plants cost around \$100 to \$300 million to construct and usually employ between 1,500 and 4,000 people. Wages are the most important variable cost for these facilities, typically 25-30 per cent of total operating costs. To run the new assembly and test plant as cost-effectively as possible, Intel knew it had to find a low-cost, yet highly trainable work force, where qualified engineers were available, and where employee turnover could likely be kept to a minimum.

Site selection for most TNCs begins with a “long list” of candidate countries that meet a company’s baseline criteria. Although never formally ranked or weighted, Intel’s baseline criteria included the following:

- Stable economic and political conditions. To be a contender, a country had to have positive economic conditions, an established and reliable political system and a reasonably transparent operating and legal environment.
- Human resources. A country needed to have an adequate supply of technical and professional operators and, importantly, a non-union work environment.
- Reasonable cost structure. Financial considerations included the cost of labour and overheads, taxation rates, tariffs, customs fees, and the ease of capital repatriation. Because all the plant’s output was for exports, tariffs and customs fees were particularly important.
- A “pro-business” environment. Loosely defined, countries had to have governments interested in assisting economic development and FDI. Some signs of economic liberalization also had to be apparent.
- Logistics and manufacturing lead time. Operating under continuous time pressures, Intel had to ensure that products coming from its plants could move efficiently from the plant to an international departure point, and then expeditiously through customs and any other export procedures.
- Fast-track permitting. Before investing in any country, Intel had to be assured of receiving all necessary permits within 4-6 months. Any delays could compromise the project’s very tight schedule, itself necessitated by short product life cycles in which profit opportunities were heavily concentrated in the cycle’s initial stages.

**Decision to invest**

Accounts vary as to how Costa Rica actually appeared on Intel’s radar. By one version, Costa Rica’s inclusion on the candidate list was almost an accident – a senior Intel executive had travelled to Costa Rica on vacation and simply liked what he saw. Nonetheless, scepticism over Costa Rica’s appropriateness was a persisting theme in the early deliberations of the selection committee. As one committee member saw it, Intel was so big and Costa Rica so small that the combination would be like trying to fit a whale into a bathtub.

The view from within Costa Rica was different. Since the early 1980s, policies to attract non-traditional export-oriented FDI had been an important part of Costa Rica’s overall development strategy. CINDE, the country’s private-sector based investment promotion agency, was the strategy’s main executing agent. The first industry chosen for targeting and promotion was the apparel industry. But by the late 1980s, this focus was shifting to the electronics industry – a reflection, on the one hand, of the inherent attractiveness of this rapidly growing industry and an acknowledgment, on the other, that Costa Rica would be increasingly hard-pressed to compete for the location of an industry driven mainly by very low-cost labour.

A core part of Costa Rica’s strategy turned on showing Intel that the country’s size – far from being a disadvantage – was in fact a net advantage by ensuring that Intel’s team would have easy and timely access to all the country’s key decision-makers. Employing a “small is beautiful” strategy expounded by President Figueres, promotion officials emphasized the efficiencies and flexibilities a small country could provide. A key part of this effort was to take advantage of the close-knit

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**(Box VI.7, concluded)**

government, business and media communities to create an “all hands on deck” mentality towards the project. To be sure, there were many issues of substance on the table, from the cost of electricity to the frequency of cargo flights and the adequacy of national technical training, to name a few. The team approach adopted by Costa Rica, often involving the President himself, ensured that these matters could be dealt with quickly, and in a constructive rather than an adversarial fashion.

Throughout these negotiations, Intel lived up to its reputation as a hard bargainer, but the company did not explicitly seek nor, importantly, did Costa Rica offer, special arrangements that would not be available to other investors. The transparency and even-handedness of Costa Rica’s bargaining posture impressed the Intel team and was evidently a factor in the choice of Costa Rica over some competing sites.

**Lessons**

Like any investment of this size and scope, Intel’s selection of Costa Rica was a highly specific, idiosyncratic event. Intel is anything but a run-of-the-mill investor, and its site selection process and investment demands are perhaps unique, even among sophisticated TNCs. Costa Rica, too, is a special country, very stable, uncommonly small. Still, there may be some lessons in this for other developing countries hoping to lure large high-technology firms or indeed any sizeable foreign investors:

- The promotion agency, CINDE, started with a strategy grounded in a clear understanding of the country’s strengths and their appeal to a discerning transnational investor. These were, in effect, the basic characteristics of Costa Rica’s political and economic system, i.e. democracy, stability, an educated workforce, suitable infrastructure, a facilitating attitude towards private enterprise, and a transparent legal system.
- The promotion strategy identified not only a desirable industry but specific companies within this industry, their individual strategies and operating styles.
- The country formed a cohesive motivated team, all of whose members told the same story, and which, collectively, had the power to get the job done.

In sum, the “core” lessons to be derived from Costa Rica’s experience – know your strengths, know your client, and make sure your team is indeed a team and has the power it needs – constitute sound advice for promotion generally, whatever a country’s level of development or specific targeting goals may be.

*Source:* Spar, 1998.



To benefit from FDI, a country has first to receive it. To obtain FDI, it must be an attractive location for foreign investors. An FDI-enabling framework is a precondition. The administrative system for FDI also needs to be effective in dealing with foreign investors and their needs. Economic conditions conducive to investment are the key determinants. One danger for a country in which other components of the FDI environment are not attractive is that the government may try to compensate for these deficiencies by implementing an overly-generous incentives system. General investment promotion is increasingly being complemented by after-investment services and, in particular, investor targeting.

## Notes

- <sup>1</sup> For a review of the literature, see Barro and Sala-i-Martin, 1995.
- <sup>2</sup> It should be kept in mind that most of the world's 60,000 TNCs are SMEs which do not necessarily have a financial advantage over their domestic counterparts. Access to finance capital by domestic firms can also differ from country to country. For a review of studies on the financial asset advantages of TNCs see Dunning (1993, pp. 150-151 and 162).
- <sup>3</sup> United States data calculated from United States Department of Commerce, *US Direct Investment Abroad. Operations of US Parent Companies and Their Foreign Affiliates*, various issues.
- <sup>4</sup> The low ratio in Canada suggests further that the dividing line in this respect may not necessarily lie between developing and developed countries, but may be determined by other factors.
- <sup>5</sup> Then, for consistency reasons, a corresponding balance-of-payments item on the debit side, repatriated earnings, should not be included, either.
- <sup>6</sup> The debt creating component of FDI inflows, intra-company loans, accounted for 18 per cent of developed and developing countries' inflows of FDI in 1990-1998 (figure I.1). As noted elsewhere, FDI inflows are not the only source of financing of foreign affiliates. The affiliates can finance their activities with funds raised in international markets which are debt-creating not only for the firm but also for the host countries. This raises the question whether affiliates' debt and local companies' debt have similar implications for the host country if it runs into a debt problem.
- <sup>7</sup> It has to be kept in mind that there is no direct link between repatriated earnings and FDI inflows in a given year. Repatriated earnings are part of profits (that are not reinvested in a host country) on the entire FDI capital invested in the country in the past.
- <sup>8</sup> After a flurry of studies at that time, little research was undertaken on this issue because, in the end, there was a recognition that the balance-of-payments effect of FDI depended largely on the assumptions that were made about the counter-factual situation and its indirect effects.
- <sup>9</sup> The transfer pricing problem is not restricted to dealings between fully-owned affiliates and parent companies (or affiliates in other countries). It may also arise in joint ventures, where it may be employed by a savvy foreign partner to shift profits from the local partner to the TNC.
- <sup>10</sup> The reason is that FDI is a form of financing expenditures by foreign affiliates and is a balance-of-payments measure, while investment is a national accounts measure. FDI can be used to finance investment expenditure in the national accounts sense but it does not have to be fully used for this purpose, as explained below.
- <sup>11</sup> FDI data are widely used because they are available for most countries in distinction from total investment expenditures of foreign affiliates (which are available only for the United States). Given that the United States accounted for one quarter of world outflows of FDI in 1991-1997, United States data can shed some light on the relationship between FDI flows and investment expenditures.
- <sup>12</sup> The ratio was unusually high in Africa: while capital expenditures were quite steady, FDI inflows fluctuated and there were several years during the period considered in which Africa as a whole experienced divestment by TNCs (that is, negative FDI inflows). The ratio for Latin America and the Caribbean was close to one, but after the exclusion of the Caribbean countries and Panama, it increased to 1.3. The reason is that a number of countries in the Caribbean region are financial centres with high FDI inflows and minimal capital expenditures of affiliates. Investment in these affiliates is low because they are shells acting as conduits for investment elsewhere.
- <sup>13</sup> The share for all countries was 58 per cent; for Mexico 58 per cent; for Brazil 72 per cent; for Germany 69 per cent; for France 64 per cent (United States Department of Commerce, 1998c).
- <sup>14</sup> There is evidence that it would not be justified to classify loans by definition as short-term financing. When a foreign affiliate receives funds from its parent company their distribution between debt and equity may be guided by tax and regulatory factors. Where, for example, the rate of corporate tax in a host country exceeds the rate in a home country, there may be an incentive to denominate the maximum proportion of the affiliate's liabilities as to the parent as debt "in order to siphon revenues as tax-deductible interest past the foreign tax collector" (Caves, 1996, pp. 139-140).
- <sup>15</sup> To prevent this from happening, Chile, a small country with liberal policies towards FDI, has retained the right to limit the access of foreign companies to the domestic banking system, if national conditions so warrant. The provision has never been invoked, but its very existence is a reminder that, for a small country, borrowing on domestic markets by foreign affiliates may, under certain circumstances, be problematic.
- <sup>16</sup> During the 1960s, many developing countries regarded the financial resources possessed by TNCs as the primary reason for attracting them. Indeed, their policies were designed to attract capital inflows, while trying to limit the perceived negative effects of FDI on the economy via, e.g., restrictions on industries

open to FDI or on the maximum percentage of equity permitted by TNCs. Today, considerably more attention is being paid to the non-financial components of the FDI package.

<sup>17</sup> For a list of these countries, see UNCTAD, 1998a, table III.1.

<sup>18</sup> Over the past decade, most developing countries have developed Internet web sites to provide foreign firms with information on their countries, their laws relating to FDI, and specific investment opportunities. Creating a web site provides a relatively inexpensive means to build a country's image as an investment site and to disseminate information.

<sup>19</sup> In the case of developing countries, particularly in Asia and Latin America where intra-regional flows account for a significant and growing share of FDI, this is of particular relevance. South African investors are also playing an increasing role in sub-Saharan Africa.

## Annex to chapter VI

### Determining crowding in and crowding out effects

Investment is determined by many variables. Among them, FDI is of small importance for most countries (table VI.5). Therefore, the direct and indirect effects of FDI on investment can be determined only after one has controlled for the effects of other variables.

An analysis of the effects of FDI on investment was undertaken, beginning with a simple equation where investment in a country is the sum of domestic investment (IDOM) and FDI:

$$I = IDOM + FDI \quad (1)$$

From the point of view of the recipient country, FDI can be considered to be an exogenous variable (because it depends on conditions in the world economy, TNC strategies, etc.) On the other hand, domestic investment needs to be specifically modelled. A large literature on investment in developing countries (Rama, 1993) offers a wide choice of explanatory variables. After experimenting with a variable that proxies the capacity utilization rates<sup>1</sup>, the growth rate was chosen as a variable for this test. Since the results regarding crowding in (CI) or crowding out (CO) were quite robust to different model specifications, only those stemming from the simplest model are reported. The model, then, is basically an accelerator model of investment:

$$IDOM = \alpha + \beta_1 G \quad (2)$$

where G is the growth rate.

By replacing (2) in (1), a model for total investment (domestic investment plus FDI) was obtained:

$$I = \alpha + \beta_1 G + FDI \quad (3)$$

The model of equation (3) assumes that FDI has no macroeconomic externalities on domestic investment and that, therefore, one dollar of FDI becomes one dollar of investment. Since the purpose of the exercise is to verify whether these externalities exist and, if they do, whether they are positive or negative, a more general formulation is used:

$$I = \alpha + \beta_1 G + \beta_2 FDI \quad (3a)$$

An empirical finding that  $\beta_2 > 1$  is evidence for CI while  $\beta_2 < 1$  is evidence for CO.

A version of this model was estimated for a panel of data for 39 countries (12 in Africa, 12 in Asia, 12 in Latin America and the Caribbean and three in developing Europe) over the period 1970-1996. The investment equations for each of these regions were the following:

$$I_{i,t} = \alpha_i + \beta_1 F_{i,t} + \beta_2 F_{i,t-1} + \beta_3 F_{i,t-2} + \beta_4 I_{i,t-1} + \beta_5 I_{i,t-2} + \beta_6 G_{i,t-1} + \beta_7 G_{i,t-2} + \varepsilon_{i,t} \quad (4)$$

where I = investment to GDP ratio; F = FDI to GDP ratio; G = growth of GDP; the  $\alpha$ 's are fixed country effects; and  $\varepsilon$  is a serially uncorrelated random error.

The equation used to determine the specific effect of FDI on investment in each country is an adaptation of (4) that considers the possibility that, within each region, the  $\beta$ 's associated with FDI can vary from country to country:

$$I_{i,t} = \alpha_i + \beta_{1,i} F_{i,t} + \beta_{2,i} F_{i,t-1} + \beta_{3,i} F_{i,t-2} + \beta_4 I_{i,t-1} + \beta_5 I_{i,t-2} + \beta_6 G_{i,t-1} + \beta_7 G_{i,t-2} + \varepsilon_{i,t} \quad (5)$$

The model allows for lags in the execution of investment projects, both domestic and foreign. The data are from IMF, *International Financial Statistics* and World Bank, *World*

*Development Indicators.* All data series are in constant 1987 prices. For all the estimations of the investment function, the method employed was that of Pooled Estimations of Seemingly Unrelated Regressions (SUR).

Note that long-term CI and CO will be tested. For this the relevant coefficient is:

$$\beta_{LT} = \frac{\sum_{j=1}^3 \beta_j}{1 - \sum_{j=4}^5 \beta_j} \quad (6)$$

The criterion used to determine CO/CI is the value and significance of  $\beta_{LT}$ . If, with a Wald test,  $\beta_{LT}$  is determined to be significantly greater than one CI takes place. Evidence for CO is the coefficient  $\beta_{LT}$  significantly smaller than one. On the other hand, if  $\beta_{LT}$  turns out to be equal or close to one, an increase in FDI raises total investment by the same amount and has a neutral (N) effect on domestic investment.

The regional results are shown in table VI.A.1. For the period 1970-1996 as a whole, there is CO effect in Latin America and the Caribbean and CI effect in Asia. In Africa, FDI increased investment one-for-one. Only in Asia there is evidence of strong crowding in. This is the region where aggregate investment, by both TNCs and domestic firms, has been strongest.

If the sample period is subdivided into two shorter periods representative of the last two decades (1976-1985 and 1986-1996), Africa shows strong CI effect in the first period and a weak CI effect (in fact, close to N effect) in the second one. In Latin America the CO effect has weakened between the two periods, as the coefficient has changed from a negative to a positive one. South, East and South-East Asia shows strong CI effects in both subperiods while the effects in West Asia have changed from CI effects to CO effects (for the entire period CI effect prevailed).

As regards the classification of individual countries into the three categories for the period as a whole<sup>2</sup>, African countries are found in all three-category groups. Latin American and Caribbean countries were either in the group with N effects or CO effects, while in Asia there was an N effect and CI effect (table VI.A.2).

This analysis is crucially dependent on FDI being exogenous to the variables determining investment (here, the growth rate with one- and two-year lags). In order to test for the exogeneity of FDI, panel regressions were run for the five regions with FDI as the dependent variable and the growth rate with one- and two-year lags as the explanatory variables. The two equations that were estimated were as follows:

$$F_{i,t} = \delta_i + \gamma_1 G_{i,t-1} + \gamma_2 G_{i,t-2} + u_{i,t} \quad (7)$$

$$F_{i,t} = \delta_i + \gamma_1' G_{i,t-1} + \gamma_2' G_{i,t-2} + \gamma_3' F_{i,t-1} + \gamma_4' F_{i,t-2} + u_{i,t}' \quad (8)$$

These two models were estimated with data for 1970-1996 using SUR with fixed effects. The results leave little doubt that the variables explaining domestic investment (past income growth) do not explain FDI (table VI.A.3). Therefore, it is justified to include FDI as an exogenous variable in the equations for total investment.

The estimated coefficients of  $G_{i,t-1}$  and  $G_{i,t-2}$  are not significant, with one exception. In South, East and South-East Asia, the estimate of  $g_1$  in equation (7) is significantly different from zero. In equation (8), when the lagged values of FDI are introduced into the model, the coefficient becomes insignificant. Since the preferred model is equation (8), problems of endogeneity



between the variable explaining domestic investment (lagged growth) and FDI can be discarded for all three regions. Adjusted R squares of most estimated equations are low. In the two cases where adjusted R squares are high (estimates of equation (8) for South East and South-East Asia and Latin America and the Caribbean), their level can be attributed solely to the effect of lagged FDI.

### Notes

- <sup>1</sup> The variable used was the difference between potential GDP (obtained using a Hodrik-Prescott filter of GDP) and actual GDP. The results of using this variable in the model instead of the growth rate and in conjunction with the growth rate were quite satisfactory from an econometric point of view.
- <sup>2</sup> The analysis for individual countries could not be undertaken for decade-long subperiods, since the data are too scant to allow for coefficient estimation.

**Table VI.A.1. Developing country regions: effects of FDI on investment**

<i>Period and region</i>	<i>Number of Countries</i>	<i>Long-term coefficient linking FDI and I</i>	<i>Long-term effect</i>
<b>1970-1996</b>			
Africa	12	0.89	N <sup>a</sup>
South, East and South-East Asia	8	2.71	CI
West Asia	4	1.74	N <sup>a</sup>
Europe	3	2.11	N <sup>a</sup>
Latin America and the Caribbean	12	-0.14	CO
<b>1976-1985</b>			
Africa	12	2.19	CI
South, East and South-East Asia	8	5.56	CI
West Asia	4	1.31	N <sup>a</sup>
Europe	3	2.48	CI
Latin America and the Caribbean	12	-1.22	CO
<b>1986-1996</b>			
Africa	12	1.30	CI
South, East and South-East Asia	8	2.91	CI
West Asia	4	-1.81	CO
Europe	3	-0.96	CO
Latin America and the Caribbean	12	0.04	CO

<sup>a</sup> Parameter not significantly different from one (Wald test).

**Table VI.A.2. Effects of FDI on investment in individual countries, 1970-1996**

<i>Crowding in</i>	<i>Crowding out</i>	<i>Neutral effect</i>
<b>Africa</b> Côte d'Ivoire Ghana Senegal	<b>Africa</b> Central African Republic Nigeria Sierra Leone Zimbabwe	<b>Africa</b> Gabon Kenya Morocco Niger Tunisia
<b>South, East and South-East Asia</b> Korea, Republic of Pakistan Thailand		<b>South, East and South-East Asia</b> China Indonesia Malaysia Philippines Sri Lanka
<b>West Asia</b> Oman Saudi Arabia		<b>West Asia</b> Egypt Jordan
<b>Europe</b> Cyprus Turkey	<b>Europe</b> Poland	
	<b>Latin America and the Caribbean</b> Bolivia Chile Dominican Republic Guatemala Jamaica	<b>Latin America</b> Argentina Brazil Colombia Costa Rica Ecuador Mexico Peru

**Table VI.A.3. Panel estimations with FDI as a dependent variable  
and growth lagged once and twice as explanatory variables, 1970-1996**

(Probabilities associated with the estimated coefficients and adjusted R<sup>2</sup>)

<i>Region</i>	<i>P-values of coefficients in equation (7)</i>	<i>P-values of coefficients in equation (8)</i>
<b>Africa</b>		
■ G(-1)	0.0504	0.4249
■ G(-2)	0.1336	0.1568
Adjusted R <sup>2</sup>	0.097	0.041
<b>Asia, South, East and South-East</b>		
■ G(-1)	0.0198*	0.4984
■ G(-2)	0.9959	0.6484
Adjusted R <sup>2</sup>	0.082	0.880
<b>West Asia</b>		
■ G(-1)	0.9227	0.2900
Adjusted R <sup>2</sup>	0.013	-0.196
<b>Latin America</b>		
■ G(-1)	0.7184	0.4984
■ G(-2)	0.0620	0.6484
Adjusted R <sup>2</sup>	0.082	0.560
<b>Europe</b>		
■ G(-1)	0.6407	0.0460*
Adjusted R <sup>2</sup>	0.0608	0.800

\* Significantly different from zero at the five per cent level.



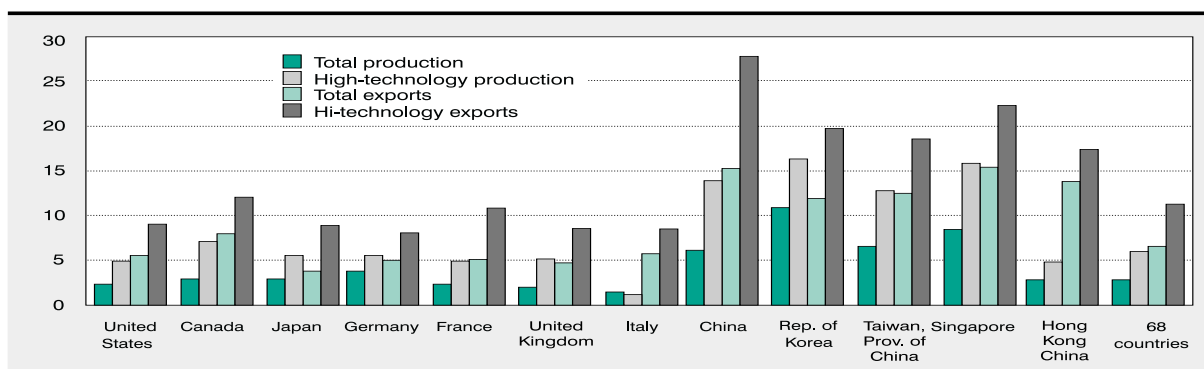
## CHAPTER VII

### ENHANCING TECHNOLOGICAL CAPABILITIES

#### A. Technology, learning and development

Technology has always been important to economic wellbeing; the current technological context makes it critical to development. This context, which some call a new “technological paradigm” (Freeman and Perez, 1988), is rapidly transforming all productive systems and facilitating globalization (chapter V). The concept of globalization may not be new – but its content is now very different (Baldwin and Martin, 1999): the pace of technological change, and within it the role of information-based technologies, is unprecedented.

**Figure VII.1. Growth rates of total and high-technology production and exports, 1980-1995**  
(Percentage)



Source: UNCTAD, based on NSB, 1998, appendix table 6.5.

The impact of technological progress is not uniform. *Product* innovation may be used to encourage consumption; and, with rising incomes, consumer demand becomes more differentiated – which further stimulates product innovation. *Process* innovation can dramatically cut the costs of production. Some new technologies are opening entirely new areas of activity. The application of information technology is a good example. In most developed and newly industrializing countries, activities with greater innovation potential (and hence the output of high-technology industries, including in the services sector) have grown faster than that of others (figure VII.1). Exports have risen faster than total production – a manifestation of globalization



– and, within exports, high-technology products have grown more rapidly. Sustained economic growth hence increasingly calls not only for the application of new technologies, but also for a shift in the productive structure from low- to high-technology activities.

An analysis of FDI and technology in developing countries has to take account of this changing context. The developing world is facing not just rapid technical change, but also shrinking economic space and dramatically intensifying competition. The parameters of competition are changing with the nature of the innovation process and the organization of production (Lall, 1998; Ernst, Ganiatsos and Mytelka, 1998a). In some (largely traditional) activities, it may be possible to remain competitive with unskilled cheap labour making homogeneous products. In most modern activities, however, competitiveness entails new, more rapid product innovation, flexible response, greater networking and closely integrated production systems across firms and regions (what Best, 1990, calls the “new competition”). The knowledge intensity of shop-floor, process and product engineering has increased considerably. The leaders of technological change (most of them transnational) are evolving new strategies in response. Apart from investing heavily in innovation, they are moving their technological assets around the world to match them to immobile factors, entering new alliances and reorganizing production relations.

The new competition places stringent demands on governments. These demands vary by level of development, of course. Industrial countries, generally speaking, focus on achieving – or even pushing beyond – frontier innovation. They seek to improve their “national innovation systems”.<sup>1</sup> Developing countries, in general, are more likely to focus on adapting existing technologies more effectively. Nevertheless, firms in a number of developing countries are among the innovators, especially in emerging areas that offer niches of opportunity. Examples include biotechnology, information technology or new areas of services industries. In every case, countries have to cope with the new competition and changing flows of knowledge and productive factors – all in a far more open economic environment in which there is a “renaissance of capitalism” (Dunning, 1998a). This new competition is the *first reason* why the analysis of FDI and technology in host developing economies today must differ from that, say, of three or four decades ago.

The *second reason* is that our understanding of technology has evolved. Much of early development thinking assumed technology transfer and diffusion in developing countries to be relatively easy, and framed the analysis of TNCs in that context. The main need was thought to be for physical investment. Technologies were transferred “embodied” in new equipment or in patents or blueprints; their efficient use was, if considered at all, taken as given. The structuralist approach supported industrial development behind protective barriers; the neoclassical approach favoured market-driven resource allocation with free trade and international investment flows. Both assumed that countries passively received and deployed technologies from abroad, and did not differ in their ability to use technology. Thus, there was a tendency towards uniform development strategies for all developing countries. In the area of technology, policy and research attention focused on modes of technology transfer and its defects. It largely ignored how well countries coped with the technologies they imported (see for example Katz and Bercovich, 1993; Katz, 1998). Moreover, the “soft” side of technology transfer and absorption – organization and managerial practices, tacit knowledge and the like – was neglected.

The consequences of neglecting technology absorption are evident under both strategies. Import substitution, by removing the competitive spur to learning, led to technological inefficiency and lags. Liberalization helped technology development in the countries that had built up a strong base of absorptive capabilities, but by ignoring the needs of costly learning and by – incorrectly – assuming efficient markets, delayed or hindered it in others. There is growing divergence rather than convergence in national capabilities: “getting prices right” is thus not a sufficient condition for sustained development (World Bank, 1998; Stiglitz, 1998a). There is now ample evidence that the technological leaders in the developing world adopted specific strategies on technology, different from both classic import substitution and free markets.

The discussion of FDI and technology needs a sound understanding of how firms in developing countries actually become proficient in using technology. For this, we turn to recent research on micro-level technical change (Ernst, Ganiatsos and Mytelka, 1998a; Lall, 1999a). This research, based on evolutionary theories of technological change (Nelson and Winter, 1982), shows why importing and mastering technologies in developing countries is not as easy as earlier assumed. Technology is not sold like physical products, in fully embodied forms; nor does it flow by osmosis when agents are exposed to more advanced systems of knowledge. It has important *tacit elements* that need effort to master. The process is incremental and path dependent (box VII.1). It often faces an uncertain environment where the skills, information, networks and credit needed are not readily available. Enterprises have to interact intensively with other agents. All these features mean that technology development faces extensive coordination problems, externalities, missing markets and cumulative effects.

#### Box VII.1. Ten features of technological learning

1. Technological learning is a real and significant process. It is conscious and purposive rather than automatic or passive. Firms using a given technology for similar periods need not be equally proficient: each would travel on a different learning curve according to the intensity and efficacy of its capability-building efforts.
2. Firms do not have full information on technical alternatives. They function with imperfect, variable and rather hazy knowledge of technologies they are using.
3. Firms may not know how to build up the necessary capabilities — learning itself often has to be learned. The learning process faces risk, uncertainty and cost. For a technological latecomer, the fact that others have already undergone the learning process is both a benefit and a cost. It is a benefit in that they can borrow from the others' experience (to the extent this is accessible). It is a cost in that they are relatively inefficient during the process (and so have to bear a loss if they compete on open markets).
4. Firms cope with uncertainty not by maximizing a well-defined function but by developing organizational and managerial satisficing routines (Nelson and Winter, 1982). These are adapted as firms collect new information, learn from experience and imitate other firms. Learning is path-dependent and cumulative.
5. The learning process is highly technology-specific, since technologies differ in their learning requirements. Some technologies are more embodied in equipment while others have greater tacit elements. Process technologies (like chemicals) are more embodied than assembly technologies (machinery or automobiles), and demand different (often less) effort. Capabilities built up in one activity are not easily transferable to another.
6. Different technologies have different spillover effects and potential for further technological advance. Specialization in technologies with more technological potential and spillovers has greater dynamic benefits than specialization in technologies with limited potential.
7. Capability-building occurs at all levels — shop-floor, process or product engineering, quality management, maintenance, procurement, inventory control, outbound logistics and relations with other firms and institutions. Innovation in the sense of formal R&D is at one end of the spectrum of technological activity; it does not exhaust it. However, R&D becomes important as more complex technologies are used; some R&D is needed just for efficient absorption.
8. Technological development can take place to different depths. The attainment of a minimum level of operational capability (know-how) is essential to all activity. This may not lead to deeper capabilities, an understanding of the principles of the technology (know-why): this requires a discrete strategy to invest in deepening. The deeper the levels of technological capabilities aimed at, the higher the cost, risk and duration involved. The development of know-why allows firms to select better the technologies they need, lower the costs of buying those technologies, realize more value by adding their own knowledge, and to develop autonomous innovative capabilities.
9. Technological learning is rife with externalities and interlinkages. It is driven by links with suppliers of inputs or capital goods, competitors, customers, consultants, and technology suppliers. There are also important interactions with firms in unrelated industries, technology institutes, extension services, universities, associations and training institutions. Where information flows are particularly dense, clusters emerge with collective learning for the group as a whole.
10. Technological interactions occur within a country and with other countries. Imported technology is generally the most important initial input into learning in developing countries. Since technologies change constantly, moreover, access to foreign sources of innovation is vital to continued technological progress. Technology import is not, however, a substitute for indigenous capability development — the efficacy with which imported technologies are used depends on local efforts to deepen the absorptive base. Similarly, not all modes of technology import are equally conducive to indigenous learning. Some come highly packaged with complementary factors, and so stimulate less learning.

Source: Lall, 1999a.

More importantly, firms face learning problems: learning to use new technologies, even those existing elsewhere, requires new skills, effort and institutional change. The diffusion of technologies even in industrial countries poses challenges (OECD, 1996a); in developing countries, it is generally far more difficult. This is why simply exposing firms to unregulated markets may not lead to sufficient technological learning. Firms may not be able to bear the costs involved or link their own learning processes with those of other firms that provide them with inputs or buy their outputs and so affect their own competitiveness. (Such technological interdependence can lead to under-investment by all linked firms.) And mastering new technology is not just a once-for-all task. It is a process that requires continuous *upgrading* and *deepening* of all kinds of intellectual capital, as well as of supporting networks and institutions. Without this, countries can remain at the bottom of the technology ladder where their competitive edge lies in simple assembly or processing based on cheap labour – once wages rise they lose this edge. Thus, as they master the simpler elements of technology, they have to move into more advanced technological capabilities. As technologies change, they have to upgrade their own capabilities to remain competitive. As they gain competence in simple activities, they have to move into more advanced ones, although this process may not necessarily be linear. At each stage, learning needs new knowledge, skills and organization. At every stage, it becomes more challenging. In the new technological context, the challenges themselves become greater. The confluence of the two new analytical factors noted is that the building of new capabilities is critical to technology development in the emerging global competitive scene, even for developing countries that are not “innovators”.

The enterprise is at the core of technology development, but it operates within a system. The main elements of this system are market and competitive signals (the incentive regime), factor markets and institutions (Lall, 1992). This interacting “triad” comprises the structure within which firms learn and create technology. Random firm-level factors aside, systems differ in their ability to stimulate, support and coordinate technological effort. Systemic differences arise from how efficient the various markets and institutions are, and the extent to which governments can improve them when they are deficient. The risks of market and institutional failure always exist and they are particularly high where learning, information, coordination and externalities are involved. To deal with these risks is all the more difficult in many developing countries. The ability of governments to overcome them, create new markets and strengthen institutions is then the crucial factor in technology development.

This is not to say that it is easy to mount effective policies. Many governments have failed to improve markets and stimulate technology development. On the contrary, their interventions are often themselves important causes of market failure. However, government failure is not inevitable. Where governments succeed in strengthening national learning systems, as in some Asian newly industrialized economies, they have triggered growth and technological success. The lesson is not that there is no role for policy, but that this role is difficult, and must support rather than displace markets. The design of policies must rely on an understanding of the technology development process, the role of TNCs in this process, and their interactions with local learning.

## **B. Technology generation and transfer: the role of TNCs**

### **1. Technology generation**

The preceding analysis has demonstrated that it is difficult to gauge innovative technological effort. The new technology paradigm conceptualizes innovation and knowledge as encompassing product and process technology as much as organization and tacit knowledge. The softer technology becomes, and the more it is embodied in people, the more difficult it becomes to measure the generation of technology and the role of particular groups of firms in it. Conventional measures, notably R&D spending or patents registered, are therefore becoming less indicative of technological accomplishments.<sup>2</sup>

To the extent that such data can nevertheless be used as indicative, they show that technology generation is concentrated in advanced industrial countries, and takes place mainly in large firms (which are typically TNCs). For example, R&D spending<sup>3</sup> – a proxy for the “input” of technological effort at the macroeconomic level – is concentrated in the OECD countries, with about 90 per cent of world R&D expenditure within this group; seven countries account for 90 per cent of R&D; the United States alone for 40 per cent.<sup>4</sup>

Innovative activity is also concentrated at the enterprise level. Using R&D spending as an indicator, a small number of firms dominate R&D in industrial countries (Mani, 1999). In the United States, for instance, just 50 firms (of a total of over 41,000) accounted for nearly half of industry-based R&D in 1996 (table VII.1). Among them, the identity of the leaders changed: one-third of the leading R&D performers in 1996 were newcomers to the list as compared to a decade earlier (annex table A.VII.1). In small developed countries, the level of concentration is even higher. In Switzerland, just three firms accounted for 81 per cent of national R&D in the early 1980s, and in the Netherlands, four for nearly 70 per cent (Kumar, 1998, p. 20).

**Table VII.1. Leading United States R&D spenders, 1996**

Number of firms	R&D (Million dollars)	Per cent of United States total
10	34 201	24.5
20	47 738	34.2
30	58 010	41.6
40	64 432	46.2
50	68 963	49.4
100	81 040	58.1
Total United States <sup>a</sup>	139 579	100

Source: UNCTAD, based on NSB, 1998a.

a Total industry funded, including federally financed R&D, covering more than 41,000 firms.

In all but a few industries, technological advantage is a powerful – often the most powerful – determinant of outward FDI (Dunning, 1993). Hence, most FDI emanates from the main innovating countries;<sup>5</sup> the firms dominating United States R&D, for instance, are almost all transnational (annex table A.VII.1). Moreover, most TNCs based in developed countries are large. Size confers an advantage in conducting risky, large-scale R&D. Increasingly, firms also need to amortize the rising cost of R&D across a larger number of markets, be it through equity or non-equity forms of involvement, which implies that these firms have an interest in open FDI regimes.<sup>6</sup> Transnationality in turn reinforces technological prowess, among other reasons because TNCs can tap more effectively sources of foreign technological knowledge and expertise.

TNCs are gaining overall in their role in technological effort. Scale economies in R&D and the need for a global presence to finance it and exploit its results dominate other influences. Large TNCs are at an advantage in forming alliances. Many successful small innovators go transnational to commercialize their innovations; in a globalizing world economy, in which competition is everywhere, they are increasingly forced to do so. Even where innovators subcontract production to other firms, breaking the traditional link between innovation and manufacturing, the importance of TNCs does not diminish.<sup>7</sup> The innovators remain large brand-named firms with large market shares and substantial transnational presence.

Nevertheless, there are many purely domestic firms that are leaders in innovation. Highly effective innovator firms can also be found among small and medium-sized enterprises (Audretsch, 1995). Also, firms from developing countries innovate, either on their own, in conjunction with supportive technology strategies offered by governments, or in different forms of alliances with TNCs. The advantage for these firms lies in the formative stages of new and emerging technologies, making customized industrial machinery, or designing fashion-sensitive consumer items – areas in which they may initially be exploiting niches that subsequently offer opportunities for further technological upgrading.

*Do TNCs spread their innovative activities internationally?* While R&D is subject to the same factors that are driving the globalization of other TNC activities and that make every part of the value-added chain potentially subject to FDI, there is less relocating of innovatory capacity abroad than observed for other functions. Not only are there large transaction, communication and

coordination costs in locating R&D activities abroad, there are also strong synergies between corporate R&D and the science and production system around it. These external economies add to the inertia in setting up innovation abroad (Porter, 1990).

However, this is not necessarily true for all countries or all periods. Take patents registered by TNCs in the United States by their head offices and affiliates abroad as an indicator of the international spread of R&D.<sup>8</sup> One study shows extensive overseas patenting by TNCs even in the inter-war period (Cantwell, 1995). National tendencies differed. French, Swiss and German TNCs had relatively low shares (three to six per cent) of patents taken out by affiliates as compared to headquarters. At the other end, Belgian TNCs had 95 per cent of patents arising abroad. British, Italian and Swedish TNCs were in the middle (with 28-31 per cent) and United States TNCs were moderately low (seven per cent). In the period 1940-1968, affiliate patenting rose for most of Europe (from 12 to 27 per cent), but not the United States (it fell to four per cent). After 1970, foreign patent shares of United States TNCs rose steadily (table VII.2), exceeding those in the inter-war period by 1991. European countries continued to have generally higher ratios; the average declined till 1978 and rose consistently since. Japanese firms continued to keep most innovation at home.

While international innovative activity by TNCs is of long standing, differences are emerging in the new context. There is now a greater spread of firms conducting R&D outside their home countries. This is partly a reflection of their growing production overseas; previously, affiliates had conducted overseas R&D mainly to exploit parent company strengths in local markets by providing support for production and adaptation. But the relocation of some R&D activity is more characteristically a response to the changing nature of innovation: along with necessary technical support, firms are increasingly integrating their innovative activities throughout their TNC systems, with affiliates specializing in line with their capabilities. This is the "new globalization of technological innovation" (Cantwell, 1995, p. 168). An analysis of leading TNCs with high levels of affiliate patenting throws further light on the nature of their R&D activity (box VII.2). It suggests that adaptation and technical support are still the main

**Table VII.2 . Share of United States patents registered by the world's largest firms attributable to research in foreign locations, 1969-1995**

(Percentage)

Nationality of parent firm	1969-1972	1973-1977	1978-1982	1983-1986	1987-1990	1991-1995
United States	5.0	5.9	6.4	7.5	7.9	8.6
Germany	12.8	11.1	12.1	14.5	17.1	20.7
United Kingdom	43.1	41.2	40.5	47.1	50.4	55.8
Italy	13.4	16.0	13.9	12.6	11.1	16.5
France	8.2	7.7	7.2	9.2	18.2	33.2
Japan	2.6	1.9	1.2	1.3	0.9	1.1
Netherlands	50.4	47.4	47.7	54.0	54.0	55.7
Belgium-Luxembourg	50.4	51.1	49.3	58.2	47.5	53.3
Switzerland	44.4	43.6	43.8	41.6	43	52.5
Sweden	17.8	19.9	26.2	28.9	30.6	42.4
Austria <sup>a</sup>	5.1	16.8	19.8	11.8	8.0	-
Norway <sup>a</sup>	20.0	1.7	12.3	32.5	37.1	20.2
Finland <sup>a</sup>	18.9	27.1	26.9	18.7	27.9	39.5
Canada	41.2	39.3	39.5	35.8	40.1	44.0
Others	28.2	22.2	26.4	30.3	7.5	3.9
Total	10.0	10.5	10.5	11.0	11.3	11.3
Total excluding Japan	10.5	11.6	12.3	13.9	15.8	16.5
Total European countries <sup>b</sup>	28.0	25.2	24.5	27.0	30.0	34.8

Source: Cantwell and Janne, 1998.

<sup>a</sup> Patents less than 50 for several periods.

<sup>b</sup> Austria, Belgium-Luxembourg, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.



motive for affiliate R&D, but that there is an increasing trend towards tapping into foreign centres of innovative excellence. The changing strategies of TNCs are leading to more “asset seeking” overseas investment (UNCTAD, 1998a).

### Box VII.2. Technological activity by foreign affiliates in developed countries

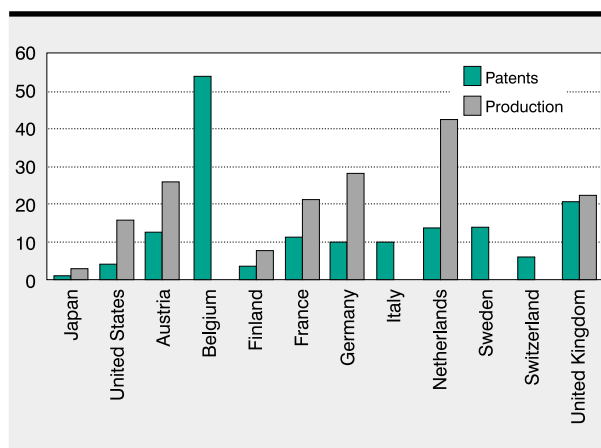
The following findings are based on a study of 220 leading TNCs with the highest volumes of affiliate patenting in the United States. These TNCs account for 30 per cent of all patenting during 1990-96, and around 20 per cent of their patenting comes from affiliates abroad. Of the 220 firms, 71 are North American, 127 European and 22 Japanese.

- The most important location for overseas R&D is the United States (41 per cent), followed by Germany (17 per cent) and the United Kingdom (12 per cent). Japan is the least important of major OECD countries (five per cent).
- Less than one per cent of overseas patenting arises from outside the Triad (North America, European Union and Japan).
- In over three-quarters of the cases, TNCs locate their technology abroad in core fields where they are strong at home. The advantages of physical agglomeration of R&D activities and close linkages with the national science base are overwhelming for launching most major innovations.
- In 10 per cent of the cases, TNCs establish technological activities abroad to exploit the technological advantage of the host country. This is increasing where the domestic science base cannot provide the relevant skills and knowledge in relevant fields with equal effectiveness, a particular problem for small countries. TNCs from small countries like the Netherlands, Sweden and Switzerland increasingly establish foreign R&D to develop families of products in a specific field for world markets. However, TNCs even from large countries like the United States, United Kingdom, Germany and Japan set up overseas R&D units to exploit science bases with different areas of competence.
- The largest increases in overseas technological activity occur when the domestic strengths of the company complement those of the host country.
- The degree of internationalization of R&D is not positively associated with the overall research intensity of the industry. On the contrary, it tends to decline with technology intensity, with the major exception of pharmaceuticals. In aerospace and electronics, for instance, around 90 per cent of patents arise from the parent company.
- Adapting products and processes to foreign conditions and providing technical support remain the main reasons for overseas R&D units. However, there is increasing technological activity to tap into developments in foreign centres of technological excellence. National science systems increasingly involve linkages between local science institutions and foreign affiliates.

*Sources:* Patel and Vega, 1997; Patel and Pavitt, 1998.

Countries with high proportions of patents taken out abroad also have high shares held by large foreign firms in their national patents – they are technologically more “internationalized” in both senses (figure VII.2). A number of European countries are more international than the United States and especially Japan. Smaller countries are more international than large ones, though the United Kingdom is an exception in being relatively large as well as highly internationalized. Interestingly, the shares of foreign firms in production are invariably higher than their shares in patents – foreign investors have, by this measure, lower innovation intensity than local firms (Patel and Pavitt, 1998).

**Figure VII.2. Shares of large foreign firms in national patents and production, 1992-1996**



*Source:* NSB, 1998.

Transnational R&D is clearly globalizing, following, if slowly, the globalization and integration of other TNC functions. Internal transaction and coordination costs are falling as TNCs set up new communication and organizational systems. The growth of international production is leading to more overseas (adaptive and supportive) R&D effort. So is the growth of M&As when acquired firms possess R&D facilities. These facilities have to be restructured and integrated into the TNCs' technology system. This may involve upgrading, downgrading, or closure (and sometimes asset stripping), depending on corporate strategy and local capabilities (box VII.3). Whatever the mode of setting up or acquiring overseas research facilities, the main determinant of innovative (as opposed to adaptive) R&D is local innovative capability. Competition and technical change are forcing TNCs from all countries, large and small, to search for and utilize sources of information and research excellence (Pietrobelli and Samper, 1997). National innovation systems are increasingly unable to provide the entire range of support needed.

Nevertheless, given the continued significance of local innovation systems, practically all affiliate innovative R&D goes to other industrial countries. Developing countries attract only marginal portions of TNC affiliate research, and much of what they get relates to production (adaptation and technical support) rather than innovation. Nevertheless, in recent years, TNCs have been locating some of their strategic R&D in a number of developing countries that have built up the required innovative environment (Reddy, 1997). This is discussed at greater length below.

### **Box VII.3. Downgrading of local innovatory capacity: examples from Brazil**

The take-over of a local firm by a transnational one can have detrimental effects on the innovation capacity in the enterprises concerned. Several experiences in Brazil illustrate this. For example, in 1996 and 1997, a number of TNCs acquired several large domestic auto parts producers - Metal Leve, Freios Varga and Cofap. Subsequently, the R&D activities of the local firms were downgraded, and their frontier research was relocated to the parent firms' R&D centres in their home countries.

Even in high-technology firms, R&D activities were scaled down when TNCs bought into them. This was the case, for example, when in 1992 Alcatel purchased Elebra Multitel, one of the most important producers of switching systems. In 1999, Zetax and Batik, two domestic firms producing and continuously upgrading a technologically-advanced switching system, Trópico, became part of Lucent Technologies. Interviews indicated that Lucent was not interested in local R&D, preferring to rely on technologies developed in the parent company. A similar process has been observed in other telecommunications foreign affiliates in Brazil. Since they are increasingly exposed to international competition, they are scaling down local R&D, and centralizing it in parent firms, as a cost-reducing strategy. In particular, R&D activities geared to the development of new products was discontinued in a number of cases, and effort shifted into the more simple adaptation of imported processes and products. In most cases, this has meant that highly-qualified engineers engaged in R&D are transferred to other, less-specialized functions, such as production, quality assurance, sales or marketing. Some estimates suggest that local R&D expenditure in the telecommunications industry may have dropped by as much as 50 per cent during the 1990s.

A related development observed in the hi-technology telecommunications and information technology clusters in Campinas and São Carlos is that the newly-established affiliates are not linking into locally-based supplier networks. Instead, they operate in isolation from the domestic innovation system, relating to their parent companies and other affiliates rather than to local firms. This too has a negative impact on local R&D capacity, since spillover effects from networking and learning processes are diminished.

As a result, the country is losing the competitive edge it had developed in some product markets. This reinforces a process of increasing import intensity that began with trade liberalization in the early 1990s. For example, the import penetration coefficient for parts and components in the automobile industry increased from eight per cent in 1993 to 20 - 25 per cent in 1996; import penetration in information technology and telecommunications products soared from 29 per cent in 1993 to around 70 per cent in 1996 (Laplane, Suzigan, and Sarti, 1998). If local production of high-technology intermediate inputs in production continues to decrease, the share of imports is bound to intensify further. The impact on technology would then be reinforced by a problematic impact on the trade balance.

*Sources:* Cassiolato and Lastres, 1997, 1999a and 1999b.

## 2. Technology transfer

Technology transfer involves the transfer of physical goods (e.g. capital goods) and the transfer of tacit knowledge. The latter is becoming more important and involves acquiring new skills and technical and organizational capabilities. Further technical adaptations are needed as the technology is implemented. The costs can be substantial. According to one study (Teece, 1976), transfer costs can comprise between 20 to 60 per cent of total project cost. The costs of transfer rise with “technological distance” or differences in technological specialization, corporate tradition, skill levels and the like. This distance also varies within similar countries, leading to different transfer costs. When countries have very different levels of technological capabilities, the costs of transfer are much larger.

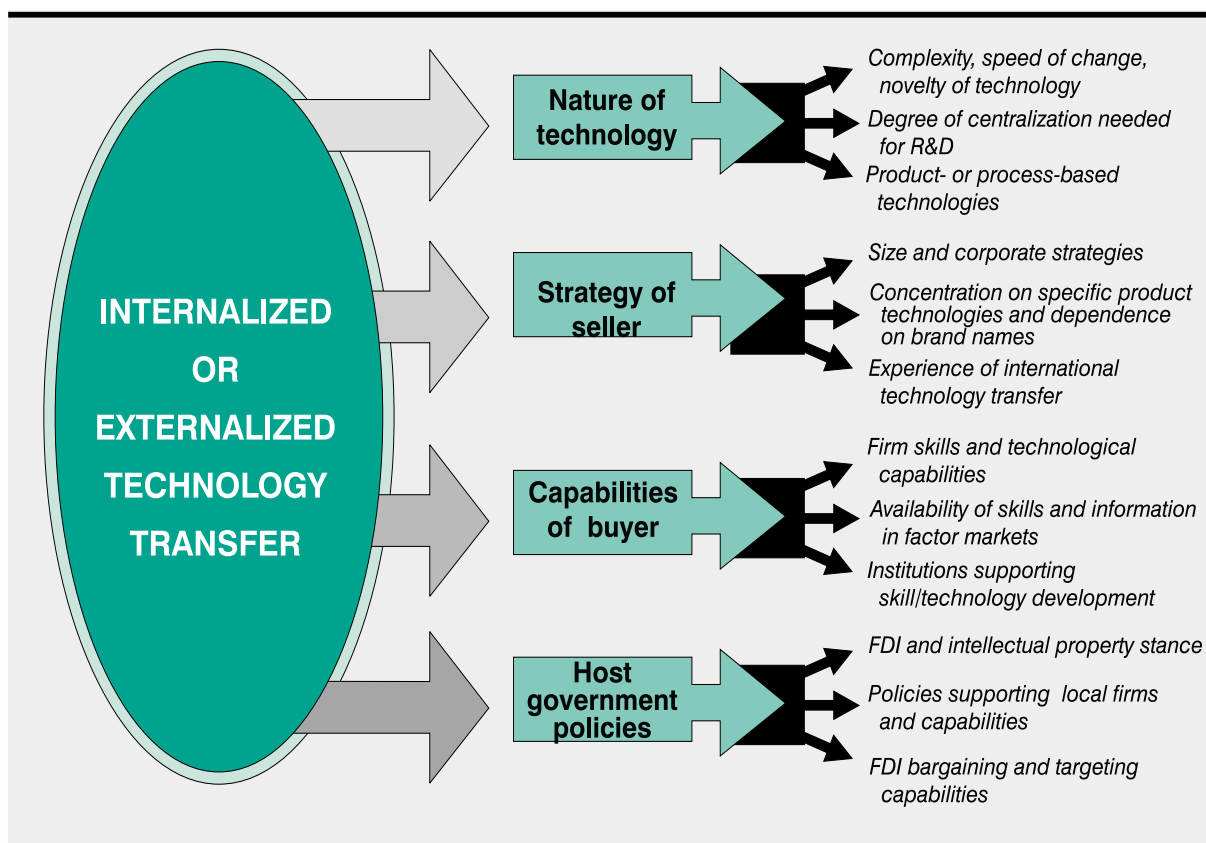
Unlike physical goods, it is not easy to define the technology “product”. The market is fragmented and ill-defined. A product can take many different forms, depending on how much information sellers include (or the buyers ask for) and how they transmit or teach this information. The seller of technology always knows more about the product than does the buyer – it would otherwise have nothing to sell (Arrow, 1962): the buyer operates under a basic information asymmetry. Even with full information, the parties can put genuinely different valuations on technology, depending on their market positions, expectations and technological capabilities. For these reasons, the price of technology is subject to bargaining. This sale itself can take many different forms, with varying commitments to the transfer of knowledge and skills over time.

The benefits of technology transfer are also difficult to measure. In the short term, the immediate recipients benefit by having higher productivity, new products and/or lower costs. Over the longer term, however, their benefits depend on how much they learn from the technology and are able to deepen and develop their own capabilities. For an economy as a whole, the benefits also include the diffusion of the technology and its spillovers to other firms and institutions. In an activity that is so prone to unpredictable dynamic learning effects and has so many externalities, the net outcome is very difficult to assess (Pack and Saggi, 1997). Short-term and long-term effects differ, and private benefits can diverge from social ones. These problems are particularly important in developing countries.

TNCs transfer technologies in two ways: *internalized* to affiliates under their ownership and control, and *externalized* to other firms. *Internalized* transfer takes the form of direct investment and is, by definition, the preserve of TNCs. It is difficult to measure and compare directly the amounts of technology transferred in this manner. Measured by payments for royalties and licence fees, a substantial part of the payments is made intra-firm (annex tables A.I.3 and A.I.4). As rising costs are forcing firms into more technology-based alliances, internalization – understood in a broader sense – can also be seen to encompass technology transfers among clusters of innovative TNCs. The increase of such alliances and networks has led to a blurring of the distinction between externalized and internalized modes of technology transfer. Policy liberalization by host governments also tends to favour internalization strategies.

*Externalized* modes of transfer by TNCs take a variety of forms: minority joint ventures, franchising, capital goods sales, licences, technical assistance, subcontracting or original equipment-manufacturing arrangements. TNCs are not the only source of externalized technology, of course. But they are very important in high-technology activities and in providing entire “packages”, i.e. technology together with management, marketing and so on. Where only discrete elements are involved, such as process plants or specific items of technical knowledge, specialized engineering and consultants firms play a more important role. Similarly, in activities with stable or simple technologies, where technology is highly embodied as in capital goods or where TNCs do not have strong ownership advantages, technologies can be acquired at arm’s length.

**Figure VII.3. Determinants of the mode of technology transfer**



*Source:* UNCTAD, 1995b, p. 23.

The international technology scene is so dynamic that it is difficult to generalize about trends. While the rising costs and risks of R&D in some technologies are leading to greater concentration (Ernst and O'Connor, 1989), there is more fragmentation and competition in other technology markets. It is not clear, therefore, whether on balance it is easier or more difficult to obtain technology at arm's length. Within advanced technologies, older vintages are easily available from innovators and imitators. In low-technology activities, new suppliers of technology and technical services are appearing, many from newly industrialized economies. TNCs often spin off independent companies to sell specialized engineering or consultancy services. International engineering and consulting companies set up affiliates or joint ventures in developing countries. For developing countries, the bulk of whose needs are in mature, standardized activities, technologies may well be available from more sources and on potentially better terms than ever before. For newly industrialized economies that need advanced technologies, on the other hand, externalized purchases may be more difficult than before in some product segments. In other cases, the intensity of competition among suppliers, and the fact that product cycles are becoming ever shorter, are opening up access to the latest technologies via external acquisition, albeit at high prices. This appears to be the case in the electronics industry.

What determines the mode of transfer? Several economic, strategic and policy factors are involved (figure VII.3). The nature and speed of change of technology, transfer costs and risks, corporate perceptions of benefits and risks and government policies all play a role (Pietrobelli and Samper, 1997). Corporate strategies and host government policies aside, internalized transfers are preferred by firms the more complex and fast moving the technology, the larger, more transnational and more specialized the supplier, and the less developed the capabilities of the buyer. Externalized transfers are preferred the more stable and simple the technology, and the smaller, less internationally experienced and more technologically diversified the sellers.

The profitability of a technology to a firm depends on its novelty, commercial value and complementarity to existing technologies, relevance to the firm's core competencies and area of business and pressure from imitators. TNCs – like uni-national firms – do not generally sell their most profitable technologies to unrelated firms abroad as long as there are other means of exploiting them, though they use them increasingly in technology alliances when they expect greater technological rewards. They are willing to sell more mature technologies, as long as the buyer does not pose a competitive threat. Where they perceive such a threat, they might sell the technology but hem in its use by restrictive clauses on exporting or further development. TNCs often manage externalized transfers to keep buyers from accessing the core elements of a technology. A competent technology buyer may therefore find that it becomes progressively more difficult and expensive – and finally impossible – to obtain new, commercially successful technologies at arm's length. A great deal of R&D goes into getting around this problem: all good follower strategies involve considerable technological effort to keep up with innovators.

Finally, consider the *content of technology transfer* by TNCs. An important feature of internalized transfers is that a TNC can transfer technology to different affiliates at very different levels. The choice depends on two factors: corporate strategy and affiliate capabilities. *Corporate strategy* defines the role assigned to each affiliate within the transnational production system of the parent firm. It reflects the balance between location costs and risks, market size and growth expectations, and competitors' behaviour. It can also reflect the strategies of affiliates. For instance, an affiliate can (if it has the necessary capabilities) bargain with the parent firm to increase its technological role. One strategy is for an affiliate to get a "product mandate". Product mandating involves an affiliate taking global responsibility for developing, producing and marketing a product. This gives it a greater innovation role than, say, producing the entire product range in a miniature version of the parent firm. For instance, the Canadian affiliate of a United States automotive TNC received a mandate to both develop and manufacture one particular vehicle. By reducing its range of assembled vehicles to concentrate on this model, it was able to deepen its design and development capabilities and build up local suppliers and skills. The growth of deep integration by TNCs reflects the increasing use of such mandating strategies, with greater specialization by both headquarters and selected affiliates in particular functions (UNCTAD, 1993a).

The second determinant, of particular importance to development, is the *technological capability of the affiliate*. In making transfers to an affiliate, a TNC can choose between a range of technologies of different vintages and levels of complexity. Each technology can comprise processes of varying levels of complexity, from simple assembly at one end to R&D at the other. The choice of technology or function reflects costs and benefits to the company as a whole. The ability of an affiliate to deploy technology efficiently is a major element: the lower the capability, the lower the appropriate content of the transfer. A simple example illustrates this (box VII.4) and explains why transfers to affiliates in developing countries typically have lower technology content than in advanced or newly industrializing ones. It also shows why globalization may result in growing inequality in TNC technology transfers between countries. Since each affiliate increasingly has to compete in world markets, host countries with low capabilities and weak learning systems may be left progressively behind those with dynamic capabilities.

#### Box VII.4. Differing technology content in TNC transfers

Imagine a developed country TNC transferring technology to its affiliates in different host countries (box figure VII.4). To simplify, assume all host countries have similar FDI regimes and locations. The spread of R&D among affiliates may be characterized as follows:

- Affiliate 1 is in another developed economy, a large operation serving the regional market. It performs the full range of technological, managerial and marketing functions, sharing some on a specialized basis with the parent "deep integration" (UNCTAD, 1993). It is in a country with a strong research tradition in its area. The affiliate has R&D facilities at full parity with the parent firms and interacts with local universities, institutions and firms. There is free flow of technical personnel and information both ways. Technologies can be developed and launched in either

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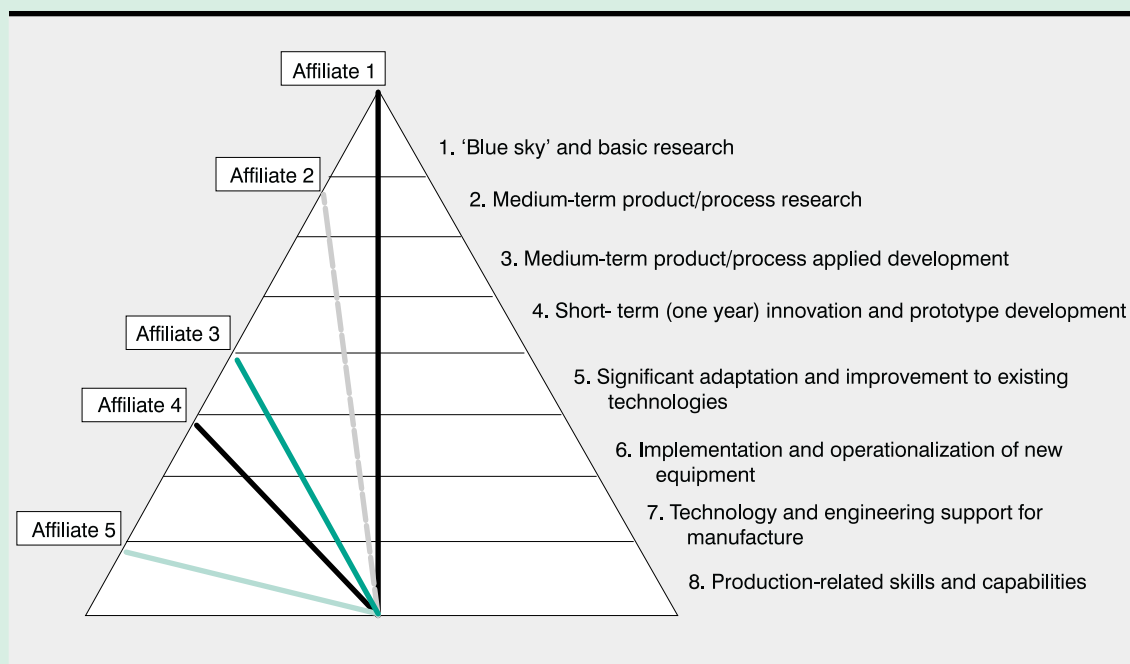


**(Box VII.4, concluded)**

location or in both simultaneously. This is the highest level of transfer: equality in capabilities and full information sharing.

- Affiliate 2 is in a newly industrializing economy, with state-of-the-art manufacturing facilities to serve local and regional markets. It has an R&D facility for certain design and development functions; this interacts with some local firms, technical institutes and universities. There is strong local content in production, management, marketing and engineering, but many head-office strategic functions are not shared with the affiliate. The relevant technical information flows freely between the affiliate and the parent firm, but the level of sophistication is lower than with the first affiliate.
- Affiliate 3, in a less industrialized, export-oriented economy, is in an export-processing zone assembling kits made by affiliate 2 for regional export markets. Local content is low, mainly packaging and printing. A significant part of top management and technical staff are expatriates. Technology transfer is mainly embodied in capital goods and training for assembly and quality management. There is practically no interaction with local firms or institutions.
- Affiliate 4 is in a protected economy with a large, but technically stagnant, industrial base. It is obliged to have high local content, so interacts closely with local suppliers. It uses older vintages of technology to sell less sophisticated products on the local market, and makes little effort to match its cost and quality to world standards. It does make some effort to adapt its materials and products to local conditions (the figure does not capture the lag in its technical efficiency).
- Affiliate 5 in a least developed country, is a small assembly operation aimed at local markets. Demand is small, the skill base is low, and there are no significant local suppliers or technical institutes. The plant is tiny, doing “final touch” assembly, with only basic quality control and maintenance. There is practically no adaptation or process engineering. Technology transfer consists of a few weeks of training to local shop-floor and supervisory staff; its technology content is minimal.

**Box figure VII.4. Content of technology transfer**



Source: based on Hobday, 1996.

Source: UNCTAD.

The relationship is not just one way, from capabilities to content. It is organic and interactive. The growth and depth of local capabilities depend critically on access to new technologies and on the learning required to master them. Higher technological content poses greater challenges and generally offers greater learning potential. The ideal virtuous circle is one where a host country raises its absorptive capacities and imports technologies to “stretch” its learning processes; the least desirable situation is one in which initial capabilities are low and technology imports fail to stimulate further learning. The first leads to dynamic growth, the second to technological stagnation. Similar sequences apply to externalized technology transfers. However, here the buyer of the technology plays a larger role in deciding technology content. It is possible for a dynamic local firm, in a supportive learning environment, to push out its technological frontier quicker than an affiliate without conflicting with a TNC’s global strategies. It is also possible, however, for a weak local firm to remain at the bottom of the technological learning ladder. This can be worse for the country than internalized transfer, since operational efficiency can be lower without the support of a foreign parent firm.

## **C. FDI and developing countries: technology transfer, diffusion and generation**

### **1. Technology transfer**

TNCs are among the main sources of new technology to developing countries. As noted, they provide technology in many forms, and there are several sources of externalized technology transfers. The benefits and costs of internalized FDI technology transfer must be judged with reference to the alternative of externalized transfers – the ultimate source of both may be TNCs.

Let us start with the *advantages* of internalized transfers. FDI provides financial resources in addition to technology. Even if FDI crowds out local investment, it might enable the host economy to expand its productive base and so use a larger range of technologies. Moreover, many technologies are available only in internalized forms. These are generally new, valuable technologies (based on expensive R&D integral to branded products) that firms are unwilling to sell to unrelated parties. They may also be mature technologies used in processes integrated across several countries, as for assembly of semiconductors for export. For countries that are part of export-oriented operations, internalized transfer is very important to obtain mature as well as latest technology, depending on the product or market concerned.

Even when technologies are available in externalized forms, internalized transfers are often cheaper and quicker. Where the technology involved is very large-scale, foreign investors are often able to mobilize the resources needed more efficiently than local firms. Where the buyer is likely to become a competitive threat, technology sellers charge high prices for new technologies, provide only older vintages or impose conditions to protect their markets. Such restrictive business practices (e.g. export restrictions, prohibition of sub-licensing, ban on local improvements) have an economic rationale, but they raise the cost of externalized relative to internalized modes. Where technologies change rapidly, repeated contracting may be cumbersome and slow, leading to high costs or technological lags. Internalized modes allow affiliates to have access to technologies generated by their parent firms. However, the extent to which foreign affiliates actually have access to them depends on the parent firms’ strategy and the affiliates’ capabilities. In general, foreign affiliates tend to be in the forefront of introducing new management and organizational techniques, quality management standards, training methods and marketing methods. One of their most immediate responses to liberalization in host countries has been to improve these elements of affiliate operations (box VII.5).

The most important benefit of internalization, however, is that it provides, at least in principle, access to the whole range of TNC technological, organizational and skill assets, including its tacit knowledge. Direct comparisons of costs of internal and external transfers tend to assume that affiliates and local firms deploy technology with equal efficiency. While this may be true of some affiliates and in some developing countries, it is not of many others. Where the technology transferred is superior to that of local capabilities, the efficacy of the

**Box VII.5. TNCs and the restructuring of Argentine industry**

Liberalization together with price stabilization and the rapid growth of the domestic economy have been decisive factors to attract significant FDI inflows into Argentina in the 1990s. The privatization of public enterprises and the automotive and mining regimes has also induced many TNCs to invest in the country. This has brought significant changes to both service and manufacturing activities, but the impact has been uneven. A survey of foreign firms shows the following:

- *Productivity and quality.* TNCs took over several state-owned service utilities and made significant changes. They laid off excess staff, and changed procurement and subcontracting policies to reduce costs and delivery times. Utilities firms improved their client records and collection methods. As a result, labour productivity and, in some cases quality standards, rose. In the telephone companies, for example, the number of lines in service per employee increased sharply. Quality indicators, such as uncleared errors, average repair time and percentage of lines out of service, improved. New services were offered to customers. Even so, there were large gaps in productivity, telephone density and quality indicators *vis à vis* the parent companies, and service charges remained higher. There were also quality improvements in other privatized services, though more modest than with telephones: the gas and electricity regulatory bodies fined foreign operators for non-compliance with targeted quality standards. In manufacturing, most enterprises have rationalized costs and raised efficiency to cope with trade liberalization, helped by growing internal demand. In automobiles, productivity increased from 5.7 to 14.9 vehicles per employee and the time needed to make a vehicle fell by 38 per cent between 1990 and 1993. However, despite these improvements, productivity levels in Argentina were still well below international levels, and quality problems were aggravated by the rapid and large increases in output. The use of new manufacturing techniques was uneven, with new entrants more active in adopting them. Established firms, with large sunk equipment costs, Fordist mass-production traditions, an uneven upgrading of suppliers and worker resistance, were less progressive. While the new policy regime imposed lower local content requirements, automobile TNCs sought to develop local suppliers to comply with sectoral foreign trade targets and reduce high levels of vertical integration. They provided technical assistance to local component suppliers, encouraging joint ventures with Brazilian enterprises to reap economies of specialization and modernization. The existence of a sectoral bilateral trade agreement with Brazil has encouraged TNC affiliates in Argentina and Brazil to specialize in order to reap benefits from scale economies by trading finished vehicles and parts between both countries.
- *Management and organizational techniques.* TNCs made significant management changes, laying off excess staff, and introducing new management methods and computerization. In telecommunications, where technologies change rapidly, TNCs diffused the latest technologies, mainly via skilled personnel. In other privatized services like gas, power or water, with slow technological change, the contribution of TNCs was in the design of investment plans, automation and efficiency improvements. In electricity and gas, TNCs hived off business operations and services previously carried out internally by state enterprises. Most quality improvements were laid down in the privatization scheme and monitored by regulatory bodies; thus, it is difficult to separate the effect of regulation from that of foreign ownership *per se*.
- *Personnel training.* To remedy problems of deteriorating labour quality, manufacturing TNCs invested substantial resources in employee training in some cases up to one per cent of turnover, particularly in automobiles, auto parts and telecommunication equipment firms. The automobile firms, which had already set up technical schools, launched new training programmes jointly with the Ministry of Labour. Again, new entrants invested more heavily in training than established firms. In privatized state enterprises, training was used as a way of dealing with problems of redundant personnel, corruption, uneven technical skills and bad working habits. The share of technicians and professionals in total employment was also raised, particularly in telecommunications. Foreign personnel were placed in some key management positions, but local personnel filled other high managerial and technical positions.
- *Research and development.* In contrast to productivity and quality, TNCs gave little attention to promoting R&D in affiliates. Of the privatized utilities, only one telephone company had an R&D unit. This unit dealt only with domestic operations, with no link with parent company R&D. In manufacturing, the strongest R&D effort was in telecommunication equipment manufacturers. In one case, it reached one per cent of sales. These efforts concentrated on product development for market niches such as low capacity switches, certain electronic components and specialized software. One firm was able to license its developments to the parent firm and generate some exports. In food processing, two export-oriented firms were more active in R&D than the others, but their efforts were very modest. In automobiles, the main technological activity, using relatively small R&D teams, was to adapt products from the parent companies to local conditions.

*Source:* Chudnovsky, López and Porta, 1997.

transfer depends on how local firms and affiliates cope with the learning process. Affiliates can have lower learning costs and shorter learning periods because they draw upon the resources of their parent firms for the skills, information, experience, tacit knowledge pool and finance needed to absorb and adapt the technology. Foreign affiliates, in other words, may face lower market failures in technological learning in a new environment than local counterparts. They may charge affiliates for services provided, but the marginal costs are likely to be low in relation to a local firm that has to create the skills, knowledge and structures from scratch.

Apart from technological learning, internalized transfers can provide other benefits. TNC marketing skills and brand names make it easier to commercialize new technologies within the host economy or abroad. If a transfer is part of an export-oriented operation, the affiliate gains access to regional or global markets, or to an integrated international production network of the parent company (chapter VIII). Internalized transfers can also lead to similar transfers by other TNCs in vertically linked activities. For instance, export-oriented TNCs in such countries as Malaysia attracted their suppliers to invest locally and so deepen the production process.

What are the *disadvantages* of internalized transfers? In internalized transfers, the host economy pays not just for the technology but for the whole package brought by a TNC, including its brand names, finance, skills and management. Where local firms possess the capability to use the technologies efficiently and do not need these other assets, internalization can be more expensive than externalization (assuming the technology is available at arm's length). The benefits of unpackaging FDI have been discussed for a long time (e.g. Rosenberg 1976; Rosenberg and Frischtak, 1985), but they are not accessible to all host countries. Whether or not countries can "unpack" FDI efficiently depends on the nature of the technology and domestic capabilities. For technologies readily available on licence, and in countries with relatively well-developed entrepreneurial and technological capabilities, externalized modes are indeed likely to be cheaper. In other cases, they are likely to be more costly, inefficient or simply not feasible.

From a development perspective, the largest drawback of internalized modes lies in the control by TNCs of their "ownership advantages". While their efficient internal markets for skills and knowledge make it easy to use new technologies inside their corporate systems, this process can hold back deeper learning processes and spillovers in the host economy. There is likely to be less effort to absorb, adapt, improve or innovate technology in affiliates than would be the case when local companies buy a license or equipment in the externalized mode of technology transfers, and build upon the acquired technology (know-why). In the short term, an affiliate may be more efficient in *implementing* a given technology (i.e. it gets operational know-how more quickly). In the long term, however, it may develop fewer innovation capabilities than a local counterpart. In the restructuring process in response to liberalization, affiliates may neglect the development of R&D capabilities (box VII.5).

Some of the economies that succeeded most in building up domestic technological capabilities - the Republic of Korea and Taiwan Province of China for example - did so by relying mainly on externalized technology transfer. Nevertheless, local firms often had long-term relations with TNCs in the form of subcontracting or original equipment manufacture contracts. They also encouraged the absorption of imported technologies in a strongly export-oriented setting, thus forcing local firms to develop and deepen their own technological capabilities (Lall, 1995; Ernst, Ganiatsos and Mytelka, 1998a). As firms became internationally competitive and needed more sophisticated products, they found that externalized transfers were insufficient. The latest vintages of technology were often simply not available from the innovators - they had to import technology either by going into other arrangements (franchising or original equipment manufacture) and/or by investing in their own R&D to imitate and build upon foreign technologies. Some firms became outward investors to engage in alliances with, or take over, innovative firms abroad or to establish listening posts in industrial countries. The process of restricting inward FDI while encouraging local capabilities to absorb TNC technologies required the rapid build-up of strong R&D capabilities. In the Republic of Korea, for example, R&D capabilities were developed in the large *chaebol*/fostered by the government; in Taiwan Province of China, largely populated by smaller firms, the authorities themselves also played a role in R&D.

Internalized transfers by TNCs reflect the strategy of the parent company and its assessment of what is appropriate to local capabilities. This assessment depends on current skills and capabilities: a rational investor exploits *existing* comparative advantages, and attempts to create dynamic comparative advantages. Thus, a TNC would place its simplest assembly technologies in an industrially backward economy, providing the training and information necessary to operate such technologies. Over time, as wages rise, it may automate the technology (as with electronics TNCs in Malaysia) (Rasiah, 1994); or, as skill levels rise, it may upgrade the technological functions served. On the other hand, where sunk costs are low, the TNC may close down operations as wages rise and set up in a lower wage country. In more advanced countries also, a TNC may decide to shift high-level technological functions to take advantage of local capabilities, or downgrade technological functions as part of a larger global strategy.

What is rational for a TNC can be undesirable for host country development if private and social interests diverge because of costly, uncertain learning processes and deficiencies in factor markets. TNCs may not be willing to upgrade affiliate technological content as fast as host governments think desirable to stimulate local industrial deepening. If local firms are able to move more quickly up the learning ladder, externalized transfers may be more desirable. The case is similar to that for protecting infant industries, based on temporary measures to overcome costs of learning.

There are important *qualifications* to these arguments. It is assumed that local firms have the capabilities to undertake efficient learning with externalized transfers. Externalized transfers may not lead to technological deepening if local firms do not or cannot invest sufficiently in the learning process. In many countries, the promotion of licensing to local firms has not led to technological competence. On the contrary, in many import substitution regimes it has fostered technical lags and inefficiency. In India, for instance, many local firms remained technologically dependent on foreign technology and failed to develop internationally competitive capabilities over decades of such a policy. The problem was exacerbated when governments promoted local firms without simultaneously improving the skill or institutional base. Without the right competitive incentives, firms do not invest in their capabilities; without efficient factor market and institutional support, they cannot go very far. The newly industrialized economies that successfully promoted domestic capabilities had an integrated strategy, building the educational base and strengthening technology institutions along with protecting their learning processes, while forcing firms into export markets as a mechanism to test and advance their competitiveness.

Governments can induce TNCs to improve the content of their technology transfer by providing better domestic skills, capabilities, supplier networks and infrastructure. Some countries have stimulated technological upgrading in affiliates by investing in the supply side of their capabilities and offering incentives to TNCs for the transfer of more advanced technical functions. The best example of this strategy is Singapore, which leads the newly industrialized economies in FDI targeting and promotion. What is not clear, however, is how this approach to upgrading would perform in comparison with an alternative strategy of promoting local firms directly, and under which circumstances either approach would lead to greater depth of capabilities.

## **2. Technology dissemination and spillovers**

The use of new technology by the recipient is only one of its benefits. Another, often larger, benefit is the diffusion of technology and skills within the host economy. Many forms of diffusion are not priced or paid for in markets. They are externalities that arise involuntarily or are deliberately undertaken to overcome information problems. These effects fall under three headings: *linked economic agents, other firms and institutions* and *competing firms*.



### a. *Linked economic agents*

Firms diffuse technology and skills to suppliers, customers and institutions with which they have direct dealings. Most industries have dense vertical networks of information exchange and cooperation to facilitate production, planning and technology development. In fact, many would cease to function if such extra-market linkages did not exist – pure markets, with anonymous price-based transactions, could not provide the information and coordination needed. Learning and innovation also tend to be greater in clusters where networking is high (Porter, 1990; Nadvi and Schmitz, 1994; Porter, 1998; Ernst, 1999). In the current technological revolution, networks and synergies are assuming even greater importance (Best, 1990; Archibugi and Michie, 1997; UNCTAD, 1998d). Firms outsource components and services more than ever. They collaborate more closely with suppliers and buyers in their technological efforts. Globalization gives such collaboration an international dimension: supply contracts extend over national boundaries, suppliers follow their customers overseas, new suppliers are located in cheaper areas, and so on (box VII.6).

How intense are the linkages that TNCs establish in developing host countries? How do these compare with linkages by domestic firms? Let us consider the most obvious manifestation of linkages, *sourcing*: the purchase of inputs, components and services from local as opposed to foreign suppliers. In an open economy, sourcing decisions of foreign (and comparable local) firms depend only on relative cost, quality and delivery, and reliable information on supplier capabilities. All other things being equal, firms prefer local procurement because proximity lowers transaction costs, allows for closer monitoring and gives greater flexibility in changing

#### **Box VII.6. Promoting TNC technology spillovers in Taiwan Province of China and Singapore**

When the Singer Sewing Machine Company started operations in Taiwan Province of China in 1964, there were several small sewing machine manufacturers in the country, with poor technology and no standardization, unable to compete in world markets. The authorities stipulated that Singer procure 83 per cent of parts and components locally within a year, provide local suppliers with standardized blueprints, send technical experts to improve productivity, prepare materials specifications and inspect final products. Singer was to provide local sewing machine producers with its own locally made parts at no more than 15 per cent above the price of parts imported from Singer's foreign parts. The company was also required to raise exports rapidly.

The company fulfilled all these requirements. It sent several technical and management experts to train and upgrade local suppliers and organize the entire production system. It provided a wide range of technical assistance to competing local sewing machine manufacturers free of charge. Suppliers received standardized blueprints enabling them to work to common specifications, measuring instruments and access to Singer's tool room and technical advice. Classes were conducted for suppliers in technical and management problems.

The result of the local content policy was a significant transfer of technology, increased backward linkages and upgrading of competitive capabilities for the industry as a whole. Within three years, Singer was using only local parts (except for some needles), and by 1986 was exporting 86 per cent of its total output. Other local firms also became major exporters, as local parts were standardized and improved in quality. One reason for this success was that relatively little investment was entailed. The existing base of technological capabilities in the local suppliers made the transfer and upgrading of technology relatively rapid and low-cost. This pattern was repeated over time in several other industries.

In Singapore, the Economic Development Board, the main industrial strategy-making agency, launched a programme to encourage subcontracting to local firms through its Local Industries Upgrading Programme. TNCs were encouraged to source components locally by adopting particular SMEs as subcontractors. In return for a commitment by TNCs to provide on-the-job training and technical assistance to subcontractors, the Government provided a package of assistance to the latter. TNCs were required to assign a full-time procurement officer to this programme, with his salary paid in full by the Government. SMEs received cost sharing grants and loans for the purchase of equipment, consultancy and training. By end-1990, 27 TNCs and 116 SMEs had joined this programme.

*Sources:* Dahlman and Sananikone, 1990; and Lall, 1996.

specifications and developing new inputs. Firms often place a great premium on face-to-face contacts with suppliers. The building of trust through direct interaction becomes more significant where tight technical specifications and quality are very important. For these reasons, as long as the costs of doing so are lower than resulting savings, firms invest in helping local suppliers upgrade their technology. In India, for example, truck manufacturers made extensive efforts to help actual and prospective suppliers to set up facilities, raise technological and skill levels, obtain inputs and find other customers (Lall, 1980).

All this is common to foreign and local firms. Differences between them arise from different access to local information, familiarity with local business practices and the ability to develop relations of trust. Local firms generally have an advantage in all these, particularly at the start. Foreign investors have established supply linkages with firms overseas. They are reluctant to sever these linkages, especially for demanding inputs and for long-established technical connections. In addition, new affiliates tend to be less knowledgeable about local capabilities, and face higher barriers to establishing strong trust relations. The situation changes over time. As they gain familiarity with suppliers and take on local "flavour" (e.g., by employing local managers), affiliates can come to resemble local firms (WTO, 1998c). In fact, when technological upgrading is needed, as in making an import-substituting activity export-oriented, TNCs can be very effective in improving the local supply base. This can go hand in hand with increased reliance on imported inputs, as overall production is rationalized in line with comparative advantage. In the Mexican automobile industry, for example, liberalization led to intense efforts to improve the local supplier base – often with the entry of foreign companies. It also led to higher import dependence, albeit offset by rapid increases in exports of automotive products (Mortimore, 1995). Japanese TNCs have been transplanting their traditional *keiretsu* links from their home country to host countries ("follow sourcing") (Mani, 1999). One study has shown that the local procurement ratio, measured as the ratio of the value of local procurement to the value of total procurement of the Asian affiliates of Japanese manufacturing firms, increased from 42 per cent in 1986 to 49 per cent in 1992 (Urata, 1998, p. 166).

A converse trend observed in other TNC networks has been to move away from local in favour of intra-firm (international) sourcing. This suggests that in these cases there has been insufficient technological upgrading of potential local suppliers, most often in technologically dynamic activities (Ernst, 1996).

In the long term, the main problem with local sourcing in developing countries lies in supplier capabilities and information gaps on these capabilities rather than in whether the lead firm is foreign or local. The sourcing problems faced by TNCs are greater in their main areas of strength – high technology and export-oriented activities, which have very demanding standards of quality, reliability and delivery. Many TNCs also tend to have large-scale requirements, often beyond the capabilities of local suppliers. However, local firms with similar characteristics also face similar sourcing problems. In many export processing zones, for instance, both local and foreign firms import high proportions of their inputs, even in relatively simple activities like garments, because local upstream suppliers are unable to match the quality, variety and cost standards. For instance, in Indonesia most clothing exporters rely on imported fabrics and accessories (Lall and Rao, 1995). At the same time, as capabilities develop, so does local content. High-technology electronics TNCs in Malaysia have over time raised the level of local purchases, from other TNCs and from local firms (Rasiah, 1994).

Clearly, the best way to raise linkages between TNCs and local firms is to raise the capabilities of potential suppliers. These supply-side measures are preferable to local content requirements, which, like other direct interventions to promote one set of enterprises, can be detrimental to technical efficiency (Moran, 1998). Taiwan Province of China and Singapore used different policies to encourage local procurement and technology transfer without damaging competitiveness in the final producer (box VII.6). Their focus was on providing strong technology support services to SMEs, generally with the support of TNCs. Other countries have put emphasis on developing clusters and networks of local enterprises, and assisted them in building technological capabilities (UNCTAD, 1998f).

### ***b. Other firms and institutions***

TNCs can have direct linkages with a variety of local institutions as well as firms. These include local technology institutions such as standards and quality control agencies, research institutes and universities, vocational training centres, financial intermediaries, infrastructure providers and so on. For present purposes, the most relevant ones are those providing technical and skill inputs.

Affiliates tend to lead in the use of the best techniques of quality control, standardization, testing and calibration, particularly when they are producing for export markets. This can lead them to interact intensely with local providers of the relevant services, and in the process to raise their services to international standards. However, where local institutions are well below the standards required – or, as with specialized testing and calibration, simply not able to provide services – TNCs tend to develop in-house capabilities or use foreign institutions. In this case, the spillover benefits will not accrue to the host economy, unless TNCs offer some of their in-house facilities to other firms. As with other spillovers, much depends on the local capability base. If this is able to benefit from TNC interaction, the interaction is likely to be positive; if not, there will not be any interaction.

The situation is similar for government research institutions. Many developing country governments have research laboratories to create and disseminate productive technologies to industry. However, these often lack direct links with the productive sector. The well-staffed ones tend to focus on academic research; the poorly financed and staffed ones do not even do this. However, some countries are reforming their research institutions, inducing them to sell their services and become financially more independent. The results are encouraging. Firms are collaborating with laboratories, where the institutions have good research capabilities and where the firms have in-house R&D experience; in India, even SMEs are starting to place research contracts with laboratories (Goldman *et al.*, 1997). Foreign affiliates are as open to research collaboration as similar local firms. In Mexico, they often take the lead in working with research institutions (Najmabadi and Lall, 1996). India features numerous examples of publicly-funded R&D institutes attracting research contracts from TNCs. The National Chemical Laboratory in India, for instance, reportedly now earns about half its budget from research contracts with industry with foreign chemical companies accounting for around 60 per cent of these contracts. These activities reflect government investment in the skill and R&D base combined with a targeted approach to FDI (table VII.3).

Some studies suggest that the scale of host country R&D is a significant determinant for TNCs' choice of locations for overseas R&D activity. For example, a recent study analysing United States and Japanese TNCs in a sample of 74 host countries found that affiliate R&D intensity

**Table VII.3. Collaboration of Indian research centres with TNCs: R&D contracts awarded by TNCs to Indian publicly funded R&D institutes in the early 1990s**

Institution	TNC Involved	R & D area
IICT, Hyderabad	Du Pont, United States	Pesticide chemistry (by screening agrochemical molecules).
IICT, Hyderabad	Abbot Laboratories, United States	Synthesis of organic molecules and advisory consultancy.
IICT, Hyderabad	Parke Davis, United States	Supply of medicinal plants.
IICT, Hyderabad	Smith Kline and Beecham, United States	Agrochemical and pharmaceutical R&D.
NCL, Pune	Du Pont, United States	Reaction engineering, process modelling for new polymers, nylon research, catalysis, and a scouting programme.
NCL, Pune	Akzo, Netherlands	Zeolite based catalyst development.
NCL, Pune	General Electric, United States	Processes for intermediates of polycarbonates.

*Source:* Kumar, 1999 based on *Business India* (Bombay), 2 January, 10 April and 9 October 1995; *The Economic Times* (New Delhi), 14 April 1996 and 16 May 1997; *Business Standard* (New Delhi), 16 May 1997; *India News* (the Hague), September 1993; *Chemical Week*, 19 April 1995; and Reddy, 1997.

was positively and significantly related with the scale of R&D activity, the availability of scientists and engineers in the host economy, and the relative cost of hiring R&D engineers of comparable qualification in the home and host country. This suggests that developing countries that are endowed with large numbers of well-trained and comparatively inexpensive researchers, and with a well-developed R&D infrastructure, are well placed to become important hosts of overseas R&D activity in coming years (Kumar, 1998, 1999).

Links between affiliates and local training institutions are fairly common, since all new technologies need shop-floor, technical and managerial training. The need for training depends, of course, on the level of technology introduced (the existing skill base and availability of training in turn influence the technologies selected for transfer). TNCs generally invest significantly in training, often more than local counterparts. They also often bring in training materials and techniques from abroad to supplement the training offered locally. Their awareness of the importance of skill formation sometimes leads them to foster new training institutions (chapter IX).

### *c. Competing firms*

The injection of any new competition stimulates technical efficiency. The entry of world class TNCs into developing countries is even more bracing, especially where firms have been shielded from international markets. Apart from providing a competitive stimulus, TNCs can have spillover benefits: local competitors can learn from their technological or managerial practices, attract their employees or gain access to their technical knowledge.<sup>9</sup>

Spillovers can also be undesirable: TNCs may lower macroeconomic efficiency if they deliberately raise concentration levels, forcing competitors out of business by predatory practices, poaching skilled labour and R&D staff from local firms, or engaging in various restrictive business practices which, among other things, deter technological development. The risk of such behaviour is higher when, as is often the case in developing countries, governments lack efficient competition policy tools and skills (UNCTAD, 1997a).

Less directly, but perhaps more importantly, a strong TNC presence may inhibit the development of local capabilities. Given initial learning costs, potential entrepreneurs may find it impossible to compete with affiliates able to draw upon their parents' technological resources. They may decide to stay in less demanding activities (when TNCs enter high-technology industries) or end up as suppliers to TNCs (where local capabilities have already reached a certain level). The effect is sometimes called "crowding out" (see also chapter VI), but this implies that local enterprises are already present in the activity. It is more the constriction and diversion of the technological learning process in local firms, raising the cost and risk of entering very demanding areas, that raises concern.

It is difficult to analyse empirically the effects of a strong TNC presence. Normal statistical tools are difficult to use to examine crowding out or constricting technological deepening. For instance, no econometric analysis of existing ownership structures in a country can show what the structure would have been if the government had adopted different FDI and technology development strategies. Such non-marginal differences can be analysed only by setting up a "strategic counterfactual" (Lall, 1993); this is very difficult. The next best approach is to compare countries with different FDI strategies but similar levels of industrial development; here one has to control for other national and historical differences, which poses its own problems. Despite these problems, such comparisons are nevertheless suggestive. Take countries that allowed FDI into advanced activities (such as Mexico or Thailand) with those that have restricted their entry to promote local capabilities (such as the Republic of Korea or Brazil). Local enterprises in the latter have developed much greater technological strength, and are now themselves world class TNCs in industries such as automobiles and electronics. However, as noted, there are many cases where FDI restriction failed to catalyse domestic technological competence.



As far as productivity of existing firms goes, statistical analyses yield mixed results on the effect of TNC presence (WTO, 1998c; Kokko, 1996a). There are problems of methodology as well as in interpreting the findings. It is difficult to measure technical efficiency in comparable firms and to control for other factors apart from TNC presence. The effects seem to differ by country, industry and firm characteristics. Much depends on the initial differences between affiliate and local firm technological levels. In many cases, the two sets of firms do not actually compete in the same product segments in a given industry (local enterprises may have already been crowded out), so that there is little that local firms can learn. The extent of spillovers depends on general factor market conditions and the level of development of the economy: there is more when markets and capabilities generally are more developed.

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In sum, the impact of FDI on technology development in local firms is mixed. Restricting TNC entry can help the deepening of local capabilities, but only in rather special conditions. Governments must have the capability to mount effective industrial policies; the skill base must be strong; competition must be ensured, either through an export-oriented trade regime or a functioning competition policy; and support institutions must be able to meet the needs for finance, information and training. In practice, only a few countries have been able to meet these conditions; in many cases, restrictions on FDI have led to technological backwardness. The form and intensity of other spillover effects vary by industry, policy and level of development. They are best when local firms have the capabilities to absorb the knowledge offered by TNCs, least when there is a large technological distance between affiliates and local firms.

### 3. Technology generation

Formal R&D does not play a significant role in early stages of industrial development. It does, however, become important as capabilities deepen and enterprises use more advanced technologies. Much of this R&D is directed to absorbing, adapting and improving complex imported technologies. (Absorption is a vital function of R&D everywhere – see Cohen and Levinthal, 1989.) But, over time, it shades into genuine innovation. Both are desirable: growing R&D signifies industrial maturity and strength. What, then, is the role of FDI in launching and stimulating local R&D?

As shown earlier, TNCs undertake relatively little R&D in developing countries. A rough indicator is R&D reported by United States TNCs in developing country affiliates. For the mid-1990s, this came to eight per cent of total R&D in affiliates, and only one per cent of parent company R&D (though there may be some underreporting of R&D in developing country affiliates) (table VII.4). R&D in developing country affiliates was, in any case, highly concentrated. Brazil by itself accounted for approximately one-quarter of recorded R&D of United States affiliates in the developing world. The top four economies – Brazil, Mexico, Singapore and Taiwan Province of China – accounted for 77 per cent. At the other end, the least developed countries had no affiliate R&D. The pattern is likely to be similar for TNCs from other industrial countries. While the share of developing countries in affiliate R&D is rising (from 3.5 per cent for United States TNCs in 1989), it remains very small in relation to the total – far smaller than their share in TNC production or investment.

Perhaps this is not surprising. The majority of developing countries do not have the research skills or institutions to make it economical for TNCs to set up local R&D facilities. However, even where local research capabilities have developed, as in some newly industrialized economies (annex table A.VII.2), the distribution of affiliate R&D in the developing world is not related to national R&D propensities. The explanation lies in a host economy's policies. Where the entry of TNCs has been restricted (particularly in complex activities) and technology development promoted by externalized transfers, there is little affiliate R&D activity. Thus the Republic of Korea, with one of the world's highest shares in enterprise-financed R&D in GNP,<sup>10</sup> receives relatively little R&D by United States TNCs, and technology intensive activities are in local ownership. In contrast, Brazil (where enterprise-financed R&D as a percentage of GNP is only



eight per cent of that in the Republic of Korea) has a 14 times higher share of United States affiliate R&D spending, although a part of it is the result of R&D capacities obtained as a result of M&As. Most enterprise R&D in Brazil is in the automotive and machinery industries and is TNC-dominated, with the exception of the aircraft manufacturer Embraer, a public sector enterprise. Taiwan Province of China is an intermediate case. It has a strong skill and R&D base, and local presence in high technology activities. At the same time, it has allowed FDI entry, and TNCs have set up R&D bases to exploit its capabilities and facilities.

**Table VII.4. Recorded R&D expenditures by foreign affiliates of United States TNCs, 1994**

(Million dollars and percentage)

Host economy	Values (Million dollars)	Per cent of total corporate R&D	Per cent of parent company R&D	Per cent of all affiliate R&D	Per cent of affiliate R&D in developing countries
Total R&D by TNCs	103 451	100.0	-	-	-
Of which: parent companies	91 574	88.5	100.0	-	-
All affiliates	11 877	11.5	13.0	100.0	-
Of which: developing economies <sup>a</sup>	901	0.9	1.0	7.6	100.0
Brazil	238	0.2	0.3	2.0	26.4
Mexico	183	0.2	0.2	1.5	20.3
Singapore	167	0.2	0.2	1.4	18.5
Taiwan Province of China	110	0.1	0.1	0.9	12.2
Hong Kong, China	51	-	0.1	0.4	5.7
Malaysia	27	-	-	0.2	3.0
Argentina	21	-	-	0.2	2.3

*Source:* Data provided by NSB.

<sup>a</sup> Economies receiving more than \$20 million in R&D expenditure.

Most affiliate R&D in developing countries is geared towards adaptation or technical support of production or what can be classified as “minor modifications”. However, there are signs of deepening of R&D, towards more innovative work (box VII.7). This is partly a process of maturing of R&D effort over time. In some cases, as in the automotive industry in Brazil, it is also the result of a reorientation of the industry from domestic to international markets, calling for rapid upgrading of technologies.

#### **Box VII.7. Strategic R&D by TNCs in developing countries**

TNCs have long had R&D units in developing host countries for adapting products and processes to the local conditions, and in a few cases for developing products for local markets. Since the mid-1980s, however, they have also started locating strategic R&D in some developing countries, for developing generic technologies and products for regional or global markets. The main incentives for this are: i) access to highly qualified scientists and engineers as shortages of research personnel emerge in certain fields (due to the mis-match of supply and demand) in industrialized countries; ii) cost differentials in research salaries between developing and industrial countries; and (iii) rationalization of operations, assigning particular affiliates the responsibility for developing, manufacturing and marketing particular products world-wide. The new trends are most visible in industries dealing with new technologies such as microelectronics, biotechnology and new materials. In these technologies, the location of R&D can be geographically de-linked more easily from the location of manufacturing. It is also possible to separate R&D in core activities from that in non-core activities. Developing countries can undertake the latter form of R&D with available skilled manpower. Moreover, these are science-based technologies and personnel with little industrial experience but with a good theoretical training can perform R&D. As a result, countries like India, Israel, Singapore, Malaysia or Brazil serve TNCs as good locations for strategic R&D.

For instance, Sony Corporation of Japan has around nine R&D units in Asian developing countries. It has three units in Singapore, conducting R&D on core components such as optical data storage devices, integrated chip design for audio products and CD-ROM drives, and multimedia and microchip software. It has three units in Malaysia, working on video design, derivative models and circuit blocks for new TV chassis, radio cassette, Discman and hi-fi receiver design, and the design of derivative models of mechatronic products. It has one unit in the Republic of Korea, focusing on the design of compact

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**(Box VII.7, concluded)**

discs, radio cassettes, tape recorders and car stereos. It has one in Taiwan Province of China, designing and developing video tape recorders, MiniDisc players, video-CDs and duplicators. Finally, it has a unit in Indonesia, focusing on the design of audio products.

Such R&D units often work in close collaboration with science and technology institutes in the host country, with knowledge and technology diffusion going both ways. For instance, Daimler Benz has established the Daimler Benz Centre India in Bangalore to work on projects related to its vehicles and avionics business. Current work includes the interface design of avionics landing systems and smart GPS sensors (intelligent traffic guidance system and development of software), for use by the group's business world-wide. The centre collaborates actively with the Indian Institute of Science in its avionics research.

*Source :* Reddy, 1999.

Some governments have used targeted FDI attraction and incentives to promote affiliate R&D, as in Singapore (Lall, 1996). And in countries like India, innovative R&D is being undertaken by TNCs to take advantage of plentiful and cheap scientific and engineering skills despite a low overall foreign presence (Reddy, 1997); often, this is in collaboration with domestic firms.

These findings suggest that there are different routes to greater TNC involvement in R&D in developing countries. Where the production base is large and considerable local adaptations or improvements are needed, adaptive R&D is likely to be launched. Over time, adaptive R&D generally shades into genuine innovation, especially where the skill base is good and TNCs gear their operations to world markets. The incidence of local R&D will be higher the more technologically complex and fast moving are the activities undertaken by TNCs. As noted earlier, innovative R&D is attracted most to countries with strong science and research bases. Where countries have been able to build up such bases, a welcoming stance to FDI is likely to attract high quality TNC research investment. Some economies, like Taiwan Province of China and India, have mobilized local research consortia to collaborate with TNCs in developing new technologies (box VII.8 and table VIII.5).

**Box VII.8. The role of industry-based research consortia**

IBM unveiled its first PC based on the new PowerPC microprocessor, a product made by the alliance of IBM, Motorola and Apple, in New York in June 1995. It was followed one day later by the unveiling in Taipei of PowerPC based products by a group of 30 firms from Taiwan Province of China - the first economy outside the United States to develop a range of state-of-art products based on the new technology. Taiwanese firms did not do this on their own. They were part of an innovation alliance, the Taiwan New PC Consortium, formed by a public research institution, the Computing and Communications Laboratory (CCL). The Consortium was set up in 1993 to bring together firms from all parts of the information technology industry in Taiwan Province of China. Its specific purpose was to transfer, master and diffuse the new PowerPC technology over the whole range of products from PCs and peripherals to software and multimedia applications, as well as semiconductor manufacturers that would make their own versions of the new chip. The firms involved were relatively small by international standards, and CCL brought them together and negotiated on their behalf with IBM and Motorola.

This was not the only instance of strategic alliance formation by the authorities of Taiwan Province of China to stimulate innovation and take industry to technological frontiers. The Industrial Technology Research Institute (ITRI) led in the formation of some 30 consortia in the IT industry over the 1990s. This focused on products like laptop computers, high-definition television, videophone, laserfax, broadband communications, digital switching devices, smart cards and so on, helping firms to move up the technology chain. In each case, ITRI identified the products, tapped channels of technology transfer, mobilized the firms, handed the complex negotiations with developed country firms, and covered intellectual property issues. The individual firms developed their own versions of the jointly developed core products and competed in final markets at home and abroad. Their size limited their ability to do this on their own.

*Source :* Poon and Mathews, 1997.

**Table VII.5. Illustrative cases of global R&D centres and R&D joint ventures in India**

<b>Institution/ year partnership was established/ location</b>	<b>TNC Involved</b>	<b>Focus and objectives</b>	<b>Rationale</b>
<b><i>Global or regional R&amp;D centres set up by TNCs in India</i></b>			
Astra Research Centre India, Bangalore, 1986	Astra AB, Sweden	Discovery of new diagnostic procedures and therapeutic products with tools of molecular biology, immunology, cell biology.	Availability of highly qualified and talented manpower; low manpower and R&D costs; access to leading institutes e.g. IISc, Bangalore.
Texas Instruments India, Bangalore, 1986	Texas Instruments, United States	CAD software for IC design and other applications, IC design of application specific memory products, digital signal processors, memories and mixed signal ICs.	Abundance of R&D personnel with strong background in theoretical sciences and engineering, strategic presence in Asia-Pacific region, English speaking environment.
Asia-Pacific Design Centre, India, 1992	SGS-Thomson Microelectronics, France	Central R&D for new circuits and libraries, mixed analogue design, memories, VHDL modeling, synthesis and regional R&D design, layout and debugging of custom ICs.	To utilize the country's highly skilled but cheap technical manpower.
Unilever India Pvt. Ltd, Bangalore, 1996	Unilever, United Kingdom/ Netherlands	As one of the five global R&D centres worldwide, to upgrade various Lever products across globe, to serve as a global tea R&D centre.	To tap the rich scientific talent in India.
D-B Research Centre India, Bangalore, 1996	Daimler-Benz, Germany	Among others, interface design of avionics landing systems and Smart GPS sensors and other projects related to vehicles and avionics business.	Availability of scientific talent in India, ability to draw upon the R&D facilities of IISc among other leading public-funded institutes.
<b><i>TNCs setting up R&amp;D joint ventures with Indian companies</i></b>			
Ranbaxy Labs. India, New Delhi, mid-1990s	Eli Lilly, United States	Joint R&D for process development for drugs.	Ranbaxy's ability to develop a cost-effective process for synthesis of Cefaclor, among other products.
Hindustan Aeronautics capabilities Ltd., Bangalore, early 1990s.	British Aerospace, United Kingdom	CAD packages, software applications in management, manufacturing, design and real time info. systems.	Complementary design of HAL.

*Source:* Kumar, 1999 based on *Business India* (Bombay), 2 January, 10 April and 9 October 1995; *The Economic Times* (New Delhi), 14 April 1996 and 16 May 1997; *Business Standard* (New Delhi), 16 May 1997; *India News* (the Hague), September 1993; *Chemical Week*, 19 April 1995; and Reddy, 1997.

However, the evidence also suggests that few developing economies are likely to benefit from the spread of TNC R&D in the near future. Among the developing countries receiving FDI inflows, many lack the base of technical skills to mount a significant research effort; they have not developed significant science bases or induced local firms to undertake R&D (annex table A.VII.2). Those that have done so managed it by restricting FDI inflows and undertaking comprehensive industrial and skill development policies (Ernst, 1996; Lall, 1996; UNCTAD, 1995b). However, their strategies are difficult to replicate. Even the economies that relied mainly on externalized technology transfer in the past are now more open to FDI, partly because of external pressures and partly because of the sheer scale and complexity of technical change. A number of policy tools nevertheless remain for developing countries to choose from, the subject addressed below.

## D. Conclusions and policy implications

Technology flows across economies in many ways, disembodied and embodied. Its effective transfer and subsequent development depend on the channels of transfer and, increasingly, on local abilities to use it. With a growing reliance on information and rapid change, the abilities needed have become more varied and skill-intensive. As a result of technological progress, the channels for transferring technology have expanded and often become cheaper, though at the advanced end of the spectrum access may have become more difficult. The costs of innovation, the spread of international production and policy liberalization have increased the role of TNCs in all aspects of technology. As commercial enterprises, TNCs in principle do not have an interest in transferring knowledge to and supporting innovation in foreign affiliates beyond what is needed for the production process or product at hand.

Developing countries therefore cannot expect that, by simply opening their doors to FDI, TNCs will transform their technological base. Deficiencies in technological learning and transfer in developing countries can mean that markets do not create technological dynamism. At best, they can lead to a better use of static endowments but not to the continuous upgrading that competing in the new context requires. To tap their potential, host governments therefore have a role to play in promoting local learning and developing skills and institutions.

Potentially, TNCs have much to offer in developing local capabilities. What technologies and functions they actually transfer to particular locations, however, depends greatly on local capabilities. There is thus again a role for policy in upgrading capabilities to optimize the transfer of TNC technology and encourage its dissemination. Moreover, there is also a role for policy in attracting higher quality FDI: providing better information to prospective investors and ensuring that their needs are met can be a vital tool of technology development.

Experience shows that there is a continuum of strategies with regard to the transfer, generation and diffusion of technology. At one end is a self-reliant or indigenous technology policy, which relies entirely on domestic firms and institutions and restricts technology transfer. At the other end is a strategy that relies almost exclusively on internalized technology inflows, with the bulk of technology transfers taking place within TNCs. In the middle are strategies that combine indigenous technology development with internalized inflows in varying combinations. The nature of government policy differs accordingly. The indigenous strategy calls for strong government intervention. The internalized strategy may call for policy intervention where the host government seeks to accelerate FDI entry into higher technological segments, or it may involve relatively little intervention where the government is content to leave the evolution to market forces.

The potential of these alternative strategies on the development of domestic capabilities is as follows:

- The rationale of an *externalization-oriented* strategy is to foster domestic capabilities, in general or in selected strategic industries, and to encourage indigenous technology development. The role of FDI is restricted, with a bias towards technology inflows in externalized forms. Some countries try to foster national flagship firms (Dunning, 1998a) in high-technology industries, providing them with protected domestic markets and subsidized credit. Governments support domestic enterprises in mastering increasingly complex technologies, and create or support R&D centres (box VII.9). This approach was adopted, at different periods, by economies such as the Republic of Korea, China, India, and Brazil. Indonesia and Brazil, for example, developed an aircraft industry in this fashion; Malaysia and India used it to build a national automobile industry.

The strategy is risky, and the results have been mixed. It has allowed economies to establish medium-technology industry and products with a competitive edge. Enterprises nurtured under this strategy have become transnational themselves - India's motorcycle industry is

a case in point. It may be more difficult, however, to establish high-technology industries, unless the government is able, as in the Republic of Korea, to invest massively in human capital and force domestic firms to orient their activities largely to export markets.

This strategy is difficult to replicate. It needs a strong base of technological skills, entrepreneurs able and willing to undertake risky technological effort, and an incentive regime that shelters learning while ensuring that there is competition, for example through anti-trust regulations<sup>11</sup> or by imposing export discipline. It also needs a government bureaucracy and other institutions able to handle these tools efficiently and flexibly without being hijacked by particular interests; and it needs resources to finance expensive R&D.

- An *internalization-oriented* strategy relies heavily on technology transfers via FDI. The rationale is to access technology as rapidly as possible, without investing public resources, and without waiting for domestic firms to develop technological capacities. There are two sub-strategies. In one, the economic role of government is minimal - ensuring a stable macroeconomic environment and good infrastructure. This strategy might lead to the exploitation of static comparative advantages, but it may not push the local technological frontier or promote industrial upgrading and extensive local linkages. In the other, the government may play a proactive role in targeting TNCs and inducing them to upgrade technologies and enter complex activities. This approach is also difficult to replicate. It requires very efficient targeting and massive investments in skills and institutions, difficult for large economies with a great number of domestic firms that need incentives or support to upgrade technology.

#### **Box VII.9. FDI and technology development strategies in the Republic of Korea**

The Government of the Republic of Korea combined selective import-substitution with forceful export promotion, protecting and subsidizing targeted industries that were to form its future export advantage. In order to enter heavy industry, promote local R&D capabilities and establish an international image for its exports, the Government promoted the growth of large local private firms, the *chaebol*, to spearhead its industrialization drive. Korean industry built up an impressive R&D capability by drawing extensively on foreign technology in forms that promoted local control. Thus, it was one of the largest importers of capital goods in the developing world, and encouraged its firms to obtain the latest equipment (except when it was promoting particular domestic products) and technology. It encouraged the hiring of foreign experts, and the flow (often informal) of engineers from Japan to help resolve technical problems.

The Government permitted FDI only when other means of accessing technology were not available; it consistently sought to keep control firmly in local hands. Foreign majority ownership was not permitted unless it was a condition of having access to closely held technologies, or to promote exports in internationally integrated activities. Some TNCs were induced to sell their equity to local partners once the technology transfer was complete. In the initial stages of development of important industries like electronics, however, TNCs played a major role in launching export-oriented assembly. Once it became clear that the pace of technological upgrading of foreign affiliates was slower than the Government desired, it pushed local firms to acquire independent capabilities. These capabilities ranged from the mastery and improvement of imported technologies to the absorption of foreign management practices and, later, to innovative R&D.

The authorities also intervened in major technology contracts to strengthen domestic buyers. It sought to maximize the participation of local consultants in engineering contracts to develop basic process capabilities. The 1973 Engineering Service Promotion Law protected and strengthened domestic engineering services. The Law for the Development of Specially Designated Research Institutes provided legal, financial and tax incentives for private and public institutes in selected activities.

Technological efforts were supported in several ways. Private R&D was directly promoted by incentives and other forms of assistance. Incentive schemes included tax-exempt technology development reserve funds, and tax credits for R&D expenditures as well as for upgrading human

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**(Box VII.9, concluded)**

capital related to research and setting up industry research institutes. The Government also gave accelerated depreciation for investments in R&D facilities and a tax exemption for 10 per cent of cost of relevant equipment. It reduced duties on imported research equipment, and reduced excise tax for technology-intensive products. The Korea Technology Advancement Corporation helped firms to commercialize research results. A six per cent tax credit or special accelerated depreciation provided further incentives.

The Government directly financed a large number of projects judged to be in the national strategic interest. Specifically, it supported three R&D programmes: the Designated R&D Programme, the Industrial Technology Development Programme and the Highly Advanced National Project Programme. By 1993, the Government had invested around \$3.5 billion in these programmes.

The import of technology was promoted by tax incentives: transfer costs of patent rights and technology import fees were tax-deductible; income from technology consulting was tax-exempt; and foreign engineers were exempt from income tax. In addition, the Government gave grants and long term low interest loans to participants in “national projects”, and gave tax privileges and official funds to private and government R&D institutes to carry out these projects. The Korea Technology Development Corporation provided technology finance.

However, the main stimulus for industrial R&D was less the specific incentives to R&D than the overall incentive regime. This created the *chaebol*, gave them a protected market to master complex technologies, minimized reliance on FDI, and forced *chaebols* into international markets where competition ensured that they would have to invest in their own research capabilities. This is why, for instance, the Republic of Korea has 35 times higher R&D by industry as a proportion of GDP than Mexico (with roughly the same size of manufacturing value added), a country that has remained highly dependent on technology imports. At the same time, it may not have created sufficient innovative capabilities on the part of the *chaebol*, which excel more at implementing rather than creating state-of-the-art technologies.

*Sources:* Lall, 1996; Ernst, Ganiatsos and Mytelka, 1998a.

In practice, most developing countries combine these two strategies, retaining a role for policy in shaping and directing resource allocation and technology transfer. This may require governments to target complex technologies and induce TNCs to upgrade local functions. This strategy is usually combined with measures to build local technological and innovatory capacity, and promote linkages with the domestic economy, working with a variety of institutions (such as departments of enterprise development, labour or education). It calls for a strong administrative infrastructure and skill base, able to select technologies, target and bargain with TNCs, and handle incentives efficiently. Policies towards technology transfer by TNCs need to be tailored to the context in which they take place, in particular the technology involved, capabilities of governments and recipient enterprises, and the learning environment. What is appropriate for high technology or a highly industrialized economy may not necessarily be appropriate for a simple technology or a less developed country. The less developed a country and the lower its domestic capabilities, the more it might resort to the internalization strategy, using FDI to overcome obstacles to technological upgrading. But it needs to be borne in mind that technologically competent enterprises can exist even in low-income economies and may well be in a position to absorb or even generate technology.

Government capabilities are crucial. Experience shows that certain types of interventions can impose high costs on an economy without corresponding gains in technological capacity. Import-substituting regimes that try to build capabilities behind high levels of tariff protection, without complementary policies to induce technological mastery and stimulate and support technological change, may result in an inefficient technological base. A critical element here is strategic planning, the ability to conceptualize the capacity-building process in an integrated fashion, across the skill, financial, infrastructure and technological markets that firms need to develop their capabilities – initiating a virtuous cycle of continuous upgrading and innovation.

However, the new technological and policy context makes it more difficult to promote local technology development. The sheer pace of technological change makes technology strategies more risky and expensive. Not too many developing countries are in a position to create broad and deep domestic capabilities in the immediate future. In the case of developing countries, therefore, especially the least developed, host country efforts need to be complemented by international efforts to foster effective transfer of technology to these countries. The issue of transfer of technology to developing countries has been recognized in various multilateral fora since the 1970s (box VII.10).

**Box VII.10. Transfer of technology in multilateral fora**

The issue of transfer of technology to developing countries has been an important component of the international economic agenda since the launching, under the aegis of UNCTAD, of negotiations on an international code of conduct on transfer of technology in the 1970s. At that time, technology was generally assumed to be like any other product, and the process of technology transfer to be effected as any other transaction between a seller and a buyer. The “tacit” elements of the transfer or the role of local learning, were not given much consideration. Thus, the problem of transfer of technology was seen largely in terms of supply-side constraints resulting from monopolistic behaviour and associated restrictive business practices in the international technology market. The code of conduct was proposed as a solution to the problem, as perceived at the time, by liberalizing trade in technology and introducing guidelines on the terms and conditions of transfer of technology to developing countries.

Although the negotiations on the draft code helped to highlight the concerns and problems of developing countries regarding transfer of technology, they did not lead to concrete action at the multilateral level as its initiators had hoped for. In the end, the negotiations on the draft code were overtaken by other developments. These include, in particular, the liberalization of markets across countries, rapid advances in technology, the growing knowledge-intensity of production as well as its diffusion across sectors, and the emergence of innovation and learning as important determinants of competitiveness. These developments had an impact on the way technology and the process of technology transfer are perceived in the new context. In the past, much emphasis was placed on the transfer of technology *per se*, rather than on its diffusion. Consequently, policy prescriptions were focused on defensive measures to remedy disfunctions in the international market for technology. Today defensive measures are less in favour on the grounds that market imperfections are best addressed by measures aimed at improving the contestability of markets B hence the importance of competition policy B rather than by interventions intended to modulate forcibly the conditions under which the transfer of technology takes place. Increasingly, the focus is on effective transfer of technology which includes the diffusion and generation of technology locally.

Although some developing countries have succeeded in building local technological capability, the transfer of technology from abroad remains the most important source of technology for most developing countries. The facilitation of such transfer through international measures that complement host country efforts to build the capability of local firms to select, acquire, adapt and master the technology continues, therefore, to be an important issue for developing countries. In spite of the failure of the code negotiations, the issue has thus been a recurrent theme in multilateral discussions that have taken place in recent years. In the context of multilateral environmental agreements, for example, the issue of transfer of technology has been a regular feature of any such agreements negotiated since the Rio de Janeiro Earth Summit. Thus, the Rio Declaration invited industrialized countries to take “all practicable steps to promote, facilitate and finance, as appropriate, the transfer of, or access to, environmentally sound technologies and know-how” (article 4.5). In the context of the TRIPs Agreement (article 67) (WTO, 1995), specific reference is made to technology transfer problems of the least developed countries (LDCs); it states that industrialized countries “shall provide incentives to enterprises and institutions - for the purpose of promoting and encouraging technology transfer - in order to enable them [the LDCs] to create a sound and viable technological base” (TRIPs Agreement - article 67) (WTO, 1995). An analogous treatment is found in the GATS Agreement (article IV) (WTO, 1995).

*Source:* P. Roffe. and T. Tesfachew, 1999.

The new rules of international trade, investment and the protection of intellectual property rights have rendered many instruments used in the past by the then newly industrializing economies difficult to apply. As regards industrial policy, for instance, it is becoming harder to impose local content rules, give infant industry protection, or subsidize targeted activities. Nevertheless, with regard to technology policy, there is some scope for developing countries to provide technology support services and finance for innovation.<sup>12</sup> Also, a number of policy options remain to strengthen the “supply side”. The main ones include minimization of business transaction costs, human capital formation, domestic enterprise development, cluster promotion, encouraging closer links between industry and research, and strengthening physical infrastructure. These are the basic building blocks of competitiveness strategies applied in many mature industrial countries, and they are applicable in developing ones as well. Taking general supply side measures as given, let us consider the menu of options to encourage more specifically the transfer, diffusion and generation of technology by TNCs fully recognizing, of course, that the various issues are closely intertwined.

## 1. Transfer

The most important determinants of technology transfer are the levels of skills and capabilities of an affiliate, its competitors and the supplier network, and the competitive environment facing the affiliate. The higher the level of local capabilities and the more competitive the environment, the better the quality of the initial transfer and the more rapid its upgrading. TNCs invest in strengthening in-house skills and technical knowledge to the extent necessary to achieve efficient production but not necessarily to raise capabilities to the next level of technology, or promoting technology transfers to local firms. Possible policies are:

- Attracting TNCs – from developed and developing countries – to specific high-technology industries like computers and computer components, software development, or biotechnology. Such targeting can be direct (a positive list of industries open to FDI), or indirect (various incentives). For the latter, instruments include fiscal (tax) deductions, duty drawback provisions and financial incentives (grants and low interest rate loans). This can be encouraged by home and host country ministries, boards of investment or chambers of commerce, and it can also include information dissemination. Instead of targeting specific industries, governments could offer incentives to foreign investment projects whose products or processes are new to the country. This approach gives the government more flexibility than simply using a list of “promoted” industries; however, there may be problems in defining new technologies and in placing considerable discretionary power in the hands of government regulators.
- Offering incentives to existing investors to move into more complex technologies and to increase or upgrade the technological R&D undertaken locally. This involves both upgrading all factor inputs that TNCs need (infrastructure, skills, information and so on) and giving targeted incentives to launch new functions by existing affiliates or to attract technology-intensive sequential investment. The nature and level of incentives can be geared to the specific technological objectives of a government, and they can be designed in consultation with TNCs and local firms, drawing on successful experiences. A variant of this strategy is to give incentives for investment in productivity-enhancing equipment, such as process automation or robotics, regardless of the industry in which an investment is made. Singapore (box VII.11) and Ireland are good role models.
- Developing industrial parks with high quality infrastructure to attract high technology investors. Government can either develop these parks itself or it can grant incentives for private developers. Governments can go further and develop industrial parks for specific high-technology industries such as computer software or hardware. If properly executed, industrial parks can be a very effective means of attracting high-technology investors. Governments can also enter the pre-production stage by fostering high-technology entrepreneurs in technology incubators located in universities or technological institutes in an industrial park.

- Attracting TNCs into natural resource processing and inducing greater local value added in resource-based exports. This strategy can lead not only to increased domestic value added but also to considerable technology transfer. For example, bans on the export of raw hardwood timber from Indonesia and the Lao People's Democratic Republic led to the creation of furniture, flooring and plywood industries in conjunction with TNCs. The Government of the Philippines induced foreign copper mining companies to form a new enterprise to smelt and refine copper. However, there is a risk that such programmes might convert valuable natural resources into less valuable finished products. This has been the case with some agro-industrial exports where the unit value of the processed product is lower than that of fresh produce or unprocessed products (UNCTAD, 1997c).
- Using TNCs present in a country to attract investment by their suppliers overseas. Suppliers are often small companies with highly specialized expertise, not accustomed to operating abroad. These might be induced to relocate if offered financial or institutional support. To attract such investors, host governments may need to relax joint venture or minimum capital requirements.
- Changing the competitive environment and the existing incentive structure to promote the use of world-class technologies and management methods, liberalizing the trade regime or promoting exports.
- Improving the skill and training base. Policies have to both raise the quality of the labour force outside the firm and encourage more training of employees within the firm or in special institutions. The former involves general education policies, the latter addresses the specific skill needs of TNCs (box VII.11). These options are discussed in more detail in chapter IX.
- Collecting, organizing and disseminating information about the technical, research and training facilities in the host country.
- Improving technology access for local enterprises, by providing information on foreign and local sources of technology.

**Box VII.11. Singapore's strategy to upgrade foreign affiliate technology**

After a brief period of import substitution, Singapore switched to free trade. It pursued growth by aggressively seeking and targeting FDI, while raising domestic resource mobilization by various measures. Moreover, it chose to deepen its industrial and export structure and used a number of selective interventions to move from labour-intensive to capital, skill and technology-intensive activities. Its technology acquisition policy was directed at consciously acquiring, and subsequently upgrading, the most modern technologies in highly internalized forms. This allowed it to specialize in particular stages of production within global systems of TNC production, drawing on the flow of innovation generated by the firms and investing relatively little in its own innovative effort.

To attract FDI while inducing it to upgrade, Singapore developed a highly efficient system of attracting and targeting TNCs. To support this targeting, it invested heavily in education, training and physical infrastructure. It developed an industrially-g geared higher technical education structure, together with one of the best systems in the world for specialized worker training. Some of the leading training centres were set up jointly with TNCs, one from India. The Tata group started the precision instruments training centre.

The country's FDI policies were based on liberal entry and ownership conditions, easy access to expatriate skills, and generous incentives for the activities that it was seeking to promote. It set up the Economic Development Board (EDB) in 1961 to co-ordinate policy, offer incentives to guide foreign investors into targeted activities, acquire and create industrial estates to attract TNCs, and generally to mastermind industrial policy. At times, it deliberately raised wages to accelerate technological upgrading, though in the mid-1980s a sharp rise in wages had to be modified to restore competitiveness. Over time, TNCs were drawn into the industrial policy-making process, and the EDB emerged as one of the world's most successful IPAs.

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**(Box VII.11, concluded)**

The public sector played an important role in launching and promoting activities chosen by the Government, acting as a catalyst to private investment or entering areas that were too risky for the private sector. While the main thrust of Singapore's technology import policies was to target FDI, in recent years the Government has also sought to increase linkages with local enterprises by promoting subcontracting and improving extension services. The Government itself has launched R&D centres to create new capabilities in the economy, which would later attract TNC participation. A good example is the Institute for Molecular and Cell Biology, established in a university and now securing research contracts from leading pharmaceutical TNCs.

The decisions of TNCs about what new technologies to bring into Singapore were influenced by the incentive system, the provision of excellent infrastructure, and the direction offered by the Government of Singapore. It itself responded (or anticipated through proactive planning and consultation) by providing the necessary skilled manpower, often in consultation with TNCs. In many instances, it was the speed, efficiency and flexibility of Government response that gave Singapore the competitive edge compared with other competing host countries. In particular, the boom in investment in offshore production by TNCs in the electronics industry in the 1970s and the early 1980s created a major opportunity. The Government seized it by ensuring that enabling support industry, transport and communication infrastructure, as well as skill development programmes were available to attract these industries to Singapore. This concentration of resources helped the country to achieve significant agglomeration economies and hence establish strong first-mover advantages. It was able to attract related industries like the disk-drive industry, where all the major United States disk-drive makers now have plants in Singapore. These industries demanded not only electronics components and PCB assembly support, but also various precision engineering-related supporting industries such as tool and die, plastic injection moulding, electroplating and others. These supporting industries were actively promoted by the government as part of a deliberate cluster promotion strategy.

As labour and land costs rose, the Government of Singapore used the opportunity to encourage TNCs to reconfigure their operations on a regional basis. A special programme was launched to make Singapore attractive as a regional headquarters for TNCs, and for regional marketing/distribution/service/R&D centres to support manufacturing and sales operation in the region. To promote such a reconfiguration, new incentives such as the regional headquarters scheme, international procurement office scheme, international logistics centre scheme, and the approved trader scheme were introduced.

*Sources:* Lall, 1996; Wong, 1997.

## 2. Diffusion

The diffusion of technology by TNCs to vertically and horizontally linked enterprises again depends greatly on their receptive capabilities and the competitive environment. Apart from general measures discussed above, specific measures should be considered to raise linkages between TNCs and local suppliers, including SMEs:

- Encouraging technology alliances between local firms and TNCs by offering fiscal benefits for R&D or the exploitation of its results.
- Improving extension and training services to strengthen the capabilities of SMEs.
- Assisting enterprises in building local brand names that might be attractive to TNCs.
- Developing backward linkage programmes between TNCs and domestic suppliers. These involve intensive consultation, training and technology transfer between TNCs and potential domestic suppliers. In exchange for incentives in the form of inexpensive infrastructure, Mattel in Indonesia, for example, agreed to develop domestic suppliers of inputs to its plastic toys production. Similarly, under its Local Industries Upgrading Programme (LIUP), the Government of Singapore encourages TNCs to "adopt" a group of SMEs and transfer technology and skills to them. It pays the salary of a full-time procurement expert to work for specified periods with the adopted firms and help them upgrade their production and management capabilities to the standards required.



- Providing venture capital to encourage TNC employees and others to establish enterprises that tap the skills and technologies developed by TNCs. For example, Malaysia has developed a special fund to provide entrepreneurs with low-cost capital. In Indonesia, government policy mandates that banks allocate a specified percentage of total loans to SMEs.
- Devising programmes to invite nationals living overseas, especially those with a higher education, to return as investors. Several economies, such as Singapore, India, and Taiwan Province of China have such programmes offering, for instance, attractive financing packages to expatriates who start high-technology companies.
- Adopting effective competition policies to stimulate efficient domestic competition and prevent restrictive business practices and abuse of monopoly positions by affiliates.
- Providing, or enhancing the performance of, the technology infrastructure. This would include establishing or enhancing quality standardization and metrology organizations, and providing support for upgrading in compliance with standards such as ISO 9000 or 14000.
- When privatizing technology-intensive state-owned enterprises, a government can insert clauses, for example, on maintaining existing R&D facilities or disseminating technology.

### **3. Generation**

Apart from measures already covered under technology transfer and the upgrading of affiliate functions, those for encouraging local R&D include:

- Encouraging contract R&D with local research institutions and universities by broadening the research areas of the institutions (to make them more industry-oriented) and strengthening their research capabilities. Governments may also consider underwriting part of the cost of approved research contracts and setting up new research institutions in areas of special interest to TNCs. Between 1985 and 1995, for example, Singapore set up a number of research centres focusing on technologies such as biotechnology and electronics. This helped to develop pre-competitive technologies, provide services to companies and deliver specialized training.<sup>13</sup> (Examples from India are reported in table VII.3.)
- Developing human resources for R&D in specialized disciplines (for example, telecommunication software or semiconductor design). This involves supporting local universities and other institutions of higher learning and adapting their curricula. It may also entail investment by foreign universities, to accelerate technology transfer, dissemination and generation and to raise the educational and skill levels of the labour force. Malaysia and South Africa, for example, are following this approach.
- Developing university research laboratories and research institutes. A government can connect such laboratories and institutes to TNC investors and to companies in other countries that contract for their services. India has been successful in following this strategy (table VII.5).
- Offering incentives for affiliates to obtain “product mandates” from parent companies. The offer of fiscal benefits or grants linked to the upgrading of affiliates to handle an entire product, from design to marketing, can be effective where other capabilities are present in a host economy.
- Offering incentives for local R&D more generally, perhaps adapting the incentives to the nature of the technology and research undertaken. Advanced work in strategic areas such as information technology and industrial electronics can, for instance, be given stronger incentives than others.

- Developing local enterprises, including clusters and networks of high-technology firms and enterprises active in niche markets, to attract knowledge-intensive FDI (Kumar, 1998; UNCTAD, 1998d).
- Providing tax incentives for TNCs that undertake R&D in the host country, provide grants or provide government cost-sharing in R&D projects. Examples include tax deduction of R&D expenses, duty free importation and accelerated depreciation for research equipment. Some countries allow for a 200 per cent tax deduction on such expenses.
- Accelerating technology generation by enforcing intellectual property rights. This encourages technology generation by domestic companies as well as by TNCs. However, unnecessarily strict enforcement of intellectual property rights may impede efforts to reverse-engineer foreign technologies, an avenue for technology generation in many developing countries. It may also raise the cost of technology transfer.
- Supporting local innovation systems. This entails some form of strategic planning – or vision – regarding a country's future technological development. This, too, will serve to make developing countries a destination for affiliate-based and other R&D.
- Tapping overseas development assistance flows and funneling them into skill development in general, and R&D-related activities in particular.

#### 4. The international dimension

These policy efforts regarding the transfer, diffusion and generation of technology of host countries need to be complemented by international measures. A new positive agenda is needed to take into account recent developments, including the evolution of thinking on technology and the process of technology transfer (Roffe and Tesfachew, 1999). In designing such an agenda as a basis for discussions on international instruments, the following elements could be taken into consideration:

- Examining the policies and incentive structures that technology supplier countries could take to encourage the transfer of technology to developing countries. Indeed, a number of home countries have already introduced tax and other incentive policies with this objective in mind. International negotiations could consider how such an approach could be formalized and institutionalized through multilateral agreements.
- Establishing a transfer-of-technology facility to undertake, among other things, assessments of technology needs of developing countries, in particular the least developed countries; to provide information on foreign technology markets and the legal and administrative frameworks in force in various economies; and to encourage networks and partnerships that promote transfer of technology.
- Defending the interests of both creators and users of technology by maintaining an appropriate balance between the incentives to innovate and the need for adequate diffusion of technical knowledge among firms and countries, and by introducing safeguards to prevent abuse of intellectual property rights.
- Strengthening the negotiating capacities of firms and governments in developing countries, especially in the areas of contract negotiations and other conditions and clauses of transfer of technology.
- Creating conditions for international cooperation in R&D activities and the mechanisms for the transfer and diffusion of the results of publicly-funded R&D activities that have direct bearing on technological capability-building efforts of host countries. This might include support to inter-country research networks (UNCTAD, 1999f and g).

- Providing the necessary institutional and financial means - including dedicated overseas development assistance flows - for the above activities.

Given the role that technology plays in development, it is not surprising that the issue remains on the international agenda. Countries – and firms – could benefit if international efforts in this area could yield tangible results.

## Notes

- <sup>1</sup> See Nelson, 1993. For an extensive discussion of national innovation systems, see for example UNCTAD, 1999f. For a discussion of the relationship between innovation and economic growth, see Cantwell, 1998, and Mytelka, 1998b.
- <sup>2</sup> One problem with patents is that they must be put into production before they can be considered “technological change” or an “innovation”. Many patents never are.
- <sup>3</sup> It needs to be borne in mind that data on R&D are not necessarily comprehensive. Some research activities, notably in developing countries, may not be fully reflected in available statistics.
- <sup>4</sup> The data, from NSB, 1998, are for 1995. Another proxy, on the “output” side of innovative effort, are patents: of all patents taken out in the United States between 1963 and 1995, 62 per cent were of United States origin. Of non-United States held patents, Japan accounted for 35 per cent and Germany 21 per cent. Between 1977 and 1996, the top five countries (all of which are OECD members) accounted for 78 per cent, and the top 10 for 95 per cent, of patents in the United States (Kumar, 1998). However, developing country firms whose main operational activities, or markets, are outside the United States may not apply for a patent there, but instead register them in other regions such as the European Union. Moreover, the costs of patenting in the United States are fairly high. So, R&D output, based on United States patent data, may underestimate the innovation activity of developing countries.
- <sup>5</sup> For instance, in an exercise conducted for this report, outward FDI by the leading 35 outward investors was found to be significantly and positively correlated with R&D propensities. R&D was also highly correlated with the share of technically advanced products in exports and domestic skill endowments. The share of advanced exports was positively related to outward FDI: direct investment and exporting complex products exploited the same set of advantages – innovation and skills.
- <sup>6</sup> See Mytelka, 1999a, for the working of this process in the telecommunications equipment industries.
- <sup>7</sup> On the increasing delinking of innovation from production, particularly in the electronics industry, see, for example, Sturgeon, 1997. Sturgeon argues that the United States electronics industry is developing a new model of industry organization where innovators are out-sourcing increasing shares of their production. The producers are becoming specialized “merchant suppliers” that are building turnkey production networks that can supply a number of firms with total manufacturing capability. Thus, in this industry, the traditional links between innovation, production and integration appear to be breaking down, giving the innovators greater flexibility.
- <sup>8</sup> Patents as a measure of technological activity have advantages over R&D. Patent data are available for longer periods, in more detail and for more countries. In any case, both give very similar geographical distributions (Patel and Pavitt, 1998).
- <sup>9</sup> For a survey see WTO, 1998c.
- <sup>10</sup> The data here refer to enterprise-financed R&D as a proportion of GNP, and are calculated from UNESCO, 1997.
- <sup>11</sup> For an extensive analysis of the role of competition policy to ensure competitiveness, see UNCTAD, 1997a.
- <sup>12</sup> Developing country governments can use technology-related performance requirements and certain government subsidies to enhance their technological capability. Under the Agreement on Subsidies and Countervailing Measures, subsidies to R&D by firms are non-actionable, and hence WTO-conforming. This requires, *inter alia*, that assistance is limited to specified costs (personnel, instruments, equipment, land and buildings, consultancy, overheads and running costs up to 75 per cent of the costs of industrial research or 50 per cent of the costs of pre-competitive development activity (article 8.2 (a)). Under the General Agreement on Trade in Services (GATS), performance requirements - including technology-related ones - can be used as conditions or limitations on market access and national treatment in those sectors in which countries make specific commitments (GATS Articles IV, XVI, XVII and XIX). The TRIMs Agreement does not classify technology-related performance requirements as inconsistent with the obligation of national treatment and the obligation of general elimination of quantitative restrictions provided in GATT 1994.
- <sup>13</sup> For a description of beneficial links between research institutions and enterprises, see Porter, 1998.

# CHAPTER VIII

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## BOOSTING EXPORT COMPETITIVENESS

### A. The competitiveness challenge

Countries engage in international trade for a variety of reasons. Exports, in particular, are a means to generate the foreign exchange required to finance the import of goods and services; to obtain economies of specialization, scale and scope in production; and to learn from the experience in export markets. In a globalizing world, furthermore, export success can serve as a measure for the competitiveness of a country's industries.

Export success among developing countries has been concentrated in a few countries (annex tables A.VIII.1 and A.VIII.2). The comparative advantage of most developing countries lies traditionally in primary commodities and unskilled-labour-intensive manufactures. Over time, as they grow and accumulate capital and skills, and wages rise, their competitive base has to change. They have to upgrade their primary and labour-intensive exports into higher value-added items, and they have to move into new, more advanced, export-oriented activities. Both require greater inputs of skill and technology. Countries can attain these objectives in several ways: by improving and deepening the capabilities of domestic enterprises, by tapping into TNC networks as conduits for trade, or by attracting FDI into export activities and upgrading these activities over time. These strategies may be complementary or alternatives. In most cases they are found together, but different countries deploy different combinations of domestic enterprise-led and FDI-led export development. Neither strategy is easy.

The technological context of export competitiveness is changing rapidly. This can be illustrated by changing patterns of world trade (box VIII.1). There is a consistent trend for exports of technology-intensive products to grow faster than others.<sup>1</sup> Manufactured exports as a whole expand far more rapidly than primary products. Within manufactured exports, growth rises with technological complexity. As a consequence, there are large changes in trade share by technological category (figure VIII.1). Complex (high- and medium-technology) manufactured products are the most dynamic element in world trade. In the 50 fastest-growing manufactures in world trade, they account for over 60 per cent (annex table A.VIII.3). The leading four are all high-technology electronics products; together they accounted for one third of the value of dynamic exports in 1995 and for 37 per cent of the growth in value since 1980. High- and medium-technology products in the group accounted for three-quarters of the total value of dynamic exports and just under half of all manufactured exports in 1995. This trend has continued beyond 1995.

**Box VIII.1. The changing technology composition of world exports and exports from developing countries**

The share in world merchandise trade of technologically complex products<sup>a</sup> has risen steadily in recent years. In fact, the higher the level of technological sophistication, the higher the export growth rate – with differences in dynamism rising over time. World exports of primary products grew at a modest 2.3 per cent *per annum* during 1980-1990 and at only 1.4 per cent over 1990-1995. At the other end of the spectrum, high-technology products (fine chemicals and pharmaceuticals, advanced electronics, aircraft, and precision instruments) grew at around 12 per cent per annum (compound in both periods). Medium-technology products (most industrial machinery, automobiles, simple electronics, chemicals) grew at 8.4 per cent and 6.9 per cent. Low-technology products (textiles, clothing, sports goods, toys, simple metal and plastic products, footwear) grew at 7.7 per cent and 5.6 per cent, and resource-based manufactures at 6.0 per cent and 5.3 per cent. When export growth rates generally declined after the 1980s, complex products maintained their growth better than simpler products.

Of the value of the 50 most dynamic merchandise exports in the world over 1980-1995, medium- and high-technology products accounted for a full 75 per cent. Within these very dynamic exports, high-technology products again grew the fastest, followed by medium technology products. Low-technology products were the slowest-growing category. Technological sophistication is thus increasingly important for trade growth.

Over 1980-1995, developing economies had faster rates of export growth than developed ones in all categories of products by technology intensity. In line with received trade theory, the developing economies' share was highest (around 34 per cent) in low-technology products at the end of the period. However, contrary to expectations, their export growth rates were higher in the case of technologically complex products. Consequently, their share in high-technology exports (30 per cent) was higher than for resource based and medium-technology exports, and may soon overtake their share of low-technology exports. In 1995, the value of their high-technology exports (\$299 billion) was higher than low-technology exports (\$266 billion), and comprised the largest single category. This was partly due to the relocation of labour-intensive processes in high-technology production by TNCs, and partly to the growth of indigenous capabilities in countries such as the Republic of Korea and Taiwan Province of China.

Export success in the developing world, however, was highly concentrated by region and country. Asian developing countries accounted for 78 per cent of total manufactured exports, and 89 per cent of high-technology exports. Latin America accounted for 17 per cent of the total, 28 per cent of resource-based, 12 per cent of low-technology, 28 per cent of medium technology and 11 per cent of high-technology manufactures. Mexico dominated Latin American export activity after 1990, mainly because of NAFTA: in 1995, it alone accounted for 90 per cent of the region's high-technology, 62 per cent of medium-technology and 50 per cent of low-technology exports. Sub-Saharan Africa contributed 1.4 per cent of the developing world's manufactured exports in 1995; if South Africa and Mauritius are excluded, the share in world merchandise trade drops to 0.1 per cent (in high-technology products, to 0.2 per cent for medium-technology products and zero for high-technology products).

Just 12 economies accounted for 92 per cent of total manufactured exports by developing countries in 1995. These are composed of nine countries in Asia (the four mature newly-industrializing economies, the three newly-industrializing economies, and India and China) and three in Latin America (Argentina, Brazil and Mexico). The level of export concentration has increased over time, from 78 per cent in 1985. The level of concentration rises with technological sophistication, being lowest in resource-based products and highest in high-technology products. The shares of the top 10 exporters in total developing country exports in 1997 were: high-technology 98 per cent, medium-technology 87 per cent, low-technology 84 per cent and resource-based 72 per cent. The concentration level for total manufactured exports was 85 per cent.

*Source:* Lall, 1998 and annex table A.VIII.3.

<sup>a</sup> This classification of exports builds on methodologies developed by the OECD and the United States National Science Foundation, using R&D expenditure as a share of turnover as an indicator of technological intensity. Low-technology products - textiles and clothing, footwear, sports goods, simple metal products - have R&D spending generally below two per cent of turnover. Medium-technology products - most industrial machinery, automobiles, chemicals, simple electronics - are characterized by R&D in the two to five per cent range, while high-technology products - advanced electronics, aerospace, pharmaceuticals and fine chemicals, precision instruments - have R&D exceeding five per cent of turnover. Medium-technology products are complex in terms of processes and skill requirements, but differ from the high-technology group in that the technology does not change rapidly. In this exercise, the trade data are at the three-digit standard international trade classification system (SITC) level. Thus, they do not reflect growth rates for products at more detailed levels: At the five-digit level, some resource-based and low-technology products, for example, grow quite rapidly, and feature among the group of 50 most dynamic exports in world trade (annex table VIII.1). It also needs to be borne in mind that the SITC organizes products by materials used or purpose. This does not capture difference among products in terms of their quality and unit value, and hence it does not distinguish between skill-intensive, high-quality products (designer-label shirts, for example) as opposed to low-quality goods (for example, mass-produced shirts). The exercise is nevertheless as good an approximation as possible, given the trade data available.

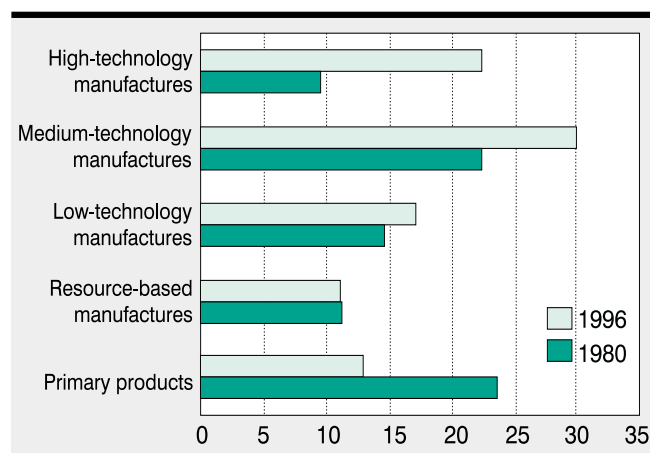


What does this mean for export competitiveness? Markets for technologically complex products are growing faster than those for other products because of the higher income elasticity of demand and greater scope for product innovation and productivity increases. Thus, it is easier for a country to sustain export growth if it can establish a competitive position in these products rather than in traditional resource-based or simple labour-intensive products. It is still possible to grow rapidly in slow-growing product groups, by specializing in dynamic products or by expanding market shares. Some low-technology products face slow demand growth and technological change, but enjoy rapid trade growth because of rapid relocation of production from high- to low-wage countries. This is the case, for example, with recent growth of exports of clothing and footwear. However, growth is likely to slow as the restructuring process matures. More importantly, a competitive position in such products is vulnerable to easy entry by new, lower-wage competitors. The simultaneous entry of several producers can create a glut and considerably lower prices. It is possible to establish more secure, high-value niches by entering high-quality segments, but this is difficult. It requires advanced technological and marketing capabilities, and until now largely remains the preserve of industrialized countries and established traders. Export sustainability requires that developing countries push into these segments, but also that they diversify into more complex, dynamic products as much as they can. Diversification has another important benefit: low-technology products generally offer limited scope for learning and beneficial technological spillovers in comparison to complex products. Thus, export dynamism has large overlaps with industrial and technological deepening (chapter VII).

Past strategies of protected import substitution have often held developing economies back from exploiting fully their initial endowments or creating new skill- or technology-based advantages. Trade and investment liberalization can stimulate both. But it may not suffice by itself. Developing countries face pervasive market, structural and institutional deficiencies that can diminish or abort a vigorous response to market signals. It is necessary to calibrate trade liberalization to the pace at which supply capabilities can develop, and to develop the requisite skill, capital, technology, and other capabilities. Otherwise, a leap into the world of technology- or skill-based competitiveness and growth may prove impossible or exceptionally difficult.

It is not easy for developing countries to launch new exports. They face problems in reaching world levels of productivity and quality. It is costly to collect information about consumer needs and designs or the requirements of industrial firms (where they are exporting intermediate products). Delivery and effective marketing are also difficult. These problems rise with the technical complexity and differentiation of a product. The easiest segments to enter involve simple production processes with low skill needs, no scale economies, undifferentiated products and stable technologies. The most difficult involve complex processes with high learning and skill requirements, rapidly changing technologies, large economies of scale or scope, branded products and after-sale servicing needs. These difficulties notwithstanding, developing countries need to make every effort to enter export markets. TNCs can help in this effort.

**Figure VIII.1: Shares of technologically-complex products in world trade, 1980, 1996**  
(Percentage)



Source: Lall, 1998.

## **B. TNC strategies and role in trade**

TNCs are significant actors in world trade. The paucity of data, however, makes it difficult to put precise figures on their global shares. In the United States, for example, TNCs, both local and foreign combined, accounted for three-quarters of total exports in 1996; over a third was intra-firm. If data from the United States were to be extrapolated for the world as a whole, TNCs would account for two-thirds to three-quarters of world exports, and more than a third of world exports would be between affiliated firms. Another estimate indicates that foreign affiliates of TNCs account for more than one fifth of world exports<sup>2</sup> and one third of developing country exports.<sup>3</sup>

The patterns of trade associated with different TNC strategies in developing countries can be quite complex (UNCTAD, 1996a). They are the outcome of their motivations for FDI (market-, efficiency- or resource-seeking) and their organizational strategies. In traditional stand-alone strategies, bilateral trade between home and host countries largely consists of the export of headquarter services from the parent firm to an affiliate. Where TNCs adopt simple integration strategies between parent and affiliate firms, the volume of exports from host countries can be significant. The use of more complex integration strategies creates a range of opportunities for developing-country exports in products, resources, information and services, both with unrelated firms in world markets and within TNC networks. These networks provide foreign affiliates, and hence developing host countries, privileged access to internal and external international markets. Domestic firms, in turn, can gain access to these markets by linking themselves to TNC networks through sub-contracting and other arrangements (UNCTAD, 1996a). To the extent that FDI helps build export-oriented capacities in host countries and contributes to industrial restructuring, it can increase host countries' competitiveness more generally.

These opportunities may benefit some developing countries while disadvantaging others, depending on corporate strategies. As trade and investment restrictions decrease, the locational decisions of TNCs on plants or corporate functions (e.g. accounting) depend increasingly on economic factors (UNCTAD, 1998a). These include the costs of reaching competitive levels of efficiency as well as transport, marketing and coordination costs. Some activities may be widely dispersed to diversify risk or to be near markets, raw materials or low-cost labour. Others may be more concentrated in a few locations to take advantage of economies of scale in production, innovation or decision-making and agglomeration benefits. In many of the complex and innovation-based industries in which most large TNCs flourish, the forces making for concentration may be stronger. As low-cost labour *per se* becomes less important as a competitive factor, transport and communication costs continue to fall and markets become more globalized, however, more countries that can offer competitive locations can attract FDI.

TNCs themselves are also large markets for internal transactions (intra-firm trade). These markets are, by definition, open only to affiliates and parent firms. Each TNC system comprises a market in which three types of transactions take place: sales by the parent firm to its foreign affiliates; sales by foreign affiliates to their parent firms; and sales between affiliates in different countries. Intra-firm exports of the first category are estimated to be approximately one quarter of exports for Japan (UNCTAD, 1995a) and the United States (box VIII.2). They accounted for over 40 per cent of United States parent company exports in 1996; the share has increased by some 10 percentage points since 1977. For the affiliates of United States TNCs, imports from parent firms represent more than 80 per cent of their total imports from the United States (annex table A.VIII.4). Such intra-firm trade provides affiliates access to firm-specific technology and knowledge. For United States affiliates, the markets offered by other affiliates of the corporate network are more important than the those of the parent companies, and their significance has increased over time, although in the case of affiliates in developing countries, the situation is the reverse (annex table A.VIII.5). The growth of intra-affiliate trade indicates changing industrial structures and consumption patterns in host countries. These changes are also reflected in the export propensities of affiliates (annex table A.VIII.6). As host developing countries grow, domestic markets become more attractive and domestic costs rise, foreign affiliates tend to export

a lower proportion of their output. For example, in the dynamic East Asian economies, the export propensities of foreign affiliates have declined in the 1990s with the growth of local markets and rising labour costs.

### Box VIII.2. The ownership structure of United States exports

The share of TNCs in world exports is difficult to estimate because of the lack of comprehensive data on trade by the ownership of enterprises. The only way to get a general picture is to extrapolate data from countries that provide such information. The United States is the only country to do so on a comprehensive basis. There are six possible export relationships:

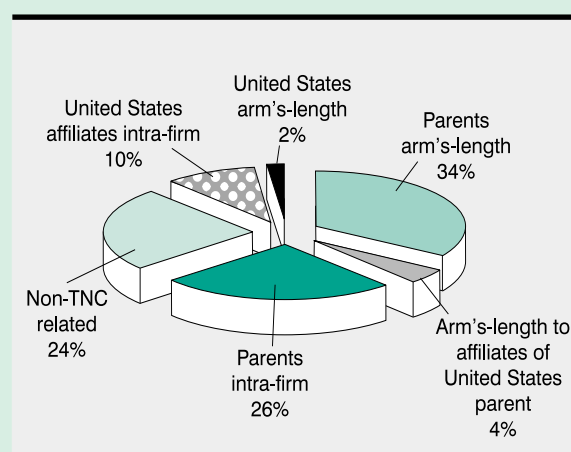
- parent companies exporting to affiliated persons;
- parent companies exporting to unaffiliated persons;
- affiliates of foreign companies exporting to affiliated persons;
- affiliates of foreign companies exporting to unaffiliated persons;
- uninational firms exporting to the affiliates of domestic companies;
- uninational firms exporting to unaffiliated persons.

Parent companies account for 60 per cent of the total value of United States exports (box figure VIII. 1);<sup>a</sup> just under half of this is intra-firm. Total intra-firm exports, parent exports to affiliates plus affiliate exports to foreign parents, comes to 36 per cent of total exports. Previous research shows that the intra-firm exports of parents from Japan and Sweden are roughly similar to that for the United States (UNCTAD, 1995), suggesting that this pattern applies to parent companies from developed home countries. If the United States pattern could be generalized, TNCs would account for around three quarters, and intra-firm trade for over one third of world merchandise exports.

*Source:* UNCTAD.

<sup>a</sup> Some companies could be simultaneously affiliates of foreign and United States companies. The share of exports attributable to such companies is 10 per cent of the total United States merchandise exports. The figure could thus be redrawn to show that affiliates of foreign companies account for 22 per cent of total exports and United States parent companies 50 per cent.

### TNCs and exports from the United States: 1996 <sup>a</sup>



*Source:* UNCTAD, based on published and unpublished data from the United States Department of Commerce and World Trade Organization.

<sup>a</sup> Data for affiliates of foreign companies that are also parent companies in the United States have been included in the data for the parent companies of the United States. The figure is estimated to be 10 per cent of total United States exports.

There is a close relationship between the intensity of intra-firm trade and the R&D intensity of an activity because rapid technological change involves higher transaction costs. For example, the pharmaceutical industry, which spends more than 12 per cent of its production costs on R&D, routes nearly 95 per cent of its international trade through intra-firm networks (OECD, 1996a). In the clothing industry, which spends less than one per cent on R&D, the corresponding figure is only five per cent; however, non-equity relationships and trade between firms linked through such relationships are important in this industry. This has implications for developing host countries. Countries that have - or can establish - more complex and technology-intensive industries and activities have significant opportunities for export expansion by integrating more closely into TNC networks. On the other hand, those that can only attract FDI in low-skill manufacturing activities may not be able to access the dynamic internalized markets of TNCs, but can take advantage of the trading networks built up through inter-firm agreements of various kinds.

TNCs also have a role to play in trade in commercial services. In the new context, the potential for exporting services across borders has increased considerably, thanks to technological advances in telecommunications and computer-communication links that enhance the tradability of information-intensive services. While FDI remains one mode of delivery for many services, such as financial services, business services and telecommunications services in which TNCs have strong competitive advantages, there is scope for increasing trade at arm's-length. This growth potential can be exploited by developing countries that host TNCs in such services. They may be able to acquire access to the internal and external markets of TNCs as they take advantage of the liberalized trading system.

## **C. The role of FDI in building export competitiveness**

TNCs impact on export competitiveness in a variety of ways, both positively and negatively (table VIII.1). Their greatest potential contribution lies in difficult, technology- and marketing-intensive products, where they have the largest ownership advantages over other firms. There are, of course, different kinds of TNCs. The large globalized firms from industrial countries can promote exports best in complex or branded products. TNCs from developing countries or smaller firms from industrial countries might promote exports of simpler or less marketing-intensive products, or increase regional exports. This section deals with the role of TNCs in strengthening the *manufacturing* export competitiveness of developing countries. The focus here is on manufacturing as manufactured products are relevant for a wide group of countries and hold considerable potential for dynamic growth. This is not to say that TNCs do not play a role in other sectors as well. Indeed, traditionally, they were important in natural resource exports (ESCAP/UNCTC, 1985; ESCAP/UNCTAD, 1994), and their role is growing in the export of certain processed agricultural products (box VIII.5). They are also playing an increasing role in services, especially in tourism (UNCTAD, 1998c).

### **1. Technology and trade patterns**

The pattern of manufacturing export success in the developing world is highly skewed, as noted earlier (box VIII.1). A small number of countries dominate manufactured export activity, with concentration level rising by level of technological sophistication (annex table A.VIII.1). While there are differences in specialization, the same economies appear in the list of top exporters of most product categories. If exports are measured on a *per capita* basis, most leaders remain the same, although large countries like China and India move down the list (annex table A.VIII.2). Some small countries appear unexpectedly high on the list, e.g. Trinidad and Tobago and Oman in medium technology and resource-based exports (based on oil production and some assembly) and Mauritius (garment exports) (annex table A.VIII.2).

Reflecting TNC strategies and host country conditions, the role of TNCs in manufactured exports, disaggregated by different technological categories, has varied among countries and over time.

*Low-technology activities.* TNCs from developed countries played a critical role in the initial stages in stimulating labour-intensive exports from developing countries; TNCs from developing countries become more important in later stages. The evolution differed by host region and country, largely reflecting the growth of local capabilities. International production involving labour-intensive activities, led by clothing, started in the 1960s, when developed countries eased their import barriers and facilitated offshore processing by granting tariff privileges. Declining transport costs and the liberalization of FDI regimes made the process economical. The developing countries that attracted export-oriented FDI had low-cost semi-skilled labour. But they also had more: attractive fiscal incentives, export-oriented production facilities like export processing zones (EPZs) and infrastructure, and, in the most successful cases, a cadre of skilled technicians and managers. EPZs contain the disruption caused to domestic industry in host countries; industrialized countries used import quotas on the most aggressive exporters to contain damage to domestic industries in the home country. The latter policy was a key factor in spreading activity to new locations which had under-utilized quotas (Navaretti, Faini and Silberston, 1995).

Table VIII.1. Possible contributions of inward FDI to competitive advantages of host countries

Issue	Positive contribution	Negative contribution	Host country characteristics that favour positive contributions
1. Resources	By providing additional resources and capabilities, viz. capital, technology management skills, access to markets	May provide too few, or wrong kind of resources and assets. Can cut off foreign markets compared with those serviced by domestic firms. Can fail to adjust to localized capabilities and needs.	Availability of local resources at low real cost, particularly those complementary to those provided by foreign firms. Minimal structural distortions or institutional impediments to upgrading of indigenous assets. Development strategies that help promote dynamic comparative advantage.
2. Entrepreneurship	By injecting new entrepreneurship, management styles, work cultures and more dynamic competitive practices.	An inability of foreign entrepreneurship, management styles and working practices to accommodate or, where appropriate, change local business cultures. The introduction of foreign industrial relations procedures may lead to industrial unrest. The pursuance of anti-competitive practices may lead to an unacceptable degree of market concentration.	The policies pursued by host governments to promote local entrepreneurship and a keen and customer-driven work ethic; the character and efficiency of capital markets; the effectiveness of appropriate market-facilitating policies. Large countries may find it easier to introduce some of these conditions than smaller countries.
3. Efficiency	By a more efficient resource allocation, competitive stimulus and spill-over effects on suppliers and/or customers. FDI can help upgrade domestic resources and capabilities as well as the productivity of indigenous firms, and foster clusters of related activities to the benefit of the participating firms.	Can limit the upgrading of indigenous resources and capabilities by restricting local production to low value-added activities and importing the major proportion of higher value-added intermediate products. May also reduce the opportunities for domestic agglomerative economies by confining its linkages to foreign suppliers and industrial customers.	The form and efficiency of macro-organizational policies and administrative regimes. In particular, the benefits likely to be derived from FDI rest on host governments providing an adequate legal, commercial and assigning priority to policies that help upgrade human and technological capabilities and encouraging regional clusters of related activities, e.g., science and industrial parks.
4. Tax revenue	By adding to the host nation's gross domestic product (GDP), via 1-3 above, and by providing additional tax revenue to governments.	By restricting the growth of GDP via 1-3 above. By transfer pricing or other devices to lower taxes paid to host governments.	See 1-3 above. Suitable policies of tax authorities of host governments to minimize transfer pricing abuse. Countries that have the most to offer TNCs are likely to be the most successful in implementing these policies.
5. Balance of payments	By improving the balance of payments, through import substitution, export generating or efficiency-seeking investments.	By worsening the balance of payments, through limiting exports and promoting imports and out-competing indigenous firms that export more and import less.	Need to take a long view of importing and exporting behaviour of foreign affiliates. The key issue is not the balance of payments <i>per se</i> , but the contribution of FDI to economic efficiency, growth and stability. However, countries with a chronic balance-of-payment deficit may find it difficult to completely liberalize their balance-of-payments policies.
6. International economic integration	By linking better the host economy with the global market-place and helping to advance economic growth by fostering a more efficient international division of labour.	By worsening the balance of payments, through limiting exports and promoting imports and out-competing indigenous firms that export more and import less.	As 3 above and, in particular, the extent to which host country governments can pursue policies that encourage investing firms to upgrade their value-added activities and invest in activities that enhance the dynamic comparative advantage of indigenous resources. The gains from 6 are particularly important for smaller countries.
7. Political, social and cultural	By more directly exposing the host economy to the political and economic systems of other countries; the values and demand structures of foreign households; attitudes to work practices; incentives; industrial relations and foreign workers; and many different customs and behavioral norms of foreign societies.	By causing political, social and cultural unrest or divisiveness; by the introduction of unacceptable values (e.g. with respect to advertising, business customs, labour practices and environmental standards); and by the direct interference of foreign companies in the political regime or electoral process of the host country.	The extent which a society is strong and stable enough to adjust smoothly to technological and political change. Also, the strength and quality of government regulations and norms; the nature of the host country's goals and its perceived trade-off between, for instance, economic growth, political sovereignty and cultural autonomy. The difficulties in optimizing the benefits of the openness induced by FDI will be greatest in countries which are most culturally distinct from their trading or investing partners.

Source: UNCTAD, based on Dunning, 1994, pp. 46-47.



The search for new locations for clothing production involved not just producers from developed countries but also garment retailers, importers and wholesalers. Each used different ways of securing low-cost supplies. Many textile and garment manufacturers used FDI, setting up wholly-owned affiliates overseas. Retailers and wholesalers (and some producers) preferred arm's-length buying or subcontracting arrangements with local firms in low-wage countries, providing the designs, fabrics and accessories and, where necessary, technical assistance. TNCs set up the mass production of standardized items in low-wage economies like Bangladesh or in economies with privileged access to their home markets such as Morocco or Costa Rica. They set up more sophisticated facilities, with quicker response times, higher-quality products and more local linkages in countries in the advanced newly-industrializing economies (and, more recently, in Central and Eastern Europe). The role of FDI – but not necessarily that of TNCs – was low in countries where local firms had good capabilities and could undertake subcontracting at low cost to the buyer. The FDI role tended to be larger when local capabilities were weak (Ernst, Ganiatsos, Mytelka, 1998a).

In the early stages, in the 1960s and 1970s, most developing-economy clothing exports came from local firms in Asia (mainly Hong Kong, China; the Republic of Korea; and Taiwan Province of China). Over time, these firms developed their capabilities further, diversifying products, intensifying local linkages, improving quality and broadening their base of markets and buyers. Many moved into designing products, establishing marketing facilities overseas, some even succeeding in promoting their own brands, notably in destination markets in other developing countries. As wages rose and quota limits were filled, they relocated their activities – generally the simpler products and processes – to cheaper sites. Over time, they came to account for large parts of textile and clothing exports from Asia. Much of the relocation by firms from the Asian newly-industrializing economies took the form of FDI and joint ventures in neighbouring countries – an early impetus to the emergence of developing-country TNCs (UNCTAD, 1995a). However, there was also significant subcontracting to local firms. In due course, newly-industrializing economies' exporters became important intermediaries for customers and TNCs in rich countries, a triangular relationship unique to the region.

The learning process was repeated in the newer developing country entrants, as local enterprises developed capabilities and took increasing shares of export activity. In the 1990s, the main recipient of FDI from the newly-industrializing economies was China, now by far the largest exporter of clothing and other low-technology products in the developing world (annex table A.VIII.1). Other important recipients of FDI from newly industrializing Asian economies in clothing were Bangladesh, Indonesia, Malaysia, Philippines, Sri Lanka and Vietnam; there is also some activity in Africa and Latin America, particularly Central America and the Caribbean. Traditional textile exporters in India and Pakistan also went into clothing exports successfully, selling directly to buyers from developed countries and with relatively low direct foreign involvement.

European TNCs have been important in labour-intensive exports from North Africa, and United States firms in exports from Central America and the Caribbean. This process started later, in the 1980s, when producers of brand-named clothing started to look for low-cost sites with unfilled quotas (to meet the intense competition from Asia). Their choice of location was strongly influenced by market access and tariff provisions granted by their home countries. While there was also increasing participation by local firms in the host countries, there was, in general, less development of local capabilities than in Asia (Mortimore, 1998a). Most production remains in low-quality segments where wage costs are the main competitive factor; there is little design capability or independent marketing. The triangular arrangement that has taken strong hold in Asia is absent.

*Medium- and high-technology activities.* The export role of FDI, particularly by TNCs from developed countries, has understandably been larger in complex industrial activities. Again, this role has varied by country, and has been especially important in three types of activities: *offshore assembly, mature infant industries and large-scale processing of natural resources for exports.*

- *Offshore assembly* for export is concentrated in electrical and electronic industries (Yeats, 1998), with some activity in automotive and other engineering products. The activity tends to have low local content and take place in EPZs, in relative isolation from the domestic economy of host countries (box VIII.3). While its determinants – low labour costs – are similar to those of low-technology export-oriented activities, high-technology activity differs in its organization. It is predominantly a part of integrated TNC systems (making subcontracting to independent local firms difficult); advanced technological functions and processes remain in the home countries. These systems have developed complex specialization patterns, with assembly facilities being set up in emerging newly-industrializing economies, more advanced facilities in mature newly-industrializing economies, and design in home countries. For instance, in the hard disk drive industry, United States TNCs conduct innovative R&D at home, perform complex technological tasks in Singapore and less advanced ones in Thailand and, more recently, China (Wong, 1997).

The activity of TNCs in offshore assembly for exports in medium- and high-technology activities is also far more concentrated than in low-technology assembly. The main developing countries involved are Malaysia, Philippines, Singapore and Thailand in Asia and Mexico in Latin America (annex table A.VIII.1). Taiwan Province of China also has a substantial TNC presence in electronics, but local firms have considerable technological

### Box VIII.3. Boosting export competitiveness with EPZs

EPZs are geographically distinct areas into which materials are imported duty free and transformed for export, with strictly controlled trade with the rest of the country where they are located. They vary considerably in size and composition. In some cases, they are as large as industrial parks; many countries offer EPZ privileges to individual factories (with in-bond facilities). In others, such as Singapore, they cover the entire country. EPZs allow to exploit the location-specific assets of a host country while avoiding the restrictions imposed by its trade regime, providing good infrastructure and offering fiscal incentives.

Although there are EPZs in developed countries (in 1997, the United States had 213 out of an estimated 845), they are predominantly located in developing countries, where the locational advantage is low-cost labour. Apart from access to duty-free imports, most EPZs offer incentives such as tax holidays and training grants. The impact of EPZs on increasing exports by host developing countries is undeniable. Many countries, such as Costa Rica, China, Mauritius, Bangladesh, Singapore, Malaysia and Sri Lanka, have enjoyed spectacular growth in manufactured exports from EPZs. Such exports account for 50 per cent of Haiti's garment exports and 77 per cent of Mauritius's total exports. The most successful exports have been garments (driven by quota allocation systems under the Multi-Fibre Agreement) and semi-conductors (annex table A.IX.3).

The impact of EPZs on long-term export competitiveness, however, is unclear. An once-for-all increase in exports based on low wages is not the same as sustained upgrading of skills and capabilities. The generous use of incentives to attract FDI to EPZs often raises doubts about the net contribution of EPZs to the country. Their sole benefit often lies in the employment of low-wage, low-skilled labour, with little spillover to domestic firms or to skill and technology development. A transition from labour-intensive assembly with very low value added to more value-added activities and deeper local linkages may not take place. Where it does, it takes time. In Bangladesh, where garment exports from EPZs began in the 1970s, there are signs only now that the industry is moving beyond the simple assembly of shirts.

However, there are several cases where EPZs have deepened their linkages and technological levels over time. In Malaysia, electronics exporters have attracted other TNCs to deepen backward linkages, and have also increased sourcing from local firms. They have upgraded their technological activity and enlarged their product range. However, such development is not automatic: much depends on policies for upgrading skills and attracting the right kind of investor. Much of Singapore's success is due to careful targeting of industries such as electronics, which accounts for over half of exports, and to inducements for TNCs to upgrade their technologies. In turn, this was feasible only because of government investments in skills, infrastructure and support institutions (box IX.5).

*Source:* UNCTAD, based on ILO, 1998c and van Heerden, 1999.

capabilities and lead the export effort often linked to TNCs through non-equity mechanisms. The established exporters have important first mover advantages – the sunk costs to TNCs of training local workers, developing the infrastructure and building up a base of suppliers (largely also foreign) are substantial. However, the activity is still very dynamic, and TNCs are setting up new facilities. In Latin America, Costa Rica, for example, has attracted a large (\$500 million) semiconductor plant from Intel (box VI.7).

There are large differences in local technological capabilities and content. The highest technological content of TNC activities is in Singapore, where production concentrates on sophisticated producer electronics and components. This specialization is the result of government policies to provide high levels of skills, technical support and subsidies to promote targeted activities. TNCs have set up advanced manufacturing, design and even development capabilities, and are gradually moving some of their regional headquarters to Singapore. Malaysia comes next: some R&D capabilities are being developed in foreign affiliates, mainly for process improvement and in mature consumer products. Thailand and Philippines lag behind Malaysia in technological depth. The Philippines has long had a large education base, which is attracting a wave of new electronics FDI, particularly in semiconductors. Consequently, over the past two years, the Philippines is the only country in the region with rapidly growing electronics exports. In 1998, its semiconductor exports overtook Malaysia, a much longer-established exporter. Mexico is the newest entrant to high-technology exports and still has very low localization levels, though its relatively good supply of technical skills means that design functions can be located there. The rest of Latin America lags in high technology export activity; recent liberalization has led its export structure to specialize increasingly in automotive and resource processing activities (Benavente *et al.*, 1997).

- The second type of complex export-oriented activity involves *mature infant industries* and is an outgrowth of import substitution, from industries being restructured because of economic liberalization (Londero and Teitel, 1998). In most large import-substituting economies with a large foreign presence, such as Mexico and Argentina, TNCs lead the export surge. The most striking example is the automotive industry, now the single largest manufactured exporter from Latin America. Automotive TNCs have rationalized production and sourcing across the region and raised technological levels considerably, promoted by a special policy regime. In some cases they induced upgrading of their suppliers and deepened their own technology into design and research activity in some major production centres (Mortimore, 1997, 1998b). However, at the same time, liberalization has led to the cutting down of several other manufacturing activities and capabilities in Latin America and (Mexico excepted) to low levels of high-technology production and exports (see box VII.3). In countries like India, where liberalization still has some way to go and foreign presence is low, the export response has been led mainly by local firms, but has been weak so far.
- The third type of TNC activity involves *large-scale processing of natural resources* for export. Unlike earlier resource-extracting activities that had little local value added, this activity involves large new world-class plants, high levels of local skills and tight integration into international networks. The main focus of this type of export-oriented FDI has been Latin America. The liberalization of investment regimes, along with technological developments, revitalized FDI in the primary sector. A large part of the investment went into the search for raw materials (mining projects in Chile; mining, oil and natural gas in Argentina, Mexico and Venezuela). Another large part went into manufacturing industries processing primary products. These industries had been strengthened by government policy in the 1980s. But the liberalization of FDI served to attract considerable foreign interest in building state-of-the-art facilities in the region (Benavente *et al.*, 1997).

Given the advanced technological, manufacturing and marketing capabilities required, few developing economies have important local exporters of sophisticated manufactures. The main exceptions are the Republic of Korea and Taiwan Province of China. They pursued relatively autonomous technological strategies and built up the skill base to enable export competitiveness. However, they did use TNCs in their strategy; their presence and technology transfer were important for export development when these countries started to export electrical machinery and electronics in the 1960s (UNCTAD, 1995a; UNCTAD, 1996b). As local enterprises acquired competence and government policies increasingly favoured national ownership, the direct role of TNCs diminished. Their indirect role, particularly via licensing or original equipment manufacture arrangements, continued. As local firms grew and became international competitors, it became harder for them to obtain technology from TNCs. Independent R&D then became vital in order to copy, absorb and create technology; the leading firms set up large research and design departments and invested heavily in innovation (Hobday, 1995; Kim, 1997). More recently, they have begun to use strategic alliances with leading foreign TNCs to expand their technology base. All in all, the autonomous strategy has given these economies much greater local content in sophisticated manufacturing and industrial depth.

However, this skilful mix of strategy has succeeded in only a few cases – most countries have been unable to meet the skill, information and bureaucratic demands of this strategy to mount efficiently the range and depth of policies needed for domestic capacity-building. Furthermore, under the new rules of the game, the scope for industrial policies that favour domestic capacity-building is diminishing. A number of the tools used for example by the Asian newly-industrializing economies are no longer permitted today for advanced developing countries, or are difficult to apply. Technologies are changing much faster and production systems are more integrated, and are raising the barriers of entry into sophisticated markets. In the future, developing countries may well use TNCs more to move into advanced export activity, either through FDI or by tapping into TNC distribution systems.

Indeed, elsewhere in the developing world, for complex products, an FDI-assisted export strategy has been more common than local enterprise-led export strategies. A substantial proportion of such manufactured exports from developing countries comes from foreign affiliates (annex table A.I.8), and a significant part of this takes the form of intra-firm trade. An FDI-assisted export strategy can provide rapid entry into complex activities, along with continuous access to new technologies and close integration into global markets and networks. The result can be impressive export growth; indeed, the relocation of labour-intensive processes in high technology activities has been a major factor in the recent export growth and diversification in the developing world.

However, this strategy is not without costs and risks. Most exports start at the bottom of the skill and technology ladder. The risk is that an erosion of competitiveness (as wages rise or technologies change) follows a burst of exports based on low-wage advantages. Unless the country improves its skill, technology, supplier and infrastructure base, the FDI-assisted route can run out of steam; the creation of backward linkages is particularly important here. As with domestic firm-based strategies, therefore, the upgrading of local factors and institutions becomes vital under FDI-assisted strategies once inherited advantages reach their limit. The only difference may be that the static base of competitive advantage lasts longer under an FDI-assisted strategy.

It would be wrong, therefore, to consider the two policy approaches - domestic-enterprise based versus TNC-assisted export drives - as mutually exclusive. Indeed, both have worked as far as exports are concerned. In many instances they are mutually supportive. A strong base of local capabilities can attract higher quality, technologically more advanced FDI, with greater local linkages and spillovers. Over time, a more rapid growth of local skills and capabilities can induce faster and greater upgrading of affiliate activities. The competitiveness of the domestic industrial sector can benefit from a stronger TNC presence and competition. A large, export-oriented TNC base can stimulate greater competence in local firms and provide stronger direct links to global markets and technologies. As local firms grow in competence, they can themselves go transnational, or enter strategic alliances with other TNCs.



## **2. Expanding market access for exports**

### ***a. Advantages of TNCs***

Foreign affiliates have several potential advantages over local firms in developing host countries in accessing and serving foreign markets. Assuming identical production costs, therefore, they can export more from a host economy than their local counterparts in products where such marketing advantages are significant. Affiliates draw an advantage from the very fact of being part of a TNC system and hence being able to use the system's physical distribution network or exploit their parent firms' links with customers. The parent company may have strong links with buyers in importing countries; such links are important in getting orders of customized industrial products or projects (e.g. capital goods, specialized components or turnkey plants). Again, these are difficult for new entrants to replicate. Foreign affiliates also face lower transaction costs and have other marketing advantages in exporting than do local firms. They have access to established brand names, warehousing, transport facilities and marketing links, trade finance and channels overseas. Affiliates often can use established brand names which are particularly important in differentiated consumer products. Competing local firms face a severe handicap in having to sell unbranded products, unless they are able to invest the large sums needed to develop independent brands (and the distribution and servicing they require), or a TNC is willing to franchise or license the use of its brand. Both can happen. Some developing country firms have gained the size and spread to build up global brands, but they are few and primarily from advanced newly-industrializing economies. TNCs allow independent firms to sell under their brands, under original equipment manufacture (OEM) arrangements, as in electronics (box VIII.4), or under international subcontracting, as in clothing.

OEM in electronics in the developing world is confined to a few newly-industrializing economies with strong local capabilities, mainly the Republic of Korea and Taiwan Province of China (Hobday, 1995). Other Asian economies exporting electronics have had to rely on foreign affiliates. The subcontracting of simple products like clothing is more common, and here foreign buyers offer an alternative way of overcoming the costs of exporting. Increasingly, investors from developing countries are emerging as an alternative to developed country TNCs, especially in export production of simple products, particularly at the low quality end.

A number of foreign affiliates are parts of integrated international production systems. Such systems can be of two types (or their combination): different stages of production located in different countries, or different components each sourced from several countries. The first system entails different processes at different levels of technology, spread over countries according to factor costs and capabilities. The second involves distribution of similar production activities across affiliates in countries with similar capabilities. In the latter case, production facilities are distributed geographically to diversify risk, reap scale economies or meet government demands (say, to achieve a rough balance in trade or maintain employment). For instance, automobile firms spread their engine and component manufacture over several countries. While it is possible for non-affiliates to export via such networks, the transaction and coordination costs of participation can be high. The costs rise with the complexity of a network, sophistication and proprietary value of technology, frequency of changes, and speed of response required. Consequently, TNCs are unlikely to involve independent firms deeply in such networks unless the product is simple and standardized, or the independent firm is a specialized supplier of long standing.

Finally, foreign affiliates may have easier access to developed country markets, or face lower tariffs there, because of lobbying by parent companies. One important form of access is favourable treatment of offshore processing (with duties imposed only on value-added overseas). This is favoured by TNCs seeking to relocate labour-intensive processes in low wage areas to maintain competitiveness (Helleiner, 1989). The growth of *maquiladora* exports from Mexico, for instance, owes greatly to such treatment by the Government of the United States. TNCs in many developed countries press for provisions of this sort, while trade unions in the home countries tend to oppose them to prevent the "export of jobs".



**Box VIII.4. Technological learning through OEM: Korea's Daewoo and Japan's NEC**

Daewoo Electronics, part of the Korean *chaebol*/the Daewoo Group, entered an original equipment manufacturing arrangement (OEM) with Japan's NEC in 1981. OEM is a form of inter-firm relationship that involves the supplying firms manufacturing equipment to the buyer's specifications, sold under the buyer's brand name. NEC sought OEM arrangements with the Korean firm because Japanese wages were too high to manufacture mid-range colour televisions competitively. This case illustrates how an OEM arrangement can provide valuable technologies and experience to an independent supplier. As was common practice for OEM suppliers, Daewoo provided prototype samples (19-inch colour televisions) to be tested by NEC engineers. Daewoo was already manufacturing televisions and exporting some to Australia. It had acquired its technological capabilities through reverse engineering and licensing a few key technologies. However, those methods were not sufficient to take it to the technological frontier, and the samples it sent to NEC suffered from several inadequacies. To the surprise of Daewoo executives, NEC found over 80 problems with their television samples, ranging from poor sound quality to faulty control knobs. Nevertheless, NEC was convinced that Daewoo had the ability to become a good OEM supplier and so established the relationship.

Because it was in NEC's interest to enhance Daewoo's capabilities to manufacture high-quality products, it provided a great deal of technological help to its partner. For example, in measuring the quality of sound and vision, Daewoo engineers initially relied on their "eyes and ears". Their NEC counterparts introduced them to much more accurate electronic measuring devices that the Koreans did not even know existed. NEC engineers instructed Daewoo on how to use them, and Daewoo adopted them in all its relevant manufacturing processes. Daewoo engineers maintain that such technical tasks as enhancing sound quality can be complex and elusive, and no "blue-print" exists for such tasks. Given the tacit elements in the technology, the direct interaction with experienced engineers was the best way to learn.

OEM provided much more than tacit technical knowledge. It also led Daewoo to define more clearly its technological gaps and needs, and to find ways of solving complex technological problems. Perhaps the most important contribution of OEM was that it set "higher sights" for Daewoo, in terms of process technologies and product quality. While Daewoo could have imported some necessary technologies from abroad, it felt that the contribution of NEC to identifying its deficiencies and setting specific targets was invaluable, and could not have been replaced by a licensing relationship.

The OEM relationship was not without problems. There was constant bargaining on prices, number of products and duration of contracts. However, Daewoo executives felt that, despite such problems, the OEM arrangement freed them from marketing, distribution and after-sales problems in crucial stages of the firm's development, allowing them to concentrate on enhancing technological and production capabilities. In fact, for a long time Daewoo made larger profits from OEM exports than from their own-brand exports, because of heavy marketing and sales costs. Today, Daewoo Electronics is a TNC with its own international brand as one of the world's largest producers of television sets. However, it continues as the main OEM supplier to both NEC and Sony.

*Source: Cyhn, 1999.*

**b. Disadvantages of TNCs**

Being part of TNC systems can also have costs for export competitiveness. Affiliates have to conform to sourcing and location patterns imposed by the parent firm. They are more prone than domestic firms to source inputs as imports from overseas. This may be from other affiliates in the TNC network,<sup>4</sup> or from established suppliers based in the home country or third countries. A high import propensity of affiliates is observed in both low- and high-technological industries - in the former, since affiliates are often limited to processing imported inputs; in the latter, because affiliates' production is capital-intensive or requires sophisticated inputs not available locally. Import intensity can be high in some services industries as well, notably in tourism. Here, one observes problems of leakages, especially in the case of luxury tourism under franchises in low-income developing countries. Capital and consumption goods not available locally are imported, and profits remitted, thus cutting into the export earnings generated (UNCTAD, 1998e).

Where the parent firm has a regional or global strategy (many do not), affiliates cannot choose whether to export, or, if they do, which markets to serve. TNCs do not encourage competition among affiliates. Where they have affiliates in different markets, they may prohibit competing exports. The process of deep integration then takes a different direction. As noted, there is a possibility that, in a liberalized world, TNCs may centralize production in a few larger-scale facilities. This can boost exports from affiliates that become such bases, but lower or eliminate exports from others, converting them into sale or final-assembly bases. Only to the extent that the process is cumulative, will successful affiliates will deepen their capabilities and pull further ahead of others. In these circumstances, local firms may actually do better than affiliates operating as part of a TNC network because they are not subject to such market access decisions. However, to take advantage of their freedom they must have the technological and marketing capabilities to match TNC competitors.

### *c. Non-equity links: some considerations*

In *low-technology* activities, there are readily available alternatives to TNCs in the form of international buyers, which handle the bulk of developing world exports of many low-technology products. Buying arrangements provide great scope for local firms to diversify their capabilities and markets. Once skills and networks have developed, local firms can themselves become TNCs and outsource in other developing countries.

However, buying arrangements do not *per se* ensure technological upgrading and diversification (box VIII.5). It is more often the case that supplying firms stay at the bottom of the technology ladder under a subcontracting relationship, and lose markets if wages rise and buyers move on to cheaper locations. Much depends on the ability of exporters to use the inputs and contacts provided by buyers to raise quality and skill levels, develop new products, find new buyers and, ultimately, build their own marketing networks and brands. This depends in turn on the learning environment in which a firm operates. If the environment is supportive, with adequate capital, skills, suppliers, and so on, upgrading is much more feasible. The main reason why the first-tier Asian newly-industrializing economies were able to use buying relations so efficiently was that their Governments could provide such environments. Where such an environment exists, there is a good case for promoting independent subcontracting relations rather than relying heavily on FDI. Alternatively, there may be a case for encouraging FDI from more advanced developing countries on a joint venture basis. The main exception is where low-technology exports require strong brand names – in this case, the cost of developing autonomous export capabilities can be very high indeed.

Independent marketing arrangements in *high-technology activities* also offer considerable scope for upgrading technology and export capabilities. Efficient local firms can sell directly to retailers or industrial buyers, and use the knowledge obtained to move up the technology ladder. They can also sell to TNCs under original equipment manufacturing arrangements: OEM arrangements have been a major avenue for technology transfer to exporters. Over time, they can develop their own product designs, brands and marketing networks overseas, though this can prove to be a much more risky and expensive task. Foreign affiliates involved in assembly activities, generally as part of integrated international production chains, may have greater difficulty in upgrading their technological status. Their process technologies may improve as wages rise, but the critical technological inputs and activities may remain centralized elsewhere.

Leading electronics firms in the Republic of Korea and Taiwan Province of China are good examples of local firms using arm's-length technology transfer and exporting arrangements to build their capabilities (Hobday, 1995). If the firms had been set up as affiliates, it is doubtful whether they would have been able to develop the diversity and depth of local technology and content that they have. For instance, affiliates in the same industries in Malaysia, Thailand or the Philippines have not developed capabilities to similar depth or sophistication. Their equipment and processes have certainly become more complex, but the level of local content remains low. Intra-firm trade has boosted their export capacity dramatically, but their technological status has lagged behind.

The more technologically sophisticated an export-oriented activity – and the larger the potential learning benefits – the stronger is the case for developing autonomous capabilities. Not only is there more scope for learning within a firm, there is also more scope for beneficial spillovers to related firms and to the whole learning system. By the same reasoning, however, the costs and needs of domestic capability-building in complex activities are correspondingly high. It is for this reason that so few countries have developed the capabilities to compete independently in medium-and high-technology activities. In most circumstances, participating in TNC networks offers the best avenue to access foreign markets in these products. However, not all countries possess the minimum requirements demanded by TNCs.

\* \* \*

The role of TNCs in export markets is large and growing. In fact, to support their competitive positions, successful national exporters themselves tend to go transnational, investing in developing as well as developed countries. Firms linked to TNCs tend to follow them overseas with supporting production facilities. With growing liberalization and globalization, such trends will intensify. This does not necessarily mean that the same set of TNCs from the same home countries will benefit and increase their dominance of world trade. The identity of competitive firms is constantly changing, and increasing numbers will hail from developing countries. Their market shares are, of course, difficult to predict. But a portfolio of locational assets will be increasingly important for their international competitiveness, and hence will lead to the further growth of developing country export-oriented FDI.

#### **Box VIII.5. TNCs and the evolution of modern agri-business**

Agri-business, or production and trade in unprocessed and processed agricultural food products, is highly concentrated, and growing more so over time. For example, UNCTAD estimates that five TNCs handled around half of world trade in green coffee in 1996; their share had risen from about 40 per cent in 1980. In coffee roasting and manufacturing, just four groups account for half of the market. In cocoa, the number of trading houses in London has fallen from over 30 in 1980 to around 10. The six largest chocolate manufacturers today account for half of world sales, the result of several mergers. A series of (continuing) M&As in the vegetable oil industry during the 1990s has led to a small number of vertically integrated TNCs dominating production, distribution and trade in both oilseeds and oils (Pugsley, 1998). TNC dominance in bananas and canned pineapples is well known. These companies have either integrated backwards into growing or have established strong contractual links with suppliers (contractual links are easier here than in coffee or cocoa). Large retail organizations may also purchase from smaller producers, but TNCs command a price premium because of their high quality standards and well-known brands.

There has been a sharp and persistent decline in international prices of unprocessed agricultural products. However, prices of processed products marketed by TNCs have not declined. On the contrary, the difference between the international price of the unprocessed and final products has increased considerably since early 1970, and at an accelerated rate in the 1980s. If the mark-up of consumer prices over world prices in 1975 was 1, in 1994 it reached 2.9 for coffee, 2.7 for wheat, 2.5 for sugar, 2.2 for rice, and 1.7 for beef. “In all major consumer markets, decreases in world commodity prices have been transmitted to domestic consumer prices much less than have increases... The increasing spreads have certainly cost several billion dollars every year to countries producing and exporting commodities by restraining the expansion of the final demand for these products” (Morisset, 1998, p. 503). Neither trade and tax policies, nor factors such as transport, processing and marketing costs or changes in quality standards fully explain the rising spreads. A significant part of the explanation lies in product differentiation in processed agricultural products. Product attributes are becoming increasingly psychological, raising marketing costs, concentration levels and barriers to entry for developing country producers. Brand names associated with TNCs provide a major advantage in reaching consumers, particularly of foodstuffs. Developing-country exporters find it almost impossible to differentiate their products and launch new brands to compete with established ones.

Another important change is the declining importance of traders, who earlier acted as a bridge between buyers and sellers who were largely ignorant of each other and of the prices set. Now, communications technology, including the Internet, allows buyers and sellers to find each other and communicate more easily. This increases competition, cutting profit margins for traders and eroding /...

**(Box VIII.5, concluded)**

their main competitive advantage – information. “Price information is not only widely available, but can be obtained instantly, severely reducing the opportunities for arbitrage and narrowing profit margins” (Pugsley, 1998, p. 35). With deregulation in exporting countries, TNC trading houses and processors of commodities, such as chocolate makers, are increasingly buying the raw materials directly from shippers. Trade is increasingly undertaken by large consolidated TNCs; traders are being relegated to specialized tasks. Intensified competition favours those with access to cheaper finance and good logistics. Large size gives advantages on both counts. With deregulation and the disappearance of marketing boards, large companies with warehousing and shipping facilities in the producing countries are able to exploit their financial and logistical advantages, even buying the produce directly from the farmer. Improved logistics also allow large firms to buy increasingly on a ‘just-in-time’ basis, reducing the cost of holding stocks and raising their competitiveness relative to firms that do not have access to such financing.

While TNCs have been important in expanding trade of processed foods, large retailers have provided important channels for exporters of non-traditional commodities such as fresh fruit and vegetables. For example, links with United Kingdom supermarkets have provided African producers with access to a growing market, as well as incentives to improve quality and efficiency. However, this carries the risk of excessive reliance on these supermarkets and importers for marketing, product innovation and technical assistance. Such risks can take several forms. (i) The producer may only learn to carry out a narrow range of production and quality control activities. (ii) Having the value-added marketing activities in distant places limits the scope for acquiring new competencies. (iii) High dependence on one or two buyers increases the vulnerability of producers to new sources of supply. (iv) Concentration of innovative activities in the hands of retailers and importers leaves producers vulnerable to shifts in tastes of overseas consumers and marketing strategies of large buyers (Humphrey, *et al.*, pp.1-4). Thus, while participation in buyer-driven commodity chains provides significant opportunities for growth, the next issue for producers is to turn these into producer-driven chains.

*Source:* UNCTAD.

### **3. Building dynamic comparative advantages**

Many developing host countries expect TNCs to be agents for the creation of dynamic comparative advantage, particularly in the export of manufactured products (Helleiner, 1973). Dynamism can take many different forms, depending on the nature of the host economy and the time-frame considered. In the short term, it can mean moving up to the next level of technological complexity: for a developing country with unprocessed primary exports and endowments of unskilled labour, dynamism means the launching of simple manufactured exports. For countries established in simple exports, it means the shift to higher value added products using relatively simple technologies. For those with a more diverse base of exports, it means entry into high technology products, and so on. In the long term, dynamism means not just the shift up the skill and technology scale in particular activities, but also *deepening the content* of export activity and *building the capacity* to sustain such a shift across a range of tradable activities in response to changing world demand and technologies. This means, in turn, that export activity needs to lead to greater local content in terms of labour, resources and intermediate products, more complex technological functions (design and development), and more intense linkages with the local technology system (chapter VII).

There are several reasons why countries may expect TNCs to dynamize their comparative advantage in all these cases. TNCs are considered well placed – relative to local firms – to provide the tangible and intangible assets needed to transform existing resources, skills and technical competence to world levels. They are believed to be better able to overcome the cost of marketing overseas, providing the information, marketing, brand name and other assets needed to generate exports. Over time, they can keep up more readily with changing technologies and shifting demand in different markets. At the same time, as noted in the analysis of technology, developing countries worry that TNCs transfer the technologies and skills that use their existing resources and capabilities, but do not do enough to upgrade or deepen them.



Both perceptions can be valid – the extent depends on the specific country context. TNCs *can* dynamize comparative advantage, but only where the host economy is able to mount the right policies and improve the base of capabilities that investors draw upon. Or, they also may not provide the dynamic benefits that comparable local firms do, for reasons noted earlier: the technological deepening of foreign affiliates, their local linkages and their spillover benefits may be less than those of comparable local firms. However, this is only so where comparable local firms exist in activities undertaken by foreign affiliates, or where a country is able to mount the policies needed to enable local firms to develop the necessary capabilities. Generalizations are difficult. What is possible is to review existing, often patchy, data on the contribution of TNCs to export activity and qualitative evidence on its upgrading in particular countries.

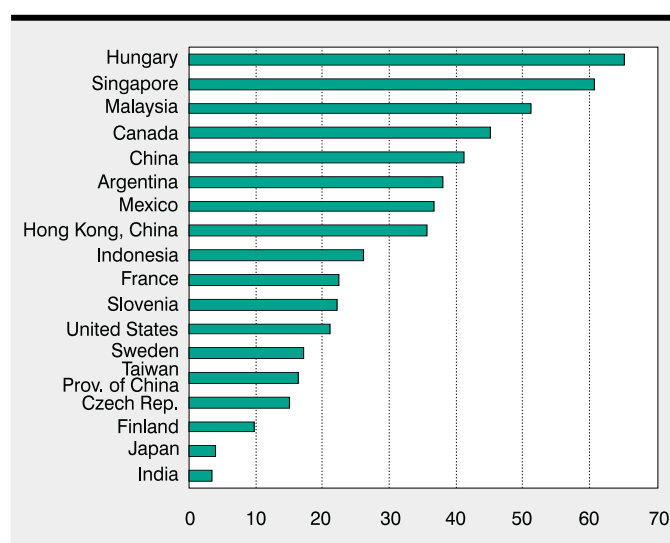
A useful indicator to start with is the share of foreign affiliates in merchandise exports. The evidence shows large differences in these shares across a number of countries, reflecting their locational advantages as export bases (figure VIII.2, annex table A.I.8 and annex table A.VIII.7). countries with a low level of FDI (such as Japan) or with low locational advantages have very low shares. Countries with a large FDI presence and strong locational advantages such as close proximity to, and integration with, a large market (Canada), or input cost advantages (Hungary, Singapore, Malaysia and China), have high shares.<sup>5</sup> The shares of foreign affiliates in exports can also vary greatly by industry, as exemplified by a comparison of the Czech Republic and Hungary (figure VIII.3). Such variations in foreign affiliate shares in national exports are to be expected. They reflect differences in the amount and type of FDI a country receives and the relative export competence of domestic enterprises and foreign affiliates.

The fact that the ratio of foreign affiliate exports in total exports varies across countries does not say anything about the extent to which FDI may influence the export performance of countries. However, a statistical analysis of the relationship between FDI and 1995 manufactured exports in a cross-section of 52 countries suggests a significant positive relationship between FDI inflows and export performance as well as between FDI inflows and the technological sophistication of exports (box VIII.6). The relationship is stronger for developing than for developed countries, and in high- than in low-technology activities. The data thus suggest that there is a correlation between FDI and export dynamism in the developing world, at least in a cross-section sense.

The positive statistical relationship between FDI and export performance, as well as the relatively high share of foreign affiliates in the exports of some countries, may reflect partly a higher export propensity of foreign affiliates as compared with domestic firms. While there are industry-level differences, the evidence from a number of studies in both developed and developing countries suggests that foreign affiliates are more export-oriented than their domestic counterparts. For example, the mean difference in export propensities of foreign and domestic

**Figure VIII.2. Shares of TNCs in primary and manufactured exports, latest available year<sup>a</sup>**

(Percentage)

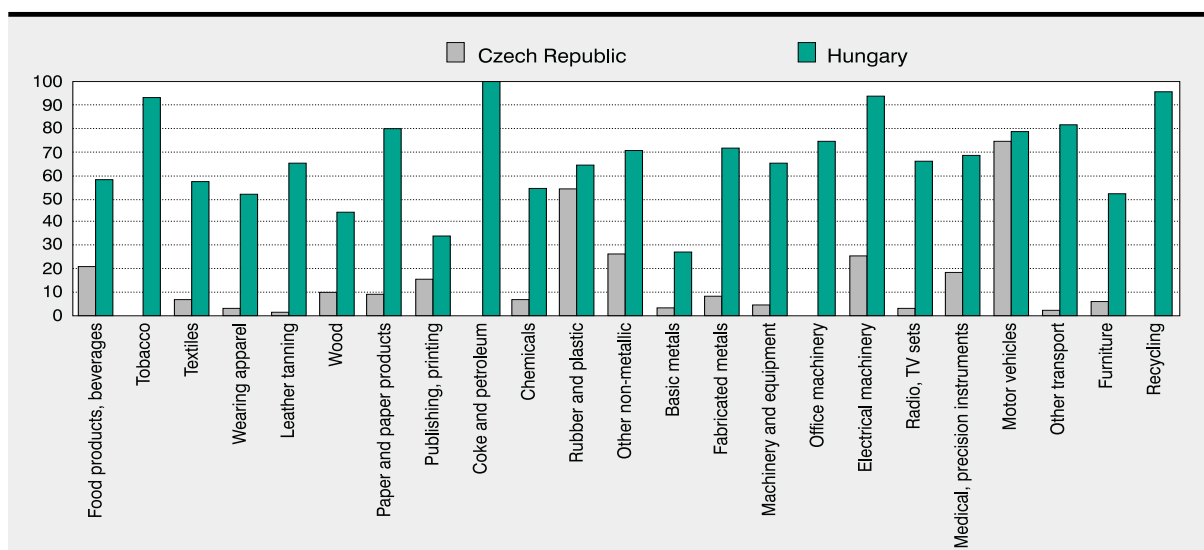


Source: UNCTAD, based on table A.I.8; Ramstetter, 1998; Chudnovsky et al, 1997; VIIES, 1998.

<sup>a</sup> 1991 for India; 1992 for France; 1993 for Mexico; 1994 for Canada, Finland, Malaysia and Sweden; 1995 for Argentina, Japan and Taiwan Province of China; 1996 for Czech Republic, Hungary, Indonesia, Singapore, Slovenia and the United States; 1997 for Hong Kong, China.



Figure VIII.3. The share of foreign affiliates in total manufacturing exports: Czech Republic and Hungary, 1995



Source: VIIES, 1998.

### Box VIII.6. FDI and manufactured export performance: some statistical relations

The relationship between inward FDI and export performance was investigated by cross-section regression analysis for 52 developed and developing countries. The dependent variable was manufactured exports (total and grouped by technological categories), measured in dollar values and per capita to account for country size. The explanatory variables were inward FDI per capita, R&D (financed by productive enterprises as a percentage of GDP), and *per capita* manufacturing value added (this variable controls for the size of the industrial sector). All variables were expressed in natural logarithms, so the coefficients are elasticities. The data are for 1995.

All countries					
Variable	Total manufactured exports	High-technology exports	Medium- technology exports	Low-technology exports	Share of high-technology exports in total exports
Constant	9.30***	5.68*	10.02***	7.82***	-3.63***
FDI per capita	0.36**	0.55***	0.31*	0.28***	0.19**
R&D	0.16*	0.55***	0.22**	0.13	0.39***
MVA	0.64***	0.51	0.91***	0.56***	-0.14
Adjusted R <sup>2</sup>	0.80	0.78	0.83	0.70	0.59
No. of observations	52	52	52	52	52
Developing countries					
Constant	8.31	3.55	8.44**	8.05***	-4.76***
FDI per capita	0.45**	0.78***	0.39	0.31**	0.33***
R&D	0.19**	0.61***	0.24**	0.16*	0.42***
MVA	0.55*	0.34	0.75**	0.58**	-0.21
Adjusted R <sup>2</sup>	0.71	0.71	0.69	0.59	0.56
No. of observations	33	33	33	33	33
Developed countries					
Constant	14.47***	12.84***	14.08***	14.69**	-1.60
FDI per capita	0.29***	0.21**	0.28**	0.36**	-0.08
R&D	-0.30*	0.34	-0.06	-0.89**	0.645**
MVA	1.52**	1.43**	1.62***	1.94***	-0.10
Adjusted R <sup>2</sup>	0.60	0.74	0.63	0.53	0.53
No. of observations	19	19	19	19	19

\*\*\* significant at the one per cent level.

\*\* significant at the five per cent level.

\* significant at the 10 per cent level.

All variables are in log form. The standard errors are corrected for heteroskedasticity.

/...

**(Box VIII.6, concluded)**

There is a positive and significant correlation between FDI and manufactured export performance for the whole sample (though the level of significance is low for medium-technology exports). The impact of FDI rises with the technology intensity of exports. Thus, a one per cent rise in *per capita* FDI leads to a 0.55 per cent rise in high technology, a 0.31 per cent rise in medium technology, and a 0.28 per cent rise in low technology, exports. The R&D variable has a similar pattern of effects (its effect on low-technology exports is not statistically significant). Taking the technological composition of exports as the dependent variable, the strongest and most significant influence is R&D; however, FDI is also significant and positive. A one per cent rise in FDI *per capita* is associated with a 0.19 per cent rise in the share of high technology in manufactured exports. The MVA variable is positive and highly significant for medium- and low-technology exports, indicating that the level of industrial development is important in explaining competitiveness in these products.

The links between FDI and export performance change slightly when the sample is split into developed and developing countries. In the developing country sample, FDI is highly significant for high-technology exports, with an elasticity of 0.78; it is also significant (at the 10 per cent level) for low-technology exports but is insignificant for medium-technology exports. It is highly significant and positive for the share of high-technology exports. The R&D and MVA variables follow the same pattern as for the whole sample. The developed country sample (the size is small, only 19 countries) also shows a positive coefficient for FDI for all types of manufactured exports, but the coefficient is highest for low technology products. The share of high-technology exports shows no relationship with FDI, but is strongly related to R&D. The MVA variable is a strong influence on export competitiveness.

While these exercises do not establish a clear causal connection, they “explain” a large part of the variation in the dependent variables, and their patterns are plausible. They support the (more scattered and qualitative) evidence that suggests that TNCs play an important role in exporting from developing countries, and that this role is particularly large in high-technology products (in developing countries, where exports have been driven by the relocation of assembly processes by TNCs). The consistency of the results from these regressions suggests that FDI can be a real and positive factor in export performance.

*Source:* UNCTAD.

manufacturing plants is positive and statistically significant in such export-oriented economies as Hong Kong, China; Indonesia; Malaysia; Singapore; and Taiwan Province of China (Ramstetter, 1998). Similarly, in Mexico, foreign plants were found more likely to export than domestic plants in 1986 and 1989 (Aitken, Hanson and Harrison, 1997). However, the East Asian economies, and to some extent Mexico in the late 1980s, pursued strongly export-oriented policies that encouraged both domestic and foreign firms to enter export-oriented activities. In other countries, with high levels of protection and small markets, domestic firms were more outward oriented than foreign affiliates (Athukorala *et al.*, 1995).

Important questions arise relating to the export performance of TNCs in a more dynamic setting. How do they react as technology changes and wages and other costs rise in a developing host country, making it uneconomical as an export site? Do they dynamize comparative advantage by upgrading facilities and local capabilities or do they move their facilities to cheaper locations?

Both outcomes are possible. Which happens depends on the industry, the technology and host-country factors. From the perspective of TNCs, the main considerations are the rate at which costs are rising, the possibility of offsetting this by improved technology and the cost of implementing that technology, weighed against the costs of relocating. Relocation costs depend on the sunk costs. Operations for which sunk costs tend to be low and technical change incremental – simple activities with low costs of training and so on – tend to relocate rather than dynamize capabilities in their original location. This is often (but not always) the case with such activities as clothing and footwear. By contrast, industries with high sunk costs tend to “stick”, unless the technological change is so drastic that it either becomes economical (despite sunk costs) to relocate or it is not possible to use new technology at the old location. Apart from that, the capacity of affiliates to absorb new technologies plays a role, as do efforts by governments

to retain and upgrade investment. Shifting comparative advantage due to technological upgrading may explain the changing export propensities of United States foreign affiliates (annex table A.VIII.6). Over time, their export propensities have declined in some regions (e.g. Asia) and risen in others (e.g. Latin America). This may reflect that, in Asia, the rising cost of producing simpler export-oriented products in which most Asian countries had a comparative advantage at an earlier stage has not yet been offset by increased competitiveness in more technology-intensive products.

The upgrading of comparative advantage is not a discrete “either/or” decision. There are many possible levels of upgrading, depending on the ability of a host economy to provide the capabilities needed. For instance, TNCs can train employees, but only if the base of formal qualifications needed is present. They can develop the skills for advanced product design locally only if enough design engineers are available. They can import more advanced equipment, but only if local staff can be trained at reasonable cost to use it at world levels of efficiency. Importing skilled personnel can relax the skill constraint temporarily, but this is an expensive solution that can only be used for a small number of high level tasks. Therefore, building up a strong education base that facilitates skills upgrading is indispensable (see also chapters VII and IX).

Malaysia provides a good case of a TNC-assisted build-up of dynamic comparative advantage and also illustrates the limits to such a process. Export-oriented electronics TNCs originally set up simple labour-intensive assembly in that country to take advantage of cheap, disciplined, semi-skilled, English-speaking workers, good infrastructure and attractive incentives (Lall, forthcoming). The operations were isolated in export enclaves with practically no domestic supply or technology linkages. As wages rose, technologies changed and the Government put on pressure to increase local content and deepen technology levels, electronics TNCs responded by automating assembly processes, bringing them to levels employed in high wage countries (Hobday, 1996; Rasiah, 1995). They invested massively in raising worker skills – Intel’s facility is referred to as “Intel University” – and sent high-level staff overseas for extensive training. They induced their international suppliers to set up affiliates in Malaysia and helped local firms (still relatively few) to develop supply capabilities. The technological content of affiliates rose as they were assigned some process and product design work. At the same time, low technology foreign investors in garments (and large local garment manufacturers) started to wind down assembly operations in response to rising wages. Several shifted their most labour-intensive operations to neighbouring low-wage economies such as Viet Nam.

However, Malaysia suffers from a scarcity of high-level technical and engineering skills. Despite more engineering courses in universities and sending students overseas, the number of engineers and technicians (relative to the size and sophistication of the industrial sector) lags well behind that in such economies as Singapore, the Republic of Korea, Taiwan Province of China or the Philippines. The country allows the liberal use of expatriate engineers and technicians, but human capital shortages are a major – perhaps *the* major – constraint on further technological upgrading. This may well be the main reason why the level of technology in electronics TNCs in Malaysia continues to trail behind that in Singapore.

In upgrading their comparative advantage and restructuring their industries accordingly, many developing countries face a large legacy of uncompetitive plants, inefficient institutions and inadequate factor markets. Raising competitiveness means restructuring and upgrading existing activities as well as setting up new ones. As noted earlier, TNCs contribute to exports in the case of previously import-substituting regimes by taking some mature infant industries into export markets. This generally involves a lengthy and costly process of technological upgrading and restructuring. Many physical facilities were obsolete and inefficient, many suppliers small-scale and technologically backward and many skills inadequate or wrongly directed (Blömsström, 1990). Coping with small and protected markets did create capabilities, but not necessarily of the type that would be useful in a liberal and global trading environment. A lot of fresh learning and re-learning had to take place before competitive capabilities were developed.

Another recent example of TNC-assisted restructuring is the Latin American automobile industry.<sup>6</sup> It is based in Argentina, Brazil and Mexico. In the 1990s, each of these countries entered regional trade agreements (MERCOSUR and NAFTA) that induced the automotive TNCs dominating the industry to rationalize, integrate and upgrade their facilities. From production for national and regional markets in a setting of high import protection, local content rules, export obligations and price controls they had to move to production at much higher levels of technical and marketing efficiency to compete in international markets. Mexico's passage is particularly impressive:

Foreign direct investment in the order of \$10 billion, first in modern engine plants, and later in modern passenger vehicle plants, completely transformed the industry. It made it the most important industry in the Mexican economy, more so if one includes the explosion of in-bond assembly activities ("*maquiladora*") of auto parts. Mexican automotive exports to the United States rose 4.6 times during 1990-97, from \$4.5 billion to \$20.8 billion. Over 90 per cent went to the North American market. By 1996, Mexico accounted for 10.4 per cent of North American imports of passenger vehicles, 10.8 per cent of commercial vehicles, 12.6 per cent of engines and eight per cent of auto parts. The automobile industry accounted for over 21 percent of the value of Mexico's total exports to North America (Mortimore, 1998b, p. 105).

Ford of Mexico changed its entire production strategy. It did not modernize its old plant, which was used to serve the domestic market, but built new, sophisticated engine and vehicle assembly facilities for \$3 billion to serve the North American market. Local content of export models fell and imports of components and parts rose. The three United States TNCs (Ford, General Motors and Chrysler) took advantage of the *maquiladora* facilities to integrate parts production with their operations in the United States. Consequently, Mexican auto parts exports to the United States rose sharply. However, the restructuring also resulted in a contraction of the local supplier industry, which found it difficult to raise its technological levels to international standards (Mortimore, 1998b).

FDI can also act as catalyst for the restructuring of domestic firms, directly in those linked to TNCs, or indirectly by intensified competition between domestic firms and foreign affiliates.<sup>7</sup> This is particularly the case in growing industries, e.g. software in India (box VIII.7). But countries cannot rely on TNCs alone to advance restructuring. In the textile and clothing industry, for example, where subcontracting arrangements with TNCs are predominant, the availability of a wide range of potential subcontractors in different host countries means that a subcontractor may be cut out of export markets at short notice. The limited relationships that exists between subcontractors and TNC buyers, and the absence of links with the ultimate clients, make it difficult for domestic firms to build dynamic comparative advantages and restructure their activities. However, firms that develop a sustained relationship with buyers can move up the value chain, even to the point where they can develop their own brand names (Van Heerden, 1999). In general, judging from the experience of Asian newly-industrializing economies, successful restructuring in the textile and clothing industry in developing countries require substantial effort by local firms, backed by government support, to improve their capabilities (including through outward FDI into low-cost locations), learn (including from TNCs) how to compete in international markets, and develop their own marketing channels (UNCTAD, 1995a, chapter V).

Restructuring by TNCs also implies that small or relatively inefficient import substituting affiliates may have to be wound down, or merged with larger, more viable firms, as affiliates are exposed to world competition. The economic determinants of these processes have been noted: the level of capabilities in existence, the distance from competitive frontiers and the efficacy of policies and institutions to support upgrading. The larger the distance, and the less adequate the policy measures to improve factors - or, to provide direct aid to restructuring firms or areas as done extensively in developed countries - the greater the likelihood of there being losers. Strategic factors include a TNC's view of a particular location in its global and regional operations, its assessment of country risk, the competitive pressures it faces and its technological strengths and weaknesses.

#### **Box VIII.7. FDI and upgrading competitiveness in the Indian software industry**

The Indian software export industry, based around Bangalore, Mumbai, Delhi and Madras, had a significant boost in the initial stages from an EPZ. In 1985, Citibank established a wholly-owned, export-oriented, offshore software company in the Santa Cruz Electronics Export Processing Zone in Mumbai. India's attractions were twofold: low-cost English-speaking skilled labour and a time difference between Europe and North America that allowed for almost 24-hour workdays.

The bulk of the FDI in this industry went into what is known in the software industry low-level data entry work. This refers to contracts in which the client gives software developers exact specifications, and leaves little to the discretion or creativity of the programmers. This form of export activity did not, however, promise much by way of skill upgrading. An integral part of the restructuring of the industry was the attraction of Texas Instruments (TI) in 1986, which established its first wholly owned export-oriented subsidiary. In addition to regulatory accommodation, the Government of India developed a Software Technology Parks of India Scheme (1988), where it provided infrastructure, buildings, electricity, telecommunications facilities and high-speed satellite links. In 1989, Hewlett-Packard (HP) set up a 100 per cent owned subsidiary in Bangalore. In 1990-1991 quantitative restrictions on imports of intermediate and capital goods for software exports were abolished.

The TI and HP investments helped the Indian software industry at a critical stage of its development. They demonstrated that India was a viable host for FDI in relatively advanced forms of software writing. Since then, many domestic firms have developed a reputation for reliable, high-quality work at relatively low cost, and have been able to move beyond simple data entry or on-site services. They have won higher value-added work where they are entrusted with a whole project instead of specific components. Others have been able to develop complete software packages, which are rebadged and sold overseas (similar to the OEM relationship in consumer electronics).

The export competitiveness of the Indian software industry is now well established. Exports in 1995 were \$485 million, and in 1998 reached \$1.75 billion. Until March 1999, exports climbed to \$2.65 billion. The five largest software companies in India today are domestically owned; two of these are quoted on NASDAQ. TNCs played an important initial role in mobilizing domestic capabilities. With government assistance and the removal of import restrictions, domestic companies were then able to supersede foreign affiliates in terms of export competitiveness.

*Source:* UNCTAD, based on Lateef, 1997; and Taylor, 1999.

The interaction of these factors causes continuous changes in the location of activities and sourcing of supplies by TNCs. For instance, in the automobile industry, TNCs are shifting their plants and suppliers across countries in line with changing locational advantages as well as corporate strategies. Corporate strategic differences aside, the response of TNCs is likely to be similar to that of other firms. However, for obvious reasons, it is likely to be more rapid and definitive.

## **D. Conclusions and policy implications**

The trends are clear: there is an increasing liberalization of trade in a globalizing world economy. The impact of liberalization, globalization and technological change on trade so far has been highly skewed. Export success is concentrated among a few developing countries, and the level of concentration has risen over time and with the sophistication of the technology involved. Among the successful economies, a few, such as the Republic of Korea and Taiwan Province of China, have been able to establish autonomous competitive positions in complex products. Others have used TNCs to spearhead their export drive. TNCs have generally played a role in promoting export competitiveness, though their role has differed by country. Their potential contribution to strengthening the export competitiveness of developing countries within the existing patterns of comparative advantage - and to dynamize this advantage - remains to be exploited fully. Indeed, in many cases it has not even been broached. In the new policy and technological setting, their role in upgrading export competitiveness has considerable potential, if the domestic and international policy environments are supportive.



The discussion in this chapter has focussed on *export* competitiveness in manufactures, since these constitute the core of trade flows, and since, for the past three decades, they have provided the broadest scope for upgrading comparative advantage. This is not to belittle the importance of commodity exports - which remain the key export items for many developing countries - or the export potential of some dynamic commodities - where new technologies are transforming their use or creating new markets - or to ignore the export-generating possibilities in knowledge-intensive services that have become tradable as a result of technological innovation. Policies directed at boosting export competitiveness increasingly need to examine the best ways of exploiting export markets for traditional commodities as well as to anticipate emerging opportunities. For commodities, resource-rich economies might examine policy measures to bring more value-adding activities to the host country - for example by targeting FDI in trade or marketing. With respect to services, governments need to examine which parts of the (increasingly segmented) value chains they might be able to capture, as TNCs increasingly split them up and disperse them among different locations. They can, moreover, target FDI associated with tourism, health, or educational services, or use electronic commerce to attract new business.

There are several sets of policy issues related to the role of FDI in boosting export competitiveness in developing countries. Some of the main issues for different groups of developing countries are:

- For countries with strong national innovation systems and exports led by national enterprises, the main issues include the following. Can their enterprises and institutions continue to cope with the rapid pace of technical change and keep up with world technology frontiers? Can they move from imitation and absorption to genuine innovation? Can they keep ahead of emerging competition from cheaper countries and make inroads into markets held by the more advanced industrial countries? What role should inward FDI play in maintaining export competitiveness? How should national enterprises relate to TNCs, both as competitors and as potential collaborators?
- For countries that have entered areas of dynamic comparative advantage assisted by TNCs, the issues relate to sustainability and upgrading. Can they continue to attract TNCs that source high-technology products as their wages rise and cheaper competitors appear? How can they induce higher local content and technological depth in local affiliate operations? How can they ensure beneficial spillovers from TNCs to local firms? More generally, how can they strengthen their national innovation systems to ensure that they graduate to sustained growth in sophisticated manufacturing by both TNCs and local firms?
- For countries that have attracted FDI into low technology export activity but have failed to diversify their export base or to move into higher value products, the main issues concern broadening the competitive base. How much can they upgrade their exports into less vulnerable, more value-added products within the low technology groups? How can they diversify into more complex activities? How can they attract TNCs into a different set of activities and build more advanced domestic skills and capabilities?
- For countries that have built up sizeable industries behind protective walls but have not made the transition to dynamic export growth by either foreign or local enterprises, the issues relate to the incentive regime and industrial restructuring. What is the best way to liberalize in order to build upon the existing base of capabilities and make the FDI regime competitive? How can existing industries be reoriented and upgraded to become export competitive? How can foreign affiliates be induced to integrate their operations better into their parent companies' global operations? How can new export-oriented FDI be attracted, initially to a range of activities and over time to higher technology activities? What role can TNCs play in restructuring domestic firms? What can be done to re-gear the national technology system to international competitiveness?

- For countries with weak industries, marginalized in export growth and FDI, the issues relate to their ability to attract FDI and to stimulate industrial growth in general. How can they improve their investment climate and attract manufacturing FDI? What is the best way to create the basic skills and institutions needed to promote learning in simple industrial activities and diversify production from the primary sector? How can they attract investments, as a first step, into the low technology activities becoming uncompetitive in more advanced developing countries? What needs to be done to upgrade traditional SMEs to participate in manufactured export activity?

In view of the objective of enhancing export competitiveness, a common set of preconditions and issues runs through all of these groups. The preconditions encompass prudent macroeconomic management - especially of the exchange rate - and an institutional environment conducive to exporting.<sup>8</sup> The common issues relate to liberalizing FDI and trade regimes; attracting export-oriented FDI and upgrading TNC activity; and strengthening domestic skills, capabilities and institutions. Each of these has a vital role to play in realizing the role of FDI in generating and upgrading exports. The precise nature of the policy problems differ, however, according to the level of national capabilities and development, the nature of the policy regime and the form of participation in TNC networks. It cannot be tackled in detail here, but some generalizations are possible.

The first set of policy measures relates to liberalization. The new institutions and rules of international trade and especially the nature of technological change suggest that globalization will continue. In this new context, the way to raise productivity and living standards lies in greater participation in international investment and trade - albeit with due preparation to ensure that liberalization does not lead to economic devastation or technological stagnation. The pace of liberalization has to be calibrated to ensure that domestic capabilities improve and the productive structure is upgraded. The rules of the game may provide sufficient flexibility to developing countries to manage this calibration, but taking advantage of them needs careful preparation and market-friendly strategies. In this situation, governments face several options to increase trade competitiveness.

Liberalization has been widespread. In the trade area, it has happened to a large extent in the framework of GATT/WTO; in the investment area, it has taken place largely unilaterally (see chapter IV).<sup>9</sup> Given the interrelationships between FDI and trade (UNCTAD, 1996b), both trends encourage export-oriented FDI. This is also true in regional contexts where free trade agreements are increasingly free investment agreements as well. In fact, in some cases their very purpose is to make an area more attractive for intra- and inter-regional FDI, as in the case of the ASEAN Investment Area (chapter IV). Similarly, MERCOSUR has triggered FDI among member countries as well as from investors outside the region interested in exploiting economies of scale in intraregional trade or in using the region as an export platform.

This liberalization process has, however, not been uniform. A number of countries have opted to use protection, because full-fledged liberalization could create problems for the survival of domestic industries. In such policy situations, selective liberalization might be a way to reconcile efforts to attract export-oriented FDI with the need to protect particular economic activities or industries. Selective liberalization can take various forms, for example, EPZs - which limit trade and investment liberalization to a spatially-confined area; bonded-warehouse and duty drawback systems - which exempt export-oriented industries from domestic tariffs;<sup>10</sup> and gradual tariff phase-outs over a period of time - which allow an economy to shield selectively certain products or industries considered strategic. Governments might also pursue a policy of "trade neutrality". The objective of this policy is to eliminate any anti-export bias (to the extent that it exists) whereby exporters may be buying inputs at prices above world prices, but can only sell their output at world prices. Trade neutrality might serve to attract export-oriented FDI.

The second policy issue is that of attracting FDI by targeting investment conducive to export competitiveness and upgrading. Again, a variety of measures are available. Where an investment promotion agency exists, it could gear at least part of its activities to this objective. Targeting as a policy instrument may be particularly effective if it has top-level government support and where it is incorporated into a cohesive overall policy framework. The more concrete elements of targeting range from systematically providing comprehensive information on industries with export-potential (e.g. databases on local firms and their capabilities, ideally made available through the Internet), to active research and investment promotion.

A special effort, for example, could be made to draw FDI into industries in which the host country has a revealed comparative advantage (RCA), i.e. where its exports of a product are growing faster than exports of that product worldwide (box VIII.8). If this can be combined with attracting TNCs that have a competitive edge in that product and in world trade, a virtuous cycle could be in the making. Targeting initiatives might also seek out TNCs from developing countries, for example SMEs, that are active in particular export niches or which serve as specialized supplier industries to global exporters. With the growth of FDI from developing countries, it can become an important reservoir of capital and other assets, and may facilitate access into new markets. This might require Governments to review their FDI regulatory framework to see whether it is not biased against non-traditional TNCs.<sup>11</sup>

The third issue for policy consideration is that of domestic capacity. Strengthening domestic enterprises, as well as the skills, capabilities and institutions on which they rely is probably the single most important long-term element for a successful export-oriented policy. This is so regardless of the role FDI plays in export activity: reliance on TNCs does not eliminate the need to invest in domestic capabilities. The entry of TNCs can complement and catalyse domestic resources; it cannot substitute for them. To foster the creation of backward linkages and to increase the share of value added in the host economy, countries - developed and developing - have used local content requirements. Such requirements are subject to provisions of the Agreement on Trade-Related Investment Measures (TRIMs) (WTO, 1995). Developing countries have also used export performance requirements to encourage the export orientation of foreign affiliates.

Domestic capacity-building also calls for measures to support local export-oriented industries that can serve as a magnet for FDI; nurturing efficient supplier networks is a related measure. Governments can, for example, initiate training programmes for domestic companies to upgrade their product quality and productivity or they can enlist the assistance of the TNCs engaged in the export sector for this training. Indonesia and Malaysia, for example, have had successful programmes in which TNCs in the export sector have conducted training courses for

#### Box VIII.8. Targeting export-related FDI

A technique called “investor targeting strategy” has been developed by investment promotion agencies to conserve resources yet attract TNC investment in industries in which the host country has a revealed comparative advantage. The first step in developing such a strategy is to identify the industries in which the host country has a revealed comparative advantage. This is done by assessing the country’s trade performance by comparing its export statistics with global trade flows. The second step is to determine why the country has a revealed comparative advantage in these industries and not in others. This can be done, for example, by a location audit, which investigates the major cost factors that go into producing, marketing and shipping these products. Often a location audit can identify factors that, if modified, would allow the country to develop a comparative advantage in other industries. The third step is to determine which competitor countries are performing well in the same product segment, as well as which countries have a revealed comparative disadvantage in the same industries. The fourth step is to identify TNCs that are active investors in these countries. These TNCs can be contacted directly in a focused promotion campaign. Those that are in countries which are successful exporters of the product or product group concerned might be interested in expanding their locations. Those that are in countries displaying a comparative disadvantage might be interested in relocating to a new competitive host economy. Depending on the type of incentives system the Government has established, FDI in these industries might be encouraged by additional incentives.

*Source:* UNCTAD.

domestic companies in supplier industries (box IX.7). Targeted incentives might include incentives for creating specific skills required by a particular export industry which can yield large dividends in dynamizing the export structure. The skilful use of incentives, and investment in skills and supply capabilities, can also induce sequential investment into the upgrading of affiliates.

Strengthening export competitiveness and upgrading is not merely an issue of *domestic* policy for host developing countries. These countries cannot reach full export competitiveness as long as developed countries restrict access to their markets. Many developed countries have tariff regimes that are characterized by tariff escalation for processed goods locking out potential suppliers - and in the process deterring potential foreign investors in those industries. Similarly, restrictions on certain industries have hampered the development of competitive industries in developing countries that would have a comparative advantage, given their natural resource and labour endowments (e.g. the Multifibre Agreement). In other industries - such as tropical beverages and some categories of vegetables or fruit - tariff peaks make it difficult for developing countries to develop export markets (UNCTAD, 1997c and 1997e; Kaplan and Kaplinsky, 1999).

In a broader context, an efficient rule-based multilateral trading system is of critical importance to developing countries. WTO membership, and the capacity to follow up on implementation, are important since a number of policy instruments of that Organization have a direct bearing on the impact of FDI on export competitiveness and upgrading. These concern, in particular, domestic content, and trade-balancing requirements and restrictions on exports. They are contained in the Agreement on Trade-related Investment Measures (TRIMs) (WTO, 1995). It requires WTO members to notify the use of instruments contained in the TRIMs illustrative list, and to phase out their use by 1 January 1997 for developed countries, by 1 January 2000 for developing countries, and by 1 January 2002 for least developed countries. Developing countries can seek extension of these transitional periods, taking into account the individual development, financial and trade needs of the country concerned (WTO, 1995, p. 164). Indeed, given that some developing countries have found these measures useful, proposals have been made to extend the transitional period. Active and skilful participation by developing countries can help ensure that the review of the TRIMs Agreement accords with their development interests (box VIII.9).<sup>12</sup> As the multilateral trade environment is being developed further, the links between trade and FDI need to be assessed carefully by developing countries

#### **Box VIII.9. TRIMs and developing countries: questions for consideration**

The TRIMs Agreement was concluded in 1994 and came into force on 1 January 1995 (WTO, 1995). It applies only to trade in goods and is limited to a clarification of GATT Articles on national treatment on internal taxation and regulation and general elimination of quantitative restrictions. The operative component of the TRIMs Agreement is the prohibition of the application of any trade-related investment measure that is inconsistent with Article III or Article XI of GATT 1994. An illustrative List annexed to the TRIMs Agreement contains examples of measures that are inconsistent with Article III.4 or Article XI.1 of GATT 1994. The most important restriction for developing countries is that on local content. Indeed, local-content requirements have been the most common notification to the WTO under the TRIMs agreement (UNCTAD, 1998a, p. 58).

The TRIMs Agreement is scheduled for review beginning 1 January 2000. The following issues are among those relevant for both development and export competitiveness (UNCTAD, 1999b):

- Could one carve out certain TRIMs on the basis of developmental considerations?
- What are the elements of a positive agenda for TRIMs, and if more TRIMs would be included, what might be the price?
- What are the interlinkages between TRIMs and incentives, especially from a development perspective?
- What are the relations between TRIMs and other investment-distorting trade measures, such as anti-dumping, subsidies and rules of origin?

The TRIMs Agreement is an example of how the international framework can reduce policy space at the national level. A similar situation is observed in some regional agreements (e.g. NAFTA) and some bilateral investment agreements (UNCTAD, 1998b).

*Source:* UNCTAD.



as they formulate their agenda. The ability to conduct complex investment discussions and negotiate international investment agreements is increasingly important for determining the role that FDI can play in boosting the export competitiveness of developing countries.

\* \* \*

In conclusion, TNCs have the potential to contribute to export competitiveness in host countries. Their role is particularly large in the most dynamic segments of export activity and, within those, in activities where increasing amounts of trade are inside corporate networks. How well developing countries *use* this potential depends largely on their own strategies and efforts. Opening up passively to international investment and trade is useful, but it is only a partial answer. Its main benefit lies in realizing existing comparative advantages based on natural resources and initial capabilities. Where capabilities are weak and static, FDI may well lead only to a short-lived hump in export performance. To build a more sustainable and dynamic export base, countries have to use proactive policies such as those suggested above. They also need to improve their human capital and capabilities in order to attract higher quality investment. This allows them to attract more sophisticated activities and functions from foreign investors and to strengthen domestic enterprises as direct exporters and as suppliers to TNCs. Only the development of a local capability base will allow countries to plug into the dynamic segments of export activity. TNCs can, in turn, help in the further development of domestic capabilities (chapter VII), leading to a virtuous circle of rising incomes, higher-quality FDI and dynamic competitiveness in trade.

## Notes

- <sup>1</sup> The data are from Lall, 1998. For a discussion of the classification used, see box VIII.1.
- <sup>2</sup> Estimated for a sample of developed and developing countries that accounted for 40 per cent of world exports in 1994. Based on home country data for foreign affiliates, they are estimated to account for somewhat more than one-third of world exports in 1998 (table I.2).
- <sup>3</sup> This estimate is based on exports from a sample of 12 developing countries between 1993-1996, using 1996 as the base year. These countries accounted for 13 per cent of world exports and 32 per cent of developing country exports.
- <sup>4</sup> A form of intra-firm trade which lends itself to transfer pricing, discussed in chapter VI.
- <sup>5</sup> In Singapore and Malaysia the shares of foreign affiliates in manufactured exports as a percentage of total manufacturing exports are higher, over 70 per cent each, according to Ramstetter, 1998. Also see UNCTAD, 1996b.
- <sup>6</sup> For an extensive discussion of this phenomenon in Asia, see UNCTAD, 1995a, ch.V.
- <sup>7</sup> In some cases, domestic firms can upgrade and diversify exports more than affiliates. They can reach out to new markets, whereas affiliates may continue to supply only other parts of a TNC system.
- <sup>8</sup> It includes the provision of trade-related physical and institutional infrastructure such as transport and telecommunications infrastructure; standardization bureaus; efficient procedures for implementing customs regulations; access to export finance and insurance; and other trade facilitation services.
- <sup>9</sup> Thus, virtually all WTO members have made some bound commitments on investment, including access and national treatment in their GATS schedules. In particular, the post-Uruguay Round negotiations on financial and basic telecommunications services resulted in major commitments with respect to investment in these industries.
- <sup>10</sup> A bonded-warehouse system allows export producers to import inputs duty free and place them in the bonded warehouse at their plant site. After production, finished products are again placed in the bonded warehouse prior to export. Under a system of duty and tax remission or drawback on inputs for export production, import duties and taxes on imported inputs are refunded (drawn back) when the final product is exported. Duty drawback provisions are subject to the Agreement on Subsidies and Countervailing Measures and need to be notified to the WTO, specifically stating form, amount involved, policy objective or purpose, duration and statistical data (WTO, 1995, p. 297; also see chapter IV for a related discussion).
- <sup>11</sup> For a discussion of these issues, see UNCTAD, 1998n.
- <sup>12</sup> For a discussion of TRIMs, see UNCTC and UNCTAD, 1991; UNCTAD, 1999h; UNCTAD, 1999r; and Moran, 1998.





## CHAPTER IX

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### GENERATING EMPLOYMENT AND STRENGTHENING THE SKILLS BASE

#### **A. The importance of employment, employment quality and skills for development**

Employment, employment quality and the skills at the disposal of workers are linked to development in several ways. Labour and human resources with skills and knowledge are indispensable factors of production in all economic activity. Increasing the quantity of labour employed in productive activity generally contributes to increasing output and income. If the increase in employment is accompanied by an increase in the quality of employment, by investment in human skills and knowledge, there is also an increase in value added per employee, leading to rising wages and improved conditions of work. Furthermore, employment creation and upgrading are important means for countries to achieve an equitable distribution of income and minimum standards of welfare for their people. Thus, for all countries, developed and developing, reducing unemployment, moving towards full employment, and raising the quality of employment are critical components of development. In developing countries, where public-support mechanisms for the poor and unemployed are often lacking, these processes are particularly important. They provide the means whereby economic development translates into social and human development through a more equitable sharing of the benefits of growth, reduction in social exclusion, and broadening of choices.

All these dimensions of the employment-development link are of importance for developing countries. The labour force in the developing world, 2.3 billion strong in 1995, is growing each year at around two per cent (ILO, 1998a; World Bank, 1997). The numbers of chronically under- and unemployed remain large, as population growth and increasing labour force participation rates continuously add new entrants to the workforce. In 1997, open unemployment ranged from three to 15 per cent in the urban areas of Latin America and five to 20 per cent in those in Africa; in addition, there is a substantial amount of hidden unemployment. Economic crises, like the recent one in Asia, inflict sharp shocks. It is estimated that total job loss resulting from the Asian crisis could reach 20 to 25 million (ILO, 1999). However, unemployment rates may not reflect this, although they rose significantly, from three per cent to nearly eight per cent in the Republic of Korea and from one per cent to four per cent in Thailand. As the experience of Mexico after the peso crisis shows, such problems last – unemployment remains high for some time. Furthermore, the processes of liberalization and structural adjustment often make it difficult to maintain formal-sector employment, at least for

some time after the implementation of the changes they involve. As existing employment opportunities diminish, either because of structural adjustment policies or because of restructuring due to growth and technological change, many countries find it difficult to create new employment in competitive activities.

Increasing employment thus ranks high as a policy objective for developing countries. Raising the quality of employment ranks equally high: increasing the quantity of employment must be accompanied by the creation of higher paid, more secure jobs with better working conditions and an improvement in the skill content of employment. There is an increasing recognition that raising employment rates and improving employment quality are complementary rather than conflicting factors in the development process. Improving employment quality necessarily involves investment in human capital through education and skills creation that increase productivity and lead to “a better use and production of ideas” (ILO, 1998, p.3); this contributes to increased demand for labour and, thereby, to the generation of employment. Moreover, as economies grow and rising incomes create demand for new and improved products, improving the skill levels and knowledge base of the labour force is necessary for restructuring production towards higher value-added activities. The shift also allows higher wages and improved conditions of work. Rapid technological change further increases the urgency of improving employment quality (chapter VII).

In the new global context (chapter V), an increasing proportion of the world's labour force is engaged in activities that compete with or are linked -- through international trade and international production -- to activities taking place in other countries. This means that national labour markets are becoming increasingly interdependent. Maintaining or increasing employment and its quality in a particular country requires that its labour markets must be responsive not only to changes related to development and growth within the country, but also to changing conditions worldwide. At the same time, globalization through international production creates scope for TNCs and foreign firms generally to play a role in the generation and upgrading of employment and the building up of skills in host countries. The role and impact of TNC activities in these respects varies, however, according to the type or motivation of FDI, the industries in which TNCs invest, the strategies they adopt, and host country conditions. They also depend significantly on the policies of host countries on FDI for increasing employment quantity, improving employment quality and strengthening human resource capabilities and for minimizing any negative effects that FDI may have in these respects.

## **B. TNC strategies and their implications for generating employment and building skills**

TNCs, like other enterprises, combine labour and other factors of production to generate goods and services. The quantity and quality of employment generated within a firm — regardless of whether it is a TNC or not — depend mainly upon the industry group to which it belongs, the production activities in which it is engaged, and its size. The activity in which a firm is engaged, and the technological parameters of that activity determine the capital-, labour- and knowledge-intensities of its production, although there is usually a range of technological options and hence combinations of labour with capital that are available to producers to choose from, depending upon, among others, relative factor costs. The size of a firm, on the other hand, determines whether a large or small amount of labour is employed, given the combination of labour, capital and knowledge that are required to produce one unit of output. It also determines the extent to which a firm can invest in training and the building up of skills.

While these determinants of the volume and nature of employment are the same for all firms, there are some factors that suggest that the behaviour, practices and role of TNCs with respect to employment and skills upgrading may differ in some respects from those of other firms. These include the larger size and greater technological sophistication of many TNCs, the competitive pressures under which they operate, and their ability to deliver, by means of FDI, non-tradable goods and (especially) services. Among other things, because of their size, many

TNCs are employers of larger total numbers of workers than uni-national firms in the same industries. At the same time, because of their technology-intensity and competitive behaviour, they are likely to generate smaller numbers of jobs than other firms of equal output size.

The principal difference between TNCs and other firms, however, is that TNCs distribute their production activities and, hence, employment, between their internationally dispersed facilities. The distribution of employment by size and quality among different locations depends upon several factors. It depends upon the TNC's motivations for and strategies with respect to international production and on the locational advantages of different countries. It also depends upon labour market conditions in host and home countries, including the availability and cost of labour of various skills and capabilities.

While FDI of all types involves employment in host countries, some FDI is motivated specifically by considerations directly related to the employment of skilled or unskilled labour. Resource-seeking and efficiency-seeking FDI in manufacturing and services is often made with the specific objective of accessing low-cost labour for labour-intensive production or taking advantage of relatively abundant supplies of educated and skilled workers. For market-seeking FDI, on the other hand, the availability and cost of labour or skilled human resources is not the main consideration in the choice of location, although it is likely to be one of several secondary factors that determine the investment location decision.

Given the broad motivations that underly TNCs' decisions regarding FDI, their strategies and the resulting organizational structures of their international production activity affect in a number of ways the intra-firm distribution of employment among home and host countries:

- Under a "stand-alone" strategy, in which a TNC replicates in its foreign affiliates much of the value-chain of the parent firm (with the exception, typically, of technology development and finance that are retained at headquarter operations), affiliates in host countries perform the tasks necessary for production to service the host-country and/or neighbouring markets (UNCTAD, 1994a, chapter III). Accordingly, most of the employment of labour necessary for host country production occurs in the foreign affiliates. Indeed, if foreign affiliate sales replace exports from the home country, that may be accompanied by a reduction of employment in the home country facilities within the TNC systems. Replacement of actual or potential employment in parent firms by that in foreign affiliates does not, of course, occur if the foreign investment is motivated by high tariffs or other restrictions on the home country's exports. It also does not occur where FDI is the only means of serving foreign markets, as for many services that by their very nature require proximity between the provider and the customer.

On the whole, FDI made under stand-alone strategies is likely to result in a higher firm-wide level of employment (especially under conditions of growing demand), since the firm's employment structure is replicated in various locations, than that made by firms of similar efficiency under other strategies (discussed below). The distribution of employment will, of course, depend upon the scale of operations in different locations. Employment in foreign affiliates is likely to be relatively stable or secure, since such investment is motivated by market size rather than low wages or labour cost advantages that might be relatively short-lived. (In protected host country markets, however, this stability depends upon continued protection: liberalization could lead to production and employment reduction.) Moreover, employment in foreign affiliates is likely to involve greater occupational diversification, with the exception of occupations at the highest skill levels (such as R&D) that are usually concentrated in the parent company. In keeping with this, training in foreign affiliates is likely to create a broad range of operational skills, although the degree of expertise and the rate at which skills are upgraded depends on the extent of competition that they face. However, stand-alone affiliates in protected host country markets with import-substituting regimes may not impart state-of-the-art skills. They may upgrade employee skills only slowly, as compared with affiliates in similar activities producing for

more open markets. In service industries, in which most FDI is market-seeking (although the situation is changing for some information-intensive services) foreign affiliates are particularly apt to reproduce abroad the factor proportions used in home countries, including the skill and capital intensities of their parent firms (UNCTC, 1989). This has positive implications for the quality of employment in service affiliates as compared with that in manufacturing affiliates.

- Under a “simple integration” strategy, in which a TNC locates one or a few elements of its value chain in its foreign affiliates, the latter undertake -- typically with technology obtained from the parent firm -- a limited range of activities to supply their parent firms with specific inputs or products that they are in a more competitive position to produce (UNCTAD, 1993a, 1994a). Simple integration does not involve reproducing the parent firm’s occupational structure in foreign affiliates; rather, it introduces a complementary hierarchy of occupations within a TNC system across different locations. Employment quantity and quality in a host country depend upon the nature of the locational advantages that attract FDI. If, as is the case in labour-intensive manufacturing for export, a TNC invests to take advantage of low-cost labour, low-skilled jobs are located in foreign affiliates, and the more skilled and highly paid jobs remain in the parent firm or in affiliates in countries with higher wages. Firm-wide employment may be lower (than in firms of similar size pursuing stand-alone strategies for market-seeking FDI), since the objective of an integration strategy is to rationalize production to take advantage of specific locational advantages of host countries. But the share of employment in foreign affiliates producing labour-intensive products is likely to be larger. Affiliate employment in particular locations will, however, be less secure than in the case of stand-alone foreign affiliates: unlike market size, low labour costs are an advantage that can be dissipated when wages rise or when other low-cost labour locations offer additional inducements, and the labour-intensive activities in which such FDI takes place have low sunk costs, making exit easy (chapter VIII).

A suitable combination of wages and skills may also lead to some higher value-added jobs being located in manufacturing foreign affiliates established under simple integration strategies. This is done, for example, in affiliates that move from the production of low value-added labour-intensive products to that of skilled-labour-intensive products for export as labour market conditions in a host country change. Service affiliates established to take advantage of low-cost educated and skilled personnel to perform functions that can be integrated with other activities conducted elsewhere within TNCs’ production systems can also provide higher quality employment, as illustrated by data processing jobs that have been located in Jamaica (UNCTAD, 1999a) or the more sophisticated computer software activities that have been located in India (Lateef, 1997). If the locational advantage that attracts FDI is in the form of the availability of scarce natural resources, the quantity and quality of employment depend considerably upon the capital intensity and technological sophistication of the extractive or agricultural activity and the degree of processing that takes place in the host country.

- Under “complex integration” strategies, each TNC affiliate specializes in a product, process or function integrated with those of other units within the TNC’s regional or global network of integrated international production (UNCTAD, 1993a; UNCTAD, 1995a). Deeper integration of this kind provides efficiency gains for a TNC and could result in a smaller system-wide workforce for a given output size than the other two strategies mentioned: specialization and consolidation of business functions in various locations have a rationalizing effect on total firm employment when compared, for example, to the replication of value-adding activities in all host locations as in a stand-alone strategy, or limited specialization among locations as under simple integration strategies. Employment quantity in different locations depends upon the role assigned to the parent firm or a particular affiliate within the network. With respect to employment quality, however, deeper integration can imply a convergence in certain elements of the employment package in order to maximize the efficient performance of a firm’s overall production system; this may imply higher employment quality and greater skill formation in foreign affiliates.



Furthermore, the location of activities within a firm becomes more responsive to a variety of created assets (particularly the cost and quality of human capital). Hence, the home country no longer has the same hold on a TNC's highest-quality jobs as it has under stand-alone or simple-integration strategies.

The motivations and strategies of individual TNCs – each with its firm-specific advantages, including, among others, those arising out of its international production networks – interact with the locational advantages of particular host countries to determine how much FDI the latter attract, in what industries, and of what kind. Simultaneously, they determine the size and quality of employment and the potential for skills upgrading directly in foreign affiliates. Different organizational forms and structures have different implications and potentials in these respects. In addition to these direct effects, there are indirect effects on employment and related skills building that occur through competition, production linkages and multiplier and accelerator effects of income generated by FDI. Moreover, TNC strategies and behaviour with respect to investment and, hence, employment, human resource management, and investment in skills formation change in response to changes in global, regional or country-specific conditions affecting their competitive positions and profit opportunities. Globalization and increased global competition are leading TNCs to shift towards more complex corporate strategies and integrated international production structures. These involve a greater geographical dispersion of TNC activities, increasing coordination and specialization of the activities of individual affiliates, and greater importance being attached to created assets in making locational decisions. Host developing countries can, by taking TNC strategies and changes therein into account, harness the potential of FDI to generate employment and, in particular, create jobs of good quality and impart skills to the workforce under conditions prevailing at any given time. They can, moreover, induce TNCs to sustain their employment-generating investments, upgrading the quality of employment they provide by moving into higher value-added production, and increasing the training and skills available to human resources in foreign affiliates and local enterprises linked to them.

## **C. FDI, employment and skills in host developing countries**

### **1. Employment generation**

FDI generates employment in host countries directly and indirectly. Foreign affiliates of TNCs employ people in their mines, plantations, manufacturing plants and service establishments (direct employment). They also cause employment to be created in enterprises that are suppliers, subcontractors or service providers to them; the latter include domestic firms as well foreign affiliates of other TNCs, some of which may be established because of associated investments attracted to the country by the demand for their products or services from original investors (indirect employment). Foreign affiliates also indirectly create employment by adding to output and incomes and thereby, further investment. Other things remaining the same, inward FDI thus has both direct and indirect effects that add to employment generation in a host country.

These positive effects may, however, be offset by a loss of employment caused by TNC activities. Such effects may also be direct or indirect. If FDI enters a host economy through mergers and acquisitions (M&As), it may lead to significant labour shedding in the acquired firms -- the newly created foreign affiliates -- as they restructure their activities in line with the objectives underlying the M&As. Moreover, as noted in chapter VI, FDI could, under certain conditions, crowd existing firms out of business, creating unemployment for their workers. It may also induce local competitors to shed employees, either by reducing the local firms' production due to a decreased share of the market or because of efforts by local firms to increase their efficiency and competitiveness by downsizing their labour force.

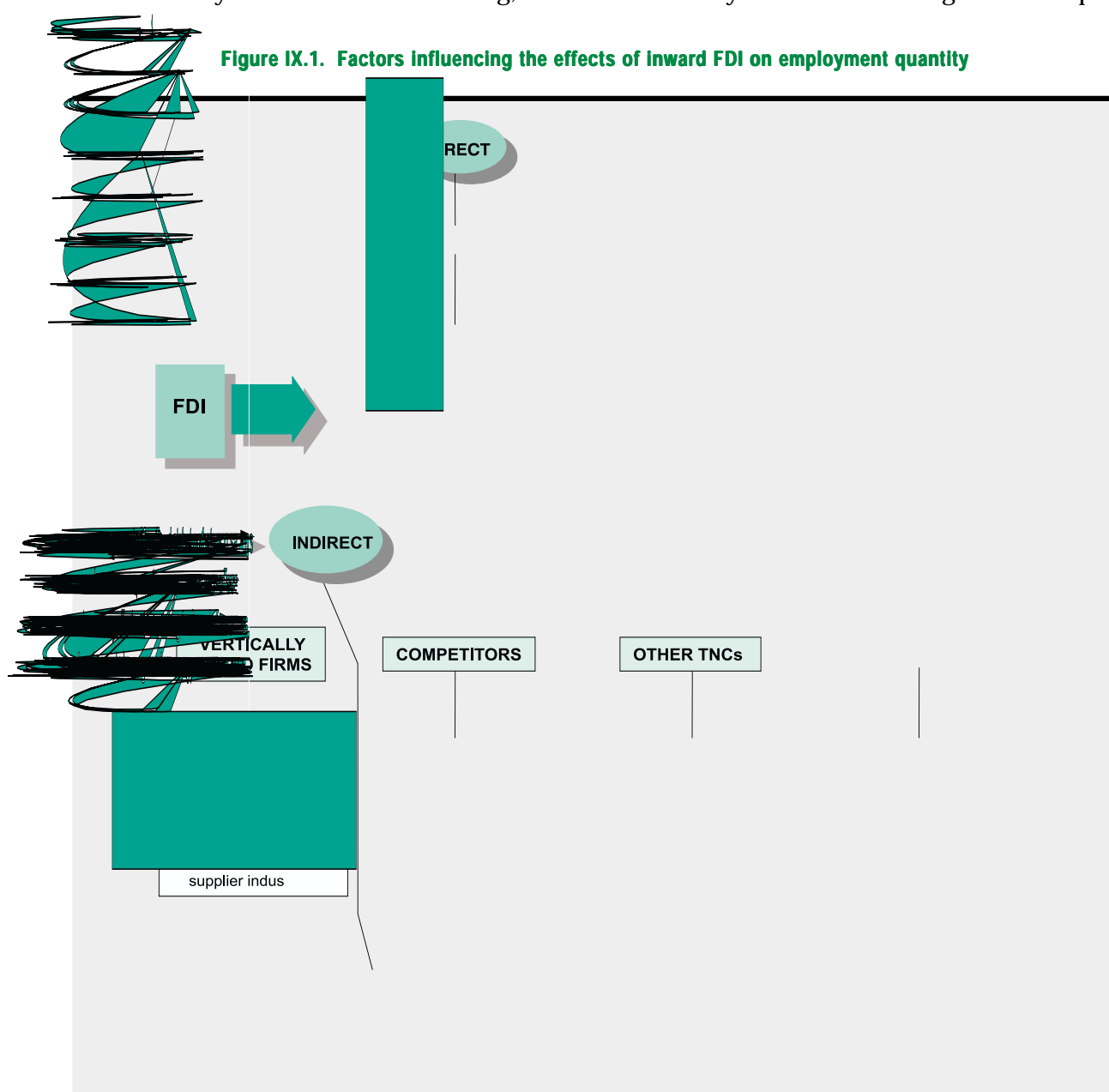
The balance of these various effects is difficult to assess and is likely to vary among host countries and industries. Effects may also vary over time. A short-term loss of employment may be more than offset by longer-term gains if FDI raises the competitiveness, efficiency and export-orientation of domestic firms, thereby raising their production levels, or stimulates the

establishment of new local or foreign supplier firms. On the other hand, if FDI is footloose, or adversely affects local business development or holds back technology upgrading, the long-term employment ~~and other~~ effects may reverse short-term gains or worsen short-term losses. Since it is difficult to specify the counterfactual – what would have happened if an investment had not taken place – the net effect is uncertain. However, a closer look at the nature of direct and indirect effects under various conditions, and empirical evidence throw further light on how and why FDI may affect employment generation in host developing countries.

The ~~net~~ effects of FDI on employment generation in host economies depend upon several factors (figure IX.1). A few of them deserve particular attention while considering the effects in developing host economies.

- As noted above, direct employment effects differ by the mode of entry of FDI. If investment is in greenfield sites (new production facilities), it generates new demand for workers. Entry through M&A, on the other hand, not only does *not* create new demand for workers but may lead to labour shedding, either immediately or with a time lag. In developed

Figure IX.1. Factors influencing the effects of inward FDI on employment quantity



Source: UNCTAD

countries, where M&As are the major mode of entry for FDI, they almost invariably lead to lay-offs, at least initially (see table III.20 for some examples); in developing countries, the effects are less clear. Some M&As salvage moribund enterprises and contribute to conserving employment. Others could reduce total employment in the host economy by dismissing labour or by out-competing local firms. Whether or not employment subsequently rebounds depends on a host of factors, including productivity, multiplier and growth effects. Comprehensive quantitative assessments, tracing employment levels over time for different M&As, are scarce.

- Employment generation by TNCs depends upon the size of FDI in general and especially that of FDI in labour- or human-resource intensive activities. Given labour-market conditions, this depends on the trade and industrial policies of a host economy. Countries with abundant low-cost labour that establish export-oriented trade regimes and an environment conducive for FDI can promote significant employment generation by attracting export-oriented activities. As the early experience of East and South-East Asia, and subsequent experience in China show, simple processing activities for exports in foreign affiliates create large numbers of jobs, initially at low wages and requiring low skills (UNCTAD, 1994a, chapter IV; UNCTAD, 1995a, chapter V). Whether this employment is sustainable over time depends on several factors, including whether technologies and skills in affiliates are deepened and improved as wages rise (chapter VII). Countries with import-substituting regimes can also stimulate employment generation by attracting FDI, especially when their markets are large; however, employment growth in market-seeking foreign affiliates in such regimes tends to slow over time if high levels of protection are maintained and lead to technological lags or constrict economies of scale. In general, a competitive environment that places fewer barriers to the entry of new firms tends to generate more sustainable growth in output and employment. However, much depends upon how competitive conditions are introduced: a sudden shift to competitive structures carries the possibility of widespread labour-shedding resulting in unemployment that could take time to resolve; for example, in some Latin American countries, liberalization led to a dramatic shift towards capital-intensive industries and methods, and high unemployment levels (Katz, 1998; Chudnovsky, 1999b).
- As developing countries move towards more liberal trade and industrial regimes, their ability to sustain employment in tradable goods and services depends partly on how quickly these activities can be restructured to face international competition. It also depends on whether new FDI flows in: while large domestic markets remain a strong magnet for FDI, the growth of employment in the new global context depends increasingly on host economies' competitive capabilities (chapters VI and VII). Thus, growth of employment resulting from FDI in the tradables sector is increasingly likely to be concentrated in economies that can support rapid restructuring and efficient new production activities. However, given the growing importance of the services sector, both because of shifting consumption patterns as incomes grow and because of the growing importance of producer – including infrastructure – services in production, the potential for FDI to contribute to sustained employment growth in non-tradable service activities, such as finance, trade, tourism and utilities, should not be overlooked (chapter VII).
- A third important factor that shapes the capacity of host economies to attract employment-generating FDI is the quality of the labour force: the level and composition of skills available, and the training potential of managers, technicians and workers. In some developing economies, the authorities have pursued ambitious and comprehensive education policies that have resulted in skill levels well above the developing country averages. In some cases, as in the Republic of Korea and Taiwan Province of China, skill levels are even above levels found in many developed countries. For instance, in international rankings in terms of high-school-level numeracy, the top-scorer countries in 1997 were the Asian newly industrializing economies and Japan.<sup>1</sup> High literacy and numeracy levels make it easier to upgrade work-place related and technical skills and this enabled these economies to climb up the value chain (Green *et al.*, 1999) including, as

in Hong Kong(China), Singapore and Taiwan Province of China, by attracting FDI into increasingly higher value-added activities.

Some of the best outcomes in terms of skill formation are found where governments and enterprises have worked together to improve the training system. Singapore, for example, has used focused training programmes effectively, not just for upgrading the industrial structure but also for attracting high-quality FDI. Its labour force has been consistently ranked as the best in the world since 1980 by Business Risk Intelligence Service, a United States consultancy firm (table IX.1). A number of other Asian countries also figure relatively high on this ranking. While all such evaluations should be treated with circumspection, they are suggestive of the general trend.

- Finally, the efficiency of the labour market and the quality of labour market institutions, such as labour laws, unionization and industrial relations in a host economy have an important role to play in the extent and manner of employment generation in foreign affiliates. If labour cannot move easily to new jobs or enter new types of employment arrangements, or if information on job opportunities is not transparent and accessible, investment may not result in commensurate employment opportunities. Similarly, if there is labour market segmentation by gender, ethnicity or other factors, investments are likely to create less employment or upgrade it less efficiently than where labour markets work well. On the other hand, where labour markets are open and well organized, and where industrial relations function smoothly and facilitate communications and exchange of information, they can serve to channel employment opportunities and stimulate ideas on how to upgrade skills as well as employment and working conditions. Thus, well-functioning institutions and appropriate regulations that ensure an efficient, fair and equitable functioning of labour markets are a precondition for harnessing FDI to employment generation.

**Table IX.1. Labour force evaluation index <sup>a</sup>  
for selected economies**  
(Points scored out of 100)

Economy	1980	1990	1995
Canada	48	53	55
China	-	32	39
France	62	58	65
Germany	59	66	66
India	37	43	42
Indonesia	47	42	44
Japan	67	73	73
Malaysia	48	51	54
Philippines	60	58	57
Singapore	81	77	79
Switzerland	73	77	75
Taiwan Province of China	73	69	69
Thailand	39	49	52
United Kingdom	42	54	56
United States	53	64	67

*Source:* Based on information retrieved from Singapore, Economic Development Board website ([www.sedb.com.sg](http://www.sedb.com.sg)), 1997.

<sup>a</sup> Index prepared by Business Environment Risk Intelligence. The index measures the quality of the workforce according to the following criteria: relative productivity and legal framework (each with a weightage of 30 per cent), worker attitude (25 per cent) and technical skills (15 per cent).

Comprehensive data are lacking with respect to the employment directly and indirectly generated by foreign affiliates in developing countries. Estimates, which must be interpreted with caution, suggest that direct employment in foreign affiliates in developing countries numbered around 17 million (table IX.2) and may be as high as 26 million (Aaron and Andaya, 1998, p.10) in the mid- to late 1990s.<sup>2</sup> In terms of direct employment, thus, TNCs account for a negligible part (around one to two per cent depending on the estimate) of the total workforce in developing host countries taken as a group, although the proportion is somewhat higher if considered in relation to formal employment. In the manufacturing sector, employment in developing-country affiliates is considerably larger in a number of economies (table IX.3; chapter I; UNCTAD, 1994a, chapter IV). With the growth of international production, the share of employment within TNCs that is located in foreign affiliates in developing countries is on the rise, as indicated by data for selected host countries (annex table A.I.7) and data for foreign affiliates of United States and Japanese firms (annex tables A.IX. 1 and A.IX.2; box IX.1).<sup>3</sup> Data

for the 100 largest TNCs over the period 1991-1997 show that employment (in developed and developing countries combined) in foreign affiliates is increasing, albeit slowly (chapter III.A): employment in the foreign affiliates of the top 100 TNCs world-wide increased by two per cent in 1995-1996 and nearly one per cent in 1997 (UNCTAD, 1998a, p. 41). Employment in the foreign affiliates of the top 50 developing country TNCs also rose, by 17 per cent per annum, roughly doubling during 1993-1996 (UNCTAD, 1998, p.52), a result of growing transnationalization of developing country firms. In 1997, however, this growth came to a halt, and employment in foreign affiliates of developing-country TNCs declined by 10 per cent.

The employment generated within the foreign affiliates of TNCs is very unevenly spread among host developing countries, reflecting the uneven distribution of FDI (box IX.1; annex tables A.IX.1 and A.IX.2). In the relatively few host developing countries that have attracted significant FDI inflows, affiliate employment tends to account for large shares of manufacturing- sector employment (table IX.3). This is particularly so in countries where EPZs or similar special arrangements for export production are large relative to other industrial activity. In other host countries, not surprisingly, shares are much lower.

Indirect employment created by foreign affiliates in a host country can be large – significantly larger than that created directly – where linkages to local producers are strong. For the manufacturing sector as a whole, indirect employment effects in the formal sector range between one and two times the number of jobs created directly in affiliates (UNCTAD, 1994a). Depending on the activity, product, supplier capabilities, the extent of outsourcing and the size

**Table IX.2. Estimated employment in TNCs**

(Millions of employees)

Economy	Total employment in TNC <sup>a</sup>	Employment in affiliates in developed countries	Employment in affiliates in developing countries
All countries			
1985 <sup>b</sup>	65	15	7
1995 <sup>c</sup>	78	15	15
1998 <sup>c</sup>	86	17	19
<i>Memorandum.</i>			
Employment in TNCs from:			
United States (1996) <sup>d</sup>	26.4	4.9	2.7
Japan (1995) <sup>e</sup>	5.6	0.8	1.4
Germany (1996) <sup>f</sup>	..	2.0	1.0

*Sources:* UNCTAD, based on United States Department of Commerce, 1998; Japan MITI, 1998a and Deutsche Bundesbank, 1998, FDI/TNC database and UNCTAD/Erasmus University database.

<sup>a</sup> Including parent firms and foreign affiliates.

<sup>b</sup> Parisotto, 1993.

<sup>c</sup> UNCTAD estimates. Affiliate employment in developed and developing host countries is estimated by applying the shares of developed and developing host countries, respectively, in total employment of foreign affiliates of German, Japanese and United States TNCs to total employment in foreign affiliates in the world. Total TNCs employment is the sum of employment in affiliates thus estimated, and employment in parent firms, estimated by adding the parent employment in Japanese and United States TNCs taken together to estimates for parent employment in other countries, based on the ratio of home to foreign employment as indicated by data for the largest 100 TNCs for 1996, and on 1985-1995 average annual growth of total parent employment, for 1998.

<sup>d</sup> From annex table A.IX.1.

<sup>e</sup> From annex table A.IX.2.

<sup>f</sup> Deutsche Bundesbank, *Kapitalverflechtung mit dem Ausland*, May 1998.

**Table IX.3. Employees in foreign affiliates as a percentage of total employment in selected developing economies**

Economy	Year	Manufacturing sector	All industries
Brazil	1995	13.4	3.5
China	1997	..	4.1
Hong Kong, China	1994	16.0	12.8
Indonesia	1996	4.7	0.9
Malaysia	1994	43.7	..
Mexico	1993	17.9	3.3
Nepal	1998	1.9	..
Singapore	1996	52.1	..
Sri Lanka	1996	54.4	22.1
Taiwan Province of China	1995	21.1	11.1
Turkey	1990	3.2	..
Viet Nam	1995	14.9	5.3

*Source:* Annex table A.I.7.

of the affiliate, the employment multiplier can be much larger.<sup>4</sup> Activities that involve a large number of input suppliers (like food processing) or subcontractors and service firms (engineering and electrical products) tend to generate substantial indirect employment.<sup>5</sup> In the latter category, however, the effect depends on the level of sophistication of the supplier network.

Production and, hence, employment linkages between foreign affiliates and local firms change over time. To start with, unless compelled to do otherwise, foreign affiliates prefer to source material inputs and services from



**Box IX.1. Employment in foreign affiliates of TNCs from the United States and Japan: recent trends**

The size and distribution of employment in foreign affiliates reflect the importance of foreign affiliates in TNCs' production activities and the distribution of those activities among the different locations where TNCs operate. Trends in foreign affiliate employment reflect changes, if any, in the importance and distribution of foreign affiliate activities. In recent years, for United States TNCs, employment in foreign affiliates has been growing faster than employment in parent firms (annex table A.IX.1). Furthermore, for TNCs from the United States as well as from Japan (annex table A.IX.2), employment in foreign affiliates in developing countries has been growing faster than that in foreign affiliates overall.

TNCs from the United States employed approximately 26 million people world-wide in 1996. Of these, one fourth were in foreign affiliates – over a third of that in developing countries. Of the 5.6 million employees of Japanese TNCs world-wide, 40 per cent were in foreign affiliates – over 60 per cent of that, in developing countries. Reflecting the distribution of United States and Japanese FDI among regions, employment by developing country affiliates of both United States and Japanese TNCs is concentrated near their respective home bases. Thus, almost 60 per cent of employment in United States foreign affiliates in developing countries is in Latin America, while almost 90 per cent of employment in Japanese foreign affiliates in developing countries is in Asia.

The bulk of foreign affiliate employment for United States as well as Japanese TNCs is in the manufacturing sector. For United States firms, the machinery industry accounts for 20 per cent of developing country affiliate employment, while food, chemicals, and transportation equipment each account for roughly 10 per cent. In the case of Japanese TNCs, one third of the employment in foreign affiliates in developing countries is in the electrical machinery industry (mainly assembly of consumer electronics).

Asia has displayed remarkable dynamism with respect to employment in foreign affiliates: employment in American and Japanese affiliates in some industries in the region increased by 10 to 20 per cent annually until the financial and economic crisis of 1997-1998 (annex tables A.IX.1 and A.IX.2). Growth rates of foreign affiliates employment in Latin America have been much lower (about one third of that in Asia in the case of United States TNCs and negative in the case of Japanese TNCs) and employment in foreign affiliates in Africa decreased during 1990-1996 (annex tables A.IX.1 and A.IX.2). The differences in rates of growth of foreign affiliates employment in different regions reflect, to some extent, differences in the rates of growth of FDI inflows as well as differences in the regions (chapter II) and the greater share of FDI in Asia that goes to labour-intensive manufacturing. The slower growth of affiliate employment in Latin America is also due, at least partly, to difficulties encountered by TNC operations in domestic market-oriented activities in the context of trade liberalization, and downsizing of employment in that context as well as that of privatization.

*Source:* UNCTAD, based on annex tables A.IX.1 and A.IX.2.

suppliers with whom they have long-established linkages. At the same time, firms also often prefer to have their suppliers close to them. Thus, TNCs source inputs from suppliers in their home countries, or induce those suppliers to establish affiliates in the host economies where they operate – unless, of course, suitable suppliers are available in the host country. This has been observed, for example, in the electronics industry of Malaysia and the automobile industry in Mexico (Lall *et al.*, 1999 and van Assouw *et al.*, 1999). As domestic capabilities develop, however, supplier relationships change. In industries and technologies where domestic firms have good capabilities or can be brought to acceptable levels with some assistance, TNCs often resort to and develop local supply networks (chapter VII). Where domestic capabilities are weak, however, such linkages are less likely to grow, constraining the potential for FDI to promote employment indirectly. In the latter situation, the indirect impact on employment through backward linkages may depend, in the short run, on the extent to which supplier firms from the home country or other countries are induced to invest in a host country, and in the long run, on the successful building up of domestic capabilities.

Indirect employment effects may also occur because of TNCs' sourcing inputs or final products from sub-contractors and agents who in turn rely on production by workers or households in the informal sectors of host developing countries. This "putting out" system is more common among TNCs as buyers for retailers than in TNCs that are engaged in production, since it involves simple activities that do not involve scale economies. In some manufacturing

industries, there is heavy reliance on outsourcing that directly or indirectly involves putting out (box IX.2). This has raised concerns that the international production networks of TNCs contribute to the informalization (or “re-informalization”) and casualization of labour in certain industries (ILO, 1998a).

### Box IX.2. Home work and TNC distribution channels

In some industries – typically, industries characterized by considerable variation in output levels in the course of a season or year, requiring simple manual tasks and hence capable of relying on low-skilled labour and portable machinery – firms, including TNCs, tend to outsource (directly or indirectly) some product lines to homeworkers and microbusinesses (Chen *et al.*, 1999; Prögl and Tinker, 1997). Examples are the garment, and footwear industries which have short production runs as fashions and models change from season to season, and the toy industry, where output volumes fluctuate heavily, peaking around major holidays and receding in other periods. In some segments of those industries, the volume of work outsourced is substantial.<sup>a</sup>

Some types of TNCs source most or even all their supply from home work. They are buyers of the outputs of such production lines for their wholesale or retail networks, and usually place orders through intermediaries. Hence, they are not responsible in a legal sense for the conditions of work that prevail in such arrangements. However, the precarious terms and conditions under which workers are employed in the supply chains in these industries, especially where work is outsourced to home workers, have attracted the attention of labour and consumer groups, and the general public. What are the problems facing homeworkers, and what could TNCs do to address them?

Often, homeworkers are informally employed and therefore do not receive the protection accorded by recognized employment relationships. This has a number of consequences for the conditions of work. First, homeworkers usually are paid at piece-rates, and these have often been found to lie below minimum wages, or to require extremely long work hours to meet strict deadlines for delivery of orders (ICFTU, 1999b). In some instances, no margin is allowed for rejects, so that flawed items are not paid for, reducing the wages earned. Secondly, as this type of work is undertaken in the household, family members other than the contracted worker become involved; often, this includes children. Thirdly, contractual relations are often tenuous, and workers often depend on one major buyer, rendering them vulnerable to tight control as regards wages as well as the amount of work available, and hence the income earnable. Job security is usually low; social insurance or other benefits accorded to workers directly employed in factories do not usually accrue to home work. Also, home work was, until recently, not amenable to group action to defend common interests, via unions or other forms of organization. For the garments industries in particular, it has been observed that wages of homeworkers in developing and developed countries are linked and hover at similar relatively low levels (Yanz *et al.*, 1999).<sup>b</sup>

There are remedies, however. At the international level, in 1996, the ILO adopted the Convention on Home Work (Convention 177). The Convention aims at placing homeworkers on an equal footing with other workers (who are employed under recognized employment relationships) with regard to key labour standards: the right to organize; protection against discrimination in employment and occupation; protection in the field of occupational safety and health; remuneration; statutory social security protection; access to training; minimum age for admission to employment or work; and maternity protection. Complementing this Convention, various consumer movements monitor the supply chain of goods, such as garments and footwear, through all their stages and seek to ensure that work conditions are socially acceptable. Examples include the Netherlands-based Clean Clothes Campaign, and the Australian-based Fairwear.

In response, TNCs are formulating and adopting codes of labour practice voluntarily, often in conjunction with NGOs. These voluntary codes set standards that apply throughout their network, including in work outsourced to suppliers and their subcontractors. For instance, over 30 transnational retailers and over 60 TNCs that are manufacturers or wholesalers have subscribed to a “Homeworkers’ Code of Practice”.<sup>c</sup> It defines work conditions and pay rates homeworkers should receive and transparency regarding occupational classification.<sup>d</sup>

*Source:* UNCTAD.

<sup>a</sup> Some surveys have examined shares of home work in a number of manufacturing industries, but these are not necessarily TNC-related. Shares of home work in the textiles and clothing industries have been estimated as follows: Venezuela, 45 per cent; Argentina, 20-30 per cent; Mexico, 30 per cent; Thailand, 40 per cent (Chen *et al.*, 1999).

<sup>b</sup> Thus, certain garment stitching activities have returned to developed countries, where some of them are undertaken at rates of pay and other conditions comparable to those prevailing in developing countries (Yanz *et al.*, 1999).

<sup>c</sup> Proposed by the Australian NGO Fairwear.

<sup>d</sup> For instance, it has developed a timing manual where garments are classified by levels of complexity which become the standard for fixing sewing time rates translated into pay rates for homeworkers. There are also indications of the minimum and maximum amounts of work a home worker can receive from a contractor over a two-week period. (website [vic.uca.org.au/fairwear/cop.htm](http://vic.uca.org.au/fairwear/cop.htm)).

Where FDI is concentrated in industries such as clothing, agro-processing, electronics assembly and certain services, women workers account for most of the employment generated by foreign affiliates in developing countries. Many of these affiliates produce labour-intensive products for export. This “feminization” of manufacturing employment – and of exports – (Standing, 1999; Joeques, 1999) is particularly characteristic of EPZs, where the share of women in production-line employment can be as high as 70 to 80 per cent (table IX.4). This pattern of employment by gender reflects the occupational structure of these industries (in developing and developed countries alike), the export-orientation of TNC production in these industries, and more generally, a preference of employers for young, low-wage, semi-skilled workers perceived as docile and undemanding (Heyzer, 1986; Razavi, 1999, forthcoming) (box IX.3)

**Table IX.4. Women’s employment in selected export processing zones in developing economies**

Country	Number of women workers as a percentage of all workers	Main industry
Bangladesh 1998	69	garments, leather, shoes, electronics
Dominican Rep. 1998/1999	58	garments, electronics
El Salvador 1997	80 <sup>a</sup>	garments, electronics
Fiji 1999	80 <sup>b</sup>	garments, food
Haiti 1998	69 <sup>c</sup>	garments
Jamaica 1997	90	garments
Madagascar 1997	60	garments, leather
Mauritius 1997	68	garments, flowers
Nicaragua 1997	72	garments, flowers

Source: Van Heerden, 1999.

<sup>a</sup> In maquiladora.

<sup>b</sup> In free trade zones.

<sup>c</sup> In apparel only.

### Box IX.3. FDI and the employment of women

There is considerable interest in the impact that FDI has had, over the past 20 years of increasing globalization, on the employment conditions of women and men in developing countries and in particular, in its implications for the role of women in paid employment and their well-being and advancement in the work place. A systematic relationship between FDI and women’s employment in the secondary sector first emerged in South East Asia where, from the 1970s onwards, large numbers of women were drawn into export-oriented manufacturing employment. By the 1980s, it was obvious that women were very much part of a “new” phase of industrialization involving the location of low-value added activities in low-labour cost countries, including by firms from higher-wage countries in order to maintain or improve their competitiveness in labour-intensive products in world markets. Indeed, this led to a rethinking of the prevailing ideas regarding the impact of industrialization on women in developing countries, which was that it would marginalize and include women from the labour market, while men would benefit from the increasing specialization of labour (Boserup, 1970). In response to the emerging reality of women’s participation in export-oriented manufacturing, the “marginalization” thesis was replaced with the “inclusion” thesis.

The implications of “inclusion” for women are, however, still a matter of debate. An “optimistic” view observes that working conditions in TNCs or their affiliates are relatively superior – and therefore preferable – to those prevailing in local enterprises in the formal as well as informal sectors. The fact that women are employed in foreign affiliates exerts some pressure on local firms to employ women where this was traditionally not the case, or to upgrade work conditions to meet those of competing foreign affiliates. Moreover, paid employment – of any kind, and whether in TNCs or domestic firms – empowers women’s personal lives, as they earn an income and have an identity that gives them independence from their families (Lim, 1990). In this assessment, the feminization of labour observed in affiliates and export-oriented domestic firms has a positive gender effect. On the other hand, a “pessimistic” view argues that the global search by producers for low-cost labour that drives FDI flows and international production on the one hand, and the increasing incorporation of women into export-oriented manufacturing on the other, are accompanied by a distinct gender gap in wages and work conditions; women are paid lower absolute wages, and subjected to more difficult working conditions, since – so runs the pessimists’ argument – they are more patient and less militant than the predominant males in the workforce (Elson and Pearson, 1981, p. 24).

There is general agreement, since the early 1990s, that a feminization of labour has taken place in the export industries of developing countries. Indeed in many developing countries, women workers comprise at least half of employment in export industries in the manufacturing sector and as many as /...

**(Box IX.3, concluded)**

three-quarters or more in EPZs (Joekes, 1999; Tzannatos, 1999; table IX.4). In other words, women's work in foreign affiliates or firms with non-equity links to TNCs is an important element in the globalization process. However, the integration of women into the globalized world economy in this manner, and the competitiveness of exports from the firms and countries involved may be due, among other things, to a wage gap between women and men workers. Although empirical evidence is inconclusive, in some TNC systems and in some EPZs, for example women's wages are 20 to 30 per cent lower than men's in the same manufacturing industry (Horton, 1999, Standing, 1999). In others, firms comply with the standard of equal pay for equal work. Moreover, the spread of export-oriented industrialization has been patchy and uneven geographically, rather than truly global. There is, furthermore, considerable diversity in how women experience industrial employment, and the outcomes for women of employment in the export-oriented industries are not uniform. This is because the implications of labour market entry and wage earning for the workplace conditions facing women (as well as their role in society) differ significantly depending on the context – that is, the existing gender and kinship relations of each society, the overall economic context in terms of growth processes, rural-urban linkages and social policy design and delivery.

With regard to the workplace, a field study examining two production sites in Shenzhen, China and Hong Kong (China) illustrates how the context might matter (Lee, 1995): two affiliates of the same TNC, managed by the same team of managers, producing the same products, and using the same technical labour processes, developed distinct patterns of shop-floor politics. These location-specific gendered patterns can be explained in terms of local and communal institutions like local networks of friends, kin, and immediate families, and the status of women in each of them, which, in turn, affected how the factory regime in each of the two affiliates was negotiated and how the workers – predominantly women – actively influenced the notion of workers' gender to bargain their workplace situation. The export-oriented production processes in both sites in some ways reproduced gender hierarchies, providing employment that was in many ways exploitative under working conditions that were far from ideal. But these “despotic” labour regimes were at the same time both contested and invested with different meanings by different parties. In the Hong Kong (China) affiliate, women workers used family obligations as a pretext to circumvent certain managerial demands, and cited gender-based inconvenience and their parenting responsibilities at home to reject management demands for assignments which required cross-border commuting or overtime work. In the Shenzhen factory, where the labour regime was highly hierarchical and “despotic”, young women subscribed to the notion of “maiden workers” – without family responsibilities – and came to terms with authoritarian control. In their view, strict supervision in the factory was combined with relative freedom from supervision outside the factory, as well as increased autonomy of personal life conferred by cash earnings.

*Source:* UNCTAD, based on Razavi, 1999.

## 2. Employment quality

Because of their size, technological sophistication and origin principally in developed countries, TNCs are often expected to be better employers than domestic firms. Foreign affiliates are expected to offer higher remuneration and superior conditions of work, investing more in training and imparting more modern skills to their workers. On the other hand, recognizing that TNCs, like all private enterprises, are driven by the profit motive, some observers, including trade unions, have concerns regarding the possibilities for TNCs to exploit their advantage of mobility over labour, which is largely location-bound, to squeeze wages and labour standards and indirectly induce governments to weaken their regulation of labour markets. These concerns are reinforced by layoffs and resort to informal employment caused by privatization and by the implementation of structural adjustment programmes in some developing countries, and by the decline in real wages that has taken place following trade and investment liberalization in several countries and economic crises in some (Miyoshi, 1998; ILO, 1997a; UNCTAD, 1997b), even if the decline in wages is not directly related to FDI. The experiences of many developed countries in which employment has become increasingly casual and precarious (through, for example, part-time work and short-term contracts with insufficient protection against lay-offs) have also reinforced concerns regarding the consequences for employment quality (ILO, 1998a). At the same time, both governments and unions are increasingly conscious of the potential



benefits that FDI and TNC operations might contribute in a globalizing world towards upgrading employment quality provided that institutions for labour representation and collective bargaining are in place. Plugging into the international production and distribution networks of TNCs can be an effective way of accessing new skills and technologies. This, in turn, can be helpful to introducing better work practices and upgrading employment.

Again, comprehensive data are lacking. Studies for some countries suggest that, in general, the workforce directly employed in foreign affiliates enjoys higher remuneration and more favourable conditions of work than that employed in domestic firms in host countries (UNCTAD, 1994a). This applies not only to developed countries but also to developing countries.<sup>6</sup> This tendency reflects a number of factors.

- Foreign affiliates tend to be more concentrated in higher capital-, skill- and marketing-intensive industries than national firms, and productivity in such industries is generally higher than in others. In developing countries, there are also pronounced disparities between foreign and domestic firms in size, technology and production organization, (even within the same industry), explaining the prevalence of intra-industry wage differentials (Jenkins, 1991; UNCTAD, 1994a, p. 198).
- World-market oriented foreign affiliates need a reliable workforce to meet quality-control standards and production schedules (UNCTAD, 1994a; Kaplinsky and Posthuma, 1994). In particular, when affiliates are part of global networks of interdependent producers, quality and efficiency dictate the need for a well-trained, stable and experienced workforce (box IX.4). Affiliates in such industries tend to take root in the host environment and offer good wages, benefits and work conditions. They also have high sunk costs for training, infrastructure and supplier systems. By offering attractive inducements, foreign affiliates can induce capable workers to join and to remain with them, and reduce the risk of production errors and delays. These inducements are likely to be especially costly in countries in which local skilled labour and managers are scarce and where there is a cultural bias in favour of domestic firms among prospective employees. Wage differentials *vis-à-vis* domestic firms are also likely to be particularly large where the affiliate has invested in generic skills that workers can transfer to other firms. In the case of such skills, foreign affiliates may also offer higher wages in an effort to poach experienced workers from other firms.
- The size and visibility of many TNCs may make them more prone than smaller domestic firms to unionization and union pressure, as well as national or international action concerning standards of employment.

#### **Box IX.4. New forms of work organization and training needs**

Over the past two decades, new forms of organizing production have been adopted in many TNC systems, in parent plants as well as in affiliates. They include total quality control, continuous improvement of processes and products, and group work. Just-in-time delivery and production in small batches to varying specifications are increasingly important in many industries. Moreover, the production of tradable goods increasingly requires compliance with quality standards imposed or recommended by importing countries. They include the various ISO standards, and special codes in some consumer industries, especially foods.

Such demands on process and product quality can only be met if workers are highly motivated and well skilled. Motivation requires an equitable share in the outcome of work and relative job security, as well as a say in day-to-day workplace decisions and shop-floor arrangements. Skills need to be such that workers are able to work on a variety of tasks and jobs within their work team, and that they can anticipate and handle at least minor assembly-line problems, such as minor technical breakdowns. Such competencies require training both on the job and more formally. They also requires that training be continuous.

*Source:* UNCTAD, based on Humphrey, 1993; Kaplinsky and Posthuma, 1994; Galhardi, 1998.



Notwithstanding the general tendency towards higher wages in foreign affiliates than in domestic firms in similar activities, wages in the former in low value-added activities based on simple technologies are low. In particular, affiliates in labour-intensive assembly operations in EPZs offer low remuneration, often lower than that in the larger enterprises operating in the main host economy, and/or catering to the domestic market (ICFTU, 1999a, p. 24f).<sup>7</sup> In fact, low labour costs are the competitive advantage sought by these TNCs in investing in certain industries or certain locations, such as EPZs. Locating in EPZs may even, in some cases, place affiliates outside the normal wage norms or laws (box IX.5; annex table A.IX.3).<sup>8</sup> Firms in such low-skill industries also tend to be footloose and have little incentive to upgrade the skills and capabilities of their employees (chapter VII). An important consideration, as far as employment quality is concerned, is how rapidly workers can move out of these kinds of jobs into more remunerative occupations. This would require technological and industrial capacity building and boosting trade competitiveness in some higher-value-added industries in which countries might have dynamic comparative advantage (chapters VII and VIII). Needless to say, real wages paid by TNCs in developing countries are generally much lower than those paid in developed countries. These differences are explained in part by differences in labour market conditions as regards supply, and also in part, by differences in labour productivity; generally, productivity in manufacturing in developing countries tends to be roughly 40 to 50 per cent of that in the same industry in developed countries.<sup>9</sup> Notably, wages for low- or unskilled workers are much lower in labour-abundant developing countries than in developed (or for that matter, developing) home countries where labour supplies are less plentiful. It is precisely this wage differential – which is, of course, related to the restrictions on the mobility of labour across borders – that attracts FDI in labour-intensive activities to developing countries. However, labour productivity in some labour-intensive activities is unlikely to differ much between countries, regardless of the level of development.<sup>10</sup>, but wages paid by affiliates in developing countries may be at times far lower than warranted by productivity differences.

#### **Box IX.5. Enhancing labour productivity in EPZs: recent trends**

EPZs are a strategy to foster exports as well as to promote employment by attracting foreign and domestic investors into export industries by avoiding the constraints imposed by trade interventions on the domestic economy and centralizing the provision of infrastructure and services (chapter VIII). In developing countries, they are often intended to take advantage of low-cost labour, and sometimes offer more liberal labour regimes than elsewhere in the economy, with restrictions on unionization and other forms of collective bargaining (annex table A.IX.3; ICFTU, 1999a, p. 24f). In some zones, working hours or minimum wage provisions do not apply or are not heeded. Most zone-operating countries emphasize employment creation in the first phase of their strategy, and expect that as the pool of experienced workers expands and skill and technology transfers take effect, there will be an evolution towards higher value-added activities, improved work conditions and linkages reaching into non-zone enterprises, which would lead to additional and improved employment in the economy concerned.

The experience of EPZs with respect to attracting employment-generating FDI is mixed. A few have succeeded in generating a considerable number of jobs, of which the majority have gone to women; most of them are in low-skill, low-wage activities. They tend to involve little investment in training by the enterprises concerned and suffer high rates of turnover of workers. The repetitive nature of the work and low social status attached to it mean that many workers leave zone employment as soon as they can afford to.

The advantages of EPZs as a means of generating employment for low-cost, low-skilled labour based, in some cases, on special market access for regional exports, are becoming increasingly undermined by intense competition among developing countries to attract FDI into EPZs, shifting trade relationships, and most importantly, intensifying competitive pressures in the global economy. Global competition now places an increasing premium on speed and reliability in reacting to market trends. This increasingly favours investment locations with highly skilled workers and state-of-the-art infrastructure. For example, the world's leading semiconductor maker, Intel, cited the availability of skilled workers as the major factor in choosing to locate its new Latin American plant in Costa Rica (box VI.7). Singapore continues to attract large amounts of investment on the basis of its highly qualified workforce, despite high wage levels. In fact, high quality human capital is the factor that increasingly determines the quality of inward investment.

/...

**(Box IX.5, concluded)**

Host countries are recognizing that fiscal incentives, infrastructure provision, and low-cost labour are not the decisive factors inducing investments in the long-term. "Smart" zones (van Heerden, 1999) have adopted a number of strategies to ensure that labour productivity is continuously upgraded. Measures include incentives to investors to undertake human resource development. Examples include the Penang Skills Development Centre in Malaysia (box IX.7) and the Skills Development Fund in Singapore (Lall, 1996), which provide assistance towards or reimburse a percentage of training costs. In other instances, investment promotion agencies and training institutes enter agreements to ensure adequate supplies of skilled personnel.

Providing skills is not enough, of course, if the social infrastructure is deficient. In many EPZs, workers face difficult commuting problems. In others, housing is cramped, uncomfortable or unsanitary. As a result, workers have trouble maintaining the intensity of production required in highly competitive export industries. Some progressive EPZ employers therefore provide transport, housing, on-site meals, or health- and childcare facilities. To encourage this, some countries, such as the Dominican Republic, offer tax incentives to investors who import equipment for workers' housing and transport.

More broadly, the political environment is also important. Zones with coherent and comprehensive policy frameworks which emphasize human resource development, good working and living conditions and stable labour relations – "the high road" approach – attract quality investors. As labour turnover diminishes, the workforce's familiarity with the jobs to be done improves, and so does the quality and reliability of production. Zones with poor working conditions and low levels of compliance with the labour laws are more likely to attract firms that use low levels of skill and invest little in training – such firms have been dubbed "swallows" that fly away to cheaper locations at their convenience (ICFTU, 1999a, p. 3).

A forward-looking approach to zone-management would therefore encourage and reward best practices in priority areas of human resources development, R&D, information technology, or social services. Steps that could be taken include:

- providing the zone with sufficient financial resources and budgetary autonomy to undertake promotional efforts, monitoring, upgrading, and other activities that can facilitate targeting of quality investors;
- ensuring that the zone is connected to on- and off-site transportation, employee housing, and other facilities that serve to attract and retain a quality workforce;
- establishing, and possibly giving incentives to, specialized zones such as science parks, or technology zones that draw on high-skilled employees;
- accepting — or even inviting — the services of private EPZ developers if they offer to establish facilities that could support skill- and knowledge-intensive production;
- fostering good industrial relations, adhering to and giving support for implementation of core labour standards;
- contributing to systematic skills upgrading through incentives, subsidies, training centres etc.
- providing specialized business services and new trade-facilitation technologies (such as, for example "smart cards" -- magnetic cards used to track shipments) or high-speed telecommunications (such as teleports) which might attract and build up new skills in the workforce.

*Source:* UNCTAD, based on van Heerden, 1999, forthcoming; annex table A.IX.3; The Services Group, 1999.

With respect to terms and conditions other than remuneration, working conditions and employment standards in foreign affiliates, in general, are not less favourable than those of comparable national employers; often, they rate better than the average in local firms (UNCTAD, 1994, p. 200). In particular, large, well-established and visible TNCs are likely to comply with international standards and not to undercut the labour standards of their host (and home) countries. They apply corporate labour standards uniformly across TNC systems to reap economies of scale, develop marketing advantages or win shareholder approval.<sup>11</sup> In addition,

their brand-name products are often subject to intense scrutiny where consumer groups or NGOs are sensitive to labour-standard or health issues. They adhere to minimum-wage, working hours, overtime and compensation regulations, and regulations regarding the provision of health services or leave, as they seek to attract and retain qualified workers and protect their reputations. Many of the larger TNCs from developed countries are likely to be found in this group (UNCTAD, 1994a; Nelson 1996).<sup>12</sup> However, other affiliates, especially those driven by cost saving and who produce for the lower end of the market, are often more lax. This is also related to the fact that some host governments may relax requirements on employment standards, and exempt some investors from the labour laws applicable in the host economy, as is the case in some EPZs (annex table A.IX.3) .

Many labour markets – in developing as well as developed economies – are frequently segmented by factors such as ethnicity or gender. In some cases, TNCs build on such segmentation: for example, as noted, women account for the major proportion of employment in foreign affiliates in low-value added assembly activities. Differences in wages between female and male workers – even those performing similar jobs or with the same skill levels – have been noted, with women typically earning lower wages than men in national firms as well as foreign affiliates in both developed and developing countries (Elson, 1994; Joeques, 1999; Horton, 1999; Standing, 1999).<sup>13</sup> Such segmentation reflects broader social and economic forces (Elson, 1999). But, TNCs could help redress such inequities by acting as role models for local firms, implementing, for example, measures that enable women to stay employed even when they take on family responsibilities, and investing in the training and promotion of women employees (Yanz *et al.*, 1999; ILO, 1998a, pp. 139). There is no systematic evidence, however, to suggest that they play such a role.

### 3. Upgrading skills

Sustaining and upgrading employment increasingly requires the workforce to be multi-skilled and reasonably mobile, and to be able to assume wider responsibilities than under traditional systems of management and work division (box IX.4). Employability in the new context needs the upgrading of skills on a continuous basis, often with changing specialization. As technology cycles become shorter, therefore, flexible lifetime learning becomes an essential part of skill formation (ILO, 1998a, p. 107).

The level and evolution of workforce skills in an economy depend directly on the following factors (Ernst, Ganiatsos and Mytelka, 1998):

- pre-employment formal (primary, secondary or tertiary) education;
- pre-employment formal and informal vocational or industrial training;
- formal vocational training during employment, either by the employer or by outside institutions;
- skills acquired informally by experience and learning – so-called “tacit” skills;
- specialized training offered for workers who have to upgrade or change occupational group (or wish to);
- “lifetime learning” offered by different parts of the education system.

There is a complex interaction between these different modes of skill formation, in particular between the general education system and enterprise-financed training. Firms, including TNCs, always undertake some form of training, at the minimum to ensure that technologies in use are deployed efficiently. However, the decision to invest in more advanced forms of training depends on the returns they expect, their time horizon, and the extent of competition they are exposed to. The profitability of training also depends upon the skills provided by the education system, the prospects of retaining trained workers or the “appropriability” of returns to training investments.

Firms, regardless of ownership, have greater incentives to offer advanced training where they can build on employees’ general and cognitive skills, that is where the education base is

strong.<sup>14</sup> Otherwise, the expected economic returns of further training will be low and firms will invest only in minimal operational training, mostly on the job. Similarly, where firms are protected from competition, particularly from international competition, they are less inclined to invest in advanced or up-to-date training. The issue of the “appropriability” of investments in skill formation is a problem that applies particularly to the creation of general, transferable skills that allow employees to move to better paid jobs in other firms. (Skills that are firm-specific do not earn commensurately high wages elsewhere).

TNCs can contribute to skill upgrading by investing directly in training in their affiliates. They can also induce or support local firms, notably their suppliers and buyers, to do so as well. They can influence local competitors or unrelated firms that emulate their practices. They can interact with training institutions to improve courses and teaching materials. They can induce the government or industry associations to set up new training facilities (box IX.7). They may attract or induce training institutions from their home countries to set up similar establishments in host countries. In some instances, governments in conjunction with business associations have established training facilities. For example, in Thailand, training programmes are being run jointly by international chambers of commerce from various countries and the Thai government organized in a consultative working group (Brimble *et al.*, 1998).

All firms train their employees on the job. Some also invest in formal training, within the firm or in specialized training institutions. TNCs tend to be more aware than other firms of the benefits of training and have well-developed routines, systems and materials for training. They tend to use advanced technologies and management systems that call for more intensive training. They can transfer trainers across countries, and send employees to different parts of the TNC system (and to suppliers) for training. TNCs in the same industry sometimes collaborate in offering training courses to each other's employees and to employees of suppliers.

Like other firms, TNCs are reluctant to invest in training if they cannot earn a sufficient return and a large part of the benefits of their efforts accrues to other firms. There is a range of options that firms can choose to remedy these problems. For instance, an enterprise can offer a premium for loyalty whereby wages or other benefits increase more than proportionately when employees stay with a firm, or give incentives in the form of promotion for successful trainees. It can offer bonded training where it provides training only if employees contract to stay on for a designated period after the completion of the training. It can offer financial support for training courses or sabbaticals that employees fund themselves (Godfrey, 1997).

The role of TNCs in skill building differs by sector, industry, or even product line, and among host countries. For instance, some TNCs may start with training employees in low-skill categories and go on to invest in further training them over time as their wages rise and more complex technologies are used. In others, however, rising labour costs and technological upgrading may not converge. For example, in the case of FDI in export-oriented activities where their advantage depends primarily on low wages and simple technologies, TNCs may just move on to other locations as wages rise. Or, TNCs may be in more complex activities but may not find it economical to use more advanced technologies because the cost of training is significantly higher than that of relocating to countries with better skill endowments. In these cases, the host economy may be in a “low-skill trap” where its competitiveness depends on keeping wages low (and providing little education to the workforce); this allows it to produce only low-technology products. In turn, firms have little inducement to invest in skill upgrading because their employees lack the educational base to make training effective. The only way out of this “trap” is for the government to raise basic skill levels and to persuade firms to invest more in training their employees.

Large firms in developed countries, transnational or otherwise, have accumulated extensive expertise in enterprise-provided training. As employee skills have become more significant as competitive assets, they have increased their investment in training. Foreign affiliates are generally better equipped to provide training than local firms in developing countries. Affiliates are more aware of training needs and have established systems to recognize



and reward skill formation. They have access, through the TNC system, to training budgets, departments and personnel, as well as training materials and facilities in other affiliates or headquarters. However, in developing host countries, the level of skills of workers and the intensity of training in affiliates provide a mixed picture. In TNCs investing abroad to utilize their technological advantages, skills and training both in management and on the shop floor tend to be better than in uni-national and local firms. In TNCs investing to take advantage of low-cost labour, the average skill levels may be lower, and relatively little may be invested in further training. Even in low-wage operations, however, export-oriented investments must have high standards of quality and delivery, and so need good skills at supervisory, technical and managerial levels. To some extent, such skills and capabilities can be obtained through frequent visits and other forms of intra-firm cooperation for skills transfer to developing country affiliates (box IX.6). In the long run, however, building up local capabilities can be cost-effective for firms as well as skills-enhancing for the host country. Various micro-level studies confirm that the skill level in affiliates is a function of the industry, corporate strategy and market orientation.<sup>15</sup>

Evidence also suggests that TNCs react to the availability of skills in host economies by raising technological content and upgrading their investments, in turn contributing to skill upgrading. They provide training on a general level; they also undertake advanced training and work with industry associations, suppliers and governments (box IX.7). However, the extent of training and collaboration is much higher in countries with advanced educational systems, and in technology-intensive activities for export markets.

The issue for developing countries that host foreign affiliates exporting unprocessed, low-value commodities or low-skill manufactures is to enter the virtuous circle of skill upgrading, higher value-added activity and greater better-quality FDI. How can they change the skill mix and ensure that skilled workers find employment commensurate with their skills, and better remunerated, while moving up from their established base of competitiveness in low-skill activities? How can they draw upon the resources offered by TNCs to upgrade their human-capital base while keeping their economy cost-competitive and attractive?

#### **Box IX. 6. Falling “co-operation costs” and global production**

In recent decades, new and improved technologies have significantly reduced transportation and communication costs. As a result, it has become easier and much cheaper than before not only to move goods and transmit blueprints, designs, and product specifications between locations, but also to move people and their services around the world. This has made it possible for TNCs to use highly-skilled employees who have the practical know-how essential to make and market products of world quality and who live in one country to participate in the running of production facilities in affiliates in other countries, by means of monthly visits by air for a day or two and frequent phone calls in between. In other words, it has made it feasible for less-skilled or less experienced employees in developing-country affiliates and supplier firms to “co-operate” on a regular basis with developed-country managers, designers, engineers and marketing experts.

The know-how of these highly-skilled workers – design, production, packaging and marketing techniques – comes mainly from experience, not from classroom education and training, and from international connections and facility in cross-cultural communications acquired as a result of particular biographies and career paths. Skills of these sorts cannot be easily or quickly copied or multiplied, which makes them globally scarce and able to command high salaries. Historically, such skills were supplied to the foreign affiliates of TNCs by expatriates and involved long-term relocation of both employment from work in the parent firm and of residence from the home country. However, since the late 1980s, a number of TNCs appear to be moving towards “distance-management”, wherein professionals based in the parent firm become increasingly involved with production decisions and processes in foreign affiliates without relocating to a host country; instead, they rely on intermittent field visits and intense communication via new information technologies.

For a TNC as well as the high-skilled employees, there are several advantages from these new forms of cooperation within the TNC system. First, there are economies from the clustering of highly-skilled employees: continuous interaction and face-to-face contact within professional peer groups in the parent plant ensure the acquisition and maintenance of expertise which might atrophy or become

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**(Box IX. 6, concluded)**

obsolete if those personnel were relocated to foreign affiliates. A second type of economy of scale arises as skills are applied in different locations across the TNC system, enabling the managers and technicians concerned to enhance further their expertise by giving them insight into differing host-country economic and socio-cultural circumstances. A further benefit is the saving that accrues to the TNC as an employer who would have had to pay high salaries to expatriate managers and high skilled staff and to the employees and their families who are spared dislocation costs, although the intensity of work load and stress is likely to increase considerably.

The trend towards reduced reliance on expatriate staff is illustrated by the experiences of Siemens joint ventures in China, described in a recent study (Münch, 1997). In 1992, there were roughly 800 employees, including 50 expatriates, in the company's several joint ventures in China. By 1996, total employment had increased to 8,070, and expatriate employment stood at 100 persons, reducing the share of expatriates in total employment from seven per cent to one per cent. Siemens and its partners are reportedly planning to keep a ceiling on expatriate employment in their joint ventures in China at 100 persons, even under major expansions, and to rely instead on training local middle-level managers with technical or accounting backgrounds. Managers are to be trained in China, with secondment of Chinese managers to Siemens plants in Germany.

For developing countries, the question arises of how this emerging trend in TNC management affects the transfer of know-how and skills. On the one hand, there is a risk that some of the spillover effects expected from TNC presence – such as technological and organizational know-how – might be weakened if the most highly skilled labour becomes increasingly concentrated in developed economies and does not rotate into affiliates in developing countries. On the other hand, local managers stand to benefit from greater responsibility and involvement in decision-making, especially when training and upgrading enable them to absorb technical expertise as well as link into the parent firm's culture.

*Source:* UNCTAD, based on Tang and Wood, 1999; Münch, 1997.

**Box IX.7. Training initiatives in Malaysia**

Penang (Malaysia) has a concentration of high technology activities, with many major electronics TNCs engaged in export-oriented activities. The Penang Skills Development Centre (PSDC) was launched in 1989 in response to growing skill shortages. The initiative, land and some financial support came from the State and Federal Governments. The local university and some large United States electronics TNCs participated in the initial venture. Other TNCs and local firms then started to participate and private industry continued to play a leading role in the institution. PSDC borrowed trainers and equipment from the companies, and devised a range of training programmes suited to their needs. Full cost was charged for its services to companies that sent employees for training, and the programmes were continually upgraded and adapted to evolving skill needs.

The PSDC caters to the free trade zones and industrial estates in Penang where there are (in the late 1990s) a total of 650 factories employing over 170,000 workers. Roughly 30 firms and 50 foreign affiliates are members of the PSDC, and over half of the members are from the semiconductor and electronics industries. PSDC has established several training programmes, training centres, and laboratories and workshops for hands-on-training. Since 1989, it has conducted roughly 2,000 courses with 40,000 participants. Workforce transformation programmes have been developed in collaboration with a number of TNCs. These programmes provide the skills needed for production operations to take on basic technical duties previously performed by engineers.

Initially, the PSDC was unique, but now most States in Malaysia feature a similar institution to train shop-floor workers. To fund such enterprise-oriented training, the Government of Malaysia in 1992 established the Human Resource Development Fund (HRDF). Firms in the manufacturing industry with more than 50 employees are required to register with the HRDF Council and pay a levy of one per cent of their monthly payroll. Firms with fewer than 50 workers can also register, and are required to contribute 0.5 per cent of the payroll, and in their case, the HRDF contributes twice the amount contributed by employers.

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**(Box IX.7, concluded)**

The HRDF is designed to:

- Produce a better-trained, productive and efficient workforce;
- Enhance productivity increases; and
- Ensure that the level of training is fine-tuned to each enterprise's technological environment.

Training schemes combine both formal classroom study and factory training and can be designed to cause minimum disruption to production. Thus it can be provided either on-the-job and/or off-the-job. The HRDF also supports industry-managed training centres, which are expected to ensure that training is tailored to the knowledge and skill requirements of the enterprises concerned. The Fund also encourages collaborative training. If, for example, large enterprises, such as TNCs, have excess training capacities, they can offer training places to employees of other enterprises, particularly the smaller enterprises which may not have the expertise and resources to formulate and run their own training programmes, or which function as sub-contractors to TNCs. Such training is also eligible for HRDF training grants.

*Source:* UNCTAD, based on Lall, 1996; Penang Skills Development Centre; Human Resources Development Council of Malaysia (websites <http://www.psdc.org.my> and <http://www.malaysiaexpo.com.my>; retrieved in July 1999).

## **D. Conclusions and policy implications**

The employment-generating potential and the role that inward FDI might play in upgrading employment and building the skills base of an economy depend primarily on the amount and type of FDI that a country receives and the strategies of the TNCs involved in making the investments. Except in highly capital-intensive activities such as mineral resources exploration, FDI can add to the quantity of employment in a host country, especially if it involves the establishment of new production enterprises without the crowding out of existing ones. The quality of the employment generated in foreign affiliates is often as high as or better than that in comparable domestic firms. However, the sustainability and growth of employment provided by foreign affiliates vary considerably among host developing countries, depending upon whether foreign affiliate activities are upgraded as labour market conditions and the structure of domestic and foreign demand change over time. The prospects for such upgrading are high if the domestic educational and skills building systems and TNCs' own contributions to training and human resource development continuously improve the skills and capacities of workers so that they are able to adapt to higher technology-intensities and changes in tasks assigned to them in production.

Good policies are crucial, as governments pursue the twin goals of generating employment and enhancing its quality. Policies affecting employment are not made in isolation, but are closely linked to institutions that evolve over time. The latter comprise the labour market framework, including, among others, industrial relations and collective bargaining mechanisms; the framework for business, including commercial laws and competition policy, and business sector organizations such as chambers of commerce; and the system of education and training institutions that provides generic and specialized skills development. Furthermore, governments are increasingly subject to influences and pressures from constituencies inside and outside their countries. These factors have implications for the formulation of employment- and skill-generation policies by developing countries, including policies for maximizing the contributions and minimizing adverse effects arising from FDI and TNC operations in their economies.

Each country's policy needs in the area of FDI as it relates to employment and skills upgrading vary, depending upon its level of development, its trade and industrial strategies, the nature of its education and training system, and the role assigned to FDI. Some developing countries – especially those economically less advanced or with large numbers of unemployed persons – are likely to attach priority to increasing employment, and fostering a shift from simple

to higher value-added production. This would suggest focusing on FDI that employs basic skills. To attract such FDI, governments need to ensure that labour markets are efficient, that the education and training system is able to meet emerging skill needs, and that firms invest in additional job-related training. Economies that have less pressing unemployment problems or are more advanced technologically are likely to focus on maintaining and strengthening their skills edge. For them, focusing on policies to induce TNCs to introduce the latest, most sophisticated technologies and to back that up with advanced training and diffusion of best practice in skill creation and work organization would be more appropriate. In either setting, a combination of good industrial relations, well-conceived government policy and competitive markets is necessary.

Traditionally, governments, employers, employees and their representative institutions have been the main players in employment policy. Things are changing, however: roles and responsibilities are shifting and new actors are appearing on the scene. The role of governments has generally diminished, but a variety of government policy instruments continue to influence employment. Parallel to central governments, local governments have become active, often attempting to increase employment by attracting new economic activity. They offer incentives ranging from tax advantages to industrial parks, technology centres, regional growth triangles, or the more classical EPZs. At times there are “locational tournaments” among districts within countries, as well as among countries (Mytelka, 1998a).

A second influence on employment-related policies is that of trade unions. Over the past decade, economic restructuring, globalization and economic crises have weakened trade unions. Membership has declined in many countries – both developing and developed.<sup>16</sup> This has reduced their capacity to advise and influence governments towards best labour practice. In response to globalization, and to re-capture their influence, international associations of trade unions are currently devising a more internationalized approach when formulating strategy for negotiations and consultations to achieve labour-related objectives – a difficult task indeed (UNCTAD 1994a, chapter VI and IX; Breitenfellner, 1997).

In addition to governments, enterprise management and labour unions, other “stakeholders” also now take an active interest in labour issues and influence government policy. They include consumer groups and other NGOs concerned with environment issues or human rights concerns, and company shareholders. Consumer activism, for example, has served to reinforce trade union pressure, particularly in some consumer goods industries, as illustrated by the recent campaigns for better work conditions, higher remuneration, workplace safety, job security, or compliance with core ILO labour standards (see, for example, Lee, 1997).<sup>17</sup> Some company shareholders and investor groups are also screening investment patterns against social criteria, including labour-related issues, with an eye on “ethical investment” (chapter XII). This too is likely to influence government employment policy, albeit indirectly and over time. Last but not least, in the new context, TNC systems, including parent firms and/or their foreign affiliates, have emerged as agents that influence employment policy and can play a role in influencing employment conditions and the skills being used.

The discussion below examines policy areas and measures that influence the volume and skill-intensity of TNC-generated employment, and proceeds to consider the broader context of the industrial relations in which such measures and activities are anchored.

## **1. Employment policies and instruments**

Based on their primary objectives with reference to employment, government policies can be grouped into two sets: those related to employment creation and those related to employment and skills upgrading. These can be further divided into policies that work directly and those that work indirectly to influence FDI and TNCs. The former typically include policies that explicitly focus on FDI and are in the domain of investment-promotion agencies or similar government-run or para-statal agencies. Most policies, however, work indirectly by enhancing

the labour market environment and institutions, industrial relations, and the skills quality and mix of human resources. They include, for example, the measures available under trade, industrial, competition and infrastructure policies. They also include various measures and incentives for promoting the development of local firms – potential partners for FDI and competitors of foreign affiliates. In a long-term perspective, they comprise policies related to science and technology and human resource development policies. By affecting the composition of industries, supplier chains and linkages, and the quality and regional distribution of employment in a host economy, these policies have a bearing on the amount and type of employment generated by inward FDI (figure IX.1).

### ***a. Employment creation***

If the objective is to increase the quantity of employment generated within host economies by TNCs, the menu of options for governments includes the following measures:

- Governments can take measures that increase FDI inflows generally. Investment in greenfield plants is likely to create additional employment – provided local enterprises are not crowded-out of the market. Investment by means of M&As can help conserve existing employment and, over time, help it to expand. Policies and measures to attract FDI – generally or in specific activities – have been described in chapter VI.
- Governments can target certain types of “employment-intensive” FDI. Since different industries feature different direct and indirect employment effects, a case can be made for pro-active market-friendly policies or careful selective intervention (Lall, 1995a, p. 534). For example, governments might decide to attract investment into industries that are labour intensive – such as garments or services – or which feature strong linkages with suppliers in the host country, so that employment in supplier networks is stimulated. A variant of this is to attract FDI to particular regions of the host economy where unemployment or underemployment is especially acute. Similarly, targeting by industry or region can be used to create employment for groups deserving affirmative action or to address poverty. A government might choose, for example, to increase the employment of women if it is felt that improving women’s economic status will contribute towards overcoming poverty and enhancing development.
- Fiscal incentives may be provided to encourage employment generation by foreign affiliates. These may take the form of tax deductions or transfers such as subsidies on inputs, or preferential loans. For example, affiliates can be offered a reduction of taxes on profits through a double deduction of labour costs from profits. This could be linked to the numbers of jobs created in a given industry or economically depressed area. A refinement in this strategy is to target labour-intensive projects or industry segments. An investment could be assessed as labour-intensive based on threshold labour-capital or labour-output ratios, or simply when it creates a specified minimum number of jobs within a given time frame. The caveat on such measures is that TNCs’ investment decisions are based on a host of variables, so that the incentives offered may merely be “icing on the cake” and divert scarce government funds away from expenditure on much needed public goods such as transport or educational infrastructure. Also, such measures face problems of definition and measurement (of costs and benefits), and risk being manipulated or abused through rent-seeking behaviour.<sup>18</sup>
- To even-out employment among regions, wage tiers differentiated by districts might be applied, provided that a collective bargaining mechanism is involved in establishing such systems of graded minimum wages. These may serve to attract FDI into economically depressed or remote areas. The effects of such wage policies are mixed, however, since the choice of investment location is driven primarily by productivity and labour quality, as well as other factors unrelated to labour costs, rather than nominal wages.
- Another increasingly popular policy measure that is relevant for efforts to induce FDI in order to increase employment is to provide industrial parks where the basic industrial

infrastructure is put at the disposal of firms under guarantee that services in the park will be reliable and of good-quality. In addition, EPZs are measures that have a long tradition and have in general included the availability of amenities required for industrial production. Over the past decade, cross-boundary arrangements to tap resources – growth triangles – have also emerged and, in some of these, employing local labour is a major rationale inducing participating governments to engage in the projects. These arrangements generally feature some type of incentive structure and governments need to weigh the cost of foregone tax revenue and outlay on the zone's infrastructure against the benefits generated in terms of direct and indirect employment and export earnings. As discussed earlier, these special areas, designed to attract low-cost labour-intensive FDI, may sometimes be accompanied by a laxity of employment and labour practices. These need to be avoided by instating labour regulations and collective bargaining mechanisms. Maintaining standards has proven conducive to efficiency, productivity and performance in the long term (box IX.5).

## ***b. Upgrading employment and skills***

The importance of improving the quality of employment generated and upgrading the skills and skills-acquiring capabilities of workers is difficult to overstate (ILO 1997a). It may appear to conflict, at least initially, with the need to raise the volume of employment. In fact, however, as discussed earlier in this chapter, the two objectives may actually converge in many cases. When governments' objectives with respect to inward FDI and the activities of TNCs include those of upgrading employment and improving the skills base, they can draw upon various options for attracting FDI in technologically more sophisticated and skill-intensive industries and activities and for encouraging TNCs to enhance the training, formal and informal, provided to employees.

Policies for human resource development are the groundwork. Basic education ensures that the population is not only employable and mobile, but is also able to take in new skills and responsibilities. Since such education is in essence a public good,<sup>19</sup> it needs to be delivered by governments.

As regards policies for human resource development related to FDI, if the goal is to attract FDI into skill-intensive industries and activities, as discussed earlier, the most powerful factor is the education and skill base of the workforce that determine its productivity and capability to learn on the job. Singapore provides a striking illustration of heavy national investments in education and training with a view to attracting FDI while inducing it to upgrade (box VII.11; Lall, 1996). Many of the Central and Eastern European countries have also attracted FDI due to the high educational and technical qualifications of their workers.

If the objective is to upgrade the quality of the labour force, governments have several options regarding workforce training and education, including measures directed at foreign affiliates:

- Governments can rely on the public education system. They can launch schemes to provide specific forms of training for activities they wish to promote. However, many developing country governments are constrained by limited budgets and prefer to reserve resources for primary education. In such cases, publicly-run training programmes may be weak and inefficient, since salaries and equipment are meager, so that qualified instructors are not available. One remedy is to use official development assistance to implement training programmes. There is, however, still a problem in that it is difficult for governments to anticipate the precise training needs to correspond to the FDI attracted and the jobs generated over time.
- Governments can initiate public-private training partnerships to complement publicly-funded or TNC-based training. In such partnerships, governments and TNCs, or their affiliates in the host country concerned, can each seek to influence employment effects in



accordance with their respective priorities, while sharing the financial burden of training. For instance, governments might offer compensation to firms by granting tax deductions on training expenditure, subsidizing training costs through financial transfers, financing the salaries of instructors, or offering training premises and equipment. They can encourage firms to collaborate with each other or with government training institutions. Governments can foster the development of private-public training centres and institutes; modalities of sharing could be to provide public premises free of cost but require participating affiliates to cover trainers' salaries and building-maintenance costs, and to supply training materials and equipment.

- Governments can foster employee-training programmes by companies, including foreign affiliates. A combination of levies and grants for training is one instrument that is widely used. To encourage affiliates to offer training, it can allow double deduction for expenses incurred in-house, or for the costs of sending employees to training programmes. Another fiscal measure is to penalize firms that invest too little in training.
- Skills audits are yet another technique: governments undertake surveys among affiliates and supplier firms to ascertain their current and projected training needs, and register the skill requirements of prospective investors. This information then needs to be channelled to the appropriate training institutions. A combination of such tools has allowed a number of governments to succeed in creating a "training culture" -- an environment where the value of continuous skills upgrading is generally appreciated -- thereby enhancing a country's reputation as a suitable location for skills-intensive investment. Providing recognition to affiliates that have been especially active in the realm of employee training and certifying course content and achievement, are other measures to foster company-based training.
- Governments can rely on private institutions for certain purposes. Private education may outperform public education, particularly in vocational training, if governments face resource constraints for purchasing the equipment needed for apprenticeships and vocational training.

The above measures refer to human resources development for workers at the shop-floor level. An equally important element in attracting FDI that will upgrade employment is to ensure that TNCs find professionals and provide local training as well. This includes technicians and engineers; plant, personnel and sales managers; accountants and market analysts. A number of policy instruments can be used for this purpose. Payroll taxes can be calibrated financially to benefit local employment or a large share of high-skill employment, expatriate or local. A longer-term strategy is for governments to train actively, or arrange for the training of, local professionals. Tertiary education in areas such as engineering and management can be provided publicly – with host government assistance or through official development assistance – or commercially. Parallel with that, conditions with respect to the share of local staff in affiliates' management can be negotiated with investor TNCs, or incentives such as rebates on wage-based taxes can, again, be offered.

If governments choose to attract commercial providers of professional training and education, they might need to adapt their regulatory framework with respect to foreign participation in educational services. This might mean allowing entry of certain types of professional training institutions run by foreign entities or more actively, granting tax incentives to them. TNCs may have a special interest here – as users of such services for their employees, or as providers of education services (box IX.8).

It was noted earlier that gender imbalances, notably wage gaps between the wages of women and men workers, prevailed in foreign affiliates as well as in domestic firms. If governments are interested in upgrading employment, one avenue to consider is to institute and implement equal wage policies and to give incentives to firms to retain women workers. When women's wages are not commensurate with those of men workers, they are more prone to withdraw from the formal-sector labour force when they take on family responsibilities.

**Box IX.8. FDI in business education: recent trends and considerations**

To be competitive, developing countries need the skills of highly-qualified managers, scientists, engineers and civil servants. These require basic as well as higher education. Traditionally, governments play an important role, directly and indirectly, in the provision of educational services, and are wary of foreign service providers in this culturally and politically sensitive area. However, given the constraints on public expenditure, private delivery of higher education is often used to supplement public investment in institutions of higher learning, and that could be expanded to include foreign providers as well. Business or management schools are a reasonable candidate for such private foreign delivery, since they cater specifically to the enterprise sector, where costs and benefits are more easily discernible.<sup>a</sup> Moreover, managers familiar with modern business practices, especially organizational and managerial practices in use in developed countries, are in rising demand in domestic firms and foreign affiliates in developing countries. China, for example, projects a need for a staggering 1.4 million MBA graduates for the early 2000s. Current enrolment is 30 000 students.<sup>b</sup>

Accordingly, a number of developing countries are opening the business and technical education segments of their educational services to foreign private service providers (WTO, 1998b). This has coincided with the need of many business schools, especially those in developed countries, to find new sources of revenue.<sup>c</sup> Several universities from developed countries have established programmes of business management in developing economies and economies in transition.<sup>d</sup> They have entered into joint ventures with local partners (for instance drawing on venture capital such as that of alumni<sup>e</sup>), collaboration with corporate universities<sup>f</sup>, direct investment in educational facilities (local offices in host countries or actual campus sites) or non-equity alliances with ministries of education<sup>g</sup> or chambers of commerce<sup>h</sup>. Courses on offer range from ad-hoc executive management courses to full-fledged multi-year MBA programmes.

For host countries, the presence of foreign business schools can offer some advantages, notably in comparison with the prevailing principal modes of delivery of educational services across borders, by means of student attendance at universities abroad, or (to a lesser extent) distance learning through postal or electronic means. On the educational side, they can increase student numbers and expose them to internationally recognized curricula and teaching styles. Graduates can tap into worldwide networks of alumni. This, in turn, can facilitate soft technology transfer – for instance, organizational practices – and thereby attract TNCs who seek local staff with global management qualifications. Financially, in-country training could contribute to easing balance-of-payment problems. In many developing countries, as many as 30 per cent and more of tertiary-level students were studying overseas in the early 1990s (UNDP, 1997, pp. 180-181); the provision of educational facilities locally may therefore have a positive effect on the balance of payments. Indeed, to reduce foreign exchange outflows associated with study abroad, several economies in Asian and the Pacific have allowed domestic private universities to offer courses accredited at overseas universities, or foreign universities to set up subsidiaries in their country (WTO, 1998b, pp. 7-8.). Moreover, if run efficiently, business schools in a country can become a hub of training for a region and attract students from neighbouring countries, thus generating foreign exchange from this services export, or becoming “educational TNCs”. Several Southeast Asian countries have been pursuing the former avenue. Examples include Malaysia and Thailand – whose English-medium fee-paying management courses are attractive to students from throughout the region – and several universities in Latin America which have developed MBAs jointly with foreign business schools.<sup>i</sup>

These emerging trends point to two possible policy considerations for governments:

- Governments might consider opening selected areas of educational services to FDI, for example specifically to augment the number of business-oriented programmes available. While relaxing some entry requirements, they might nevertheless impose defined quality standards such as requiring accreditation in established MBA systems<sup>j</sup>, and more generally require compliance with the relevant standard-setting conventions under the auspices of UNESCO or other international organizations (WTO, 1998b, p. 17). In their commitments under the GATS (WTO, 1995), for example, most of the 21 countries which, so far, have made commitments on educational services (WTO, 1998b, p. 22) have included limitations in their schedules designed to retain government influence over the services. Examples include:
  - making partial commitments which limit entry to specified sub-sectors;
  - retaining equity ceilings and limitations on the acquisition of real estate;
  - having limitations on national treatment;
  - limiting access to public financial assistance for foreign students;

/...

**(Box IX.8, concluded)**

- making prescriptions on authorization and licensing requirements, and
  - making specifications on the presence and required qualification of natural persons engaged in higher education (WTO, 1998b, pp. 11-12 and 22-24).
- A second consideration for policy makers is to look beyond business education training geared to managers for the private enterprise sector, to public administration training for staff in governments and parastatals. Such programmes might be cross-subsidized from MBA programmes, or co-funded from bilateral development co-operation programmes.<sup>k</sup> This could contribute to capacity building in the crucial area of policy formulation and implementation.

*Source:* UNCTAD, based on *Financial Times Survey: Business Education*, 17 May 1999; *International Herald Tribune* 10 May 1999; Hiebert, 1999; and websites of the following institutions: Association of MBAs; Harvard University; International Association for Management Education; International Executive Development Center; International Institute of Management Development; Loyola University (Baltimore); Monash University; Mt. Eliza University; Tulane University; Wharton School of Business.

<sup>a</sup> Management expertise is predominantly a “private” asset - students regard business school fees as an investment from which they will appropriate high income as a result of the training received. Hence, management training is less contentious than other areas of higher education as far as private, domestic or foreign provision is concerned.

<sup>b</sup> Data from [www.aacsb.edu](http://www.aacsb.edu), July 1999.

<sup>c</sup> *Financial Times*, 17 May 1999.

<sup>d</sup> Random examples include Bocconi University (Italy), active, inter alia, in the Russian Federation; Monash University (Australia), present in Suva, Jakarta, Hong Kong, China and Kuala Lumpur; the University of Bath Business School (United Kingdom) which has an alliance with the Malaysian Institute of Management; the London Business School (United Kingdom) which cooperates with Hong Kong University of Science and Technology; and McGill University (Canada) which runs several business schools in China.

<sup>e</sup> Harvard Business School is currently exploring this modality in the MERCOSUR countries.

<sup>f</sup> The latter are becoming major competitors to or co-providers with conventional business schools. For example, the International Institute of Management Development at Lausanne is the result of a merger between two former corporate universities in Switzerland, those of Alcan, Geneva and Nestlé, Vevey (*Financial Times*, 17 May 1999). In the United States alone, there are as many as 4,000 corporate universities, many of them based within TNC systems.

<sup>g</sup> For example, CIAPA in San José, Costa Rica was founded in 1975 as a private research institute, in a collaboration between the Government of Costa Rica and Tulane University.

<sup>h</sup> The International Executive Development Center (IEDC) in Slovenia, for example, was established in 1986 by the Chamber of Commerce of Slovenia and private companies as contributors.

<sup>i</sup> For instance, ILADES in Santiago de Chile offers MBA courses delivered in Spanish; the degree is conferred by the Sellinger School of Business and Management, Loyola College (Baltimore).

<sup>j</sup> Such as, for example, those of the International Association for Management Education (AACSB) (St Louis, Missouri) or the Association of MBAs (London).

<sup>k</sup> For example, some Canadian and Australian business schools cover public management in their teaching programmes in developing countries, and have partnerships with the public management academies found in many developing countries; the Fundacao Getulio Varga in Sao Paulo, Brazil, is a business school that also offers a degree in public administration; it has a cooperation arrangement with Bocconi University (Italy). Similarly, the Centro de Investigación y Adiestramiento Político y Administrativo in Costa Rica (CIAPA) offers research and seminars for high-level government officials and other professionals on political, social and economic issues in Latin America.

Where family-care amenities (day care, support for ailing or elderly family members) are available, it is easier for women to retain their employment. Longer tenure of these employees is usually in the interest of affiliates, since they have provided some on-the-job training. Experienced workers are an asset. Therefore, government measures enabling or supporting the longer-term employment of women workers can reinforce the goal of upgrading employment in the host economy. Possible tools include equal wage laws; moral incentives such as awards for compliant affiliates (designations such as “government-certified equal-opportunity employer”); the provision of government-funded social facilities; and subsidies and tax breaks for affiliates that provide such facilities or invest particularly in the training of women workers and women professionals.

## **2. Industrial relations**

Whether a government is primarily concerned with generating a large number of jobs, or moving an increasing number of workers into higher-quality jobs requiring more skills and paying good wages, the industrial relations regime has a strong role to play. The type of institutions, laws, and standards in place with respect to trade unions and their collective bargaining rights, and labour-management relations vary greatly among countries and regions. The differences among countries are often influenced more by socio-cultural factors than by strictly economic ones. Regardless of how labour and management interact with each other, stable and reliable relations and collective bargaining frameworks are necessary both for TNCs and their affiliates to function effectively and for host country employment objectives to be met. Where industrial relations are unstable, tense or frail, both FDI and employment are likely to be fraught with problems.

Many foreign affiliates recognize, and have bargained with, trade unions for decades. Others do not, either because their workforce has not insisted on such relations or because management has resisted or suppressed union organization (ICFTU, 1999a). In looking for a pattern in trade union relations with TNCs, it is clear that the dominant influence is the prevailing industrial relations system in the country concerned. The “nationality”, or home country, of a TNC is also important, but there are plenty of examples of foreign affiliates following the norms of the country in which they are located rather than the norms of their home country. However, there are signs of change both in management thinking about relations with trade unions and in union strategies for addressing the need to represent workers in companies that are planning and acting with a global perspective.

This global perspective is reflected in increasing international contracts among trade unions. These contacts are accelerating especially within the European Union as a result of the European Union Directive on European Works Councils (UNCTAD, 1994a, pp. 249-273 and pp. 364-369). Such arrangements seem to be more common in firms in which national-level union management relations are widespread and an international dimension is a logical step for both sides. The discussions usually take the form of consultations rather than collective bargaining over contracts of employment; these remain at the national level. Examples include works councils established by agreements between Danone and the International Union of Food, Agriculture, Hotel, Restaurant, Catering, Tobacco and Allied Workers Associations (IUF), and between Statoil and the International Federation of Chemical, Energy, Mine and General Workers' Union (ICEM), and AXA and the International Federation of Commercial, Clerical, Professional and Technical Employees (FIET).

For unions, the main objective is to enlarge the opportunities for workers to organize and advance their interests. They have therefore focused on a series of core labour standards enshrined in seven ILO Conventions (box IX.9; annex table A.IX.4). These codes are universal and apply to both domestic and foreign firms in a country.<sup>20</sup> In addition, unions have sought commitments from companies and industry associations on the independent verification of systems for monitoring the observance of these codes. In the meanwhile, a plethora of corporate codes has emerged. Some of them are formulated in cooperation with NGOs and, to some extent, are beginning to complement the long-established OECD Guidelines<sup>21</sup> and the ILO Declaration of Principles Concerning Multinational Enterprises and Social Policy (box IX.9; annex table A.IX.4) – the principal international codes focusing specifically on TNCs. Nevertheless, the latter remain in force, and many governments and some sections of the business community are ready to respond to trade union proposals to update and strengthen these universal instruments.

As a result of these various interlocking trends, the dialogue between unions and TNCs is becoming increasingly complex and sophisticated. It is also no longer restricted by national boundaries and has an international character that is likely to evolve still further. The question of whether unions and TNCs are “enemies or partners” is becoming harder to answer and perhaps obsolete. Antagonistic relations tend to be publicized more frequently than the more subtle forms of contact and dialogue over issues of common concern.



To conclude, good industrial relations can serve to enhance employment and further the goal of upgrading employment quality and skills in foreign affiliates. Their merit is to facilitate communications, and to accommodate constructive negotiations which can bridge the conflicting objectives of governments, TNCs and their affiliates, and the representatives of labour. Functioning industrial relations are a prerequisite if severe imbalances are to be avoided; they are thus in the best interests of domestic development as well as long-term FDI.

#### Box IX.9. Core labour standards and FDI

Since its inception in 1919, the International Labour Organization has been promoting fundamental rights at work. In this effort, conventions – international treaties subject to ratification by ILO member States — and recommendations — non-binding instruments setting out guidelines to orient national policy and action – are the key instruments. Conventions and recommendations are designed to have a concrete impact on working conditions and practices, and they establish benchmarks against which the rights and conditions of workers are measured.

Out of over 180 existing conventions, the Governing Body of the ILO has identified seven “core conventions” as fundamental to the rights at work. They were reaffirmed recently in the Declaration on Fundamental Principles and Rights at Work and its Follow-up (adopted by the ILO Conference in 1998). These conventions are relevant to all employers, including TNCs and their affiliates. They include :

- Two conventions concerning the abolition of forced labour (conventions 29 and 105). They are the least contentious and most widely adopted ; most countries bar the import of products produced by forced labour.
- Two conventions assuring basic rights for both employers and workers: freedom of association and the right to organize and to collective bargaining (conventions 87 and 98). These conventions assure a smooth flow of information between labour and management, and enable a productive settlement of disputes. Collective bargaining can help to clear labour markets and ensure that workers’ wage or other employment-related demands receive due consideration. For affiliates operating in an environment that they do not know well, trade unions and collective bargaining can render the local labour market more transparent and predictable.
- Two conventions regarding discrimination : that prohibiting discrimination on the basis of race, colour, sex, religion, political opinion, national extraction or social origin, which might impair equality of opportunity or treatment in employment or occupation (convention 111); and the convention on equal remuneration for men and women workers for work of equal value (convention 100). These conventions reflect basic human rights. Moreover, they can function as a lever for upgrading employment, for instance if they help in assuring all groups of the labour force of equal remuneration. When offering equal pay for equal work, employers contribute to overcoming segmentation in labour markets, and this might serve as a signal to employees that it worthwhile to upgrade their skills since this will lead to higher wages, regardless of their gender or social affiliation.
- The minimum age convention (convention 138) , which stipulates that adolescents cannot be employed before reaching the end of compulsory schooling and at least 14 years of age. This convention has come into the limelight in recent years, as ethical investor groups and consumer and labour rights NGOs demand that employers in general, including transnationals, their affiliates and subcontractors, adhere to minimum age regulations.

Other conventions that have a bearing on the activities of affiliates include :

- The convention on minimum wage fixing (convention 131);
- The convention of the working environment (air pollution, noise and vibration, convention 148);
- The convention on home work (convention 177) (box IX.2).

With respect to TNCs specifically, the ILO adopted the Tripartite Declaration of Principles concerning Multinational Enterprises and Social Policy in 1977. Its aim is to encourage the positive contribution that TNCs can make to economic and social progress and to minimize and resolve the difficulties to which their various operations may give rise. The Declaration exhorts Governments to ratify the core conventions and TNCs to comply with them. The Declaration also recommends practices regarding the employment of local labour and local sourcing as mechanisms to increase employment in host economies. Governments, transnationals, and trade unions report to the Governing Body of the ILO every three years on the effect given to the Declaration.<sup>a</sup>

*Source* : UNCTAD, based on ILO ([www.ilo.org/public](http://www.ilo.org/public)).

<sup>a</sup> For ratification status in member States of the ILO, see annex table IX.4.



## Notes

- <sup>1</sup> *The Economist*, 29 March, 1997. The Republic of Korea and Singapore also ranked among the top scorers in science.
- <sup>2</sup> Estimates for employment in EPZs range from three to 4.5 million (Van Heerden, 1999 and annex table A.IX.3). In some countries, EPZ employment is included in estimates of employment generated by foreign affiliates; in others, it is recorded separately and so it is not clear whether the figure is in addition to, or included in, that for total employment in foreign affiliates.
- <sup>3</sup> It is difficult to judge if EPZ employment has increased, as consistent data over time are not available.
- <sup>4</sup> For a discussion of indirect effects, see Parisotto, 1995; Aaron and Andaya 1998; Dupuy and Savary 1993. Employment multipliers by industry are available on a consistent basis only for the United States, where the Department of Commerce calculates from input-output matrices the additional employment created for each new job in a given industry. In manufacturing, these multipliers range from three to as high as seven (the latter in food and kindred industries). (See United States Department of Commerce, Bureau of Economic Analysis, 1999.) The prospects for substantial indirect employment generation are illustrated at the firm level by the automobile plant established in the mid-1980s by Nissan, the Japanese automobile manufacturer, in Sunderland in Northern England, a region hard hit by a decline in its traditional industrial base. The plant grew over the next 10 years to employ 4,350 people. Several suppliers and subcontractors located production facilities in the region, accounting, collectively, for 20,000 employees (Bridge, 1998, p.2).
- <sup>5</sup> A recent study for Thailand, for example, provides indirect employment multipliers for FDI in that country on the basis of a 1980 input-output table for that country. The indirect multiplier for total manufacturing is 1.7; the multipliers range from 7.8 in the non-electrical machinery industry and 6.5 in food, beverages and tobacco, to 0.5 in wood and wood products (Brimble, *et al.*, 1998, pp. 12 and 29).
- <sup>6</sup> Some developing economies for which studies show that foreign affiliates pay generally higher wages than local firms include Côte d'Ivoire; Hong Kong, China; Indonesia; Malaysia; Peru; Singapore; Thailand; and Venezuela (UNCTAD, 1994a; Aitken *et al.*, 1995; Ramstetter, 1994).
- <sup>7</sup> For instance, EPZs in India and Mauritius pay lower wages than the rest of the manufacturing industry (Joekes, 1995, p. 27); the ICFTU reports that in 1995, in Manila, the minimum wage was \$5.27 but in one EPZ surveyed, it was \$4.90, and that similarly, up to 30 per cent of workers in six Asian countries studied received wages below the legal minimum wage for their occupation. In Sri Lanka and Bangladesh, when workers earned the minimum level, it was reportedly due to overtime work. (ICFTU, 1999a, pp. 24-25).
- <sup>8</sup> The implications of this low-wage employment for the welfare of the workers involved depends upon the alternative employment opportunities that would have been available if the FDI had not taken place. Obviously, where there are few other employment opportunities or none, there is a net increase in economic welfare from the generation of even low-paid jobs. Workers may also accept lower wages in order to achieve at least a certain minimum level of income (Elson, 1996). In the wake of the Asian crisis, some impoverished groups were prepared to accept "sweatshop jobs" as a last resort, preferring an unsafe and underpaid job to no work, or to prostitution. See for example Aaron and Andaya, 1998, p. 20; ILO 1999.
- <sup>9</sup> For example, the average value added in manufacturing for a group of nine developing economies was \$31.00 as compared to the average for a group of 12 developed countries of \$76.00. In some industries, such as glass and glass products, other non-metallic mineral products, iron and steel and non-ferrous metal, the average for the developing countries was close to 50 per cent of the developed-country average. In others, such as machinery, both electrical and other, the developing-country average was close to 30 per cent of the developed-country average. (Based on data from UNIDO, Industrial Database, 1998. The developing economies included in this comparison were Chile, Colombia, China, India, Malaysia, Republic of Korea, Singapore, Taiwan Province of China, and Uruguay. The developed countries were Canada, Denmark, Finland, Germany, Greece, Japan, Netherlands, Portugal, Ireland, Sweden, United Kingdom and United States).
- <sup>10</sup> An example from the garment industry illustrates this: in the mid-1990s, labour costs (wages plus social security and related costs) ranged from over \$20 per hour in developed countries such as Switzerland, Japan, and Germany to less than \$2 per hour in most developing countries. In the East Asian newly industrializing economies, hourly wages costs stood at \$3 to \$5. This was one factor in generating outward FDI from these locations, and relocation of TNCs from the East Asian economies to other host countries (Lall, *et al.*, 1999, pp. 21-22), and *Far Eastern Economic Review*, 30 March 1999.
- <sup>11</sup> Analogous effects are observed with respect to compliance with environmental standards (chapter X).
- <sup>12</sup> Consumer goods industries, where compliance with social standards is a component of brand-specific goodwill, place greater premium on "reputation" and tend to be better employers than those with less public interface; see Nelson, 1996, p. 47.

- 13 Data for the 1980s to mid-1990s for a number of developing countries show that women's wages (not controlled for occupational group) are at 50 to 90 per cent of male wages (Tzannatos 1999, pp. 557-559; Standing, 1999, pp. 593; Horton 1999). These data are for all firms, domestic and foreign. Studies focusing specifically on TNCs have found similar patterns: in foreign affiliates in Brazil, for example, wages of men workers were double or more those of women workers. The grading of female and male occupations was such that hourly wage rates for men workers were higher than those of women in the same areas of employment and occupation (Humphrey, 1987, p. 41). This has also been observed in the garment industry in some developing countries (Elson, 1994). In the newly exporting segments of some developing countries' industries, it has been noted that the wage gap between male and female workers is small or absent and, in some countries, there is strict adherence in EPZs to payment of equal wages (ILO, 1998c). But male resistance to equal wages and the concentration of women workers in EPZs are conducive to a fine classification of occupations and their allocation to one or another gender, allowing room for wage discrimination to enter by the back door (Joekes, 1999).
- 14 This assumes that all firms are fully aware of the benefits of training. This is often not the case, even in advanced industrial countries. Many firms are unaware of their skill needs or of the benefits of further training, especially when the managers themselves are not highly educated. In developing countries, this problem may apply particularly to SMEs, and is less likely to apply to foreign affiliates. On the economics of training within enterprises, see Godfrey, 1997.
- 15 A study of Japanese affiliates in Brazil, for example, found that the introduction of total quality circles and just-in-time production methods required workers with above-average skills. These firms required workers with at least primary level education (eight years). Where they could not find sufficient qualified workers, they invested in adult education and short courses in literacy, numeracy, and group work techniques (Humphrey, 1993, p.109). The same pattern was observed in TNCs in the automotive industries in Thailand, which required at least full primary school education, and undertook training efforts (van Assouw, *et. al*, 1999). In contrast, another survey, also in Thailand, found that TNCs had lower shares of skilled employment in total employment than locally-owned firms across a variety of industries, such as electrical and computer industries. The share of skilled employees in total employment of United States and European affiliates was 16 per cent, in Japanese affiliates 15 per cent, and in Asian newly-industrializing enterprises affiliates 10 per cent, compared to 18 per cent in local firms (Cortes *et al*, 1998, p. 14). The explanation probably lies in the low-technology nature of assembly operations in ostensibly high-technology industries.
- 16 ILO press release, 22 December 1997.
- 17 In some instances, protectionist motives may lie at the origin of such initiatives, as for example when rising trade in developed countries arouses a fear that cheap imports will adversely affect domestic industries.
- 18 For instance, if the assessment of the fiscal incentive or concession to be granted is left to the foreign investment agency to determine on a case-by-case basis, this can be an arbitrary or non-transparent process.
- 19 It cannot be fully appropriated by individuals, it cannot exclude freeriders, and spillovers benefit all society.
- 20 It is interesting to note that some of the developing countries with the highest rates of compliance with the codes, including several Latin American countries, are among the largest recipients of FDI.
- 21 The OECD Guidelines for Multinational Enterprises, adopted in 1972, deal with a number of issues with an indirect bearing on industrial relations and contain a chapter referring directly to employment and industrial relations (see UNCTAD, 1994a, pp. 350-351; OECD, 1986).



# CHAPTER X

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## PROTECTING THE ENVIRONMENT

### A. The importance of the environment for development

There is a strong link between development and environmental protection. Economic growth may, in the absence of appropriate action at various levels, degrade the environment.<sup>1</sup> At the same time, development offers new opportunities for environmental protection by increasing and diffusing more advanced environmental technologies and management systems and allows for more environmentally friendly consumption patterns. The challenge for developing countries is to take advantage of the latter, minimizing and managing the environmental stress caused by economic growth and maximizing the benefits of their environmental endowments.

Traditionally, moral and regulatory imperatives were the principal drivers of environmental responsibility. These are still relevant today. But they have been complemented by a number of new drivers, which have emerged from a cross-section of stakeholder groups such as non-governmental organizations, employees, consumer groups and local communities, shareholders of companies and financial institutions that lend to firms (box X.1) (Warhurst, 1998). Some of these are quite visible, as demonstrated for example by the campaign surrounding the disposal of the Brent Spar oil platform by Shell. The impact of these driving forces is amplified in a globalizing world economy, with TNC systems serving as an additional conduit.

These new drivers have resulted in two changes in the analysis and understanding of the relationship between environmental protection and development:

- A general understanding of this relationship has evolved. The use of inappropriately priced environmental resources has traditionally been considered a necessary cost of economic growth.<sup>2</sup> Today, however, with economic development (box V.1) defined to involve a broadening of choice, protecting the environment is a major objective of countries.<sup>3</sup> It is now commonly accepted that both - environmental protection and economic efficiency - can, and should, be achieved simultaneously.<sup>4</sup> This approach is being adopted by many actors, including firms, and has resulted in their becoming actively involved in addressing environmental issues.<sup>5</sup>
- The scope of the accepted definition of “environmental damage” has widened. Traditionally, environmental damage was associated with process issues such as industrial pollution (the degradation of air, land and water caused by, for example, chemical plants or pulp and paper mills) or with the excessive extraction of renewable and non-renewable

resources. Today, there is a growing recognition that protecting the environment requires that the entire range of production processes and products be environmentally friendly. Land, water and air are constituents of the environment that, if damaged or exhausted, may affect negatively the health of ecosystems, including human health and well-being. Moreover, these effects are experienced differently depending on the relationship of a stakeholder group to a given project, as the effects will be different for members of the working, local, regional, national or international community.

Environmental protection is increasingly being reinforced by sound business considerations. Investors always seek to reduce their credit risk, which is now increasingly a function of the corporate capacity to manage environmental risk. In addition, firms are finding that environmental protection and competitiveness are not mutually exclusive. It is possible to be eco-efficient, that is to reduce both negative environmental impact and costs of production simultaneously. For example, between 1975 and 1996, 3M reduced its waste released to the environment by 1.4 billion pounds and saved over \$750 million (Schmidheiny *et al.*, 1997). Similarly, between 1992 and 1998, SC Johnson reduced its waste output by 420 million pounds and, by so doing, reduced its costs by \$125 million (WBCSD, 1999).

Moreover, consumers in some countries are now more environmentally conscious in making their purchasing decisions. This is creating both a market for “green” products and opening another avenue by which firms can be pressured to respond to environmental concerns (Schmidheiny *et al.*, 1997). Companies are called upon to be more careful in identifying the environmental damage caused not only by their core activities, but also activities generated by their backward and forward linkages. For example, companies selling household products have found that their environmental impact is largest outside their direct activities, including their supply chain as a whole, the raw materials they use and the disposal of their products.

In response, a growing number of firms are concerned with their “environmental footprint”. This encompasses the entire life cycle of a product, from the design stage (e.g. ensuring that a product makes a greater use of recycled material and uses production processes that minimize environmental damage) to its disposal. The demand for change from firms with regards to their effects on the environment is also reflected in the increased stringency of national environmental regulations in a growing number of countries. This concern has also found its way into international commitments. Perhaps most prominently among them is Agenda 21, the call for action from the 1992 United Nations Conference on Environment and Development, which contains a number of provisions across five chapters directly addressed to TNCs (annex table A.X.1).

These changes are positive. But, on their own, they are not sufficient to ensure an equitable intergenerational access to the world’s resources. The responses by governments, firms and consumers vary across countries and by level of development. Protecting the environment therefore remains a challenging task. This is particularly so because the fundamental tension between the profit motive of private firms and the public interest in protecting the environment has by no means vanished, and because market failures continue to persist in the use of environmental resources due to such factors as the inability to define property rights properly, bargaining costs between relevant parties, or the valuation of the environmental damage (UNCTC, 1992; World Bank, 1992). In addition, firms may be locked into older vintages of technology that were developed prior to regulatory upgrading (Warhurst, 1992).

Policy decisions are still often taken in response to immediate employment and output objectives. The pressures of delivering high economic growth rates and securing FDI, especially in developing countries, may in some instances tempt them to accept environmentally risky activities. Developing countries have dealt with such situations in a variety of ways, sometimes with the assistance of development agencies. But they often lack the resources<sup>6</sup> and technical expertise in inspection, monitoring, enforcement and prosecution needed to implement appropriate environmental legislation, and the ability to work collaboratively with those they regulate to improve environmental performance. This chapter analyses the role played by TNCs in developing country efforts to meet these challenges and the policies by which host countries can maximize the positive contribution of TNCs to environmental protection.



### Box X.1. TNCs and the new context in the mining industry

Much of the focus of the early debate on the environmental performance of TNCs in developing countries was placed on mining companies. The highly visible and localized environmental impacts of mining were no doubt among the reasons for this attention. Another reason was the presence of mining TNCs in developing countries already at the early stages of FDI expansion in these countries. This presence resulted from the fact that mining faced fewer and less important obstacles to TNC entry into host countries; it also has market access in importing countries and is less dependent on the presence of a skilled workforce and a well built up infrastructure in host countries. In other instances such as the Brazilian Grande Carajás project to exploit large mineral reserves in the southeastern Amazon, in the 1980s a major factor was the role played by OECD donors and the World Bank (Kolk, 1996, 1998). The dependence of the mining industry on one specific locational factor - the presence of high-quality mineral deposits - reduces the relative weight of other factors.

Accordingly, when international attention began to focus on the performance of TNCs with respect to the environment, mining companies had operations in place in developing countries that in many cases had been present for years or even decades. The environmental impacts of mining are largely determined at the development stage, when the basic layout of the operation, including the location of shafts, pits and tailings dams, is defined, and it is almost impossible to undertake radical changes later. It has proved possible to reduce the environmental impact of these older operations significantly through incremental changes to operations. Examples of such changes include improvements in ore processing technology which have reduced airborne emissions, increased re-use of processing water and improved dust control. Nevertheless, there is still a marked difference between older mines and newer operations with respect to environmental performance, particularly where the physical layout of operations make changes difficult to undertake. Examples of such differences are the rehabilitation of mined-out areas and the management of groundwater impacts from mine pits and tailings dams. In more recently built mines, factors such as improved environmental management techniques, new technology, lower costs of environmental mitigation and rehabilitation, and the introduction of planning for closure from the start of a project, have all contributed to a reduction of environmental impacts during and after operation. Only in exceptional cases, however, is it possible to achieve "zero impact", which requires restoring the mined land to a state close to the original one with no need for continued surveillance.

Due to the broad age distribution of operating mines, the environmental performance of mining companies has sometimes been assessed on the basis of capital investments of a much older vintage than for enterprises in other industries. This may have led to a more negative public perception of mining TNCs than would otherwise have been the case. The public image of mining TNCs has been further affected by a number of recent widely publicised incidences of spills from tailings dams, e.g. in Guyana in 1995, the Philippines in 1996 and Spain in 1998. While none of these resulted in loss of human life, a less publicly noticed collapse of a tailings dam in South Africa in 1994 resulted in 17 deaths (Ostensson, 1999).

Individual mining TNCs have reacted to public criticism both by improving environmental management practices and, in many cases, by establishing industry-wide guidelines or codes of conduct, also covering the performance of sub-contractors. For reasons given in the main text of this chapter, most mining TNCs apply environmental standards in new projects that are in conformity with their home country standards. Efforts to establish industry-wide guidelines, while successful in individual countries such as Australia and Canada, have not yet succeeded at the global level. The only set of guidelines applying to a large group of international mining companies is the Environmental Charter of the International Council for Metals and the Environment (ICME) (UNCTAD, 1996e). The ICME Charter is considerably less ambitious than the guidelines applied by many individual mining companies and it does not provide for monitoring or sanctions. Part of the reason for the lack of ambitious, industry-sponsored international guidelines is probably the aforementioned co-existence of mines of different vintages, which complicates the introduction of a common set of standards.

While governments generally rely on "command and control" type policies for regulating the environmental impact of mining operations, economic measures are gaining importance. This is the case in particular when it comes to financial guarantees against environmental damage. Governments commonly require the establishment of a trust fund or other guarantees that can be used to mitigate environmental damage or compensate those affected by it. The most important objective of such guarantees is to provide sureties that mine sites will be restored after operations have ceased, even if the operating company no longer exists.

*Source:* UNCTAD.

## **B. Environmental strategies of TNCs**

Environmental resources are an input into the production process. The extent of their use or damage by TNCs ranges across mining and other natural resource industries to manufacturing industries and services. The response of TNCs to environment issues differs in one important respect from that of uninational firms: in addition to managing the environment through pollution - abatement practices, environmental management systems, education and training, TNCs must also manage these issues in relation to their affiliates across international borders. Hence, an added dimension for them is cross-border environmental management, which is a key issue in assessing their impact on the environment in host developing countries.<sup>7</sup>

When it comes to managing the environment, TNCs have at their disposal the same type of strategies available to other firms. They can be end-of-pipe, where the focus is on “add-on” technology to address disposal and clean-up; or process-oriented, where environmental damage is prevented from the outset. The choice of option may reflect different business perceptions of environmental challenges, they also are indicative of the options available by virtue of the different products and processes involved. The perspective that addressing environmental issues is a burden, or where there are constraints related to resources or technology, can result in an end-of-pipe strategy. In contrast, if environmental protection is perceived to be a challenge and is integrated into decisions regarding business profitability, firms tend to pursue process- and product-oriented environmental management strategies.

The way in which the range of environmental management approaches is handled within a TNC system has implications for host developing countries. Again, a range of options exists. One is a decentralized strategy. Some parent firms leave all environmental issues to be addressed at the level of their foreign affiliates. Affiliates here have a commitment to the environment that is defined by the requirements of national law. If the host country does not have strict environmental legislation in place, affiliates can either choose the least-cost strategy or, alternatively, behave pro-actively in a more environmentally responsible manner; where legislation is more stringent, they comply accordingly. Affiliates are aware that they have a legal responsibility for environmental care, and pursue it within the framework of the laws and regulations of the host country.

A second strategy is to centralize environmental decisions for a TNC system as a whole. This would seek to ensure that the environmental performance of a firm is similar in all countries; it would also ensure that the activities of an affiliate in one host country do not have an adverse impact on the reputation of other affiliates or the parent firm. Within this centralization strategy, however, there could be different approaches:

- A parent firm could establish a framework within which affiliates are required to optimize their environmental performance, with due regard to domestic laws. The framework could include, for example, principles of environmental performance, reporting requirements and managerial responsibility.
- A parent firm could establish uniform environmental standards across the entire TNC system, compatible with each host country as well as the home country. Thus, the highest national level of all the countries in which the TNC operates sets the standards. One variation of this approach is to set standards higher than those in any of the countries in which the firm operates. Another is that the standards are minimum, with affiliates in countries with higher standards being required to deviate upwards.
- A parent firm could establish comprehensive uniform environmental standards across not only the entire TNC system, but also across input suppliers, regardless of ownership.

The choice of strategy depends on a complex mix of considerations. Some factors are:

- The environmental impact of the activities of a particular TNC. If it is low to begin with, there may be less of an incentive to pursue a centralized strategy.

- The implications for competitiveness of the affiliates and the TNC system as a whole. This goes beyond the direct costs of environment technologies and management. However, they need not deter the adoption of a centralized environmental strategy: other incentives may exist, national or international, to adopt clean technologies.
- The threat of liability. This is a major consideration for TNCs in implementing environmental protection. The potential liability of environmental litigation can be more important to firms than the cost of clean technology implementation (UNCTAD, 1996f). In addition to the public embarrassment of being caught deploying poor environmental technology or inefficient managing the environmental technology in place, and the threat of consumer boycotts, there is even a possibility that company executives could be extradited to face trial in the host country.<sup>8</sup> All this can have serious consequences for the reputation of a firm and its brand names, with immediate implications, for instance for the firm's stock market valuation (UNCTAD, 1998h).
- Uncertainty with respect to host government policy. While implementing less stringent technology in an affiliate may seem appropriate where it meets existing host country legislation, this could be short sighted. A host country government could later introduce more stringent regulations, requiring the affiliate to upgrade its technology and incur the costs of complying with the new regulations (Hansen, 1998; Adams, 1997). Moreover, it may be cheaper to anticipate the upgrading of environmental legislation by installing the latest technology.
- The role of consumer markets. In some cases, the shift towards a centralized strategy is due to the perception that there are competitive advantages in being "green". For example, the following products are now being advertised as being environment friendly:
  - household products such as cleaners that are phosphate free;
  - packaging of consumer products that require less landfill; and
  - consumer electronic equipment (such as computers) that is energy efficient, uses more recycled material for input, and creates less waste when being disposed of.
- Home country regulation. TNCs have been shown to be strongly influenced by home country regulations (UNCTAD, 1993c). This is due to a combination of factors, which include greater shareholder accountability, the potential embarrassment of having higher environmental performance in the home country than in host countries and, in the case of a number of countries, greater public demand for a better environment.
- The nature of costs also matters, especially in the application of environmentally sound technologies and environmental management systems; in particular, it is important to distinguish between the size and type of costs (Adams, 1997). Fixed costs such as the costs of installation of equipment to reduce emissions have a different effect on the choice of strategy than variable costs such as compliance checks or the use of more costly inputs. The existence of fixed costs means that there are scale economies in implementing clean technologies. Thus, it may be cheaper for a TNC to implement the same clean technology across its entire corporate system than to tailor the technology to each affiliate (Hansen, 1998). A distinction, however, has to be made between cases that use process-based technology or end-of-pipe technology. The incentive in the former to implement the same high-level technology is higher.

In sum, a TNC can pursue a wide range of environmental strategies, from comprehensive ones that ensure that its worldwide environmental costs are increasingly internalized, to those that focus on ensuring compliance with local regulations. The environmental implications for host countries depend on the type of strategy followed by a TNC and the public policy framework within which the strategy is pursued.

## C. The impact of FDI on the environment in host developing countries

Environmental degradation in host developing countries is a consequence of both production and consumption patterns within countries and of its export markets. Apart from regulations and corporate strategies, the environmental effect of FDI depends on a combination of macro and micro issues. At the macro level, the issue is the profile of FDI, i.e. the type of industry in which FDI takes place and, especially, the extent to which it involves pollution-intensive activities. At the micro level it is the specific decisions that TNCs make with regard to their management of production activities and the application and diffusion of environmentally sound technologies. Each of these issues is examined in this section with specific reference to the question of whether or not foreign or domestic ownership matters.

### 1. An environmental profile of FDI

The effect that production processes can have on the environment depends considerably on the industry involved. Some industries are classified as potentially highly polluting in the sense that they can have large negative effects on air, water and land, while others have minimal effects. Studies to identify these industries use different criteria, but arrive at similar conclusions:<sup>9</sup> traditionally, industries classified as potentially highly polluting include chemicals and allied products, mining for minerals and metals, pulp and paper, fabricated and non-fabricated metals, cement, glass and ceramics (table X.1). However, data shortfalls do not allow testing for a precise correlation between the potential pollution intensity of industries and FDI. It is important to note therefore that the subsequent discussion is based only on an approximation of the pattern of TNC participation in pollution-intensive industries. In addition, there may be substantial foreign control of some activities without direct foreign equity participation, for instance via subcontracting or licensing relations. It is then difficult to distinguish the real environmental profile of TNCs: foreign affiliates may have high environmental standards while suppliers or licensors may not. The substantive issue is the environmental footprint of the activities of a given TNC.

Table X.1. Environmental Impacts of selected industries

Industry	Air	Water	Soil / land
Chemicals (industrial inorganic and organic compounds, excluding petroleum products).	<ul style="list-style-type: none"> <li>Many and varied emissions depending on processes used and chemicals manufactured.</li> <li>Emissions of particulate matter SO<sub>2</sub>, NO, CO, CFCs, VOCs and other organic chemicals, odours.</li> <li>Risk of explosions and fires.</li> </ul>	<ul style="list-style-type: none"> <li>Use of process water and cooling water.</li> <li>Emissions of organic chemicals, heavy metals (cadmium, mercury), suspended solids, organic matter, PCBs.</li> <li>Risk of spills.</li> </ul>	<ul style="list-style-type: none"> <li>Chemical process wastes disposal problems.</li> <li>Sludges from air and water pollution treatment disposal problems.</li> </ul>
Paper and pulp.	<ul style="list-style-type: none"> <li>Emissions of SO<sub>2</sub>, NO<sub>x</sub>, CH<sub>4</sub>, CO<sub>2</sub>, CO, hydrogen sulphide, mercaptans, chlorine compounds, dioxins.</li> </ul>	<ul style="list-style-type: none"> <li>Use of process water.</li> </ul>	<ul style="list-style-type: none"> <li>Emissions of suspended solids, organic matter, chlorinated organic substances, toxins (dioxins).</li> </ul>
Cement, glass, ceramics.	<ul style="list-style-type: none"> <li>Cement emissions of dust, NO<sub>x</sub>, CO<sub>2</sub>, chromium, lead, CO.</li> <li>Glass emissions of lead, arsenic, SO<sub>2</sub>, vanadium, CO, hydrofluoric acid, soda ash, potash, specialty constituents (e.g. chromium).</li> <li>Ceramics emissions of silica, SO<sub>2</sub>, NO<sub>x</sub>, fluorine compounds.</li> </ul>	<ul style="list-style-type: none"> <li>Emissions of process water contaminated by oil and heavy metals.</li> </ul>	<ul style="list-style-type: none"> <li>Extraction of raw materials. Soil contamination with metals and waste disposal problems.</li> </ul>
Mining of metals and minerals.	<ul style="list-style-type: none"> <li>Emissions of dust from extraction, storage, and transport of ore and concentrate.</li> <li>Emission of metals (e.g., mercury) from drying of ore concentrate.</li> </ul>	<ul style="list-style-type: none"> <li>Contamination of surface water and groundwater by highly acidic mine water containing toxic metals (e.g. arsenic, lead, cadmium).</li> <li>Contamination by chemicals used in metal extraction (e.g. cyanide).</li> </ul>	<ul style="list-style-type: none"> <li>Major surface disturbance and erosion.</li> <li>Land degradation by large slag heaps.</li> </ul>

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Table X.1. Environmental impacts of selected industries (concluded)

Industry	Air	Water	Soil / land
Iron and steel	<ul style="list-style-type: none"> <li>Emissions of SO<sub>2</sub>, NO<sub>x</sub>, hydrogen sulphide, PAHs, lead, arsenic, cadmium, chromium, copper, mercury, nickel, selenium, zinc, organic compounds, PCDDs/PCDFs, PCBs, dust, particulate matter, hydrocarbons, acid mists.</li> <li>Exposure to ultraviolet and infrared radiation, ionizing radiation.</li> <li>Risks of explosions and fires.</li> </ul>	<ul style="list-style-type: none"> <li>Use of process water.</li> <li>Emissions of organic matter, tars and oil, suspended solids, metals, benzene, phenols, acids, sulphides, sulphates, ammonia, cyanides, thiocyanates, thiosulphates, fluorides, lead, zinc (scrubber effluent).</li> </ul>	<ul style="list-style-type: none"> <li>Slag, sludges, oil and grease residues, hydrocarbons, salts, sulphur compounds, heavy metals, soil contamination and waste disposal problems.</li> </ul>
Nonferrous metals treatment,	<ul style="list-style-type: none"> <li>Emissions of particulate matter, SO<sub>2</sub>, NO<sub>x</sub>, CO, hydrogen sulphide, hydrogen chloride, hydrogen fluoride, chlorine, aluminum, arsenic, cadmium, chromium, copper, zinc, mercury, nickel, lead, magnesium, PAHs, fluorides, silica, manganese, carbon black, hydrocarbons, aerosols.</li> </ul>	<ul style="list-style-type: none"> <li>Scrubber water containing metals.</li> <li>Gas-scrubber containing solids, fluorine, hydrocarbons.</li> </ul>	<ul style="list-style-type: none"> <li>Sludges from effluent coatings from electrolysis cells (containing carbon and fluorine) soil contamination and waste disposal problems.</li> </ul>
Coal mining and production	<ul style="list-style-type: none"> <li>Emissions of dust from extraction, storage, and transport of coal.</li> <li>Emissions of CO and SO<sub>2</sub> from burning slag heaps.</li> <li>CH<sub>4</sub> emissions from underground formations.</li> <li>Risk of explosions and fires.</li> </ul>	<ul style="list-style-type: none"> <li>Contamination of surface water and groundwater by highly saline or acidic mine water.</li> </ul>	<ul style="list-style-type: none"> <li>Major surface disturbance and erosion.</li> <li>Subsidence of ground above mines.</li> <li>Land degradation by large slag heaps.</li> </ul>
Refineries, petroleum products	<ul style="list-style-type: none"> <li>Emissions of SO<sub>2</sub>, NO<sub>x</sub>, hydrogen sulphide, HCs, benzene, CO, CO<sub>2</sub>, particulate matter, PAHs, mercaptans, toxic organic compound odours.</li> <li>Risk of explosions and fires.</li> </ul>	<ul style="list-style-type: none"> <li>Use of cooling water.</li> <li>Emissions of HCs, mercaptans, caustics, oil, phenols, chromium, effluent from gas scrubbers.</li> </ul>	<ul style="list-style-type: none"> <li>Hazardous waste, sludges from effluent treatment, spent catalysts, tars.</li> </ul>
Leather and tanning	<ul style="list-style-type: none"> <li>Emissions including leather dust, hydrogen sulphide, CO<sub>2</sub>, chromium compounds.</li> </ul>	<ul style="list-style-type: none"> <li>Use of process water.</li> <li>Effluents from the many toxic solutions used, containing suspended solids, sulphates, chromium.</li> </ul>	<ul style="list-style-type: none"> <li>Chromium sludges.</li> </ul>

Source: WRI, 1998, p. 52, based on WHO, 1997.

An examination of the industrial composition of *outward* FDI stock data from selected countries shows that the share of pollution-intensive manufacturing industries in total outward FDI stock did not exceed 16 per cent in 1996, reflecting the importance of the services sector (table X.2); it also appears that this share has been fairly stable since 1990. The share is higher when only manufacturing is considered, being highest for Germany at 40 per cent. This compares to a share of less than 6 per cent<sup>10</sup> for the same industries in total domestic investment of the same countries, and up to 40 per cent if put in relation to manufacturing only. When it comes to the primary sector, the share of FDI in the total has declined; however, this is due more to an increase in the share of FDI in the services sector. Outward FDI in the primary industry sector has increased in nominal terms for France, Germany, the United States and United Kingdom.

Examining FDI stock is but one way to measure the environmental profile of foreign affiliates. One can also use the share of value-added by majority-owned foreign affiliates engaged in selected pollution-intensive industries in the total value-added of these affiliates. These data, available only for United States TNCs, indicate that the share of pollution-intensive production in total affiliate production has risen slightly over time and is somewhat above the share of the same industries in total domestic United States manufacturing production (figure X.1). However, this picture differs considerably across regions: the share of pollution-intensive production in total affiliate production is the highest in developed countries,<sup>11</sup> and has been so for the past decade and a half (figure X.2). South America and Central America have comparatively high shares, while all other regions have relatively low shares, with West Asia the lowest.



**Table X.2. The share of pollution-intensive industries <sup>a</sup> in outward FDI stock and gross fixed capital formation, selected developed countries, 1990 and 1996**

Country	Outward FDI stock				Gross fixed capital formation			
	Share in total stock		Share in manufacturing stock		Share in all industries		Share in manufacturing	
	1990	1996	1990	1996	1990	1996	1990	1996
France <sup>b</sup>	14.6 <sup>c</sup>	13.5 <sup>d</sup>	33.5 <sup>c</sup>	36.6 <sup>d</sup>	4.6 <sup>c</sup>	4.0 <sup>d</sup>	28.2 <sup>c</sup>	30.3 <sup>d</sup>
Germany	17.7	15.2 <sup>e</sup>	42.3	39.4 <sup>e</sup>	7.6	4.1 <sup>e</sup>	36.6	38.2 <sup>e</sup>
Japan <sup>f</sup>	7.4	7.6	27.9	25.9	..	..	..	..
United Kingdom <sup>g</sup>	10.4	13.8	26.7	33.0	2.3	2.3	17.3	17.0
United States	12.0	11.6	29.3	32.1	4.5	5.7	30.9	41.0

Source: UNCTAD, FDI/TNC database; and OECD, 1998c.

<sup>a</sup> Pollution-intensive industries are defined as chemicals, pulp and paper, petroleum and coal processing and basic metals industries. For the purpose of this table, the fabricated metals industry could not be included since data on gross fixed capital formation are not separately available. If the fabricated metals industry is included in outward FDI stock, the share of pollution-intensive industries would increase by almost 2 percentage points in all industries and by at most 4 percentage points in manufacturing.

<sup>b</sup> Does not include petroleum and coal.

<sup>c</sup> 1991.

<sup>d</sup> 1995.

<sup>e</sup> 1993.

<sup>f</sup> Notification data. Includes chemicals and manufacture of basic metal.

<sup>g</sup> Includes petroleum and coal, and manufacture of basic metal.

Note: Caution should be exercised when comparing shares among countries due to differences in methodology or data availability.

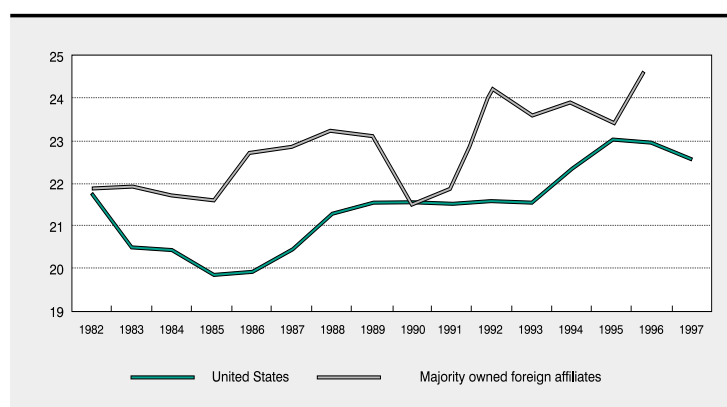
If *inward* FDI stock data are examined over time for a number of host countries (table X.3), no particular pattern emerges, either for developed or developing countries and either for the share of pollution intensive industries in total FDI or in manufacturing FDI: these shares are going up in some countries and down in others. However, the share of pollution-intensive industries in inward FDI stock appears to be higher than the share of the same industries in domestic gross fixed capital formation.

What the above data suggest is that, when it comes to the industrial composition of investment, the ratio of pollution-intensive industries in FDI stock appears to be higher than that in domestic investment, in both developed and developing countries (tables X.2 and X.3).

However, considerable caution must be exercised in interpreting these data and predicting environmental outcomes.

- The data may over- or underestimate the share of pollution-intensive activities across sectors and in manufacturing. Also, they do not provide information on the environmental impact of production; that impact varies, depending, among other things, on the type of technology used, the environmental management system in place and the regulatory environment. That there is FDI in pollution-intensive industries at all means that

**Figure X.1. Share of pollution-intensive<sup>a</sup> manufacturing production in total manufacturing production: United States and for United States majority-foreign-owned affiliates**  
(Percentage)



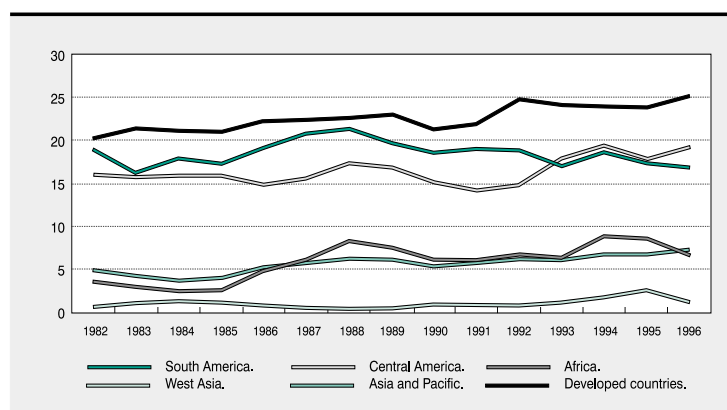
Source: UNCTAD, based on United States Department of Commerce data.

<sup>a</sup> Pollution-intensive industries are the sum of chemicals and allied products and primary and fabricated metals.

environmental stress can be one of the consequences of FDI. Moreover, the environmental vulnerability of countries varies too; small island host countries, for example, depend heavily on tourism and a narrow range of primary products such as fisheries (ADB, 1992). Furthermore, there is a negative relationship between economic growth and some pollutants over a range of *per capita* incomes. The data also do not capture the possibility that there are varying *degrees* of environmental damage. Substantial environmental problems can arise in many industries that are not considered heavily polluting overall, for instance, textiles

**Figure X.2. Share of pollution-intensive<sup>a</sup> manufacturing production in total manufacturing production: United States majority-owned foreign affiliates, by region, 1982-1996**

(Percentage)



Source: UNCTAD, based on United States Department of Commerce data.

<sup>a</sup> Pollution-intensive industries are the sum of chemicals and allied products and primary and fabricated metals.

**Table X.3. The share of pollution-intensive industries<sup>a</sup> in inward FDI stock and gross fixed capital formation, selected economies, 1990 and 1996**

Economy	Inward FDI stock				Gross fixed capital formation			
	Share in total stock		Share in manufacturing stock		Share in all industries		Share in manufacturing	
	1990	1996	1990	1996	1990	1996	1990	1996
<b>Developed economies</b>								
France <sup>b</sup>	10.9 <sup>c</sup>	14.6	30.5 <sup>c</sup>	38.0	4.2 <sup>c</sup>	4.1	27.9 <sup>c</sup>	30.3
Germany	19.2	10.3 <sup>d</sup>	36.0	35.4 <sup>d</sup>	7.6	4.7 <sup>d</sup>	36.6	38.2 <sup>d</sup>
United Kingdom <sup>e</sup>	6.8	9.3	18.9	31.9	2.3	2.3	17.3	17.0
United States	21.6	19.5	45.9	43.1	4.5	5.7	30.9	41.0
<b>Developing economies</b>								
Brazil <sup>f</sup>	..	19.0	..	38.0	25.3	9.0 <sup>d</sup>	72.0	54.0 <sup>d</sup>
Hong Kong, China <sup>f</sup>	..	..	15.7	18.4 <sup>g</sup>	1.2	0.4 <sup>g</sup>	15.2	18.4 <sup>g</sup>
India <sup>h</sup>	33.6	28.5 <sup>d</sup>	39.6	33.8 <sup>d</sup>	5.9	7.8 <sup>d</sup>	44.0	42.4 <sup>d</sup>
Indonesia <sup>h</sup>	44.5 <sup>d</sup>	44.9 <sup>i</sup>	65.8 <sup>d</sup>	68.0 <sup>i</sup>	0.9 <sup>d</sup>	1.5 <sup>i</sup>	21.8 <sup>d</sup>	17.7 <sup>i</sup>
Philippines <sup>j</sup>	22.5	23.4 <sup>d</sup>	46.1	44.1 <sup>d</sup>	2.5	5.0 <sup>d</sup>	20.4	36.2 <sup>d</sup>
Republic of Korea <sup>j</sup>	19.3	25.9 <sup>i</sup>	30.9	40.9 <sup>i</sup>	12.5	7.7 <sup>i</sup>	38.6	26.5 <sup>i</sup>
Singapore	..	..	44.2	44.8 <sup>g</sup>	5.6	5.1 <sup>g</sup>	28.7	31.0 <sup>g</sup>
Thailand <sup>j</sup>	12.7	12.4 <sup>k</sup>	28.3	27.4 <sup>k</sup>	4.7	2.9 <sup>k</sup>	8.9	15.9 <sup>k</sup>

Source: UNCTAD, FDI/TNC database, OECD 1998c and UNIDO, 1998.

<sup>a</sup> Pollution-intensive industries are defined as chemicals, pulp and paper, petroleum and coal processing and basic metals industries for developed countries. For the purpose of this table, fabricated metal products could not be included in the case of developed countries as data on GFCF in this specific industry are not available. If the fabricated metals industry is included in the inward FDI stock of the selected developed countries, the shares of pollution-intensive industries increase by about 2 percentage points in all industries and by at most 4 percentage points in manufacturing in developed countries. Pollution-intensive industries in the selected developing countries include chemicals, coke, petroleum products and nuclear fuel, rubber and plastic products, basic metal and fabricated metal products.

<sup>b</sup> Does not include petroleum and coal, manufacture of basic metal.

<sup>c</sup> 1992.

<sup>d</sup> 1993.

<sup>e</sup> Includes petroleum and coal, manufacture of basic metal.

<sup>f</sup> Does not include petroleum and petroleum products.

<sup>g</sup> 1994.

<sup>h</sup> Does not include petroleum and coal, rubber and plastic products.

<sup>i</sup> 1995.

<sup>j</sup> Does not include rubber and plastic products.

<sup>k</sup> 1991.

Note: Caution should be exercised when comparing shares among economies and regions due to differences in methodology or data availability.

and clothing as well as semiconductors.<sup>12</sup> Finally, there are industries that may not be polluting *per se* but nevertheless raise environmental concerns because of their scale. This is the case for example in agribusiness where plantations, run as monocultures, might have a detrimental impact on the environment as could the over-use of pesticides and fertilizers. Also, logging and other forestry activities are increasingly attracting FDI. For example, almost 90 per cent of logging operations in Gabon and Cameroon are foreign owned; and foreign investment from various home countries, including developing East Asia, is going to the forestry sector in Brazil, Cambodia, Congo, Guyana, Nicaragua, Papua New Guinea, the Solomon Islands and Suriname (French, 1998). The total impact of foreign affiliates on the environment therefore depends on the scale of activity, their pollution content and the control measures used. Low pollution-content activities with large outputs and poor environmental control can do significant environmental damage.

If this is the environmental profile of FDI, the obvious question arises: what explains it?

One possible explanation given is the “pollution haven” hypothesis: TNCs shift the location of their pollution-intensive production in response to lax environmental standards. While there are some cases in which firms appear to have shifted their production activities to take advantage of lower environmental standards elsewhere,<sup>13</sup> there is no conclusive evidence whether TNCs *in general* exploit environmental laxity (box X.2). If that is the case, lowering environmental standards – or, for that matter, raising them – should not have a systematic impact on FDI flows.<sup>14</sup>

#### **Box X.2. Testing the “pollution haven” hypothesis**

There have been several approaches to testing the general “pollution haven” hypothesis (Adams, 1997). The first has been to correlate outward FDI with environmental standards. The results have found no support for the “pollution haven” hypothesis, i.e. the hypothesis that TNCs direct their investment to countries with lax standards (Leonard, 1988; Repetto, 1995; Lucas *et al.*, 1992; Eskeland and Harrison, 1997; Warhurst and Bridge, 1997). One study (Xing and Kolstad, 1997) does find the predicted effect, but its robustness has been questioned because of the use of sulphur dioxide emissions as a proxy for environmental stringency (Adams, 1997; Zarsky, 1999). The second approach has been to embed environmental regulation in a larger model of locational choice. Again, the studies find that the environmental variable is rarely significant. The most important variables remain the traditional ones of locational choice: factor endowments, infrastructure quality, distance and market size (Eskeland and Harrison, 1997).

There is also a third approach – to use case studies. This approach, which examines specific company decisions, has proved to be more successful in finding cases that support the notion that environmental standards are a factor in TNC location decisions (WWF, 1998). Examples of both – governments failing to enforce environmental legislation and firms acknowledging that lower environmental standards were a factor – were found in Costa Rica, Mexico, India, Indonesia, Papua New Guinea and the Philippines (WWF, 1998 and 1999a).

All three approaches have inherent difficulties. The first two suffer from imprecise measurement of the variables, such as environmental stringency and the difficulties plaguing FDI data and affiliate production data in general; they also rely heavily on data from the United States. The third suffers from selection bias – only firms that have actually shifted are documented.

*Source:* UNCTAD.

That is not surprising: a range of studies on the principal determinants of FDI locational decisions has shown that, once an enabling regulatory framework is in place, economic factors become by far the most important determinants (UNCTAD, 1998a). In addition, there may be other factors that explain the lack of a correlation between environmental standards and location decisions by TNCs:

- The costs of compliance with environmental regulations in both home and host countries are a relatively small share of total costs, and so do not weigh heavily in the final decision.<sup>15</sup>
- The cost of applying common standards across a TNC system may be lower than the cost of differentiating standards by country.
- The measures used in the analysis of environmental stringency and its impact may be deficient and need improvement.<sup>16</sup>

- TNCs are now more visible, and environmental issues more closely monitored; thus, the risks associated with environmental negligence could be too high for firms to bear, especially in large projects.
- Finally, as was observed in chapter VII, technological advantage, often a function of R&D intensity, is frequently the most powerful determinant of outward FDI. And many R&D-intensive industries are not among the most polluting ones. More broadly, FDI flows have seen a substantial shift towards services, which typically have less potential for direct negative environmental effects.

More generally, it is difficult to isolate the pollution intensity of FDI and international production from that associated with normal industrial restructuring. More importantly, what matters in the context of assisting developing countries to protect their environment is not the fact that TNCs are present, but how environmentally responsible they are in practice, in particular in terms of the diffusion of clean technology and efficient environmental management practices.

## 2. Environmental management and clean technology

The level of environmental degradation resulting from industrial activity is closely linked to the production efficiency of firms and their capacity to innovate. Environmental damage tends to be greatest in low-productivity operations working with obsolete technology, outdated work methods, poor human resource development, inefficient energy use and limited capital. This suggests that there is much scope for firms to improve their environmental performance by adopting corporate strategies that promote the development and mastery of technological processes and that facilitate the adoption of environmental management systems that optimize process control, continuous improvement and organizational learning (Warhurst, 1999). What this means is that, to a large extent, environmental performance is a function of the use of clean technology within an efficient environmental management framework. The discussion that follows focuses on natural resources and capital-intensive industries as these are the industries with the largest environmental impact (table X.1), although the environmental consequences of other industries are increasingly being recognized as well (von Moltke *et al.*, 1998).

A typical example is the mining industry - particularly important because operations here tend to be large relative to the size of the communities affected. It is characterized by scale economies, high capital-intensity and a dominance by TNCs. The degree of environmental degradation is determined by a combination of clean technology diffusion and management practices and host country characteristics (box X.3). FDI to many countries dependent on the export of minerals is increasing, principally as a result of the fact that they are fast liberalizing their economies to encourage FDI and are also privatizing their state-owned industries which, in many cases, were the traditional vehicle for minerals production. Historically, this state-owned production was particularly polluting on account of obsolete technology, poor human resource development, weak management and an absence of accountability (Warhurst and Bridge, 1997). The modernization of those previously state-owned projects and the inflow of new investment into new projects are leading to enhanced environmental protection overall. After a period of using rather static technology in the mining industry, innovations such as energy-efficient “flash” smelters, biotechnology-based leaching alternatives to smelting, and continuous-concentration processes are substantially reducing the overall levels of use of environmental resources, particularly energy, and damage to the quality of land, water, air and ecosystems. These innovations, plus a growing number of add-on end-of-pipe solutions (such as smelter scrubbers, acid capture equipment, water treatment plants and dust precipitators), underlie the potential that FDI promises to improve the environmental performance of industrial production in host developing countries. The policy framework needs to harness this potential through a range of innovative policy mechanisms and incentives. This is especially the case in mineral development, where new projects are very costly. As investment is financed, as a rule of thumb, one third equity and two thirds debt, environmental conditionality is increasingly being attached to the provision of credit and risk insurance.<sup>17</sup>

**Box X.3. Key factors in the diffusion of clean technologies**

A recent study evaluated the diffusion of clean technologies in 25 different FDI projects undertaken in a number of countries.<sup>a</sup> Four types of clean technologies were examined: The INCO SO<sub>2</sub> process used in cleaning effluents from gold extraction and milling processes; the Outokumpo flash smelter, an innovative energy efficient technology for smelting sulphide ores; GENCOR's (now called Biliton) BIOX and BIONIC processes which are bacterial-based leaching technologies for extracting gold and nickel from low grade ores; and the Rio Tinto environmental management system. The latter is a systematic approach to the management of environmental effects, combining a computerized system with practices monitoring and reporting procedures.

Main findings include:

- Clean-technology innovators/suppliers did not export old, obsolete, polluting technology to developing countries. Rather they sought "rent" and "track records" from diffusing demonstrably cleaner technologies and environmentally-friendly reputations. For that reason, the faster and more efficient the technology implementation process was from the outset, the greater the monetary advantage in terms of generating further opportunities for selling the clean technology.
- The clean-technology suppliers worked intensively to train the recipients to manage and monitor their newly acquired technologies and environmental management systems. In some cases, the suppliers set up "user clubs", supported by investment in technical support from the innovators, to ensure firstly, efficient implementation; and, secondly, that the suppliers were able to capture the learning benefits of recipient adaptation trials and errors, in order to improve the technology further and enhance its successful diffusion worldwide.
- As an incentive to optimize this learning process, suppliers allowed recipients to keep the benefits accruing from modifications and harness the enhanced capacities for competitive advantage. More traditional approaches to technology transfer foster dependency in the recipient by maintaining property rights to secure future rent earning on further incremental innovations.
- It was found that this technological collaboration took place more commonly at the diffusion stage B and not the R&D stage; that it is more successful if it is intensive in training and human resource development; and that the most successful cases of clean-technology transfer were found where supplier-recipient collaboration lasted longest.

*Source:* Warhurst, 1999.

<sup>a</sup> Recipient sites studied were spread across Australia, Bolivia, Brazil, Chile, Papua New Guinea, Peru, Russia, South Africa and the United States.

The effects of environmental pressures are also quite obvious in such capital-intensive manufacturing industries as pulp and paper, steel and chemicals.<sup>18</sup> There is growing evidence that the pollution intensity of these industries as well as the long life-cycle of plants (typically extending to 20-30 years) renders investment decisions subject to careful scrutiny, initially in terms of financing, but also during the lifetime of the investment. As in the case of natural resources indicated earlier, the sheer size of a new project is often such that a significant degree of debt financing is used, involving an increasingly stringent set of environmental impact assessment criteria on behalf of the lenders. Furthermore, firms that have made the step to undertake process redesign rather than pursue an end-of-pipe approach to environmental concerns are also increasingly worried about any potential liabilities arising during the lifetime of a facility and after its closure. Concerns about future liability (apart from the role of consumers and legislation), for example, have led leading firms in the paper industry to pursue a "closed mill" as a design objective, whereby all of the flows of inputs and by-products would be contained within the facility, resulting in little if any environmentally damaging releases into the air and water. Indeed, the pulp and paper industry has been "greened" to a certain extent (box X.4), with apparently little difference between foreign- and domestic-owned facilities (box X.5).



Developing countries also face an environmental challenge in their traditional area of comparative advantage, namely labour-intensive industries. Although the level of pollution in these industries is comparatively low, there is still a concern over firms' environmental performance. Export-oriented foreign affiliates (and their suppliers) are particularly relevant here, although affiliates oriented towards the domestic markets of developing countries also have to consider their environmental footprint. This brings into context the significant role played by the characteristics of the product such as the level of price competition and the environmental demands of the final consumer.

#### **Box X.4. The "greening" of the pulp and paper industry**

Following a first wave of environmental investment in the early 1970s, a second wave of investment was initiated in the pulp and paper industry when concerns about the effects of chlorinated organics in the mill effluent began to emerge in the mid 1980s, particularly in Sweden and Germany. In Germany, Greenpeace campaigned actively for the removal of chlorine in the bleaching process for fear that the residual chlorine in the waste water would combine with organic matter and form highly toxic substances, such as dioxins. The impact of this (market-led) action on the industry was substantial, as it was not possible to allay such concerns through the use of end-of-pipe technology, which in this case would have meant multiple layers of water treatment facilities. Instead, two new processes were developed: the totally chlorine-free pulping process (which eliminated the use of chlorine) and the elemental chlorine-free process (which eliminated the use of elemental chlorine ( $\text{Cl}_2$ ), and replaced it with chlorine dioxide).

Prompted by the importance of the German market to Scandinavian producers, the industry in these countries invested heavily in the new technologies. By the early 1990s, chlorine use in the Swedish and Finnish industries had been reduced 10 and five-fold, respectively. In 1998, the elementally chlorine-free process also became the standard endorsed by the Environmental Protection Agency of the United States. These processes represent the dominant technology on offer from the major equipment suppliers. Mills such as those operated in a joint venture by UPM-Kymmene of Finland and the Indonesian APRIL in Indonesia (1998) and China (1999) are said to meet European emission standards, while APRIL is also working towards achieving ISO 14001 certification for its forestry operations next year.

*Source:* Lundan, 1996.

#### **Box X.5. Foreign investment and environmental management: evidence from the Chilean pulp and paper industry**

Due to the specific structural characteristics of the pulp and paper industry, parent firms have been found not to be important sources of production technology in the Chilean pulp and paper industry. For example, the dominance of outside supplier and equipment firms and consulting engineering companies, who play the key role in mill design for both foreign- and domestically-owned mills, have limited the scope for dramatic differences between them in terms of control and treatment technologies. Export market pressures are also an important influence, with both foreign- and locally-owned firms introducing environmental changes specifically linked to market access (notably decreases in chlorine use in bleaching). Scale is also an issue here, with some smaller mills particularly active in searching for cost-saving environmental measures (fixing leaks, recovering waste streams) to help meet the challenges of competition with larger rivals in a price-competitive, scale-intensive industry. The final issue is the role played by third party lenders in reinforcing environmental standards as a condition of lending. In the cases where mills have sourced funding from international agencies, they have been subjected to similar environmental performance criteria.

Differences between foreign affiliates and domestic firms were found in the area of environmental management. Foreign-owned and joint venture firms are more likely to have a formal environmental policy, and to have designated a specific individual to take responsibility for environmental matters at the plant level. They are also more likely to have pursued (or be pursuing) international certification. These points indicate a more active pursuit of ongoing, incremental improvements in environmental performance in foreign affiliates relative to domestic firms.

*Source:* Herbert-Copley, 1998.

What is increasingly relevant here - and is a core part of the new context of business - is the environmental management responsibilities of TNCs *vis-à-vis* their suppliers (and consumers). To the extent that suppliers (and consumers) are part of the environmental footprint of firms, pressure can be put on TNCs to take responsibility for their environmental performance, particularly in developing countries. In this case, it is not ownership that matters, but rather that they are related to a TNC system. TNCs have an advantage in assisting their suppliers to upgrade their environmental management practices and consumers to change their consumption habits. Most of the developments in this area relate to increased consumer demand in developed countries for environmentally-friendly products (von Moltke *et al.*, 1998). TNCs can also be conduits for introducing environmentally-friendly consumption products into developing countries (Jha, 1999).<sup>19</sup> They also have an advantage of being able to train input suppliers in changing their production processes to exploit these market opportunities. Notable examples here are the contributions of TNCs to help their suppliers qualify for eco-labelling.<sup>20</sup> If customers place a premium on eco-labelled products, regardless of ownership, suppliers need to meet the certification requirements. TNCs have also assisted their suppliers in the form of technical workshops, training courses and ISO 14000 certification. Intel, for example, insists that its suppliers conform to its rigorous in-house environmental standards. Hewlett-Packard also has a product stewardship programme that embraces the design, manufacture, distribution, use, take-back, disassembly, reuse, recycling and ultimate disposal of constituent parts and materials of all its affiliates and suppliers (von Moltke *et al.*, 1998).

Looking at the manufacturing sector as a whole, there is some evidence - although neither comprehensive nor systematic - to suggest that foreign affiliates may have higher environmental standards than domestic counterparts across the entire manufacturing sector.<sup>21</sup> However, foreign ownership was not a significant factor in the adoption rate of ISO 14000 - a certification that environmental management systems are in place (box X.6) - in Mexico (Dasgupta *et al.*, 1998). Neither are other overseas links through trade, management training or management experience. The most important factors are the skill level of plant managers and staff awareness of environmental issues. Foreign ownership is also insignificant in plant-level abatement practices in South and South-East Asia (Hettige *et al.*, 1996).<sup>22</sup> Key factors are scale, productive efficiency and the use of new process technology. On the other hand when it comes to the consumption of energy and environmentally "dirty fuels" (as a proxy for pollution intensity) and after controlling for other factors, foreign manufacturing plants in Côte d'Ivoire, Mexico, Morocco and Venezuela were found to be significantly more energy-efficient than their domestic counterparts (Eskeland and Harrison, 1997).<sup>23</sup>

#### **Box X.6. ISO 14001 standards for environmental management**

The International Organization for Standardization<sup>a</sup> has developed ISO 14001 as a series of tools for environmental management, encompassing standards for environmental management and guidelines for environmental performance analysis and life cycle analysis. ISO 14001 specifies the requirements for an environmental management system (EMS) - the management of those processes and activities that influence environmental impact. An organization might implement ISO 14001 for the internal benefits it can provide, such as reduced cost of waste management; savings in consumption of energy and materials; or clarification of environmental responsibilities within the organization. In addition, the standard may be used as the basis for certification of the EMS by an independent "registration" or "certification" body. ISO itself does not carry out conformity assessment and does not issue ISO 14001 certificates. An ISO 14001-certified EMS is intended to provide confidence to external parties that an organization has control over the significant environmental aspects of its operational processes, that it has committed itself to comply with all relevant environmental legislation and to continually improve its environmental performance.

Such independent certification is becoming an integral part of environmental management strategies: certification has increased twenty-fold between 1995 and 1997.

Firms seeking certification are required to take the following steps:

- an initial review by management to identify environmental issues of concern (e.g. excessive use of polluting inputs; the potential for a serious environmental accident);

/...

**(Box X.6, continued)**

- establishment of priorities for action, taking into account local environmental regulations and potential costs;
- establishment of an environmental policy statement, signed by the CEO, which includes commitments to compliance with environmental regulations, pollution prevention and continuous improvement;
- development of performance targets based on the policy statement (e.g. reduction of emissions by a set amount over a defined period);
- implementation of the environmental management systems, with defined procedures and responsibilities;
- implementation reviews, performance measurement and management audits.

Although fairly new, the bulk of the certificates that have been issued are for firms in developed countries. This reflects their demand for environmentally responsible management. Developing countries are starting to obtain a greater share of the certificates being issued. TNCs have a role to play in assisting, first, developing countries to upgrade their abilities to have certification bodies;<sup>b</sup> and, second, domestic firms, especially their own operations and suppliers to meet the certification requirements.

**Box table X.6.1. The growth of ISO 14001 certifications worldwide, 1995-1997**

Economy	1995	1996	1997
Developed economies:			
Japan	4	198	713
Germany	35	166	352
Denmark	21	96	347
Netherlands	74	119	263
Austria	11	56	198
Sweden	2	25	194
Switzerland		18	170
Finland	10	41	151
Australia	1	53	137
Belgium		8	137
Italy		27	103
Spain		13	92
Ireland	3	8	82
United States	1	34	79
France	3	23	52
Norway	3	13	35
Canada		7	27
New Zealand		3	26
South Africa			21
Portugal		1	7
Greece		1	6
Luxembourg		1	6
Israel		4	6
Iceland			1
Total	168	915	3 205
Central and Eastern Europe			
Hungary		3	12
Poland		8	
Slovakia		1	6
Slovenia		5	
Czech Republic			4
Croatia			2
Total	0	4	37
Developing economies			
Africa			
Egypt		1	7
Mauritius		1	1
Total	0	2	8

/...

**(Box X.6, concluded)**

**(Box table X.6.1, concluded)**

Economy	1995	1996	1997
Asia			
Korea, Republic of	19	57	463
Taiwan Province of China	2	42	183
Singapore		37	65
Thailand		58	61
Hong Kong, China		7	46
Indonesia		3	45
Turkey	3	6	44
Malaysia		7	36
India	1	2	28
China		9	22
Philippines		1	11
United Arab Emirates			4
Iran			2
Pakistan		1	2
Oman			1
Total	25	230	1 013
Latin America			
Brazil	2	6	63
Argentina	1	5	28
Mexico		2	11
Colombia		1	3
Barbados		3	3
Uruguay			1
Total	3	17	109
World total <sup>a</sup>	257	1 491	5 017
Number of countries	18	43	53

*Source:* UNCTAD, based on ISO.

<sup>a</sup> Includes certification not accounted for above.

<sup>a</sup> The International Organization for Standardization, based in Geneva, publishes voluntary standards for technology and business activity.

<sup>b</sup> On the participation of developing countries in standard-setting bodies, see Krut and Gleckman, 1998.

There are also pressures for change in the services sector where cost savings on account of better environmental practices may be higher than in other sectors. In the tourism industry, for example, hotels are seeking to be more environmentally efficient. The Taj Group of hotels, for instance, seeks to promote across its entire chain - at home and abroad - such environmental practices as energy conservation, a reduction of waste and water conservation (box X.7). At the same time, new opportunities arise for eco-tourism. In the air transport and shipping industries, there are pressures to reduce noise and limit the possibility for ecological disaster. New airports, for example, are subject to rigorous environmental impact assessments. The financial service industry is experiencing different types of pressure, for example, as regards the types of projects it finances and preconditions that need to be met for the projects it can finance. The industry is also becoming more demanding in terms of environmentally relevant information that needs to be provided. Indeed, the demand for better environmental reporting is coming from multiple stakeholders. As in other industries, the spotlight is on the leading firms, which are often expected to set examples, be it at home or abroad.

**Box X.7. Combining environmental management with eco-efficiency in the hotel industry:  
the Taj Group of Hotels in India**

Several years ago, senior management in the Taj Group of Hotels (a part of the Tata Group of Companies in India) made it a policy to demonstrate the urgent need for environmental protection in a manner that was effective and measurable, and that demonstrated the benefits to others in the industry. The approach used by the company is to combine elements of both a decentralized and centralized environmental management strategy.

EcoTaj, the Environmental Initiative of the Taj Group of Hotels, is an effort to institute, encourage and standardize good environmental practices across the entire chain of over 60 hotels located in nine countries. Its goals are to:

- protect, conserve and enhance the environment for the benefit of present and future generations;
- be an industry leader in the development of sustainable business practices and sustainable tourism;
- simultaneously improve the quality of services while minimizing their impact on the environment.

The initiative consists of the following elements: an environmental policy statement; energy conservation; reduction and treatment of waste; water conservation and treatment; purchasing policy; reduction of emission; avoiding noise pollution; marketing; building a green team and appointing an environmental officer in every hotel. The net effect of this initiative is to reduce the company's environmental footprint, while at the same time remaining competitive. As part of the implementation of its environmental programme, the hotel group was aware of India's environmental difficulties, as well as the fact that, all things considered, a potential customer would prefer to stay at a more environmentally friendly hotel.

An important element of the environmental programme is to give hotel employees training courses on environmental management. While this has had an effect on changing the attitude of its employees, the Taj Group of Hotels is also assisting its competitor hotels upgrade their environmental management skills. This includes providing technical advice on each of the elements above, running training programmes to develop environmental managers, and explaining to individual hotels and to the industry the benefits of being eco-efficient.

*Source:* UNCTAD, based on information supplied by the Taj Group of Hotels.



What this discussion suggests is that it is possible for firms and industries to improve significantly their environmental performance (Vogel, 1995). A number of variables appear to be important. Particularly when the leading firms of an industry are from developed countries and are subject to regulatory and other pressures, they comply - or even lead<sup>24</sup> - by developing clean technology. Affluent and environmentally demanding markets can act as beacons for firms and industries. They are aided in this by the fact that most R&D activities are, in any event, concentrated in developed countries (chapter VII), allowing the development of clean technology and environmental managerial systems. Especially where heavy investments with a long life cycle are involved, where firms are highly visible, when high liabilities are possible and where environmental requirements of third-party lenders come into play, clean technologies and environmentally-efficient management practices tend to be used in the corporate system as a whole - not necessarily because firms are particularly environmentally conscious (although this may well be the case for a number), but because it makes good business sense in the new context. Moreover, this can work particularly well in highly integrated industries.<sup>25</sup> Natural resource industries, as well as capital-intensive industries, by their very nature, tend to fall into this category. In labour-intensive industries, an important variable is the degree to which the value-added chain is integrated: the more it is integrated, the more susceptible is the firm to pressures for environmental upgrading. In fact, where upgrading becomes the *de facto* norm of an industry, firms risk being singled out, including by their competitors, if they fail to rise to the new standards.<sup>26</sup>



This is not to say that all firms do - or can - pursue this strategy. Most firms, and especially small and medium-sized enterprise TNCs, take a decentralized line.<sup>27</sup> Some may seek to establish uniform standards but may fail because of a lack of skills or resources; others operate in parts of the market that are not equally affected by environmental concerns. This is particularly true of indigenous firms in developing countries. But it also applies to less prominent firms, whether purely domestic or transnational, in the developed world. And it applies to the large number of small and medium-sized TNCs and suppliers to foreign TNCs who compete primarily on price, and who have neither the resources nor the clear payback guaranteed from making long-term investments in technology and efficient environmental managerial practices.

Foreign affiliates are in an advantageous position to use clean technology and efficient environmental management practices, as they can draw on their transnational corporate systems even if they are not directed from headquarters to do so. Foreign ownership can therefore matter in that corporate systems can become conduits for the transfer of clean technology and environmentally sound management practices, reaching even beyond the corporate system *per se* where comprehensive uniform corporate standards are in place. Indeed, when there are commercial benefits to being environmentally friendly, the use by affiliates of clean technology may spur domestic consumers to acquire such technologies (Wheeler and Martin, 1992). In these instances, the presence of such foreign affiliates in developing countries can help to improve the environmental performance of the industry as a whole. In general, however, it is an unresolved issue whether domestic *vs.* foreign ownership of facilities makes a significant difference when it comes to environmental performance. Other factors – such as size, vintage of plants, skill levels, technology, host country regulation – may well be as important or more so. Moreover, the picture may differ from industry to industry and is further muddled by the fact that some industries (especially in natural resources and capital-intensive production) are dominated by TNCs.

The challenge for TNCs and developing country governments - and the international community - is to devise ways in which a transfer of environmentally sound management practices and clean technology into the domestic industry can be encouraged. This is all the more important to the extent that there are real costs<sup>28</sup> involved in upgrading management practices and technology; and markets increasingly demand environmental-friendly products and processes.

## **D. Conclusions and policy implications**

The environmental profile of FDI, combined with efficient environmental management and the transfer of clean technology by TNCs, are important determinants of their impact on host developing countries. This is particularly the case as TNCs are active in many industries with potentially high environmental impact. TNCs – especially from developed countries – have considerable experience with managing the environmental problems caused by process and product technologies. At the same time, they have developed environmentally friendly processes, products and packaging to conform to standards and consumer preferences in their home countries. The evidence as regards the actual impact of FDI on the ability of host countries to protect their environment is mixed, however. In addition, it is not clear that, in general, ownership matters - i.e. that the impact of foreign firms is significantly different from that of domestic firms. Some TNCs are clearly international leaders in mitigating the environmental impact of their entire range of activities. Others do not use their full potential for environmental protection, especially when using a decentralized strategy. The evidence shows that a large number of factors – in addition to foreign ownership – affect the environmental performance and management strategies of foreign affiliates and domestic firms in developing countries.

It is also important to note that, despite the absence of systematic evidence allowing for a general conclusion about the importance of ownership when it comes to environmental impact, an advantage held by TNCs is their basic ability to respond and adapt to change (chapter V). In the changing regulatory framework for environmental aspects of economic activity in home and host countries, this could be an important asset that foreign firms can bring to host

developing countries. Host-country policy measures can be designed in a manner that encourages TNCs to deploy this asset and to utilize more fully the potential they have to contribute to environmentally sound development. The challenge for policy-makers - especially in the presence of intense competition for FDI and the chilling effect this could have on environmental regulations - is to accentuate the positive environmental contributions that TNCs can make while reducing the negative ones. Against this objective, governments must, of course, balance their goals in terms of increased investment, output, exports, technology transfer, and job creation which can differ considerably across countries and levels of development. As is often the case, choosing the right trade-offs is difficult.

## 1. Admission and establishment

A crucial policy intervention point for governments is at the time of entry of a TNC, especially when it comes to large-scale projects and particularly in pollution-intensive industries. Some studies suggest that some host countries are willing to use the lowering of environmental standards as a tool with which to attract FDI (WWF, 1999a), or hesitate to raise them (Zarsky, 1997). This approach is a problematic response to the competition for FDI, if only because the empirical evidence shows that a number of other factors are more important for FDI locational decisions. In addition, in the new context, there is now an incentive for companies *not* to take advantage of such regulatory inducements.

Host country governments once relied heavily on screening as a mechanism to review the contribution of FDI to their economies. This mechanism, however, is no longer as effective as it once was. In general, governments are moving away from screening and towards providing incentives for entry. Nevertheless, a useful tool for improving the environmental performance of firms, regardless of nationality, is to require environmental screening prior to the implementation of projects. This, however, demands special skills. In any event, governments can require, especially in the case of big projects, that TNCs provide their corporate environmental policy statements and report regularly on their environmental performance.

But there are other ways in which environmental screening can be undertaken. In large natural resource projects, for instance, environmental impact assessment studies have become standard procedures, often financed by the corporations themselves. In fact, large TNCs are quite familiar with the need for environmental assessments in project planning, design and implementation.

In addition, FDI insurance agencies of home countries sometimes require environmental assessment studies before they extend insurance. The Overseas Private Investment Corporation (OPIC) of the United States, for example, which insures investment by United States firms, screens project proposals on the basis of five categories, depending on their environmental sensitivity (OPIC, 1999). All highly environmentally sensitive projects require a full environmental impact assessment or initial environmental audit. Also, prior to OPIC's final commitment to such a project, the environmental impact assessments or initial environmental audits are publicly available for comment. The environmental assessment process is ongoing and continues through the life of OPIC's commitment to a project, involving, in some cases, independent third party environmental audits and corporate self-reporting.

Finally, the Multilateral Investment Guarantee Agency (MIGA) requires, before it issues a guarantee, that an environmental assessment be undertaken.<sup>29</sup> MIGA is particularly important for investors from developing countries because, contrary to virtually all developed countries, developing countries typically do not provide insurance for outward FDI. It is therefore typically the only investment insurance facility available to firms from these countries. But, of course, any firm from any of the 127 developing countries members of MIGA that wishes to avail itself of the Agency's FDI insurance would need to prepare an environmental assessment.

Entrepreneurs from developing countries, however, may often be unfamiliar with the level of analysis and degree of consultation that are standard practice for environmental assessments. SMEs, in particular, can be discouraged by the front-end costs of an environmental

impact assessment for a proposed investment in another developing country, especially when they are often hesitant in the first place to venture abroad. As a result, such firms may be effectively excluded from MIGA support by such barriers and, hence, refrain from undertaking an FDI project. MIGA has, indeed, encountered situations in which its environmental impact assessment and local consultation requirements have discouraged such investors.<sup>30</sup>

To deal with this challenge, one could create a small pilot grant programme, with a total budget in the range of \$300,000-\$400,000, to help direct investors from developing countries improve their capability to prepare environmental impact assessments, effectively consult with local affected parties, and obtain technical advice in implementing environmental action plans. The assistance could be strictly limited to investors from developing countries with proposed investments in other developing countries where the host country's requirements for environmental assessment are lacking or inadequate for MIGA's requirements. Preference could be given to SME investors and projects in least developed countries (box X.8).

**Box X.8. Assisting developing countries' SMEs with environmental impact studies for outward FDI**

The criteria for eligibility for grant under this pilot programme should be quite restrictive and the guidelines for the use of the funds should be narrow. Potential criteria and guidelines might include:

*Criteria* (one of the following conditions should apply):

- The investor should have already made an effort to prepare an environmental impact assessment, but requires help in upgrading the assessment to meet MIGA requirements.
- The investor has prepared an adequate environmental impact assessment and obtained host country approval, but local consultation and disclosure were not adequate for MIGA's requirements.
- MIGA has identified deficiencies in the implementation of approved environmental or corrective action plans, and lack of easy access to good technical advice appears to be an important contributing factor.

*Guidelines:*

- A grant is not to exceed \$50,000.
- A grant is to provide expert technical advice in improving the environmental assessment, assistance in carrying out adequate local consultation and disclosure, or advice in implementing corrective action plans (for upgrading existing facilities) or implementing environmental action plans for new facilities.
- For the specific tasks to be executed under the grant, the investor must carry at least 25 per cent of the costs and provide an appropriate staff person to work with the technical expert (providing a technology transfer component).

Naturally, these criteria and guidelines would have to be discussed in some detail and spelled out further. At the end, this programme should facilitate FDI between developing countries, especially by smaller firms, under conditions that protect the environment and strengthen the human capacity in firms to prepare environmental assessment studies.<sup>a</sup>

<sup>a</sup> This approach does not address the question of the capacity of host developing countries - and especially that of the least developed countries - in evaluating environmental assessment studies. See in this connection the proposal in chapter VI.

## 2. Operation

Once a foreign affiliate has been established, the type of environmental strategy pursued by TNCs comes into play, as does the general regulatory framework for environmental issues. This includes setting both regulatory and market incentives that favour environmentally friendly production and consumption patterns. These policies need to provide the base for the specific set of policies targeted at the environmental performance of foreign affiliates. They can include:

- pricing policies that more accurately reflect a society's valuation of environmental resources;
- a balanced combination of regulatory, market and voluntary incentives;
- developing a strategic environment impact assessment plan that encompasses an entire region, not just a specific project;
- consultation and cooperation with relevant stakeholder groups;
- reinforcement of the national framework with multilateral aid financing;
- requiring all relevant new investments to have a closure plan;
- requiring a broad-based independent environmental impact assessment.

As TNCs can either pursue decentralized or centralized environmental management strategies, host country governments that so desire can encourage TNCs to follow the same environmental standards in their countries as they do in their home countries or elsewhere. They can also encourage TNCs to extend their environmental standards to domestic subcontractors and suppliers of foreign affiliates and become leaders in the environmental field. The key word here is "encourage", unless, of course, governments prefer mandatory approaches for all firms.

To enhance the environmental performance of foreign affiliates and, in particular, to encourage TNCs (and domestic companies) to reduce their negative environmental impact, the menu of options that governments can consider - many of which may well require extensive discussions to examine their feasibility, and many of which, if not all, are good practices for all firms whether domestic or foreign - includes the following:

- subsidizing the costs, or increasing the tax deductions, of R&D expenditures related to clean technology;
- the same can be done for environmental management training and information technology support;
- encouraging company training and the appointment of a specified environment person to be in charge of all environmental matters;
- reducing visa restriction for persons associated with clean technology and environmental management training programmes;
- providing a duty drawback or concession for capital goods related to environmentally sound technology;
- requiring firms to employ the cleanest technology they have;
- granting accelerated depreciation for clean technology capital goods;
- monitoring the environmental impact of production and requiring annual environmental performance reporting;
- trading pollution permits against FDI (including in joint ventures) by firms possessing clean technology;

- encouraging companies to adopt environmental management systems, such as ISO environmental certification (box X.6). Just as companies advertise in the media and on billboards in front of their factories that they have met other ISO standards (e.g. quality standards), they could be encouraged to advertise their compliance with environmental management systems;
- encouraging foreign affiliates to work with their suppliers and customers to comply with environmental management systems;
- removing disincentives and encouraging TNCs to invest in industries that involve a cleaning up of the environment. For example, TNCs have expertise in waste-to-energy projects and the construction and management of sanitary landfills;
- encouraging TNCs to establish environmental infrastructure such as testing and certification facilities on a commercial basis.

### **3. The international dimension**

Countries also pursue ways to enhance the contribution of TNCs towards environmental protection at the international level. Accordingly, environment issues have been embedded in international investment agreements. The Bolivia-United States bilateral investment treaty, for example, makes reference to the environment (see chapter IV). At the regional level, concern over the environmental affects of liberalized trade and investment led to the establishment of a North American Commission for Environmental Cooperation in the framework of the North American Free Trade Agreement. And the draft OECD Multilateral Agreement on Investment contemplated including provisions on environmental protection (see chapter IV).

Another approach that has been taken is to examine ways in which provisions dealing with TNCs can be introduced into intergovernmental policy documents and multilateral environmental agreements. Reference has already been made to Agenda 21 which provides a framework for environmental responsibility that explicitly makes reference to the role of TNCs (annex table A.X.1). The Montreal Protocol on substances that deplete the ozone layer and the agreement establishing the Global Environmental Fund created a fund that provides resources to cover the incremental environmental costs of specific projects in developing countries. The Kyoto Protocol to the Convention on Climate Change, if ratified, would have various financial mechanisms to stimulate climate-friendly investments in developing countries.<sup>31</sup>

The investment dimension of international environment initiatives require careful consideration. How they evolve in the future is difficult to say. It is seems clear that national policy action will increasingly be complemented by international action - a not altogether surprising evolution, given the importance and global nature of this issue.

\* \* \*

In conclusion, the new context requires that both firms and governments reassess their approach towards the relationship between the environment and development and reconfigure their policies accordingly. This needs to be done in a way that recognizes the role of TNCs. TNCs have the potential to assist developing countries to meet the challenges of contributing to economic development while protecting the environment. Large TNCs in environmentally sensitive areas, and those with visible and valuable brand names, are increasingly implementing strategies to improve their environmental footprint. Especially when a country's capacity to regulate is weak, the environmental management systems of TNCs can both make up for this to a certain extent and potentially be a vehicle for improving domestic environmental performance. At the same time, there are a number of cases of TNCs having negative effects on the environment. Governments need to provide a policy framework to promote a reduction in the negative environmental effects of production and consumption, regardless of whether these effects are created by transnational or domestic firms. However, TNCs have a special environmental responsibility which needs to be recognized, given the growing economic importance of FDI and their access to efficient environmental management practices and clean technology.



## Notes

- <sup>1</sup> The achievement of environmental objectives has opportunity costs in terms of goods and services (UNCTC, 1992).
- <sup>2</sup> This is commonly referred to as an externality, i.e. when the consumption or production decisions of an individual, household, firm or government do not reflect the wider costs or benefits to society. If the price of goods, be they consumption or intermediate goods, does not reflect their value to society, their production and consumption could result in harm to the environment.
- <sup>3</sup> The work of UNEP and of the United Nations World Commission on Environment and Development (UNEP, 1987) (informally known as the Brundtland Commission) has been important in changing perceptions.
- <sup>4</sup> There are several considerations concerning a simple tradeoff between growth and environment. Some evidence suggests, for instance, that there is an inverted-U relationship between local air pollution and income per capita (Grossman and Krueger, 1994). Over lower ranges of per capita income, environmental quality deteriorates with growth, but after a threshold level it improves. If the components of environmental quality are decomposed into specific categories of pollutants, there is no aggregate relationship at all with growth (World Bank, 1992). Thus, the relationship can be complex, especially if the definition of “sustainable development” is wider than the traditional one of the depletion of natural resources and waste disposal of firms.
- <sup>5</sup> Environmental disasters involving TNCs, such as the Bhopal disaster in India (1984) and the oil spill from the Exxon Valdez in Alaska (1989), have contributed to an increased awareness of environmental issues.
- <sup>6</sup> This issue reflects the income elasticity of demand for environmental protection, which is estimated to be quite high (Mani and Wheeler, 1999). Developed countries are able to demand and obtain better environmental protection than do developing countries. One reason for this is the relationship between per capita income and environmental damage, as discussed in footnote 4.
- <sup>7</sup> This is not to say that uninational firms are single-plant firms. Uninational firms could not only have multiple-plants, but could also have them in different states or provinces. To the extent that environmental regulation varies across sub-national states, uninational firms also face the dual problem of managing environmental concerns and managing their affiliates.
- <sup>8</sup> Another related issue is whether or not in cases of environmental negligence a case against an affiliate can be tried in the home country. In 1995, the Supreme Court of Victoria in Australia ruled that negligence claims by landowners in Papua New Guinea against Broken Hill Propriety in connection with the Ok Tedi copper mine could be tried in Australia (Ostensson, 1999).
- <sup>9</sup> Most of these studies use data from the United States Toxic Release Inventory (TRI). This inventory contains over 200 substances of varying toxicity that can be discharged into the environment. With these data, the emissions intensity of a discharge or transfer can be measured in volume terms. It is important to note that emission intensity is not the same as toxic intensity (Olewiler and Dawson, 1998). The latter measure includes the toxicity of each discharge.
- <sup>10</sup> The data used to make this calculation is taken from table 3 of OECD, 1998. The low figure is driven by the fact that investment in finance, insurance, real estate and business services is approximately 40 per cent of total domestic investment in these countries.
- <sup>11</sup> Mani and Wheeler, 1999, find evidence to suggest a downward trend in the production share of some pollution-intensive industries in some developed countries. This is due partly to their definition of pollution-intensive industry. Figure X.1 uses a definition that, although broad, does not include pulp and paper.
- <sup>12</sup> Textile manufacturers use numerous chemical liquid effluents for washing, dyeing and bleaching in the finishing stage. Semiconductor products, critical to the exports of some East Asian developing countries, contain hazardous materials such as lead, use toxic chemicals in assembly and cleaning, and produce harmful waste and emissions.
- <sup>13</sup> These are cited in a review of the pollution haven hypothesis in WWF, 1998. Most of the cases have to do with developing host countries exempting TNCs from local environmental laws and the relevant TNCs being denied permission to operate in their home countries. Another area in which the pollution haven hypothesis is likely to be confirmed is in free trade zones (Sierra Club, 1993).
- <sup>14</sup> There is a debate on this issue that parallels the debate on the effectiveness of fiscal incentives to affect location decisions. The extensive literature on that issue has shown that incentives are not a significant determinant of location (UNCTAD, 1996d).
- <sup>15</sup> Pollution-abatement capital expenditures are less than five per cent of total investment costs for most industries, though for heavily polluting industries such as petroleum and coal the figure is much higher. Even then, the share of these expenditures in total revenue is very low (Wheeler and Martin, 1992; Low and Yeats, 1992).

- 16 Indicators of environmental quality used in studies of FDI and investment include ambient levels of selected pollutants (e.g. on sulphur dioxide see Xing and Kolstad, 1997, on air and water emissions see Eskeland and Harrison 1997); indices of the stringency of environmental regulation compiled from surveys (or pollution abatement expenditures) (Jaffe *et al.*, 1995). Zarsky, 1999, notes that none of these indicators is a comprehensive measure of regulatory stringency or environmental quality.
- 17 For example, the Overseas Private Investment Corporation (OPIC) imposes environmental conditionality on its lending (OPIC, 1999).
- 18 Empirical evidence of this dynamic in the steel industry can be found in Barton (1997) and in Christmann (1997) for the chemical industry.
- 19 But switching to environmentally-friendly products can result in an increase in costs that have to be absorbed by either the firms or consumers. Given the low levels of incomes in developing countries, many consumers may simply not be able to afford these products, despite the premium they may place on environmentally sustainable consumption.
- 20 For example, as regards certificates from the Marine Stewards Council ([www.msc.org](http://www.msc.org)) and the Forest Stewardship Council ([www.fscoax.org](http://www.fscoax.org)).
- 21 See Leonard (1988) on United States TNCs in Ireland, Spain, Romania and Mexico; and Pearson (1987) on Indonesia, Brazil, the Republic of Korea, Turkey, Mexico, Malaysia and the Philippines. Gentry (1998) reviews five case studies for Brazil, Costa Rica and Mexico, and concludes that TNC affiliates made improvements in their environmental standards and performance. See Eriksen and Hansen, 1999, for Danish firms.
- 22 That foreign ownership makes little difference in relative environmental performance has been suggested by Huq and Wheeler, 1993; Pargal and Wheeler, 1996; Jenkins, 1999.
- 23 But these studies need to be interpreted with caution. They are point-in-time estimates, and do not identify when environmentally sound technologies or management practices were implemented. This may overstate the positive environmental impact of affiliates.
- 24 Firms can of course choose to become first-movers in the environmental arena and to develop innovative solutions to address these concerns. In practice, this appears to be a niche strategy, due to the uncertainty related to the market payback from consumers, who have so far not paid high premia for green products (e.g. Lampe and Gazda, 1995), and who may find it hard to discriminate between products or between competing eco-labels.
- 25 The results of a survey of 169 companies with sales over \$1 billion indicate that 43 per cent have an international environment policy; 58 per cent have standardized procedures for international audits; 30 per cent conduct international environment accounting and 45 per cent have formal arrangements between the parent firms and foreign affiliates for the allocation of environmental management (UNCTAD, 1993c).
- 26 Industry guidelines and codes of conduct help in this respect. Some of them have been assessed positively. For example, the industry guidelines for the International Councils on Metals and the Environment and the Canadian Chemical Producers' Association compare positively with the Agenda 21 provisions; in some cases, they require the application of standards above those required in a host country (UNCTAD, 1996e). Moreover, independently of whether or not industry norms exist, TNCs may have an incentive to ensure that all firms in the industry follow state-of-the-art environmental practice to shape the image of an industry as a whole; this could even lead them to assist domestic competitors, not just subcontractors or supplier firms (box X.7).
- 27 Out of 112 Danish TNCs responding to a survey, mainly SMEs, only 17 per cent had centralized approaches (Eriksen and Hansen, 1999).
- 28 In cases where the switch to environmentally sound technology raises costs, both foreign and domestic firms will attempt to pass this increase on to consumers in the form of higher prices. On the other hand, when firms are able to be eco-efficient, cost savings may not necessarily be transferred to consumers. The extent of this pass-through depends on the market structure of an industry and also on the application of competition policy.
- 29 Environmental assessment is the process of evaluating a project's environmental risks and impacts and identifying ways of providing, minimizing, mitigating or compensating for adverse impacts. The scope of work and approach to environmental assessment varies from project to project, depending on the nature of the project and its environmental and social setting. MIGA's board of directors recently approved a new environmental assessment policy, effective 1 July 1999 ([www.miga.org](http://www.miga.org)).
- 30 Communication from MIGA.
- 31 For a discussion of the clean development mechanism under the Kyoto Protocol to the United Nations Framework Convention on Climate Change, see UNCTAD, 1999t; UNCTAD/UNDP/UNEP/UNIDO, 1999 (forthcoming) and Vrolijk, 1998).

# CHAPTER XI

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## ASSESSING FDI AND DEVELOPMENT IN THE NEW COMPETITIVE CONTEXT

### A. The new competitive context

The development priorities of developing countries include income growth, raising investments and exports, creating more and better employment opportunities, and benefiting from technological progress. Governments are committed to achieving these in a sustainable manner, ensuring that resources are available to future generations. The new international economic environment places considerable pressures on developing countries to upgrade their resources and capabilities if they are to achieve these objectives. In a liberalized policy setting, governments focus increasingly on providing an institutional framework within which private enterprises can thrive.

Foreign direct investment can play an important role in the development process. However, the objectives of TNCs differ from those of host governments: as noted in chapter V, governments seek to spur *national* development, while TNCs seek to enhance their own competitiveness in an *international* context. There can be considerable overlap between the two, but there are also differences. These differences created much suspicion of FDI in the past in developing countries. However, perceptions have changed greatly in recent years. So have the ways in which TNCs operate and organize themselves globally. Both are in response to the new global context: rapid technical progress, shrinking of economic space, improved communication, intensification of competition, new forms of market rivalry, increasingly mobile capital, widespread policy liberalization and more vocal (and influential) stakeholders. Up to now, *WIR99* has focused on FDI in this new context, in particular areas. This chapter draws together the implications of the analysis in the preceding chapters for development and government policy at the national level; the next chapter addresses the responsibilities of TNCs themselves.

A vital part of the new context is the need to improve *competitiveness*, “competitiveness” being defined as the ability to sustain income growth in an open setting. In a liberalizing and globalizing world, growth can be sustained only if countries can create new, higher value-added activities that hold their own in open markets. This requires many things. Central among them is the ability to use new technologies efficiently, furnishing the requisite skills and institutions. Globalization also affects TNCs. The ownership advantages that account for their international activity are changing in line with technical change and shrinking economic space. Rapid innovation and deployment of new technologies in line with logistic and market demands is

more important than ever before. The rising complexity of information flows and the diversity of possible locations mean that TNCs have to organize and manage their activities differently. They also have to change relations with suppliers, buyers and competitors to manage better processes of technical change and innovation. And they have to strike closer links with institutions dealing with science, technology, skills and information. The spread of technology to, and growth of skills in, different countries means that new TNCs are constantly entering the arena to challenge established ones. Many of the entrants are small firms, or previously publicly-owned enterprises that were traditionally confined to home markets; a significant number are enterprises from developing countries.

A striking feature of the new context is how TNCs are shifting increasingly their portfolios of mobile assets across the globe to find the best match with the immobile assets of different locations. In the process, they are also shifting some functions that create their ownership assets like R&D, training and strategic management to different locations within an internationally integrated production and marketing system (the process of “deep integration”). The ability to provide the necessary immobile assets thus becomes a critical part of an FDI – and competitiveness – strategy for developing countries. While a large domestic market remains a powerful magnet for investors, TNCs serving global markets increasingly look for other attributes that can help raise their competitiveness. The opening of markets creates new opportunities and challenges for TNCs and gives them a broader choice of modes with which to access those markets. It also makes them more selective in their choices of potential investment sites.

Apart from primary resources, the most attractive immobile assets for export-oriented TNCs are now world-class infrastructure, skilled and productive labour, innovatory capacities and an agglomeration of efficient suppliers, competitors, support institutions and services. Low-cost unskilled labour remains a source of competitive advantage for countries, but its importance is diminishing; moreover, it does not provide a base for sustainable growth since rising incomes erode the edge it provides. The same applies to natural resources. Natural resources provide a rent for as long as the resource is in demand. But without upgrading the technologies used or establishing downstream industries, the resource may face eventually stagnant prices and the risk of substitution. In both cases, to draw the most dynamic assets of TNCs requires that host countries improve the quality of their immobile assets.

There is no conflict between exploiting static sources of comparative advantage and developing new ones: existing advantages provide the means with which new advantages can be developed. A steady evolution from one to the other is the basis for sustained growth. What is needed is a policy framework to facilitate and accelerate the process: this is the essence of a competitiveness strategy. The need for such strategy does not disappear once growth accelerates or economic development reaches a certain level; it merely changes its form and focus. This is why competitiveness remains a concern of governments in developed countries as much as (if

must not be more costly than market failure. This condition is often not met. Economic history has many instances of badly designed or implemented policies. This does not rule out the case for intervention. Many strategies have been efficient (some, as in East Asia, dramatically so). Moreover, government skills and capabilities are not static. Governments can learn and their capabilities can be improved with training, information and correct incentives. Policy design must reflect current (and future) government capabilities, and not require interventions that exceed those capabilities. This means that policies must be flexible and constantly monitored. They must also be coherent and consistent in addressing objectives, with coordination between different branches of government and between the government and economic agents.

The need for coherence and coordination means that a strategy for development using FDI can benefit from an overall vision of what the development objectives are and how they can be achieved. Such visions can differ greatly across countries, depending on the nature of the economy and the government. Take the mature East Asian newly industrializing economies. One vision – pursued by Singapore – was to rely heavily on FDI, integrate the relatively small economy into TNC production networks and promote competitiveness by upgrading within these networks. Another, that of the Republic of Korea and Taiwan Province of China, was to develop domestic enterprises and autonomous innovative capabilities, relying on TNCs as arm's-length sources of technology. Yet another, that of the administration of Hong Kong (China), was to leave resource allocation largely to market forces, while providing infrastructure and governance. Strategies can be made, of course, without explicit visions. They can emerge from political and social processes, inter-group and intra-governmental interactions, and other internal or external pressures. In such cases, however, there is a risk that policies are not fully coordinated, signals are unclear, difficult strategic decisions are not taken and responses to changes are slow.

There is no ideal development strategy that uses FDI for all countries at all times. Any good strategy must be context specific, reflecting the level of economic development, the resource base, the specific technological context and the competitive setting. Each must take into account government capabilities. The appropriate strategy for a country with an advanced industrial and skill base and a well-developed administration must differ from one for a country with rudimentary industry, deficient skills and weak administrative structures. With these general considerations in mind, and with competitiveness as the long-term objective, we now turn to the role of FDI in developing countries.

## **B. FDI in developing countries**

### **1. Introduction**

Most developing countries today consider FDI an important resource for development. However, the economic effects of FDI are almost impossible to measure with precision. TNCs represent a complex package of attributes that vary from one host country to another. These are difficult to separate and quantify. Where their entry has large (non-marginal) effects, measurement is even more difficult. There is no precise method of specifying a counter-factual – what would have happened if a TNC had not made a particular investment. Thus, the assessment of the development effects of FDI resorts to one of two general approaches. The first is econometric analysis of the relationships between inward FDI and various measures of economic performance. The second is a qualitative analysis of particular aspects of TNC contribution, without any attempt at calculating a net rate of return.

The conclusions of the econometric analysis of FDI and economic growth remain unclear, especially as regards the causality within the relationship. Some analyses show a positive impact of FDI on growth (see the chapter annex), others a negative impact; yet others have found growth to be a determinant of FDI. Since growth depends on many factors whose effects are difficult to disentangle, and since FDI itself affects several of these factors, an indeterminate conclusion is probably the most sensible. But there is little doubt that fast growth and large FDI inflows go hand in hand in many instances.



The qualitative analysis of FDI, taking its different components separately, is more appealing. *WIR99* has adopted this approach. The purpose has not been so much to analyse the impact of FDI in an abstract sense, but to start from the premise that it offers a mixture of positive and negative effects. The task facing host countries is then to disentangle these effects, and take measures that maximize one and minimize the other.

There is, however, a prior issue, similar to the one posed earlier about competitiveness. If TNCs were to operate in well-functioning markets and were to act as rational profit maximising agents, there would be no need for policy intervention.<sup>1</sup> Their impact would be negative only if markets were distorted. The optimal policy for a government would then be to provide security, the basic rules of the game, public infrastructure and good macroeconomic management, and to place no restrictions whatsoever on the free flow of FDI.

This is justifiable only if the stringent assumptions of well functioning markets are fulfilled. Most analysts would doubt that they are, even in a simplified pragmatic sense – under-development is characterized by an absence of efficient markets and institutions. More importantly, the mere existence of TNCs is itself a manifestation of market failure. Large oligopolistic firms operate across national boundaries precisely because they have firm-specific ownership advantages over other firms, enjoy scale and scope economies, internalize deficient markets for information and skills and have privileged access to finance. All these violate the requirements of perfect competition. It is not clear that the interaction between the efficient internalized markets of TNCs with the deficient ones of host developing countries leads automatically to mutual benefit.

Policies on FDI are needed to counter two sets of market failures. The first arises from information or coordination failures in the investment process, which can lead a country to attract insufficient FDI or the wrong quality of FDI. The second arises when private interests of investors diverge from the economic interests of host countries. This can lead FDI to have negative effects on development, or it may lead to positive but static benefits. Private and social interests may of course diverge for any investment, local or foreign: policies are then needed to remove the divergence for all investors. However, some divergence may be specific to *foreign* investment. FDI may differ from local investment because the locus of decision-making and sources of competitiveness in the former lie abroad, TNCs pursue regional or global competitiveness-enhancing strategies or because the investor has less commitment to the host economy and is relatively mobile. Many countries also feel that foreign ownership has to be controlled on non-economic grounds, for instance, to keep cultural or strategic activities in national hands. Thus, the case for intervening in FDI may have a sound economic basis. Let us consider this case.

## **2. What FDI offers**

FDI comprises a bundle of assets, some proprietary to the investor and others not. The proprietary assets are what the literature terms the “ownership advantages” of TNCs. These give TNCs an edge over other firms (local and foreign) and allow them to overcome the transaction costs of operating across national boundaries. Non-proprietary assets – finance, capital goods, intermediate inputs and the like – can be obtained from the market, at least in part. Proprietary assets can only be obtained from the firms that create them. They can be copied or reproduced by others, but the cost can be very high (particularly in developing countries and where advanced technologies are involved). TNCs are naturally reluctant to sell their most valuable assets to unrelated firms that can become competitors or could leak them to others that have not paid for it.

Of proprietary assets, the most prized is probably technology. But there are others: brand names, skills, and the ability to organize and integrate production across countries or to establish marketing networks. They also include privileged access to the market for non-proprietary assets: TNCs may be able to raise funds, or purchase equipment, on better terms than smaller firms, or firms in developing countries. Taken together, these advantages mean that TNCs can contribute significantly to host developing countries – if the host country can induce them to transfer their advantages in appropriate forms and has the capacity to make good use of them.

The assets that the FDI bundle comprises are:

- Capital: (chapter VI): FDI brings in investible financial resources to host countries. The inflows are more stable, and easier to service, than commercial debt or portfolio investment. In distinction to other sources of capital, TNCs invest in long-term projects, taking risks and repatriating profits only when the projects yield returns.
- Technology (chapter VII): developing countries tend to lag in the use of technology. Many of the technologies deployed (even in mature industries) may be outdated. More importantly, the efficiency with which they use given technologies may often be relatively low. Even if part of their productivity gap is compensated for by lower wages, technical inefficiency and obsolescence can severely handicap the quality of their products and their ability to cope with new market demands. TNCs can bring modern technologies, some not available without FDI, and they can raise the efficiency with which existing technologies are used. They can adapt technologies to local conditions, drawing upon their experience in other developing countries. They may, in some cases, set up local R&D facilities. They can upgrade technologies as innovations emerge and consumption patterns change. Moreover, they can stimulate technical efficiency in local firms, suppliers, clients and competitors, by providing assistance, acting as role models and intensifying competition.
- Market access (chapter VIII): TNCs can provide access to export markets, both for existing activities (that switch from domestic to international markets) and for new activities that exploit the host economy's comparative advantages. The growth of exports itself offers benefits in terms of technological learning, realization of scale economies, competitive stimulus and market intelligence.
- Employment, skills and management techniques (chapter IX): TNCs possess advanced skills and can transfer these by bringing in experts and by setting up state-of-the-art training facilities. (The need for training is often not recognized by local firms.) New management techniques can offer great competitive benefits. Where affiliates are integrated into TNC networks, they can develop capabilities to service the regional or global system in specific tasks across the entire spectrum of corporate functions.
- Environment (chapter X): TNCs often possess clean technologies and modern environmental management systems, and can use them in all countries in which they operate. Some TNCs are in the forefront of adopting high environmental standards at home and abroad.

While TNCs offer the potential for accessing these assets in a package, this does not mean that simply opening up to FDI is the best way of obtaining or benefiting from them. As noted, there are market failures in the investment process and divergences between TNC and national interests. This means that governments may have to intervene in the FDI process to attract or promote (specific types of) FDI, or to regulate and guide it.

The policy issues fall into four groups, taken up below:

- Information and coordination failures in the international investment process.
- Infant industry considerations in the development of local enterprises, which can be jeopardized when inward FDI crowds out these enterprises.
- The static nature of advantages transferred by TNCs where domestic capabilities are low and do not improve over time, or where TNCs fail to invest sufficiently in raising the relevant capabilities.
- Weak bargaining and regulatory capabilities on the part of host country governments, which can result in an unequal distribution of benefits or abuse of market power by TNCs.

The complexity of the FDI package means that there can be trade-offs between different benefits and objectives. For instance, countries may have to choose between investments that offer short as opposed to long-term benefits; the former may lead to static gains but not necessarily to dynamic ones. A large inflow of FDI can add to foreign exchange and investment resources in a host economy, but it may deter the development of local firms or create exchange-rate problems. The desire to generate employment may lead governments to favour labour-intensive, low-technology investments, while that to promote technology development may favour more sophisticated investors. Similarly, the desire to upgrade technology may call for a heavy reliance on technology transfer by TNCs, while the desire to promote local innovation and deepening may require more emphasis on arm's length transfers to indigenous firms. There can be many such trade-offs, and there is no universal answer to how they should be made. As noted, there is no ideal policy on FDI which applies to all countries at all times.

### **3. Policy issues**

#### ***a. The international investment process***

*WIR99* has stressed that the factors affecting the choice of TNC location relate increasingly to efficiency and competitiveness. Resource-based investments apart, the sites that receive most FDI in a liberalizing setting are those that allow TNCs to set up competitive facilities able to withstand global competition and enhance the competitiveness of the corporate system as a whole. This means that the host country will want to provide competitive immobile assets – skills, infrastructure, services, supply networks and institutions – to complement the mobile assets of TNCs. While market size and growth (as well as such factors as transport costs and taste differences) mean that large markets will continue to attract more investment than small ones, few countries can afford to take continued inflows of FDI – especially high quality, export-oriented FDI – for granted. This means that the ultimate draw for FDI is the economic base of the host country; FDI-attracting efforts by themselves cannot compensate for the lack of such a base.

This being said, however, there remains a strong case for proactive policies to attract FDI. Countries may not be able to attract the volume and quality of FDI they desire, and that their economic base merits, for one or more of three principal reasons. These are high transaction costs; deficient information on the potential of the host economy; and insufficient coordination between the needs of TNCs, the assets of a host economy and the potential to improve those assets.

- *High transaction costs.* While most FDI regimes are converging on a common (and reasonably welcoming) set of rules and incentives, there remain large differences in how these rules are implemented. The FDI approval process can take several times longer, and entail costs many times greater, in one country than another with similar policies. After approval, the cost of setting up facilities, operating them, importing and exporting goods, paying taxes, hiring and firing workers and generally dealing with the authorities, can differ enormously.
- Such costs can, other things being equal, affect significantly the competitive position of a host economy. An important part of a competitiveness strategy thus consists of reducing unnecessary, distorting and wasteful business costs. This affects both local and foreign enterprises. However, foreign investors have a much wider set of options before them, and are able to compare transaction costs in different countries. Thus, attracting TNCs requires not just that transaction costs be lowered but also, increasingly, that they be benchmarked against those of competing host countries. One important measure that many countries are taking to ensure that international investors face minimal costs is to set up one-stop promotion agencies able to guide and assist them in getting necessary approvals. However, unless the agencies have the authority needed to negotiate the regulatory system, and unless the rules themselves are simplified, this may not help. On the contrary, there is a risk that a “one-stop shop” becomes “one more stop”.

- Despite their size and international exposure, TNCs face *market failures in information*. They collect considerable information on potential sites on their own, as well as from FDI information brokers and other foreign investors. However, their information base is far from perfect, and the decision-making process can be subjective and biased.
- “Prospective investors, even the largest firms, do not always conduct systematic world-wide searches for opportunities. The search for opportunities is a bureaucratic process whose initiation and direction may be swayed by many factors, including imperfect information and skewed risk perceptions. Most companies consider only a small range of potential investment locations. Many other countries are not even on their map.” (IFC/FIAS, 1997, p. 49).

Taking economic fundamentals as given, it may be worthwhile for a country to invest in altering the perception of potential investors by providing better information and improving its image. However, such promotion efforts are highly skill-intensive and potentially expensive. They need to be carefully mounted, and they should be targeted to maximize their impact. Targeting can be general (countries with which there are trade or historic connections, or which lack past connections but are ripe for establishing them), industry-specific (investors in industries in which the host economy has an actual or potential competitive edge), even investor-specific. Note that targeting or information provision is *not* the same as giving financial or fiscal incentives: incentives play a relatively minor role in a good promotion programme, and good long-term investors are not the ones most susceptible to short-term inducements. The experiences of Ireland, Singapore and more recently Costa Rica, suggest that promotion can be quite effective in raising the inflow of investment and its quality.

Effective promotion should go beyond simply “marketing a country” and into *coordinating the supply of immobile assets with the specific needs of targeted investors*. This addresses potential failures in markets and institutions for skills, technical services or infrastructure in relation to the specific needs of new activities targeted via FDI. A developing country may not be able to meet such needs, particularly in activities with advanced skill and technology requirements. The attraction of FDI in such industries can be greatly helped if the host government discovers the needs of TNCs and meets them. As Costa Rica illustrates, the fact that it was prepared to invest in training to meet Intel’s skill needs was a major point in attracting the investment. Singapore goes further and involves TNC managers in designing its on-going training and infrastructure programmes, ensuring that the country remains attractive for future high-technology investments. The information and skill needs of such coordination and targeting exceed those of promotion *per se*, requiring the competent agency to have detailed knowledge of the technologies involved (their skill, logistical, infrastructural, supply and institutional needs), as well as of the strategies of the relevant TNCs.

### ***b. Domestic enterprise development and FDI***

The development of domestic enterprises is an important objective of most developing countries. In fact, FDI is attracted to economies with a vibrant domestic enterprise sector. This issue is often discussed in the context of crowding out, which can take one or both of two forms: first, in the product market, by adversely affecting learning and growth by local firms in competing activities; second, in financial markets, by reducing access or raising costs for local firms. Both raise legitimate policy issues.

The first issue reflects “infant industry” considerations though they differ from the usual connotation of protecting new activities against import competition. It takes the form here of fostering incipient learning in domestic *vis-à-vis* foreign firms. FDI can abort or distort the growth of domestic capabilities in competing industries when direct exposure to foreign competition prevents local enterprises from undertaking lengthy and costly learning processes. Foreign affiliates also undergo learning locally, to master and adapt technologies and train employees in

new skills. However, they have much greater resources to undertake this learning, and considerably more experience of how to go about learning in different conditions. In these cases, “crowding out” can be said to occur if potentially competitive local firms cannot compete with affiliates *at a given point in time*.

The infant industry argument for trade protection differs from that for domestic enterprise protection. When trade protection is abolished, consumers benefit from cheaper imports and greater product variety; but some domestic production and employment can be lost. Without local enterprise protection from FDI competition, there is still domestic production, and employment (in addition to consumer benefits); but there can be less indigenous entrepreneurial development (and less variety of such development), particularly in sophisticated activities. The net cost of this is that linkages may be fewer and technological deepening may be constricted. As with all infant industry arguments, crowding out is economically undesirable if three conditions are met. First, infant local enterprises are able to mature to full competitiveness if sheltered against foreign competition through trade and/or FDI. Second, the maturing process does not take so long that the discounted present social costs outweigh the social benefits. Third, even if there are net social costs, there must be external benefits that outweigh them.

Crowding out can impose a long-term cost on the host economy if it holds back the development of domestic capabilities or retards the growth of a local innovative base. This can make technological upgrading and deepening dependent on decisions taken by TNCs, and in some cases hold the host economy at lower technological levels than would otherwise happen. However, it is important to distinguish between crowding out potentially efficient domestic enterprises from affiliates out-competing inefficient local firms that cannot achieve full competitiveness. One of the greatest benefits of FDI can be the injection of new technologies and competition that leads to the exit of inefficient enterprises and the raising of efficiency in others. Without such a process, the economy can lack dynamism and flexibility, and lose competitiveness over time, unless competition between local firms in the domestic market is intense or they face international competition (say, in export markets). TNCs can also *crowd in* local firms if they strike strong linkages with domestic suppliers, subcontractors and institutions (see below).

The second form of crowding out reflects an uneven playing field for domestic firms because of a segmentation in local factor markets: TNCs may have privileged access to such factors as finance (which may give them a special advantage especially *vis-à-vis* local SMEs) and skilled personnel because of their reputation and size (especially in small economies). They can thus raise entry costs for local firms, or simply deprive them of the best factor inputs.

Both forms of crowding out raise legitimate policy concerns. Most governments wish to promote local enterprises, particularly in complex and dynamic industrial activities. Many feel that deepening capabilities in local firms yields greater benefits than receiving the same technologies from TNCs: knowledge is not “exported” to parent companies and exploited abroad, linkages with local suppliers are stronger, there is more interaction with local institutions, and so on. The few developing countries that have developed advanced indigenous technological capabilities have restricted foreign entry (some in general, others in specific activities). Without building such capabilities, countries may languish at the bottom of the technology ladder. The possession of a strong indigenous technology base is vital not just for building the competitiveness of local enterprises – it is also important for attracting high technology FDI and for R&D investments by TNCs. As noted below, the level of local capabilities determines the benefits of spillovers from foreign presence.

At the same time, there are risks in generally restricting FDI to promote local enterprises. For one thing, it is very difficult in practice to draw the distinction between crowding out and legitimate competition. If policy makers cannot do this efficiently and flexibly, they may prop up uneconomic local firms for long periods, at heavy cost to domestic consumers and economic growth. For another, the context is itself changing. The danger of technological lags if TNCs are kept out in sophisticated activities is much greater now than, say, three decades ago. So is the risk of being unable to enter export markets for activities with high product differentiation and



internationally integrated production processes. The evidence produced earlier (chapter VII) showed how few countries had a significant international presence of domestic firms in complex manufacturing activities. There is another implication of the changing context. Since most developing countries are liberalizing their trade regimes in any case, FDI may provide an effective way to develop industry, since TNCs face lower learning costs than local enterprises and may be better able to deal with restrictions in export markets.

The right balance of policies between regulating foreign entry and permitting competition depends on the context. Only a few countries have built impressive domestic capabilities and world-class innovative systems while restricting the access of TNCs. Many others have restricted foreign entry, but have not succeeded in promoting competitive domestic enterprises in high-technology manufacturing activities. Success clearly depends on a number of things apart from sheltering learning. The most important are the competitive climate in which learning takes place and the availability of complementary inputs. If firms face intense competition, both locally and in international markets (say, through export activity), they have an incentive to invest in constant learning and upgrading. If they have access to ample human (particularly technical and managerial) resources, a strong science and technology infrastructure, and efficient suppliers, consultants and institutions, they are able to learn. Without a competitive setting and responsive factor markets, however, learning is likely to be stunted. Since many high-technology industries have significant economies of scale and scope, the size of the domestic market is also important. In sum, the infant enterprise argument remains valid, and can provide a case for policy intervention to promote local capability development. Obviously, interventions have to be carefully and selectively applied, monitored and reversed where necessary.

As far as access to factor markets is concerned, TNCs can crowd in as well as crowd out domestic firms. Crowding in can take place when foreign entry increases business opportunities and local linkages, raises investible resources or makes factor markets more efficient. Such stimulating effects are most likely when FDI concentrates in industries that are undeveloped in host countries. Where local firms are well developed, however, but face difficulties in raising capital or other resources because of TNC entry, there can be harmful crowding out.

Similar considerations apply to mergers and acquisitions of local firms by TNCs, a common form of foreign entry in Latin America, and more recently in Asian countries affected by the financial crisis. (Thailand is a good example.) Some M&As that entail a simple change of ownership akin to portfolio investment can be of dubious developmental value. If they involve only a change of ownership without adding to productive capacity or productivity, they can just increase the foreign exchange drain on the host economy once the investment has been made. Some take-overs lead to asset stripping, and large M&A inflows can become large outflows when the investments are liquidated, giving rise to exchange rate volatility and discouraging productive investment. Many countries, including developed ones, are concerned about the adverse impact on employment, though this may be part of a rationalization effort that can raise productivity. M&As can have anti-competitive effects if they reduce the number of competitors in the domestic market.

On the other hand, M&As may yield significant economic benefits. Where the investor makes a long-term commitment to the acquired firm and invests in upgrading and restructuring its technology and management, the impact is very similar to a green-field investment. In Thailand, for instance, a number of M&As in the automobile industry are leading to restructuring and increased competitiveness, with a surge in commercial vehicle exports. FDI can play an important role in modernizing privatized utilities such as telecommunications and public utilities, as in many instances in Latin America. Foreign acquisitions can prevent viable assets of local firms from being wiped out; this can be particularly important in economies in transition and financially-distressed developing countries.

The benefits of M&As (including in the context of privatization) depend on the circumstances of the country and the conditions under which enterprises are acquired and

subsequently operated. Several countries feel the need to control M&As and the subsequent operation of acquired assets, particularly for reasons of competition policy. The correct policy is not blanket prohibition of M&As; this would involve a loss of large potential benefits in terms of foreign exchange, productivity and export growth. However, there may be value in monitoring M&As, instituting effective competition policies, and placing limits on them when the macroeconomic situation justifies this.

This raises a related question: the effects of FDI on market structure in host countries. There has been a long-standing concern that the entry of large TNCs raises concentration levels within an economy and thus leads to the abuse of market power. The risk is, as noted, certainly present. TNCs tend to congregate in highly concentrated industries. Whether this leads to the abuse of market power is not clear. The correlation between foreign presence and concentration may owe more to the nature of TNC ownership advantages than to deliberate anti-competitive behaviour. In small economies, the efficient deployment of modern scale-intensive technologies is bound to lead to highly concentrated market structures. If these economies have liberal trade regimes, the danger of anti-competitive behaviour in such structures is largely mitigated. However, it remains true that effective competition policy becomes more and more important in a world in which large transnational firms can easily dominate an industry in a host country – we take up competition policy below.

### *c. Static versus dynamic effects*

Many important issues concerning the benefits of FDI to technology, skills and competitiveness revolve around their static or dynamic nature. Most analysts agree that TNCs can be efficient vehicles for the transfer of technologies and skills suited to *existing* factor endowments in host economies. They provide technology at very different levels of scale and complexity in different locations, depending on market orientation and size, labour skills, technical capabilities and supplier networks. Where the trade regime in host (and home) countries is conducive (and infrastructure adequate), they can use endowments effectively to expand exports from host countries. This can create new capabilities in the host economies and can have beneficial spillover effects. In low-technology assembly activities, the skills and linkage benefits may be low; in high-technology activities, however, they may be considerable. Unless they operate in highly protected regimes, pay unduly low wages (as in some EPZs in low-skill assembly), or benefit from expensive infrastructure while paying no taxes, there is a strong presumption that FDI contributes positively to using host country resources efficiently and productively. This constitutes one major step up the development ladder, and it can apply to each host country depending on where it is located on that ladder.

In this context, one of the main benefits of TNCs to export growth is not simply their ability to provide the technology and skills to complement local resources or labour, but to provide access to foreign markets. TNCs are increasingly important players in world trade. They have large internal (intra-firm) markets, access to which is available only to affiliates: these comprise some of the most dynamic and technology-intensive products in world trade. They also control (or have access to) large markets in unrelated parties. They have established brand names and distribution channels, with supply facilities spread over several national locations. They can influence the granting of trade privileges in their home (or in third) markets. All these factors mean that they enjoy considerable advantages in creating an initial export base for new entrants.

The development impact of FDI depends, however, on more than the static exploitation of factor endowments. It also depends, to a greater extent, on the *dynamics* of the transfer of technology and skills by TNCs: how much upgrading of local capabilities takes place over time, how far local linkages deepen, and how closely affiliates integrate themselves in the local learning system. As noted, sustainable growth is more the outcome of dynamic sequences than the static ones, though there need be no necessary conflict between the two. However, TNCs may simply exploit the existing advantages of a host economy and move on as those advantages erode. Static advantages may not automatically transmute into dynamic advantages. This possibility

looms particularly large where a host economy's main advantage is low-cost unskilled labour and the main TNC export activity is low-technology assembly.

The extent to which TNCs dynamically upgrade their technology and skill transfer and raise local capabilities and linkages depends on the interaction of four factors. These are the trade and competition policy regime; government policies on the operations of foreign affiliates; the corporate strategies and resources of TNCs; and the state of development and responsiveness of local factor markets, firms and institutions.

The *trade and competition policy regime* in a host economy provides the incentives for enterprises, local and foreign, to invest in developing local capabilities. In general, the more competitive and outward-oriented the regime, the more dynamic is the upgrading process. A highly protected regime, or one with stringent constraints on local entry and exit, discourages technological upgrading, isolating the economy from international trends. This is not to say that completely free trade is the best setting. Infant industry considerations deem that some protection of new activities can promote technological learning and deepening. However, even protected infants must be subjected to the rigours of international competition fairly quickly – otherwise they will never grow up. This applies to foreign affiliates as well as to local firms, though, as noted, their learning processes are likely to differ. A strongly export-oriented setting with appropriate incentives (e.g. tax-free profits on exports) provides the best setting for rapid technological upgrading.

The second factor concerns *policies on the operations of foreign affiliates*: local-content requirements, incentives for local training or R&D, pressures to diffuse technologies and so on. Most host countries have used such policies. The results have often been poor when they were not integrated into a wider strategy for upgrading capabilities. However, where countries used them as part of a coherent strategy, as in the mature newly-industrializing economies, the results were often highly beneficial: foreign affiliates enhanced the technology content of their activities and of their linkages to local firms, which were supported in raising their efficiency and competitiveness. Much of the effort needed by the foreign affiliates to upgrade local capabilities involves extra cost and effort; they will not necessarily undertake this effort unless it is cost effective and suits their long-term objectives. For the host economy, it is worth doing so only if it leads to efficient outcomes. If upgrading is forced beyond this limit it will not survive in a competitive and open environment. The use of performance requirements is now being constricted by international rules such as those contained in the TRIMs Agreement. While there are good reasons for pressing for greater market orientation and level playing fields, it is important to retain policies to correct for market failures –including information flows, linkages, cluster formation and learning.

The third factor is *TNC strategies*. Firms differ between themselves, in their *corporate strategies* in the extent to which they assign responsibility to different affiliates and decide their position in the corporate network. As noted in chapter V, TNCs are changing their strategies in response to technological change and policy liberalization, and much of this is outside the scope of influence of developing host countries. Nevertheless, host country governments can influence aspects of TNC location decisions by such measures as targeting investors, inducing upgrading by specific tools and incentives and improving local factors and institutions (below). This requires them to have a clear understanding of TNC strategies and their evolution; they cannot formulate their own effective strategies otherwise. Indeed, foreign affiliates themselves can become allies in this respect, e.g. when they seek global product mandates (which, for example, may involve an upgrading of local R&D).

The fourth factor, the state and responsiveness of *local factor markets, firms and institutions*, is probably the most important one. TNCs upgrade their affiliates where it is cost-efficient to do so. Moreover, since firms in most industries prefer their suppliers to be nearby, they will deepen local linkages if the suppliers can respond to new demands efficiently. Both depend upon the efficacy and development of local skills and technological capabilities, supplier networks and support institutions. Without improvements in factor markets, TNCs can improve the skills and

capabilities of their employees, but only to a limited extent. They cannot compensate for weaknesses in the local education, training and technology system. In the absence of rising skills and capabilities generally, it would be too costly for them to import advanced technologies and complex, linkage-intensive operations.

Education, training and technology markets have well-known “public good” characteristics. Individuals may invest too little in their own education because of myopia, risk aversion, lack of information or lack of finance. Institutions may not provide the right kinds of skills, or may be absent altogether. Other firms may under-invest in training and knowledge creation. SMEs may not receive adequate technical, training and marketing support, and so on. Raising local skills and capabilities requires widespread policy support. Some are pure public goods that only governments can provide. Others need governments to catalyse private provision (including by TNCs themselves) and to regulate its quality and delivery. Whatever the nature of such improvements, there is no doubt that they are critical to realizing the dynamic benefits of foreign (and domestic) investment.

At the same time, there are risks that TNCs inhibit technological development in a host economy. TNCs are highly efficient in transferring the results of innovation performed in developed countries, but less so in transferring the innovation process itself. While there are some notable exceptions, foreign affiliates tend to do relatively little R&D apart from that needed for local absorption and adaptation. This may be acceptable for countries at low levels of industrial development, but can become a constraint on capability building as countries approach maturity and need to develop autonomous innovative capabilities. Once host countries build strong local capabilities, TNCs again contribute positively by setting up R&D facilities. However, at the intermediate stage, the entry of large TNCs with ready-made technology can inhibit local technology development, especially when local competitors are too far behind to gain from their presence. Their technology spillovers may, in other words, be negative. This is far more likely to be the case with semi-industrial host economies that lack the industrial depth and institutions of developed countries.

However, where a host economy adopts a proactive strategy to develop local skills and technology institutions, it may be able to induce TNCs to invest in local R&D even if there is little research capability in local firms. As with many other aspects of FDI strategy, the best example here is Singapore, which has the third highest ratio of enterprise-financed R&D to GDP in the developing world, with most of it coming from foreign affiliates.

The appropriate policy response, as before, is not to rule out FDI but to selectively channel it so that local learning is protected and promoted. In countries that do not have technological ambitions for local firms, it is possible to induce advanced TNC technological activity by building skills and institutions. As before, there are no general prescriptions – FDI strategy is an art not a science.

#### ***d. Bargaining and regulation***

In some cases, the outcome of FDI depends significantly on how well a host economy bargains with international investors. However, the capacity of developing host countries to negotiate with TNCs is often limited. The skills and information available to TNCs tend to be of better quality. With growing competition for TNC resources, the need of many developing countries for the assets of TNCs is often more acute than the need of TNCs for the locational advantages offered by a specific country. In many cases, particularly in export-oriented investment projects where natural resources are not a prime consideration, TNCs have several alternative locations. Host countries may also have alternative foreign investors, but they are often unaware of them.

It is therefore a distinct possibility that, where the outcome of an FDI project depends on astute bargaining, developing host countries may do rather poorly compared to TNCs. The risk is particularly great for major resource-extraction projects and the privatization of large public



utilities and industrial companies. Considerable bargaining also takes place in manufacturing projects where incentives, grants and so on are negotiated on a case-by-case basis. (There is intense and prolonged bargaining for large manufacturing investments in developed countries.) Though the general trend is towards non-discretionary incentives, considerable scope for bargaining still exists.

The need for regulation is growing in importance. The capacity of host developing countries to regulate enterprises in terms of competition or environment policy is emerging as the most active policy-making area. With liberalization and globalization, there are fewer tools left to ensure competitive conduct by foreign and local firms. An effective competition policy is therefore an absolute necessity. However, most developing countries lack effective competition policy. Some, in fact, are not aware of the need for such policy. Mounting a competition policy is a complex task, with needs for specialized skills and expertise that are often scarce in developing countries. It is important for host countries to start the process of developing these, especially in the presence of large TNCs with significant market power.

Similar concerns arise with respect to the environment. Many developing host countries have only limited regulations on the environment and lack the capacity to enforce effectively what regulations they have. TNCs are often accused of exploiting these to evade tougher controls in the developed world; some host countries are accused of using lax enforcement to attract FDI in pollution intensive activities. The evidence on the propensity of TNCs to locate their investments in order to evade environmental regulations is, however, not conclusive. Some firms may well do so. Others enforce uniformly strict standards in all their affiliates and even require their local suppliers to observe those standards. TNCs are under growing pressure to conform to high environmental standards from home country environmental regulations, consumers, environment groups and other “drivers” in the developed and developing world. Many thus see environment management not only as necessary but also as commercially desirable. However, it is up to host governments to ensure that other TNCs and domestic firms follow the example set by “green” TNCs.

Another important regulation problem is that of transfer pricing to evade taxes or restrictions on profit remission. TNCs can use transfer pricing over large volumes of trade and service transactions. The problem is not restricted to dealings between affiliates, and may also arise in joint ventures. However, it may well be that the deliberate abuse of transfer pricing has declined as tax rates have fallen and remittances have been liberalized in much of the developing world. Double-taxation treaties between host and home countries also lower the risk of transfer-pricing abuses. However, this does not mean that the problem has disappeared. It remains a widespread concern among developed and developing countries, and tackling it needs considerable expertise and information. Developing country tax authorities are generally ill equipped to do this, and can benefit greatly from technical assistance and information from developed-country governments.

#### 4. Policy-making capacity

Managing FDI policy effectively (in the context of a broader competitiveness strategy) is a demanding task. A passive *laissez faire* approach is unlikely to be sufficient because of deficiencies in markets and existing institutions. Such an approach may not attract sufficient FDI, extract all the benefits it offers, or see it operate by best-practices standards. However, the performance of any approach depends critically on the ability of the government to “deliver”. If administrative capabilities are not appropriate to the skill, information, negotiation and implementation abilities needed, it may be better to minimize market interventions and simply reduce obstacles in the way of FDI, minimize business costs and leave resource allocations to the market.

A *laissez faire* FDI strategy may yield benefits, particularly in a host country that has under-performed in terms of competitiveness and investment attraction because of past policies. A strong signal to the investment community that the economy is open for business can attract



FDI into areas of existing comparative advantage. However, there are two problems. First, if attractive locational assets are limited, or their use is held back by poor infrastructure or non-economic risk, there will be little FDI response. Second, even if FDI comes, its benefits are likely to be static and will run out when existing advantages are used up. To ensure that FDI is sustained over time and enters new activities necessarily requires policy intervention, both to target investors and to raise the quality of local factors. Needless to say, for the great majority of countries the form of intervention has to be different from traditional patterns of heavy inward-orientation and market-unfriendly policies – it has to be aimed at competitiveness.

As noted repeatedly, there is no ideal universal strategy on FDI. Any strategy has to suit the particular conditions of a country at a particular time, and evolve as its needs change and its competitive position in the world alters. Increasingly, it has also to take into account that international investment agreements set parameters for domestic policy making; governments of developing countries need to be careful, therefore, that such agreements do leave them the policy space they require to pursue their development strategies (box XI.1). Making effective strategy requires above all a development vision, coherence and coordination. It also requires the ability to decide on trade-offs between different objectives of development. In a typical structure of policy making, this requires the strategy-making body to be placed near the head of government, so that a strategic view of national needs and priorities can be formed and enforced.

#### **Box XI.1. Flexibility in international investment agreements**

Appropriate national policies are necessary if FDI is to contribute to development as much as possible. Indeed, national policies and rules are the principal means by which development objectives and strategies are given effect. International investment agreements (IIAs) are also increasingly important. By clarifying the rights and obligations of the parties involved in international investment relations and by providing mechanisms for the settlement of investment disputes, these agreements help establish a favourable investment climate. However, care must be taken that IIAs not only do not impede development but support it. The challenge here is how to ensure that countries at different levels of development and with different development strategies benefit from IIAs in promoting their growth and development. One way to achieve this is by allowing participating countries to retain a certain flexibility in order to give effect to their national development policies and strategies. The issue is particularly important given the proliferation of IIAs (see chapter IV).

Most IIAs – and particularly BITs – have as their main objective the intensification of economic cooperation and the creation of favourable conditions for investment, with a view towards promoting and protecting FDI. In the case of agreements that involve developing countries, in particular, the promotion of economic and social development is an essential goal. To respond to the concerns of developing countries, IIAs need therefore to be designed from the start with development considerations in mind. One of the challenges facing countries is therefore to ensure that IIAs serve adequately, in addition to the specific objectives of each instrument, the development needs of developing countries. A major issue that arises in this respect is that the countries covered by IIAs are often at widely disparate levels of economic and technological development and differ from one another in many other important respects (economic asymmetry). At the same time, the parties to an agreement are formally equal (legal symmetry). While it is widely recognized that IIAs need to take into account the interests and concerns of all participating parties, the asymmetries among them require special attention to ensure that the aim of development is actually achieved. A way to deal with these asymmetries is to allow a degree of flexibility in IIAs as they apply to developing countries participating in them.

Flexibility in IIAs may be approached from four main angles:

- *Objectives.* Examples of preambles that refer to development as an objective can be found in a number of IIAs. They may refer broadly to development as an overall objective or outline specific development objectives. Sometimes there is a general recognition of the special needs of developing and/or least developed countries requiring flexibility in the operation of obligations under the agreement, especially as regards the operation of their national laws.
- *Substantive provisions.* It is clear that the contents of IIAs is the principal means by which their development orientation is given effect. Countries parties to an IIA make choices as to the types of issues they wish to include and those they wish to keep outside the scope of an agreement, to

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**(Box XI.1, concluded)**

be dealt with in specialized instruments (e.g. double-taxation treaties) or as a matter of national law and policy. Even when they decide to include certain issues, countries may wish to retain some flexibility regarding the commitments they made. They may therefore use formulations that allow them some discretion to pursue their national policies while keeping in line with the broad principles of the agreement. Development concerns can also serve to determine the extent to which the contents of an IIA reflect a balance of rights and responsibilities for all actors concerned. Recent IIAs often contain provisions dealing with protection, liberalization and promotion of foreign investment; they may also include provisions dealing with other concerns, e.g. the proper functioning of markets, transfer of technology and various elements of what is considered to be good corporate citizenship. Agreements have sought to formulate these issues more or less flexibly in order to accommodate development concerns.

- *Overall structure.* The development orientation of international agreements needs to be reflected in their structure. The structure is important because it reflects, and thereby determines, the overall design of the relationships between the parties. Sometimes the entire agreement is informed by the aim of development. The economic asymmetry of the parties to an agreement can also be recognized by distinguishing explicitly between rights and obligations of developed and developing countries and, even more importantly, by allowing countries to assume gradually certain obligations, e.g. by identifying specific activities or measures in relation to which they are prepared to assume certain obligations.
- *Modalities of implementation.* Implementation mechanisms depend on the particular characteristics of an agreement, including whether it is a stand-alone agreement (e.g. BITs), or forms part of a larger body of commitments (e.g. WTO GATS and TRIMs). The implementation process can be responsive to development objectives by providing for various exceptions or temporal derogations from the obligations of an agreement when it comes to developing countries to reflect their special situation. Moreover, it may be necessary to put in place special arrangements for technical and financial assistance, including for instance for the purpose of promoting investment and technology flows to developing countries through appropriate home-country measures.

In short, like all other international agreements, IIAs at whatever level typically contain obligations that, by their very nature, reduce to some extent the policy-making autonomy of the participating parties. At the same time, such agreements need to recognize the differences of the parties involved where these differences are indeed substantial, as between developed and developing countries. More specifically, if IIAs do not allow developing countries to pursue the paramount objective of advancing their development — indeed, make a positive contribution to this objective — they run the risk of being of little interest to them. This underlines the importance of designing, from the start, IIAs in a manner that allows their parties a certain degree of flexibility in pursuing their development objectives. At the same time, of course, there is the question of what degree of flexibility would be consistent with the aims and functions of an IIA. In other words, there is a need to balance flexibility and commitments. In this respect, flexibility needs to be linked to other basic concepts such as transparency, stability and predictability of national regulations, in order to avoid connotations of arbitrariness or excessive discretion in dealing with foreign investment.

*Source:* UNCTAD, 1999d.

The traditional structure of departments and ministries is not suited to forming such views or to ensuring that strategies cutting across traditional lines of authority are implemented. For instance, an investment promotion body located at a relatively low level in, say, the commerce ministry, cannot assure prospective investors that the infrastructure, skills or trade procedures they need will be provided if they meet specified conditions (e.g. to set up technologically-advanced facilities). The experience of Singapore, where the Economic Development Board has the authority to negotiate and deliver on all aspects related to FDI (including incentives and grants) suggests that effective FDI strategy needs such a centrally-located body, perhaps a council that brings together key policy makers and representative of business (apart from other stakeholders). Most agencies are not, however, structured in this way. Besides, they mainly seek to attract FDI or facilitate the investment process, rather than formulate broader strategy.

Moreover, the FDI promotion body needs highly skilled personnel with an intimate understanding of the private sector and world markets. Many government promotion agencies do not have such personnel, particularly as far as marketing is concerned. Some mixture of private and public sector skills is necessary, with a quasi-government status and considerable autonomy and some economic authority. Some marketing and promotion activities can also be subcontracted to the private sector, as in Indonesia and the United Kingdom. Experience suggests that investment promotion works best when it targets export-oriented FDI; domestic-market oriented investors need less attracting and persuasion. However, it is worth reiterating that no amount of promotion can overcome underlying structural and economic deficiencies.



Finally, to return to the new context: what is different today in the FDI scene from that of three decades ago? Perhaps the most important change is technological: the world is more closely knit, using different means of organization, communication and production, and is more subject to rapid change than ever before because of constant and pervasive technical change. The leaders in the innovation process are TNCs. Countries are responding to the technological challenge, and to past development experience, by liberalizing their economies. However, the spread of technological benefits is uneven, and the activities of TNCs do not necessarily reduce this unevenness – they may even exacerbate it. Part of the reason for this is that many countries lack the capabilities and institutions to cope with a rapidly globalizing world economy. The past 30 years show striking – and growing – differences between countries in their ability to compete and grow. They also show how markets by themselves are not enough to promote sustained and rapid growth: policies matter, as do the institutions that formulate and implement them. There is an important role for government policies, but not in the earlier mould of widespread intervention behind high protective barriers. Rather, in a globalizing world economy, governments increasingly need to address the challenge of development in an open environment. FDI can play a role in meeting this challenge. Indeed, expectations are high, perhaps too high, as to what FDI can do. But it seems clear that if TNCs contribute to development — and do so significantly and visibly - the relationship that has emerged between TNCs and host country governments (particularly in developing countries) over the past 15-20 years can develop further with benefits for all concerned.

### Note

- <sup>1</sup> There may still be a case for policy intervention if TNCs, because of their sheer size or market power, distort markets.

## Annex to chapter XI

### The impact of FDI on growth: an econometric test

#### Introduction

The phenomenon of economic growth is complex, and the lines of causation frequently go both from supposed causes to growth and from growth to the supposed causes. Furthermore, the various factors that are thought to explain growth are themselves interrelated. These problems face all studies attempting to throw light on whether, in what way, and to what extent a particular factor or group of factors affect growth. They similarly apply to study of the impact of FDI on growth. Capital formation may be affected by FDI inflows, because they are a source of financing. Inward FDI may increase host country productivity and exports, and productivity growth may affect exports. Host country institutional characteristics, such as the legal system, enforcement of property rights, and the extent of corruption, that have been suggested as explanations for differences in growth rates, are likely to influence also the extent of inward FDI and capital formation.

The search for explanations of growth has been pursued in several different ways. Many of the earlier studies, such as those of Kuznets, traced the long-term growth of countries, mostly those that were, at that time, developed. Few developing countries at that time had data extending over long periods for even a few of the standard aggregate measures commonly used in research. After World War II there came a worldwide expansion and international standardization of national accounting systems, eventually covering almost every country. The United Nations International Comparison Programme (ICP) began in the 1970s to provide real income and price comparisons across countries, including developing countries. These were the raw material for a series of papers by Summers and Heston and the accompanying Penn World Tables that underlay a large outpouring of studies of economic growth, especially growth in developing countries.

Studies of economic growth of this later generation proceeded in two ways. For the most part, they examined growth over a whole period covered by whatever version of the tables was available at the time. They asked what combination of initial country characteristics, such as *per capita* income and various institutional factors, and later developments, such as capital formation, education of the labour force and openness to trade or flows of FDI, explained the growth of aggregate real income or *per capita* income. One problem with the interpretation of these studies is the difficulty of disentangling the direction or directions of causation. Was one economy growing more rapidly than another because the level of capital formation was higher or was the rate of capital formation higher because the economy was growing faster? An alternative method is to break the long period up into shorter ones and hope that the timing of developments in growth and its presumed determinants reveals something about the direction of influence. This is attempted here, but the method does suffer from the problem that precedence in time does not necessarily distinguish causes from effects, and the problem that some influences may be swift in their results while others take long and uncertain lengths of time to operate. What is fairly certain, without any necessary implications as to causation, is that high growth rates and large inflows of FDI tend to go together. That is explicit in studies of the post- World War II years as a whole and in studies of shorter periods.

#### 1. Overview of previous studies

##### a. *Long-term cross-section studies*

The few long-period cross-section growth studies that included FDI as a variable tended to find some positive relationship. For example, one study reported a significant relationship between inflows of FDI as a percentage of GDP and the growth of *per capita* GDP across all developed countries for the period 1960-1985 (Blomström, Lipsey, and Zejan, 1994). It suggested

that although the gap in technology and productivity between foreign-owned firms and locally-owned ones is larger in poorer countries than in richer ones, that does not necessarily mean that the poorer countries gain the most from inward FDI. It argued that “the least developed countries may learn little from the multinationals, because local firms are too far behind in their technological levels to be either imitators or suppliers to the multinationals” (pp. 250-251). And it found, in confirmation of this supposition, that inflows of FDI were significant as determinants of growth for the upper half of the distribution of developing countries, by *per capita* income, but not in the lower half.

A similar conclusion was reached in a study for 69 developing countries of growth in *per capita* GDP from 1970 to 1989 (Borensztein, De Gregorio and Lee, 1995). The FDI variable in that study was the inflow of FDI to these countries from the presumably more advanced ones that made up the OECD. FDI itself was a marginally significant positive influence on growth, but FDI interacting with a measure of average educational attainment was a stronger and more consistent influence. The higher the level of education of the labour force, the greater the gain in growth from a given inflow of FDI. An interaction between FDI and education was also found in a paper on FDI in China that concluded that “Education becomes even more effective when it is associated with foreign knowledge ... the interaction between school enrolment rates and foreign investment is significantly positive, suggesting mutual reinforcement between domestic human capital and foreign knowledge that accompanies the investment.” However, “the coefficient on foreign investment becomes negative when the interaction term is introduced, implying that much of the power of foreign knowledge may come through the local base of human capital” (Mody and Wang, 1997, p. 309).

Another mechanism through which the influence of FDI can take effect is through the impact of inward FDI on domestic capital formation. As is evident from box VI.3, FDI appears to increase investment in one-to-one ratio or encourages capital formation by domestic firms, so that “a one-dollar increase in the net inflow of FDI is associated with an increase in total investment in the host economy of more than one dollar” (Borensztein, De Gregorio and Lee, 1995, p. 3). This does not, of course, mean that cases of FDI crowding out local capital formation can be ruled out.

Very few long-period cross-section studies have included a measure of FDI as a potential source of growth (Blomström, Lipsey, and Zejan, 1994; and Borensztein, De Gregorio, and Lee, 1995). Reflecting this, a comprehensive review of variables used in such studies did not include FDI (Levine and Renelt, 1992). However, some of the variables identified in these studies as factors of growth are typically under the influence of FDI. For example, relatively “robust” relations were found between investment ratios (investment/GDP) and growth and between investment ratios and trade ratios. But, both investment ratios and trade ratios could be affected by FDI flows, and thus, indirectly form a channel for an effect of FDI on growth. Another example refers to the effects on growth of knowledge spillovers (Eaton and Kortum, 1994 and 1995 and Coe and Helpman, 1995). FDI is also a plausible vehicle for these knowledge spillovers, by itself (through R&D, for example) and through its relation to the intensity of trade.

The relation of FDI to trade is more generally a possible connection that may obscure the relationship of FDI to growth in quantitative studies including both variables. There is a great deal of evidence that foreign-owned firms in most countries trade more with their parent countries, but also trade more in general, than locally-owned firms. A summary of the evidence shows that “MNEs or their affiliates generally enjoy a larger share of home or host country exports and imports than they do of output ... this is partly explained by their being concentrated in trade-intensive sectors, and partly because their trading propensity in any given sector tends to be greater than that of uninationals or indigenous firms” (Dunning 1993, p. 386). It is likely, therefore, that high foreign ownership, or a large inflow of FDI, will increase the importance of trade for a host country, thus affecting growth indirectly.



### ***b. Time series studies***

Time series studies focused initially on the impact of FDI on domestic investors. In an early example, relating to Canada, some regression coefficients, taken at face value, implied that “\$1.00 of direct investment ‘led to’ \$3.00 of capital formation” (Lubitz 1966, pp. 97-98). A later study of FDI into Canada, with somewhat different methods, a slightly longer time span, and annual rather than quarterly data, found a positive direct effect on capital formation greater than the amount of the FDI (Van Loo, 1977). That is, there was some complementary effect on fixed investment by domestic firms. However, when indirect effects through impacts on other variables, such as exports (negative), imports (positive), and consumption (negative), operating through the accelerator, were added, the addition to total capital formation was much smaller, a little over half the inflow. The offsetting negative effects on domestic investment are quite model-specific, and involve accepting plausible, but statistically insignificant, coefficients.

Long-period analyses of growth face endogeneity problems, particularly uncertainty about the direction of causation between growth and investment ratios. In an attempt to avoid some of these problems, in one analysis, the period since 1970 was broken into five-year sub-periods (Blomström, Lipsey, and Zejan 1994). The main conclusion was that there was more evidence that high growth led to high subsequent investment ratios than for the opposite relationship. In equations including (among others) contemporary or previous period fixed investment as a right-hand side variable, FDI appeared as a positive and significant influence on a country’s rate of growth. However, the level and significance of the FDI coefficient fell when the following period’s investment was included, suggesting that FDI in one period may have affected host country capital formation in the following period (table XI.A.1). When the equations were formulated so as to eliminate the cross-section influences by dividing each variable by its long-period average, the influence of the FDI variable disappeared. In other words, the influence of FDI was evident only in the cross-section; higher FDI in a period did not have any visible influence on growth in that period in a given country, although across countries, those with higher ratios of FDI to GDP were also those that grew faster.

If the effect of FDI over time were mainly to raise the level of capital formation, it might be concealed in an equation that included both variables. While this is a possibility, the simple correlations found between FDI inflows and fixed investment do not make it seem likely. In combined cross-section and time series data, FDI inflow in period (t) was most closely correlated with fixed investment in time t ( $r = .31$ ), next with investment in period  $t+1$ , and less with investment in period  $t-1$ . However, when the cross-section variation is removed, the correlation in period (t) is reduced almost by half and that with later investment is cut by two thirds (Blomström, Lipsey, and Zejan 1994). Thus one should not expect too much from the time series effects of FDI on growth from effects on fixed investment.

## **2. Regression analyses**

As a step towards adding to the understanding the relationship between FDI and growth for developing countries, an examination was conducted of changes over five-year intervals. This duration should be long enough to remove purely cyclical effects, but short enough to permit observation of the sequence of events. The idea is, as noted, to search for the impact of events taking place in one period on outcomes in the following period or periods. The data used cover many developing countries - over 100 in some calculations - and, for the most part, five periods between 1970 and 1995. All these countries and periods are examined together, in addition to changes over time in each country relative to that country’s average over all periods. The reason for making the calculation in this manner for measuring time series effects, is that some of the apparent impacts of various factors on growth could arise from long-term characteristics of countries that are not taken into account in the equations. Comparisons with country averages should remove any influence of these long-term country characteristics and reveal the determinants of changes in the rate of growth over time within individual countries.

The basic model explored here relates a country's growth in a five-year period,  $t$ , measured by the change in real *per capita* GDP, to several frequently proposed sources of growth. These include the share of investment expenditures in GDP (INV), measured in real terms at each period's current international prices, the inward flow of FDI as a per cent of nominal GDP (FDI), past growth in real *per capita* GDP (ROG), the level of schooling at the beginning of a period (SCH), and changes in the labour force participation rate (PART). In some calculations, two other variables are added. One is the change in the country's price level, relative to the world price level, and the other is the country's *per capita* real income relative to that of the United States in the initial year of a period.

One difficulty in interpreting most growth equations is that, as mentioned earlier, the dependent and independent variables interact in both directions: high growth rates induce high investment rates at least as much as high investment rates induce high rates of growth in *per capita* GDP. To reduce such ambiguities (although without the expectation of completely eliminating them), those independent variables most clearly subject to this two-way interaction are introduced in lagged form. That is, only the observations for period  $t-1$  enter the equations for growth in period  $t$ .

The fullest version of the model used is:

$$\text{ROG}(t) = f[\text{ROG}(t-1), \text{INV}(t-1), \text{FDI}(t-1), \text{SCH}(t), \text{PART}(t), \text{PR}(t), \text{RGDP}/\text{US}(t)],$$

where the variables are those described above.

Since the variables used are likely to be highly interrelated, it is advisable to examine the nature of these relationships. One way to do this is to test the time series characteristics of the plausible variables in the Granger-Sims causality framework (Granger, 1969; Sims, 1972). The first step in this direction is to ask whether FDI inflows are themselves the result of contemporary or past growth in *per capita* output. The two variables are modestly correlated on a current basis ( $r = .18$ ) (Blomström, Lipsey, and Zejan, 1994, p.22). Further, the test is made on whether including growth in *per capita* output adds any predictive power to equations relating current to past inflows of FDI. The results of equations relating FDI inflows to past inflows (annex table XI.A.1) confirm that there is strong serial correlation in FDI inflows. The geographical pattern of inflows in the previous five-year period is a significant predictor of current inflows. The pooled equation implies that the current period's ratio of FDI to GDP will be equal to that of the preceding period, although most of the individual period equations imply a current rate around half of the previous one. Adding another past period does little to improve the prediction. Therefore further calculations are confined to using a single period lag of FDI flows.

When past growth in *per capita* GDP is added to the equations for current period FDI inflows, there is a substantial improvement in the prediction in the first three periods, and the lagged growth coefficients are statistically significant (table XI.A.2). In the last two periods, and in all five periods taken together, the lagged growth coefficients are not statistically significant and reduce the degree of explanation. Thus, given past levels of FDI inflows, past income growth adds something, sometimes, to the explanation of current FDI flows, but not always, and not when all the periods together are examined.

Current growth in a period is always positively and significantly related to FDI inflows in the same period, even when past FDI flows are taken into account. If current and past growth are both included in the equation, it is the current growth that is the significant influence. Thus only equivocal evidence exists that past growth induces current FDI inflows, but there is much stronger evidence that the growth rate and FDI inflows coincide in time.

One possible link between FDI and growth is through investment, if high levels of investment both attracted subsequent FDI and stimulated growth. Current FDI inflows are correlated with current investment ratios and the relationship is stronger than between FDI and any other of the usual supposed determinants of growth (Blomström, Lipsey and Zejan, 1994,

p.22). That connection is explored further by adding the past investment ratio (the ratio of investment to GDP) to equations with past FDI ratios (table XI.A.3). The results are similar to those for *per capita* GDP growth. There is a significant coefficient in only one period, and an improvement over equations with only past FDI in the degree of explanation in only two periods. Past investment ratios are significant in the pooled equation, having a positive impact on current FDI inflows.

The investment ratio itself is strongly correlated with its past level. If the addition of past FDI flows added to the explanation of current period investment, that would be a possible avenue of influence of FDI on *per capita* income growth. The results do not lend any support to this possibility (table XI.A.4). Past FDI flows are never a significant positive influence on the current period's investment ratio.

Since the ratio of trade to GDP is another possible candidate for a variable that might influence, or be influenced by, FDI, a corresponding test is performed for this ratio. The trade ratio, indeed, is strongly correlated over time; one period's level almost entirely explains the next period's level (table XI.A.5). Adding the preceding period's FDI flow to the equation adds little to the degree of explanation despite the close association that is expected to exist between FDI with trade. The only exception was that the trade ratio in 1990 was positively and significantly related to FDI inflows in 1986-1990.

While there is no association between past FDI and current trade ratios, there is some evidence that the trade ratio at the beginning of a period is associated with current FDI flows (table XI.A.6). The relationship is erratic, but in the three individual period equations with significant coefficients for trade ratios, the coefficients are positive, suggesting that economies that trade more, relative to their GDP, attract more FDI. The pooled equation points strongly in the same direction, with both past FDI and the initial level of the trade ratio in a period positively affecting current FDI. The inclusion of the initial trade ratio variable does not consistently improve the estimates of FDI flows, perhaps because both trade ratios and FDI are so strongly correlated with their own past values. They are so strongly correlated over time that the addition of country dummy variables makes both past FDI flows and trade ratios insignificant. The equations do suggest that if there are any positive effects of high trade ratios on growth, they might be associated with the encouragement of FDI inflows.

Real *per capita* GDP growth is much less correlated over time than FDI flows. In a regression pooling data for six periods, only four per cent of the variation is explained by past growth rates (table XI.A.7) while the corresponding equation for FDI inflows explained over three-quarters of the variation. The regressions did explain more and more of the variance over time but the highest levels, with two lags, were below 20 per cent. In only two periods was the second lagged term statistically significant, but it was significant in the pooled regression.

Adding past investment ratios to the equation predicting growth in *per capita* GDP from past growth improves the equation somewhat in every period except one, and in the pooled regression. The investment coefficient is significant in only two periods but it is also a positive factor in the pooled equation (annex table XI.A.8). Adding past inflows of FDI instead of the investment ratio adds to the explanatory power of the equations in every period. The coefficient for lagged FDI inflow is positive but it is significant only in the last period. When both lagged investment and lagged FDI are incorporated into the equation for all periods, both have positive coefficients but neither one is significant. Thus there is at least some evidence for a positive effect of inward FDI on subsequent growth without a strong indication that it is the past growth that is inducing the FDI. However, the apparent effect could come from the contemporaneous correlation between FDI inflows and investment ratios.

If country dummy variables are added to the first of the pooled equations in table XI.A.8, in which the lagged investment ratio is the determinant of growth being tested, the positive influence of the investment ratio on subsequent growth disappears; the coefficient, in fact, turns negative, as do those for past rates of growth.

When the country dummies are added to the second pooled equation, using past FDI inflows as an independent variable, the coefficient for FDI is not much affected, but remains insignificant. However, in the pooled equation including both the investment ratio and the FDI ratio, only the FDI ratio appears as a positive, although not significant, influence on subsequent growth. The coefficients from that equation, omitting those for the country dummy variables and the intercept, are as follows:

<u>Variable</u>	<u>Coefficient</u>	<u>t</u>
GDPC(t-1)	-.033	0.50
GDPC(t-2)	-.014	0.23
INV(t-1)	-11.36	3.52
FDI(t-1)	239	1.59

Deviations of the FDI ratio from its average were the only apparent positive influence on changes over time in the rate of growth. A high investment ratio and a high growth rate in one period, relative to their averages over all periods, seem to be associated with lower growth in the following period, an indication that the past growth and investment ratio coefficients reflect cyclical swings rather than long-term influences.

The variables examined so far are added to a variety of other possible influences on the rate of growth, to test whether the apparent positive influence of FDI might come from its association with other factors favourable to growth. These include such familiar ones as the change in the labour force participation rate and a measure of the schooling level at the beginning of each five-year period (table XI.A.9). The degree of explanation is poor through 1985 and then it improves. The equations are significant in the last two periods and for all periods combined. The introduction of several independent variables in addition to past growth does improve the predictions over those from past growth alone (table XI.A.7) in most periods, but less than 10 per cent of differences in growth are explained until 1985. The contributions of the added variables are not consistent across periods. The lagged investment ratio is significant in only one period and the lagged FDI ratio not at all, although the FDI ratio comes close, as a positive influence, in the pooled equation. The coefficient for the participation rate is significant at times, but it is erratic in sign. Rapid growth is positively associated with past rapid growth and marginally with past FDI inflows and past investment ratios.

If, again, country dummy variables are added to these growth equations, eliminating the effects of cross-sectional differences among countries from the coefficients for the other variables, the coefficient for past growth, investment ratios, and schooling all turn negative, and that for the participation rate becomes insignificant. The only variable not strongly affected is the positive coefficient for FDI inflows, although it remains insignificant. Although the variables for changes in relative prices and for initial *per capita* real income relative to the United States were not consistently important contributors to explaining growth in the individual periods, the price variable is significant in the pooled regression. The pooled regression including both price and relative income (table XI.A.10) is a slight improvement over that in table XI.A.9. Past income growth, past inflows of direct investment, past investment ratios, and current changes in the participation rate and in prices are all positive influences on the rate of growth. However, only the price coefficient is significant. The addition of country dummy variables to the pooled regression for all periods (table XI.A.10) again points to the positive influence of changes over time in the FDI ratio. The coefficients for the independent variables, aside from the country dummy variables and the intercept, are:

<u>Variable</u>	<u>Coefficient</u>	<u>t</u>
GDPC(t-1)	-.169	2.20
GDPC(t-2)	-.097	1.45
INV(t-1)	-4.82	1.37
FDI(t-1)	230.9	1.48

Participation rate(t)	-.400	1.11
Schooling(t)	-5.65	3.97
Price(t)	.094	1.28
RGDPC/US(t)	-8.74	3.44

With these additional variables added, past deviations from average levels of past growth, the investment ratio, and the level of schooling are all negatively related to the current growth rate, but only the first and last are significant. Above average inflows of FDI into a country remain a positive, but not significant, influence on subsequent growth, and large gaps in real *per capita* income relative to the United States also produce faster than average growth.

As was mentioned earlier, it has been hypothesized, and sometimes confirmed, that inward FDI can act in concert with the host country's education level. A cross-product term, for the interaction between the initial schooling level in a period and the inflow of FDI, is not significant in individual period equations, but does produce some gain in the degree of explanation in the pooled regression (table XI.A.11). Past income growth is no longer statistically significant there, but the interaction between inward FDI and schooling is. The contemporary price change and participation rate are both positive contributors to the rate of growth, while the past investment rate does not appear to be significant.

The same equation with country dummy variables added, isolating the effects of changes in the variables over time, shows a positive and significant influence for the combination of FDI inflow with schooling, the first clear evidence found in this exercise for the effect of FDI inflows:

<u>Variable</u>	<u>Coefficient</u>	<u>t</u>
GDPC(t-1)	-.057	0.79
GDP(t-2)	-.049	0.72
INV(t-1)	-8.89	2.62
FDI(t-1)x Schooling(t)	8.75	2.26
Participation rate(t)	-0.14	0.38
Price(t)	.202	3.02
GDPC/US(t)	-8.82	3.49

The other positive influences on the rate of growth relative to the country's average rate, aside from the FDI-Schooling interaction term, are the change in prices during the period relative to the long-term average change and the size of the gap between the country and the United States. The lower the income relative to the United States, or the larger the gap, the greater the gain in *per capita* income. The coefficient for the past investment ratio is again negative, presumably reflecting cyclical fluctuations around the country averages.

## Conclusions

Few studies of long-term growth have incorporated FDI into their sets of explanatory variables. Those that have attempted to do so have generally found that rapid growth and high ratios of FDI to GDP have gone together.

One problem in assessing the impact of FDI on growth is that FDI is often associated with other growth-promoting factors. These include the ratio of investment to GDP and the degree of openness of the economy. Some studies have pointed to the role of knowledge spillovers, another factor likely to be associated with FDI, across countries and over time. Time series studies have found some evidence for an effect of FDI in increasing investment in the host country. Short-period studies have found FDI to be related to growth and to investment ratios across countries.



Some of these relationships were explored here more fully to try to establish whether any consistent influence of FDI on growth can be found when other possible influences on growth are taken into account. Since FDI flows and other explanatory variables are frequently correlated with each other within a period, and also with the rate of growth, the focus was on searching for effects of FDI flows in a period on the subsequent period's rate of growth. And since some of the possible variables are strongly correlated over time, the time series aspects of these relationships was also examined. That was done by including country dummy variables in the equations. The equations with country dummy variables exclude the influence of average (over the period) differences among countries and reflect only changes over time within each country.

After testing for possible evidence that past growth or past levels of other included variables determined the flow of FDI, it was found that only two had significant effects. A high trade ratio, defined as the ratio of exports and imports to GDP, did appear to encourage the subsequent inflow of FDI, in all periods combined and in some individual periods. And high investment ratios seemed to have a similar effect over all periods, but not in most individual periods.

When both the past FDI ratio and the past investment ratio are, included, along with past growth, in an equation explaining current growth in real *per capita* income, neither seems to have a significant effect. When country dummy variables were included in this equation, FDI, but not investment, contributed positively to the growth rate. The coefficient for the past investment ratio was negative.

As other explanatory variables are added to the growth equations, the degree of explanation, as measured by the coefficient of determination, or R squared, rises gradually. However, it never gets beyond 13 per cent in pooled equations for all periods combined without country dummy terms. The degree of explanation for recent individual periods is higher, reaching over 20 per cent in 1986-1990 and over 30 per cent in 1991-1995.

In general, the ratio of FDI inflow to GDP in a period is the most consistently positive influence on subsequent growth in *per capita* real income, although it is rarely statistically significant except when combined with the level of schooling. In the combined cross-section and time-series pooled equations, several other factors contribute to more rapid growth. They include, in various versions, high past growth rates, high past investment ratios, increases in the participation rate (the ratio of the labour force to the population), and increases in the price variable (relative increases in the price levels for products heavily weighted in the country's GDP), and low initial *per capita* income relative to the United States. The past investment ratio fades as a factor when some of the others are introduced.

Once country dummies are introduced into the pooled equations to eliminate the influence of long-term cross-country differences in growth and other variables, past growth and past investment ratios no longer appear as significant positive influences on growth. Their positive influence is absorbed by the country dummy variables. When the widest set of variables is included, the only ones that appear to increase rates of growth are the FDI inflow combined with the schooling level, and the degree to which a country is below the United States in *per capita* income at the beginning of a period. The lower the initial GDP *per capita* in a period, the faster the subsequent growth. That is not the usual catch-up variable that appears in many growth studies to represent the initial level of development of a country, because a country's average economic distance from the United States over all periods combined has been removed from the variable. The coefficient therefore probably represents the effects for a country of being below or above its long-term status at the beginning of a particular period.

The effect of past inflows of FDI on the rate of growth of a country in a period remains elusive, partly because FDI is intertwined with investment ratios and trade ratios. The coefficients for the FDI variable are consistently positive in sign from equation to equation, at least when the periods are pooled, but few of them are significant. The most favourable indications of a positive influence on growth are for the combination of FDI and schooling. That positive influence is visible in both the time series-cross section combination and in the pure time series relationship to growth.

## Tables

**Table XI.A.1. Equations relating FDI inflows to past FDI inflows, five one-year periods, 1971 - 1995**

Period	Coefficients			$\overline{R}^2$	F probability	Number of observations
	FDI (t-1)	FDI (t-2)	Constant term			
1971-1975	.530 (3.60)		14.3 (0.97)	.179	.001	56
1976-1980	.056 (.61)		51.2 (4.41)	.009	.542	70
1981-1985	.554 (5.26)		19.0 (1.64)	.268	.000	74
1986-1990	1.23 (43.04)		18.8 (1.69)	.953	.000	93
1991-1995	.568 (7.35)		61.3 (4.65)	.359	.000	96
<u>All periods</u>	1.054 (35.49)		8.2 (1.23)	.764	.000	389
1976-1980	.282 (2.85)	-.099 (-0.84)	34.3 (3.1)	.105	.021	55
1981-1985	.546 (6.28)	.094 (1.48)	7.0 (0.72)	.378	.000	66
1986-1990	1.36 (9.27)	-.103 (-0.67)	14.3 (0.96)	.601	.000	73
1991-1995	.489 (4.12)	.080 (0.45)	60.0 (4.16)	.325	.000	84
<u>All periods</u>	0.847 (10.484)	-0.0014 (-0.059)	23.1 2.963	.359	.000	194

**Table XI.A.2. Equations relating FDI inflows to past FDI inflows and past and present growth in per capita GDP, five-year periods, 1971 - 1995**

Period	Coefficients			$\overline{R}^2$	F probability	Number of observations	
	FDI (t-1)	GDPC(t-1)	GDPC(t) Constant term				
1971-1975	.483 (3.35)	0.132 (2.02)		-.136 (-1.77)	.233	.000	54
1976-1980	-.003 (-.03)	0.102 (2.10)		-.059 (-1.06)	.036	.115	67
1981-1985	.499 (5.99)	.109 (2.62)		-0.108 (-2.35)	.488	.000	70
1986-1990	.913 (7.95)	-.063 (1.35)		.085 (1.89)	.431	.000	83
1991-1995	.422 (4.66)	.023 (0.29)		.045 (0.53)	.281	.000	71
<u>All periods</u>	0.425 (9.128)	.036 (1.487)		-.000 (-0.007)	.225	.000	345
1971-1975	.491 (3.41)		.109 (1.99)	-.107 (-1.68)	.231	.001	54
1976-1980	.018 (0.19)		.139 (2.37)	-.101 (-1.50)	.053	.066	67
1981-1985	.561 (7.26)		.098 (2.35)	-.083 (-2.06)	.476	.000	71
1986-1990	1.321 (11.56)		.172 (2.92)	-.166 (-2.68)	.715	.000	73
1991-1995	.497 (6.12)		.103 (1.97)	-.046 (-0.80)	.339	.000	92
<u>All periods</u>	.545 (11.34)		.131 (5.06)	-.104 (-3.68)	.331	.000	357
<u>All periods</u>	.405 (8.84)	.014 (0.53)	.119 (4.67)	-.102 (-2.97)	.275	.000	332

**Table XI.A.3. Equations relating FDI inflows to past FDI inflows and past ratios of fixed capital formation to GDP, five-year periods, 1971 - 1995**

Period	Coefficients			$\bar{R}^2$	F probability	Number of observations
	FDI (t-1)	INV(t-1)	Constant term			
1971-1975	.520 (3.27)	.399 (0.21)	.012 (0.47)	.172	.003	54
1976-1980	-.001 (-0.01)	2.53 (2.10)	.198 (0.96)	.036	.114	67
1981-1985	.551 (6.73)	1.49 (1.57)	-0.011 (-0.67)	.455	.000	70
1986-1990	.808 (6.75)	1.53 (1.26)	.006 (0.35)	.430	.000	83
1991-1995	.400 (4.19)	1.33 (0.67)	.053 (2.00)	.285	.000	71
<u>All periods</u>	.401 (8.53)	1.82 (2.81)	.015 (1.51)	.238	.000	345

**Table XI.A.4. Equations relating investment ratios to past ratios and past FDI inflows, five-year periods, 1971 - 1990<sup>a</sup>**

Period	Coefficients			$\overline{R}^2$	F probability	Number of observations
	INV (t-1)	FDI(t-1)	Constant term			
1971-1975	1.105 (15.29)	-7.96 (-1.33)	1.43 (1.47)	.827	.000	54
1976-1980	.799 (14.79)	-3.17 (-0.73)	3.88 (4.25)	.763	.000	69
1981-1985	.801 (14.11)	5.09 (1.05)	1.11 (1.16)	.759	.000	73
1986-1990	.913 (19.50)	-3.44 (-0.72)	.676 (0.99)	.865	.000	70
<u>All periods</u>	.854 (28.26)	-0.64 (-0.24)	2.15 (4.51)	.764	.000	266

<sup>a</sup> 1991-1995 could not be included because investment ratios corresponding to those for earlier periods were not available.

**Table XI.A.5. Equations relating trade ratios<sup>a</sup> to past trade ratios and past FDI inflows, five-year periods, 1965 - 1995**

Period	Coefficients			$\overline{R}^2$	F probability	Number of observations
	TR (t-1)	FDI(t-1)	Constant term			
1965	.868 (19.78)		8.01 (2.90)	.842	.000	74
1970	.910 (30.40)		5.48 (2.65)	.918	.000	83
1975	1.076 (26.41)		5.26 (1.88)	.891	.000	86
1980	1.213 (24.64)		-5.47 (1.39)	.871	.000	91
1985	.797 (26.87)		8.50 (2.77)	.871	.000	108
1990	1.047 (26.48)		2.57 (0.73)	.868	.000	108
1995	.916 (22.91)		12.40 (3.32)	.841	.000	100
<u>All periods</u>	0.942 (58.97)		7.14 (5.36)	.844	.000	645
1970	.863 (21.1)	-13.66 (0.67)	9.31 (3.84)	.917	.000	54
1975	1.125 (24.82)	-23.39 (1.55)	4.69 (1.60)	.908	.000	69
1980	1.259 (22.61)	29.73 (1.14)	-11.02 (2.67)	.901	.000	72
1985	.804 (19.53)	6.51 (0.31)	7.53 (2.17)	.870	.000	89
1990	.972 (18.46)	46.6 (2.20)	5.10 (1.39)	.875	.000	98
1995	.924 (20.72)	-1.81 (0.10)	11.09 (2.94)	.857	.000	87
<u>All periods</u>	0.943 (37.92)	17.041 (1.54)	6.45 (3.58)	.846	.000	382

<sup>a</sup> (Exports + imports) / GDP.

**Table XI.A.6. Equations relating FDI inflows to past inflows and to trade ratios, five-year periods, 1971 - 1995**

Period	Coefficients			$\bar{R}^2$	F probability	Number of observations
	FDI (t-1)	TR (t)	Constant term			
1971-1975	.430 (2.54)	0.41 (1.06)	-1.79 (0.08)	.172	.003	54
1976-1980	-.031 (0.33)	0.93 (3.79)	-8.24 (0.43)	.161	.001	68
1981-1985	.327 (3.07)	0.75 (4.49)	-27.18 (1.84)	.422	.000	73
1986-1990	.957 (8.47)	0.73 (2.83)	-19.28 (0.98)	.634	.000	89
1991-1995	.764 (5.20)	-.027 (0.10)	50.65 (2.48)	.326	.000	91
<u>All periods</u>	0.519 (3.89)	.652 (4.37)	-5.51 (0.74)	.349	.000	375

Note: The equation for all periods has been corrected for heteroskedasticity.

**Table XI.A.7. Equations relating real per capita growth to past growth, five-year periods, 1965 - 1995**

Period	Coefficients			$\bar{R}^2$	F probability	Number of observations
	GDPC(t-1)	GDPC(t-2)	Constant term			
1966-1970	.134 (1.27)		1.013 (8.40)	.007	.208	95
1971-1975	.074 (0.55)		1.053 (6.61)	-.007	.586	96
1976-1980	.144 (1.44)		.972 (8.42)	.011	.153	100
1981-1985	.168 (2.24)		.789 (9.08)	.039	.028	101
1986-1990	.294 (2.68)		.754 (6.90)	.071	.009	82
1991-1995	.374 (3.42)		.685 (5.90)	.119	.001	80
<u>All periods</u>	.200 (4.73)		.869 (18.29)	.037	.000	554
1971-1975	.065 (0.48)	.171 (1.23)	.872 (4.17)	-.001	.382	95
1976-1980	.122 (1.21)	.267 (2.02)	.690 (3.67)	.039	.059	96
1981-1985	.169 (2.23)	.033 (0.44)	.753 (6.62)	.035	.067	100
1986-1990	.275 (2.53)	.212 (2.78)	.525 (4.50)	.189	.000	80
1991-1995	.382 (3.12)	.184 (1.56)	.504 (3.30)	.148	.001	76
<u>All periods</u>	0.185 (3.92)	0.147 (3.11)	0.710 (10.55)	.061	.001	447



Table XI.A.8. Equations relating real per capita growth to past growth, past investment ratio and past FDI, five-year periods, 1971 - 1995

Period	Coefficients					$\bar{R}^2$	Numbers of F probability	observations
	GDPC(t-1)	GDPC(t-2)	INV(t-1)	FDI(t-1)	Constant term			
1971-1975	-.059 (0.42)	.074 (0.53)	8.83 (2.54)		1.017 (4.82)	.056	.042	95
1976-1980	.114 (1.01)	.258 (1.78)	0.48 (0.15)		.702 (3.42)	.029	.130	96
1981-1985	.132 (1.71)	-.036 (0.44)	4.34 (1.87)		.806 (6.96)	.059	.032	100
1986-1990	.238 (2.10)	.183 (2.28)	2.83 (1.13)		.554 (4.65)	.192	.000	80
1991-1995	.230 (1.88)	.097 (0.86)	9.77 (3.49)		.618 (4.23)	.261	.000	76
<u>All periods<sup>a</sup></u>	.147 (2.67)	0.104 (1.95)	3.48 (2.44)		0.751 (11.21)	.073	.000	447
1971-1975	.242 (1.49)	.189 (1.04)		285 (0.80)	.642 (2.42)	.034	.200	53
1976-1980	.112 (1.12)	.234 (1.92)		-142 (0.70)	.745 (4.54)	.043	.124	67
1981-1985	.254 (2.31)	.040 (0.46)		143 (0.63)	.620 (4.22)	.075	.039	73
1986-1990	.196 (1.62)	.319 (3.09)		57 (0.21)	.486 (3.43)	.219	.000	68
1991-1995	.288 (2.28)	.264 (2.27)		483 (2.19)	.495 (3.22)	.228	.000	72
<u>All periods</u>	.218 (4.02)	.145 (2.81)		161 (1.39)	.664 (9.10)	.099	.000	333
<u>All periods</u>	.215 (3.97)	.130 (2.42)	1.50 (1.07)	132 (1.11)	.665 (9.11)	.100	.000	333

<sup>a</sup> Corrected for heteroskedasticity.

**Table XI.A.9. Equations relating real per capita growth to past growth and other past variables, five-year periods, 1971 - 1995**

Item	1970-1975	1975-1980	1980-1985	1985-1990	1990-1995	All periods	
						Without country dummies <sup>a</sup>	With country dummies
GDP (t-1)	.117 (0.68)	.188 (1.50)	.203 (1.62)	.077 (0.60)	.169 (1.17)	.138 (2.10)	-.216 (2.83)
GDP (-2)	.048 (0.27)	.282 (2.13)	.016 (0.15)	.265 (2.45)	.182 (1.45)	.101 (1.70)	-.098 (1.47)
INV (t-1)	11.74 (2.22)	-6.59 (1.94)	1.09 (0.31)	1.09 (0.30)	6.92 (1.79)	.759 (.39)	-7.75 (2.21)
FDI (t-1)	-87.8 (0.22)	160.9 (0.68)	146.6 (0.50)	174.1 (0.50)	344.0 (1.35)	248.1 (1.75)	217.2 (1.35)
Participation rate (t)	1.29 (1.98)	0.74 (1.48)	-0.70 (0.87)	1.58 (2.47)	-1.31 (2.35)	.733 (1.85)	-.015 (0.04)
Schooling (t)	-1.79 (0.80)	0.41 (0.27)	0.72 (0.63)	-1.02 (0.97)	1.44 (1.48)	-.237 (0.39)	-7.16 (5.32)
Constant term	-0.49 (0.72)	-0.08 (0.15)	1.37 (1.78)	-0.92 (1.42)	1.89 (3.18)	.043 (0.11)	1.70 (3.80)
$\bar{R}^2$	.133	.079	.007	.200	.355	.091	.262
F probability	.056	.099	.390	.006	.000	.000	.000
Number of observations	50	63	66	59	60	298	298

<sup>a</sup> Corrected for heteroskedasticity.

**Table XI.A.10. Pooled equation relating per capita growth to past growth and other variables including price level and income relative to the United States**

Item	1971-1995 <sup>a</sup>
GDP (t-1)	0.121 (1.70)
GDP (t-2)	.069 (1.19)
INV (t-1)	1.05 (0.52)
FDI (t-1)	275.5 (1.85)
Participation rate (t)	.611 (1.53)
Schooling (t)	.458 (0.59)
Price (t)	.133 (2.50)
GDPC/US (t)	-1.09 (0.85)
Constant term	.037 (0.10)
$R^2$	.126
F probability	.000
Number of observations	295

<sup>a</sup> Corrected for heteroskedasticity.

**Table XI.A.11. Equations relating per capita growth to past growth and other variables including FDI-schooling cross product, five-year periods, 1971 - 1995**

	1971-1975	1976-1980	1981-1985	1986-1990	1991-1995	All periods <sup>a</sup>
GDP (t-1)	1.09 (0.65)	.177 (1.45)	.222 (1.85)	.074 (0.61)	.248 (1.71)	.117 (1.71)
GDP (t-2)	.31 (0.18)	.272 (2.03)	.026 (0.25)	.246 (2.39)	.204 (1.60)	.080 (1.40)
INV (t-1)	10.57 (2.19)	-6.41 (2.04)	2.29 (0.73)	-.889 (0.28)	.012 (3.33)	1.25 (0.66)
FDI*schooling (t-1)	-6.08 (0.80)	1.22 (0.18)	2.32 (0.31)	5.16 (0.91)	-1.69 (0.04)	8.43 (2.89)
Participation rate (t)	1.51 (1.89)	.841 (1.87)	-.437 (0.74)	1.41 (2.44)	-.919 (1.70)	.769 (2.04)
Price (t)						.132 (2.75)
GDPC/US (t)						1.35 (1.25)
Constant term	-.33 (0.52)	-.155 (0.32)	1.07 (1.85)	.746 (1.27)	1.39 (2.40)	-.121 (0.33)
R <sup>2</sup>	.150	.107	.025	.224	.325	.130
F probability	.027	.042	.261	.002	.000	.000
Number of observations	52	63	66	62	61	301

<sup>a</sup> Corrected for heteroskedasticity.



# CHAPTER XII

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## THE SOCIAL RESPONSIBILITY OF TRANSNATIONAL CORPORATIONS

### A. The context for the social responsibility of TNCs

Privatization, deregulation and liberalization create more space for firms to pursue their corporate objectives. International agreements give more rights to firms to operate internationally. Should this expansion of action, space and rights be accompanied by an increase in corporate responsibilities? In the international context, this question attracts particular attention because TNCs are one of the principal drivers of globalization. They are also seen to be the most important beneficiaries of the liberalization of investment and trade regimes, with rising influence on the development of the world economy and its constituent parts. The concept of “social responsibility” captures the search for an answer to this question. It implies that firms have obligations that go beyond what countries require individually, and agreements prescribe internationally. The assumption of greater social responsibility by TNCs would be particularly important in light of the economic and social disruptions that accompany the globalization process, which -- if not tackled -- could threaten the very framework within which firms build their international production systems.

Corporate social responsibility concerns how business enterprises relate to, and impact upon, a society's needs and goals. All societal groups are expected to perform certain roles and functions that can change over time with a society's own evolution. Expectations related to business enterprises, and particularly TNCs, are undergoing unusually rapid change due to the expanded role these enterprises play in a globalizing society. Discussions relating to TNC social responsibility standards and performance therefore comprise an important component of efforts to develop a stable, prosperous and just global society.

TNCs, by definition, operate in multiple societies around the world, responding to each country's legal requirements while adjusting to diverse social and economic conditions. Occasionally, TNCs are caught between conflicting requirements or expectations in different countries. Multiple public and private sector groups comprise overlapping societies in the local, national and regional settings in which TNCs operate. At the same time, TNCs seek to maintain their corporate identity and the operating procedures of an integrated global enterprise. The context for the social responsibility of TNCs therefore encompasses a multilayered environment of societal requirements and expectations. Overlaying this collage is the fabric of an emerging



global society in which emerging common standards and expectations must also be met, including concerns for the special development needs of the world's poorest countries.

Economic models that rely on competitive market disciplines and the regulatory functioning of public authorities do not fully capture the dynamics of the current globalizing economy, particularly for developing countries in which marketplace competition is often insufficiently developed and governmental resources are often inadequate for the task of effective regulation. Under these circumstances, a governance vacuum may develop, underlining the responsibilities of TNCs. Indeed, greater corporate social responsibility may prove important for broad support for a globalizing world economy.

## **B. Meanings of corporate social responsibility**

Corporate social responsibility encompasses an array of meanings and intended applications that have undergone substantial modifications over time. These are important to note and understand because they influence the dialogue between governments, business and other civil society groups. The same term, or its variations may carry different implications among various parties regarding the legitimacy, obligations and impact of corporate social responsibility standards.

### **1. Beyond compliance with law**

Corporate social responsibility is sometimes mistakenly equated with either corporate philanthropy or simple compliance with law. These two ideas actually stand at opposite extremes to the social responsibility concept whose focus rests centrally on a firm's operational behaviour and its impacts on the surrounding society. Corporate philanthropy involves an activity extraneous to a firm's actual operations: while generally appreciated by social recipients, it does not represent an essential or even necessarily expected business function. By contrast, corporate compliance with law is no more than the mandated minimum necessary to permit the continued existence of any legally-chartered corporate entity.

The philanthropic tradition is rooted in the personal or family origins of business enterprises, which in many countries has led to both personal and corporate gift-giving for worthy causes, as well as to the direct involvement of firms in the provision of housing, schools, social facilities and other amenities for employees and local communities. Where wealthy industrialists such as Rockefeller, Carnegie or Ford in the United States or Cadbury in Europe have made gifts or established foundations, it was the individual not the firm who determined the nature, rationale, and ultimate beneficiaries of any gift. The rise of public corporations with dispersed stock ownership extended philanthropic activities from the personal to the corporate. Top executives in large corporations can approve programmes that include contributions to a variety of not-for-profit activities. However, because the gifts derive from corporate assets managed by the executive rather than from personal funds, the professional manager has certain fiduciary responsibilities not to dispose of shareholder assets in ways that do not advance longer-term returns to those corporate owners. Complex tax calculations and even more ambiguous public image and reputation factors leave ample room for managerial discretion, but the stewardship concept and a professional manager's fiduciary responsibilities influence corporate contributions to social causes.

A confusion between corporate philanthropy and corporate social responsibility can arise from this connection between corporate giving and a firm's business activities. Recipients of corporate gifts are often local communities in which an enterprise maintains its headquarters or significant production sites. Other gifts may seek to improve educational programmes in technical fields connected to corporate operations, or sponsor youth or elderly programmes related to the age groups comprising a firm's main product market. In these cases, philanthropic motivations can blend with marketing or brand-name enhancement objectives, creating a link between "good deeds" and corporate interests. However, such a philanthropic programme is really tangential to how a firm's *operational* behaviour impacts on society, which is the essence

of corporate social responsibility. An external programme of “good deeds” will not protect a firm whose actual operations harm its surrounding society, nor will a society reject productive, well-behaved firms just because they do not engage in philanthropic activities.

Compliance with legal requirements constitutes a mandatory minimum standard for corporate conduct. Corporate entities are legal persons granted the right to exist and operate within a society, subject to the laws of that society. Violations of law subject firms to civil or criminal penalties and can result in revocation of the corporation’s licence to operate. Some international instruments include references to a general duty of TNCs to observe the laws of the host country (UNCTAD, 1996c). However, these provisions simply recognize the essential role of national law in setting a mandatory minimum floor for corporate conduct. Corporate social responsibility rises above this required floor to incorporate standards of behaviour that may be expected, but are not required, under a society’s legal statutes.

Compliance with law, then, is really nothing more than a minimum standard of conduct legally necessary to the corporation’s continued existence. Corporate social responsibility that extends beyond legal mandates can help meet societal expectations in the absence of statutory devices. Such conduct may be particularly important to meeting social needs in developing countries where legal regimes may be absent or underdeveloped in areas related to certain aspects of TNC conduct. There are also cases where the existing legal framework in a country runs counter to internationally-accepted principles and values regarding, for example, human rights as well as labour and social standards. In these cases, corporate social responsibility might even require that TNCs ignore or go beyond local law rather than take advantage of governance failures of the law-making or enforcing institutions in a country. Prominent examples are situations where a country’s laws rule out the formation of trade unions or any other forms of organized labour activities and where TNCs that seek to comply with global corporate responsibility principles would - nevertheless - allow or even encourage such activity among their own workforce.

## **2. Evolving corporate social contracts and stakeholder interests**

The intellectual foundation for most evolving views of corporate social responsibility lies largely with the notion of a “social contract” between a corporation and its host society (UNCTAD, 1994a, chapter VIII). The legal incorporation process results in a formal corporate charter that grants an enterprise the right to operate within the governing society’s body of established laws and regulations. From one viewpoint, these legal requirements can be seen to constitute the full extent of a corporation’s societal responsibility; for anything else, “the business of business is business” (Friedman, 1983, 1984). A contrasting philosophy, however, asserts a broader, extra-legal social contract that encompasses a society’s implicit assumptions and expectations regarding the behaviour of corporations to which the society has granted a right of existence (Donaldson, 1984; Donaldson and Dunfee, 1994). This social contract incorporates a firm’s contractual legal obligations but extends beyond them to include additional expectations or responsibilities that are not (currently) mandatory. The contents of a corporation’s social contract can evolve more rapidly than its legal charter, reflecting a society’s changing social and cultural mores. When governed parties, such as corporations, are slow to comply with new societal values, those norms may then be formulated into legally-binding mandates.

In several respects, social contract theory helps bridge the conceptual gap between the early history of voluntary gifts involving personal or corporate philanthropy and broader, contemporary concepts of corporate social responsibility. The first essential step is to attach a stronger sense of moral duty or obligation to desired corporate activity. If certain norms of behaviour are part of an implicit social contract, then complying corporate actions become a more obligatory response rather than a philanthropic “good deed” whose design and initiation rest entirely unilaterally with the charitable benefactor. A second element arises from the potential relationship between social and legal contracts: to the extent that evolving values encompassed within social contract expectations may become viewed as “moral minimums”, the expectation is strong that those norms will be made into legal mandates, unless complied with “voluntarily”. This notion corresponds to the implicit (or sometimes explicit) “threat” that some corporations

perceive behind “voluntary” codes of conduct, where noncompliance may result in even more restrictive mandatory regulations. The third link ties social responsibility standards more closely to the essential nature of corporate operations. Social contract theory encompasses a broad range of corporate behaviour, certainly including the normal operating standards for a firm’s core activities. This operational agenda introduces social responsibility notions into a firm’s internal operations whereas self-initiated acts of charitable giving to external constituencies keeps non-legal societal standards at a safe distance from the corporation’s inside processes. Hence, corporate social responsibility has come to be associated with standards of performance that are applied to both internal and external corporate activities, addressing societal norms that are not (but may become) legally-required mandates.

Stakeholder analysis represents a companion concept to social contract theory. A stakeholder approach seeks to define corporate social responsibility broadly in relation to the groups or interests that affect, or are affected by, a corporation’s actions (Freeman, 1984). A contrasting shareholder view of corporate responsibility focuses more narrowly on an enterprise’s need to serve the interests of its owners by pursuing and delivering profitable returns to its investing shareholders (Friedman, 1983, 1984; Levitt, 1983). Shareholders are indisputably important stakeholders in business enterprises. But these two concepts carry very different implications about whether shareholder interests should be given exclusive or even relative priority over other stakeholder goals (Davis, 1977).

No consensus exists on any single list of corporate stakeholders, although most discussions include groups such as shareholders, workers, managers, customers, suppliers, local communities and governments. Affected stakeholder interests can also be conceptualized in such terms as the unknown or as yet unrecognized interests (future generations or unexpected side-effects). To some degree, the number of relevant stakeholders, and the nature of a corporation’s social responsibility to them, vary with a corporation’s own unique characteristics, including its size, sector, product and operations. In any event, it will comprise all those that – for one reason or another – feel that they are affected by a company’s operation.

The size, scope and impact of modern TNCs extends their potential stakeholder groups beyond the realm defined by the normal activities of national corporations. In all societies, some groups affected by corporate activity will lack the economic or political power to ensure that their interests are represented adequately through market mechanisms or governmental regulations (Carroll, 1989; Donaldson and Preston, 1994). In a global society, however, the under-representation of developing country needs and concerns presents a challenge of far greater magnitude, with considerably broader consequences. Special concerns arise from TNC interactions with developing countries, where FDI can play a large role especially in a relatively small domestic economy. In countries with weak competitive discipline of efficient markets or lacking “good governance” reflected in effective governmental institutions to represent the public interest, TNC social responsibility requires that the corporation pay special attention to the interests of under-represented stakeholders that could be adversely affected by business operations.

### **3. The scope and content of corporate social responsibility**

The scope of corporate social responsibility is conceptually quite unbound at the present time. Although the debate between TNCs, civil society and governments often focuses on a few key issues – notably human rights, the environment and workers’ rights – this list is by no means exhaustive. In principle, a company is broadly responsible for the consequences of its operations, including direct impacts as well as unintended side-effects or other externalities that affect third parties. In fact, a more expansive definition of the scope of social responsibility would also cover firms linked to another firm by more or less strong business ties (e.g. with supplying firms) — what, in the environment discussion (chapter X) was called the “environmental footprint”. Calls for greater corporate social responsibility generally arise from incidents involving negative external effects in areas in which legal responsibilities are not (yet) clarified. These externalities can occur in a wide range of areas involving various stakeholder

groups. Negatively affected groups will ask companies causing these impacts to take measures to prevent, reduce or rectify such consequences, or otherwise to internalize the costs resulting from their activities. External effects can, for example, relate to the social changes produced in a community by a TNC's decision to close down large existing operations. Negative externalities involving environmental impacts are well known.

Although the list of issues that can be included under a comprehensive definition of corporate social responsibility is long (and could include, e.g. consumer rights, information disclosure and fiscal and commercial probity), very few issues actually receive levels of public attention that might convince TNCs to include them in their responsibilities. These key issues — which were mentioned above — distinguish themselves from other issues largely because they possess a broadly accepted base in existing international norms and are linked to on-going discussions on global instruments (Annan, 1999) and they are supported by groups with significant political or economic power. These groups — largely based in developed countries — might either play a key function in the political decision-making process of the home or host country of TNCs, or they have sufficient economic power that they could, for example, influence important consumer groups. Many other issues, especially ones that may particularly affect people in developing countries, go often unnoticed by the wider public and are not taken up by TNCs as long as they are not associated with sufficiently influential public pressure. Thus, a number of development-related issues — such as technology transfer, training of the local workforce, the importance of backward linkages and the promotion of local entrepreneurship — that are of great interest to developing countries are generally not included when TNCs and civil society in the developed countries engage in debates over corporate social responsibility.

#### **4. Business, civil society and government perceptions of corporate social responsibility**

The relationship between standards of corporate social responsibility and potential legal requirements governing corporate operations lies at the heart of the sometimes adversarial relationship between civil society groups and the business community. For many civil society groups, corporate social responsibility signifies conduct that rises above the minimum required by law but still constitutes a corporate duty to act rather than a more optional norm or charitable “good deed”. This view — that corporate social responsibility standards are, in fact, normative obligations — is evident when civil society groups implicitly or explicitly threaten to seek legal mandates should business fail to comply with acceptable voluntary guidelines deriving from the social contract. Private enterprises on the other hand generally prefer the flexibility of self-designed voluntary standards. However, when voluntary guidelines are devised as part of a public process involving governments and/or civil society, corporate executives tend to worry that the content and precise wording of voluntary guidelines may become a precedent for subsequent legal requirements. One result is a tendency to assign corporate legal departments the task of representing business interests in discussions regarding how social contract concepts might be used to develop voluntary guidelines or codes of conduct, often motivating a drive for minimalist norms in case they should become the basis of future legal mandates.

The business community's aversion to binding international legal standards governing corporate operations contrasts with its strong advocacy of international law commitments applied to the obligations of governments towards foreign investors. This view is advocated on issues such as expropriation and compensation standards, and guarantees of non-discriminatory national treatment relative to domestic firms. In these cases, governmental responsibilities are seen as normative duties or obligations, based on fair treatment principles, that should be backed by international legal sanctions. The legal advocacy of governmental responsibilities can be seen in some early business community documents on codes of conduct, such as the 1949 ICC International Code of Fair Treatment for Foreign Investment, or the 1972 ICC Guidelines for International Investment (both in UNCTAD, 1996c), which first addressed corporate as well as governmental responsibilities. Similar positions underlay business support for attempts to negotiate binding high standards for governments in the OECD's Multilateral Agreement on



Investment (MAI) (UNCTAD, forthcoming, c) exercise, while maintaining an insistence upon the voluntary nature of the OECD's earlier Guidelines for Multinational Enterprises (UNCTAD, 1996c).

For governments, the relationship between a social contract and legal regulations governing corporate operations assumes new meaning and complexities when the business concerned is transnational. A mismatch exists between the territorially-bounded authority of national governments and the transnational reach of a TNC's integrated international production system. Although an individual country may seek to extend its law extra-territorially, its reach may infringe on another country's sovereignty, raising the potential for political conflicts and confrontations. The obvious solution is to devise a common foundation of international law whose reach will match the global span of modern corporate activities; but in a world of diverse nation-states with often divergent goals and priorities, this remedy proves difficult, time-consuming and, in many cases, impossible to achieve as a near-term outcome.

Generalizations about national government perspectives on the concept of TNC legal and social contracts can mask important differences both within and between countries. Conflicting domestic pressures exist in many countries that reflect divergent views on whether outward FDI and trade expansion are in the national interest, and how resulting economic and social adjustment costs should be managed, at home and abroad. Perceiving an incipient backlash against globalization in some home countries, developing countries may fear that proposals for new TNC social responsibility standards can represent a disguised form of protectionism. Thus, proposals that seek improvements in TNC global operating standards can generate mixed reactions within and among countries based on differing views of how national interests may be affected.

## **5. International guidelines and codes of conduct**

A consensus on TNC-related issues capable of supporting international law formulations was unattainable during the turbulent decade of the 1970s when acrimony over TNC roles and activities was at its zenith, and debates in international organizations split along a widening North-South divide. Faced with the apparent impossibility of generating international standards backed by legal sanctions, some governments initiated discussions aimed at developing non-binding codes of corporate conduct. These devices developed into new "soft law" alternatives, somewhat akin to a defined social contract, whereby governments would endorse and promote the agreed standards as embodying the type of conduct expected of "good corporate citizens". These soft law standards were achievable precisely because they did not require intergovernmental consensus on the level of detail necessary for legally-enforceable regulations. Instead, differing points of view and emphases could be accommodated through creatively broad and sometimes deliberately ambiguous language that left room for flexible implementation.

Such soft law codes were of two broad types. One type stated general standards of behaviour that permitted an adaptable application by private enterprises in light of their individual circumstances. Examples of such instruments are the 1976 OECD Guidelines for Multinational Enterprises, the 1977 ILO Tripartite Declaration of Principles Concerning Multinational Enterprises and Social Policy, and the UNCTAD Code on Restrictive Business Practices, adopted by the General Assembly in 1980 (all in UNCTAD, 1996c). The second type is aimed at more specific types of business activities or conduct and hence can be more precise, although still open to interpretation. Perhaps the best known of these soft law codes is WHO's International Code of Marketing of Breast-Milk Substitutes (UNCTAD, 1996c). Another example is the FAO's International Code of Conduct on the Distribution and Use of Pesticides adopted in 1985, which established voluntary standards of conduct for all public and private entities involved with the distribution and use of pesticides, particularly in countries with inadequate national law to regulate this product. The code was based on the shared responsibility of all segments of society and a cooperative effort between governments of pesticide exporting and importing countries.



Sometimes, voluntary compliance regimes can provide an alternative that permits public action while shifting the burden somewhat onto corporations to discern, apply and monitor the voluntary standards in a way that will be deemed acceptable to that firm's surrounding society (which, in the case of a TNC, actually comprises numerous and diverse societies whose views, expectations and priorities may differ and perhaps conflict). Governments and other constituent groups can then judge corporate performance case-by-case, with wide latitude to interpret the guidelines and respond to corporate actions as they see fit. This aspect might play a particularly important role in countries with deficits of governance, i.e. where governments lack (the will or) the means to enforce legal standards. However, the increasing proliferation of various codes across a broad array of business life caused some corporate concern and incipient signs of a "code fatigue". Civil society groups similarly viewed the spread of voluntary corporate codes with some ambivalence, often evaluating case outcomes as less than satisfactory, and retaining a preference for mandatory alternatives that seemed to promise more assured results. At a minimum, these groups increased their focus on devising monitoring and public reporting programmes that could add enforcement aspects to the implementation of voluntary codes.

Regardless of the question whether legally binding standards are superior to voluntary regimes or not, voluntary standards appear to be gaining renewed favour among some governments. One reason may be that legally binding standards prove difficult to negotiate internationally. In other instances some governments find voluntary compliance regimes more efficient and cost-effective to address technically complex and rapidly-changing business operations. International commerce has fostered a remarkably rapid pace of scientific discovery, product innovation and business adaptation. By contrast, negotiating new international legal regulations can be a cumbersome, time-consuming process that can yield results that may already be overtaken by technological or managerial change the day an instrument enters into force.

## **6. International aspects of corporate social responsibility**

The concept of corporate social responsibility embraces standards of good business practice that can apply to all firms, whether they are national or international in their scope and orientation. Relating social responsibility to TNCs, however, introduced several distinctive elements into debates from the 1970s onward that had not arisen so prominently earlier. As mentioned above, devising international legal regulation of TNC operations can be difficult, because of the multiple sovereign governments involved and the great diversity among their respective countries' perspectives, policies and priorities. These same differences also make it difficult, although somewhat more possible, to forge agreement on non-binding corporate guidelines or codes of conduct. For corporations, the task can be equally daunting, for they must strive to meet or exceed these diverse and sometimes conflicting expectations while operating simultaneously in many sovereign countries around the world. Both the greater number of interested governmental and non-governmental constituencies, as well as the magnitude of differences among them, magnify the challenge of defining and applying corporate social responsibility concepts to TNCs as opposed to national corporations.

Another unique aspect of corporate social responsibility as applied to TNCs arises from activist pressures generated by civil society groups in a TNC's home country (or even a host country) related to the firm's operations in other countries. Although international trading ties may allow groups in one country to bring pressure to bear against interests based in another country, the locally invested presence of a TNC provides an easier channel with a more proximate array of interests and activities to target. From a different perspective, these same TNC interrelationships mean that host governments can face policy pressures generated by non-citizen groups located in foreign countries, channeled through their influence on locally invested TNC operations. Actions by TNCs, whether on their own initiative or impelled by pressures from constituencies in other countries, can be viewed by a host country as unwelcome and unjustified external interference in its internal affairs. Of course, this result may be the explicit intention of

external groups, as was the case with opponents of the former apartheid regime in South Africa. The main point for this analysis is that a TNC's international investments give it a scope and capacity for social responsibility activities in multiple societies and political jurisdictions that broadens the audience of interested external constituencies while increasing the impact of corporate decisions on how to respond to calls for actions based on social responsibility norms.

A TNC's social responsibility may exert a differential impact on developing countries which are most often the target rather than an initiator of such actions. Much of this difference stems from the practical reality that developing countries are more host than home countries for TNCs, meaning that an enterprise will have matured using operating standards developed under a set of foreign legal and social expectations. Although TNCs can and do adjust to their host societies, where significantly different standards are encountered the invested enterprise must decide how to respond, bringing a potential for introducing change within the host society to a degree that exceeds impacts arising under traditional commercial trading relationships.

The differential impact arising from FDI is reinforced by the earlier emergence and maturation of civil society groups in the developed countries. Developing country organizations that represent various elements of civil society are growing in both number and capabilities, and are expanding their ties with similar organizations in other countries. Still, developed country civil society groups provide the main impetus and follow-through influence for defining social responsibility standards and selecting the issues and business applications to target. Even where internationally-defined standards have been achieved — as on certain environmental and human rights, including labour issues — the proposition that local applications by TNCs in host developing countries fall unacceptably short of those standards (even though they may be consistent with local law and practice) is often made by groups from outside the country. Affirmative TNC responses to calls for change will then alter local operations and impacts in response to external rather than internal evaluations of “higher” social values and norms. This outcome may be questioned by developing countries, especially if the evaluation criteria and methodology for social performance measures are designed and implemented from experiential data drawn narrowly from developed countries. In reality, developing-country standards and practices may differ from those used in developed countries, and differ sometimes from desirable internationally-agreed norms as well. In these cases, however, it is important to assure that evaluation and performance measures derive primarily from international and not solely developed-country normative standards. The powerful influence of TNCs based in developed countries, and the prominent role played by similarly-located NGOs, may sometimes obscure the proper societal reference points for normative standards of corporate social responsibility.<sup>1</sup>

## **7. Global corporate citizenship**

The presence of foreign affiliates in many countries also engenders the notion of “global corporate citizenship” (Annan, 1999), ( box XII.1). This idea can be conceptualized more broadly than the recent usage of corporate social responsibility that may appear one-sided if only the responsibilities or obligations of corporations to their host societies are discussed. Citizenship involves both rights *and* responsibilities. The “rights” involve the business community's concerns with standards of treatment in host countries for foreign investors (e.g., national treatment, MFN treatment, fair and equitable treatment) (chapter IV and UNCTAD, 1996c). The “responsibilities” are captured by the corporate responsibility concept as discussed above (section B.3), except that they now extend to the international context. In distinction to the national context, however, the determination of the context of social responsibility becomes more complicated, because TNCs may operate in societies that may well have different norms and expectations.

The citizenship notion also provides a bridge between legal regulations and broader social contract standards, acknowledging that a citizen's responsibilities to society rise beyond a floor of legally-mandated obligations. The addition of “global” to “corporate citizenship” emphasizes that, for TNCs, rights and responsibilities must be reconciled within the global arena that constitutes their “society”. This concept suggests that TNCs are not just legal citizens in each country in which they do business, responsible to that society's standards and mores. TNCs

are, in fact, “global citizens” whose international span, involvement and capabilities confront them with challenges, as well as opportunities, not encountered by national corporations.

The terminology of global corporate citizenship is naturally employed more by international organizations than by national governments, and by NGOs when they are addressing applications of corporate social responsibility outside a TNC’s home country. Corporations themselves tend to use the term in a broadly ambiguous sense that specifies adherence to all host-country legal norms, without much specification of what standards may be global rather than national in character, or how national norms should be dealt with if they conflict with global citizenship responsibilities. On the other hand, TNCs are usually quite clear that international investor rights should be respected if they conflict with national norms (for example, when seeking the better of national treatment and the international law standard).

Global corporate citizenship has come to emphasize *capability* as much as *causality*, with an accompanying shift to notions of “doing good” rather than just “not doing harm”. This broadened concept engenders calls on TNCs based in one country to prevent or rectify disagreeable conditions in other countries, because they have the capacity to influence outcomes, even where the firms may be, at most, distantly connected to the problem’s origin. This type of challenge arises most obviously in the realm of political issues where TNCs are called upon to influence a host government’s policies, or even press for a change in the regime itself (for example, as occurred in protests against the former apartheid regime in South Africa). Activists in such cases often seek to demonstrate linkages by positing various types of TNC support for, or beneficiary interests in, an objectionable regime’s governance. However, the clear trend over the years has been to incorporate as broad an array of TNC actors as possible, despite widely varying degrees of involvement with a country’s political situation, in order to maximize potential capacity to alter outcomes. This historical expansion of corporate social responsibility concepts, particularly for TNCs, underlines the need to work towards a consensus in the

### Box XII.1. Towards a global compact for the new century

The Secretary-General of the United Nations, Kofi A. Annan, challenged world business leaders at the World Economic Forum, Davos, on 31 January 1999 to demonstrate good global citizenship by “embracing and enacting”, both in their individual corporate practices and by supporting appropriate public policies, a number of universally-agreed values and principles:

#### 1. The Universal Declaration of Human Rights

The Secretary-General asked world business to:

- a) *support and respect the protection of international human rights within their sphere of influence; and*
- b) *make sure their own corporations are not complicit in human rights abuses.*

#### 2. The International Labour Organization’s **Declaration on fundamental principles and rights at work**

The Secretary-General asked world business to uphold:

- a) *freedom of association and the effective recognition of the right to collective bargaining;*
- b) *the elimination of all forms of forced and compulsory labour;*
- c) *the effective abolition of child labour;*
- d) *the elimination of discrimination in respect of employment and occupation.*

#### 3. The Rio Declaration of the UN Conference on Environment and Development (1992)

The Secretary-General asked world business to:

- a) *support a precautionary approach to environmental challenges;*
- b) *undertake initiatives to promote greater environmental responsibility;*
- c) *encourage the development and diffusion of environmentally-friendly technologies.*

*Source:* UNCTAD, based on Annan, 1999.

international community regarding how terms such as global corporate citizenship should be understood, defined and applied.

Overall, the idea of global corporate citizenship rests on the linkage between the rights granted in an enabling national and international regulatory framework that permits global business activities, and an accompanying set of social responsibility commitments accepted by TNCs that operate within, and benefit from, an integrating global community. Modern business activities require the certainty and regularization provided by international agreements and institutions. Much of the expansion of global commerce over the past decade stems from the extension of liberal policy regimes wherein TNCs can organize their operations to seek optimal business efficiencies. However, maintaining the current investment and trade framework and ensuring its implementation - much less formulating new international economic instruments - may well depend on corollary progress towards the achievement of related societal goals that lack so specific an international legal elaboration.

### **C. The growing importance of TNC social responsibility**

The increased importance of TNC social responsibility corresponds to the growing scope of activities undertaken by these enterprises in the globalizing world economy (Part One). Another factor that explains the broadened importance of TNCs in the global economy is the conceptual as well as operational expansion in the definition of TNCs, as they are now — in addition to their traditional FDI mode — increasingly defined by a variety of low- or non-equity investments.

Large retailers, for example, face calls for action against abusive working conditions in foreign plants that produce clothing for them under sub-contracting arrangements, although the retailer has no equity ownership or even foreign presence in the country in which the abusive labour conditions exist (see Wal-Mart; Kmart; Kohl's; Dillard Department Stores; Sears Roebuck; Dayton Hudson) (IRRC, 1999a). A similarly broadened scope arises with enterprises whose valuable brand-names reflect many years of significant financial investments in building a product's reputation and image. These firms seek to protect their assets from misappropriation or misuse in foreign markets, establishing contractual obligations and accompanying controls that shape related business activities in those markets, with or without an actual presence by the TNC itself. Other low or non-equity TNC investments are reflected in the rapidly expanding range of international strategic alliances and partnerships that blend the comparative and competitive advantages of firms from several different countries in complex sets of evolving TNC linkages (UNCTAD, 1995a, 1997a).

The changes in the magnitude and nature of TNC activity increase the relevance and importance of social responsibility in two interrelated ways. First, the impact of TNCs on people around the world has grown exponentially as these agents of economic globalization reach into the life of domestic societies through both equity and non-equity mechanisms. Reflecting their increased global span and scope, TNCs have become more capable, proximate and aware actors whose activities can create causal links to societal outcomes in multiple countries and cultures. This impact can raise particular concerns for governments if the main TNC purveyor of change does not even have an invested local presence that is susceptible to the country's legal jurisdiction. This situation is most likely to occur in smaller developing countries whose societies may already be among the most vulnerable to the impact of external forces.

Among linked social responsibility variables, TNC capability seems to emerge as the most prominent factor in recent calls for greater corporate responsiveness. Proximity through FDI certainly increases a TNC's awareness and capability to act in local situations. But - as was evident with social pressures on non-invested retailers - neither a local presence nor direct causality links to abusive conditions are necessary preconditions for asserting that a firm's foreign business ties produce significant social responsibility obligations. TNCs can be called upon to use their expanded capabilities to prevent or to rectify offensive conditions even in countries in which a firm has played no causal role in their creation. These circumstances raise questions about what (and who) should determine the appropriate function and limits on TNC



responsibility for social conditions around the world. A general conclusion, however, is that the expanded scope for business efficiencies permitted by liberalized economic conditions seem to bring with them a new perception of a “global social contract” whereby TNCs that enjoy the freedom and benefits of globalization must accept some expanded responsibilities for managing its effects on various societies.

In a second, related manner, newly expansive views of social responsibility reflect not only the recent growth in TNC scope and influence, but also the broader impact and uncertainty brought on by globalization trends that are only partly driven by TNC activity. The rate of societal change in all countries has increased exponentially over the past few decades, affecting nearly every segment of the population and fostering noticeable feelings of anxiety and insecurity about the future. Globalization brings the potential for more dramatic forms of change, derived from foreign influences, than would have developed more naturally and slowly within a country’s own society. When channeled through FDI directly into a country’s domestic fabric, these external influences can sometimes bypass or overwhelm a society’s traditional adjustment mechanisms, thereby causing unexpected disruption or dislocation in social as well as economic processes.

Evidence of a potential backlash against globalization is now appearing among societal groups most affected by the adjustment costs or other adverse impacts of rapid changes often associated - rightly or wrongly - with TNC activities. These pressures are most evident in labour and environmental organizations but are also present among domestically-oriented businesses that worry about increased competition and other societal interests that fear a loss of national autonomy or identity. In the United States, these concerns threatened congressional approval of the North American Free Trade Agreement (NAFTA) and helped derail attempts to renew “fast track” negotiating authority for new trade agreements. The OECD’s discontinuation of its MAI negotiations is attributable, at least in part, to the successful coordination of public opposition from these various groups (chapter IV). On-going debates in various national and international fora reflect similar efforts to condition any future expansion of trade agreements on accompanying action as regards related labour and environmental issues. This strong pressure from civil society groups reflects, at least partially, their concern that many TNCs have done too little so far to live up to the increased responsibilities in a more liberal global economy.

Having organized their expansion based on globally-integrated efficiencies made possible by liberalized investment and trade regimes, TNCs now confront a substantial challenge to this permissive regime. Globalization could bring about a serious backlash from unresolved societal needs. Considered within a global context, social responsibility thereby takes on immediate practical and political importance for an international business community whose operations are conditioned on continued globalization. In fact, there is a significant recent expansion of attempts to design newly cooperative ways for TNCs to respond, individually and collectively, to the evolving public expectations of a global social contract.

## **D. Recent developments in corporate social responsibility**

Recent developments influencing the application of social responsibility concepts to international business derive from many different sources that comprise the stakeholders of TNCs, as well as from the corporations themselves. The major new development, at least in developed countries, is a proliferation of groups representing general public or specific issue interests that utilize a wide array of public pressure tactics, intermingled with instances of more direct dialogue, to promote an activist view of TNC duties towards an expanding agenda of social responsibility objectives. An expanding number of private enterprises are creating and/or revising individual statements of business principles or codes, although this group would still constitute only a small percentage of the total TNC community. Collective business organizations have adopted a mixed approach. Some sectoral groups actively responded to social responsibility pressures with industry-specific initiatives, while most organizations take a more cautionary approach, with the notable exception of a new statement on environmental principles. Governments continue to use international organizations to promote guidelines or



codes of conduct on issues or in sectors in which international consensus is insufficient to support more precise legal standards. Only occasionally do national governments individually endeavour to develop TNC social responsibility initiatives.

## **1. Increased activities by civil society groups**

A major development, particularly evident over the past decade, is the expanding number, range, coordination and activism among parts of civil society on issues relating to TNC social responsibility. Although some groups organize around very specific products, such as tobacco or nuclear energy, most activism focuses on a relatively small set of major issue themes that are then exemplified and addressed in terms of specific products, companies or events. As mentioned before, the issues most prevalent over the past decade involve labour rights and working conditions, the environment and human rights, reflecting primarily a developed country perspective on TNC social responsibility (box XII.2). Some groups choose to focus principally on one of these areas, such as Greenpeace on the environment or Amnesty International on human rights. Others, such as religious organizations or other socially-directed institutional investors, may be active across a spectrum of social issues. Although most groups originate in the developed countries and draw their most involved membership from that base, an increasing number of organizations is emerging in developing countries as well. Where interests and perspectives are shared, groups may forge ties internationally through affiliated networks, conferences, newsletters and an exponential growth in relatively inexpensive Internet linkages. In fact, the emergence of the Internet is virtually unparalleled in its impact, both on increasing international communication among elements of civil society and on facilitating these groups' outreach to media channels that can focus instant attention on TNC activities worldwide.

This section offers only an illustrative description of the growth, activism and impact of these groups relative to TNC social responsibility developments, but informative examples can suggest the diverse and evolving nature of their activities. For instance, a particularly comprehensive set of social responsibility standards has been developed by several religious organizations and issued by the Ecumenical Committee for Corporate Responsibility as international benchmarks that could be used in TNC codes and against which TNC performance might be measured. This set of standards draws from a number of ILO conventions and other documents to address issues related to a broad range of TNC stakeholders, including employees, customers, suppliers, contractors, shareholders, community relations and the environment (Wild, 1998).

Another recent initiative aimed directly at monitoring TNC performance on social responsibility issues is the Council on Economic Priorities Accreditation Agency (CEPAA), established in 1997 by the Council on Economic Priorities (CEP). An advisory board that included participants from unions, universities, human rights groups, corporations and accounting firms helped draft a Social Accountability standard (SA 8000), conceptually mirroring the ISO 9000 quality standard that has been widely accepted within the international business community. Drawing from provisions of selected ILO conventions and human rights principles, the drafters of SA 8000 constructed a set of specific standards addressing many labour and work condition issues, including child labour, health and safety, freedom of association, collective bargaining, discrimination, work hours and wages. Signatory companies can be measured, audited and accredited under SA 8000, which might provide labelling or reputational advantages if the standards are met. Several international accounting firms are closely associated with this undertaking while some other companies have indicated their intention to use this programme (Wild, 1998).

Trade unions actively participated in the development of several international standards relating to TNCs, including the OECD Guidelines and, principally, ILO instruments (conventions, recommendations, the Tripartite Declaration and the Declaration on Fundamental Principles and Rights at Work). Union concerns encompass both operational conditions in the

**Box XII.2. Comparative codes of conduct and their auditing and follow-up procedures**

Possible precedents for initiatives to strengthen corporate social responsibility are two programmes that have sought, with varying success, to engage United States companies in collective, yet voluntary, codes of conduct. Each programme required – or promoted – some degree of reporting by the companies for oversight by outside parties. One was the Sullivan Principles, which requested companies to improve workplace and social conditions for blacks in South Africa during the apartheid era. The other one, still in effect, is the Ceres Principles, an environmental programme with approximately 50 endorsers.

**Sullivan Principles**

The Sullivan Principles were the brainchild of the Rev. Leon Sullivan, a Philadelphia minister, black civil rights activist and member of the board of directors of General Motors Corp. (GM) at the time of the Principles' genesis. Sullivan invited several leading United States companies to join him in formulating a set of principles designed to guide corporate activities in improving the conditions of black workers, their families and communities, which he released in March 1977, together with representatives of 12 major United States corporations, including GM.

The six original principles called for the desegregation of facilities, equal pay for equal work, equal employment practices for all employees, skills training and black advancement within the workplace, and improvement of employees' lives outside the workplace.

Sullivan expanded and amplified the original Principles four times before he left the programme in 1987, to present ever more challenging objectives to signatories and to respond to developments in South Africa. The two most significant amplifications were the second amplification, in May 1979, which required signatories to challenge South Africa's influx control laws and to allow their employees to unionize, and the fourth amplification, in November 1984, which required companies to support the ending of all apartheid laws.

The number of signatory parent companies to the programme grew to a peak of more than 180 in 1985-1996, but dwindled thereafter as United States companies withdrew from South Africa in the late 1980s. Approximately 50 companies were involved in the programme in 1994, its final year.

Under the programme, a company was eligible for signatory status when it (1) expressed a written commitment to the Principles, (2) paid an annual assessment, and (3) submitted a completed questionnaire to the consulting firm of Arthur D. Little Inc. (ADL) for evaluation on an annual basis. A senior vice-president of ADL monitored the signatories and drew up an annual questionnaire that signatories were expected to complete. Each year, ADL provided a summary report of the signatories' progress in implementing the Principles and listed which of three grades each signatory received for the year.

There were three ratings for the signatories: I - Making Good Progress, II - Making Acceptable Progress, and III - Needs to Become More Active. In order to get a rating above Category III, a company had first to meet 14 basic requirements, including: allowing freedom of association, providing equal pay for equal work, paying a minimum wage at least 30 per cent above the poverty line for a family of five, ensuring that all company facilities were available to all races, and ensuring that the implementation of the programme and the ratings were regularly reviewed with a representative group of employees.

If a signatory met all 14 basic requirements, it was then eligible to earn a passing grade (Category I or II), based upon its performance in such "action areas" as employee training and community development. In assessing the companies' performance, ADL largely relied on statements in the questionnaire, but it did require the signatories to submit their complete questionnaires, along with figures on total payroll, number of employees, wage of lowest-paid workers and total spending on community affairs, to an outside accounting firm before sending them to ADL.

**Achievements**

During the first few years, many of the signatory companies with factory operations were preoccupied with desegregating cafeteria and locker facilities. But, as time went on, the focus of the programme turned to training and development, community development and social justice. Between 1981 and 1990, for instance, the percentage of the signatories' managerial positions filled by black South Africans increased from three to 13 per cent. In contrast, the percentage of managerial jobs held by blacks at South African firms was probably less than five per cent, according to South African analysts. However, some critics suggested that the apparent success of the signatories reflected, in

/...

**(Box XII.2, concluded)**

part, the appointment of blacks to token positions with limited powers and responsibilities. Less open to question, though, was the scale of the signatories' philanthropy.

From 1986 through 1993, the signatories to the Sullivan Principles collectively contributed nearly \$30 million (measured in 1996 dollars) to community affairs focusing on South Africa's black population. Anecdotal evidence, as well as a pilot survey by IRRC in 1995, suggested that this social investment by United States companies far outstripped that of other companies of comparable size in South Africa. The Statement of Principles also galvanized initially reluctant United States companies to lobby privately and publicly for the ending of apartheid laws.

**Motivating factors**

A compelling reason for United States companies' involvement with the Sullivan Principles was that the United States and international anti-apartheid movement gathered steam when the Principles first made their debut. Many companies needed the programme to defend themselves against critics who said their operations supported apartheid. Against this pressure, the Sullivan Principles had features that gave it credibility with important constituencies – particularly institutional shareholders – that were prepared to let companies demonstrate the benefits of “constructive engagement”. The companies were rated by a respected third party (Arthur D. Little), these ratings were made public, and for many years the programme was guided by a prominent figure (Sullivan) from outside corporate circles.

**The Ceres Principles**

The Ceres Principles were drafted and introduced in September 1989 by 15 major environmental groups as well as several major institutional investors, including the New York City Employees' Retirement System, the California public pension system and the Interfaith Center on Corporate Responsibility, which in turn represents more than 200 Protestant denominations and Catholic orders.

The 10 Ceres Principles include broad statements on protecting the biosphere, sustaining natural resources and reducing the volume of waste. Other provisions focus on conserving energy, reducing risks and marketing safe products. The last four principles – and the most contentious – ask companies to restore the environment to redress damage they may cause, disclose potential hazards of their operations, make senior management and the board of directors more accountable for environmental matters, and conduct annual environmental audits of their operations using a standard Ceres report, with results reported to the public.

Today, the Ceres campaign is directed by a 23-member board of directors that represents the 50-plus institutional investors, public interest groups and environmental organizations that make up the Ceres coalition. The coalition's executive director heads a small staff, and much of the coalition's work is handled through four committees of coalition and staff members. Over the last 10 years, 48 firms have endorsed the Ceres Principles, including 19 publicly traded companies, among them being General Motors, Coca-Cola, BankAmerica, Bethlehem Steel, Polaroid and ITT Industries.

The primary costs of endorsing the Ceres Principles are the payment of annual dues (which can range up to \$25,000 for a company with \$25 billion or more in annual sales) and completion of the annual Ceres report form. The latter requires considerable time and effort for companies not already collecting the requested information for other purposes. The reporting exercise provides a comprehensive accounting of the company's environmental affairs; many endorsers use the annual questionnaire as the basis for their own corporate environmental reports. Companies' attendance at periodic meetings convened by the Ceres coalition is encouraged but not required. Some companies welcome the opportunity to interact with environmental groups, investors and other companies in a collegial setting to discuss environmental and sustainable development issues.

In 1998, Ceres embarked on a new Global Reporting Initiative, which aims to establish voluntary, standardized measures of corporate sustainability reporting worldwide. The Initiative has grown to include numerous global organizations, including the World Business Council for Sustainable Development, the (United Kingdom) Association of Chartered Certified Accountants, the Stockholm Environment Institute, the (United Kingdom) Imperial College of Science, Technology and Medicine and the United Nations Environment Programme. In April 1999, the Initiative's members formally introduced in London the draft Corporate Sustainability Reporting Guidelines that will form the basis for a pilot corporate reporting programme expected to involve about two dozen TNCs in the year 2000.

*Source:* UNCTAD, based on IRRC, 1999b.

workplace and process rights such as freedom of association and collective bargaining. Trade unions occupy a somewhat different position than other civil society groups, however, due to their traditional economic role in contractual negotiations with business. General union preferences are to seek legally binding regulations on labour issues rather than voluntary TNC codes. The difficulty with forging such agreements internationally is demonstrated by the mixed success of even the core ILO conventions: not all countries have ratified these standards and, among those that have, practical implementation or enforcement is sometimes lacking.

Several recent labour initiatives adapt the concept of TNC social responsibility standards to the context of labour-management bargaining. In 1997, the International Confederation of Free Trade Unions (ICFTU) adopted a list of minimum labour-practice standards that should be included in codes of conduct, essentially comprising a model for developing agreements with corporations that would cover their practices as well as potentially those of business partners such as franchisees, licensees, sub-contractors and principal suppliers. During the same year, nearly two dozen business and trade unions representing the European textile/clothing industry reached the EURATEX agreement that identified core labour issues, referenced by ILO conventions, that companies are called upon to adopt, with a follow-up monitoring and review process. The organizing committees for the Sydney Olympic and Paralympic Games also agreed to a labour-practice code for licensees of goods produced for those events. In other cases, new labour-practice standards evolved from the use of media revelations to build public pressure on companies whose products involved abusive practices, most notably with the use of child labour for stitching soccer balls in Pakistan and rug production in India (Wild, 1998).

Despite such examples of success among trade unions in formulating some general international and more specific sectoral standards, the degree of international cooperation and coordination among organized labour may face constraints because interests are still essentially perceived and pursued nationally, with workers in other countries representing potential competitors for jobs that TNCs can shift among different geographic locations.<sup>2</sup> This factor also differentiates labour from many other civil society groups that appear to pursue more complementary or at least non-competing goals.

Human rights groups such as Amnesty International and Human Rights Watch are sometimes aligned closely with labour groups because a number of human rights principles pertain to labour relations and working conditions, exemplified by some of the recent high-profile cases involving forced labour, child labour, restrictions to freedom of association and the right to collective bargaining, as well as abusive “sweatshop” working conditions. Other human rights issues extend to cases involving political oppression, where the relationship to TNC operations may be indirect rather than causal. Following from experiences with the successful fight against apartheid in South Africa, many of these groups employ similar tactics and standards in pressing for socially-responsible business behaviour in other countries in which human rights abuses exist. Goals may extend from respecting and preserving employees’ human rights in the workplace and beyond, in order to not take advantage of the situation in these countries, to intervening actively to promote change in political conditions, or discontinuing business ties with the offending country.

A range of measures may be employed to urge TNCs to adopt a human rights agenda among their social responsibility obligations, with an evolving list of countries as applied targets for action. Recent activities have focused on generating public as well as private commercial sanctions on TNCs that continue an involvement with regimes that significantly abuse human rights. This approach is exemplified by the steps taken by some United States’ state and metropolitan governments to enact selective procurement bans on products from such companies. Business organizations oppose this use of purchasing sanctions, and a number of governments accept that such regulations violate WTO trade rules (Kline, 1999).

Debates involving human rights standards and TNC social responsibility usually revolve around two fundamental issues. The first concerns who should decide whether and when significant human rights violations are occurring in a specific country. The second issue is determining the appropriate relationship between human rights obligations and the actions that



business entities (particularly foreign-based TNCs) might take to influence a host country's domestic political affairs. Failure to achieve a broad consensus on these issues, perhaps backed by the institutional processes of a relevant international organization, risks placing corporations in a difficult position. Target TNCs can be caught between competing value standards of political non-interference in a country's domestic affairs and the pursuit of either activist involvement in such politics or a penalizing withdrawal from the country aimed at forcing changes in the host government's policies.

Civil society groups have been particularly successful "drivers" of environmental concerns (chapter X). Recent activities by environmental NGOs have focused primarily on urging governments to adopt and improve international and regional accords related to the protection of the environment. Some of this emphasis undoubtedly stems from the relative success of international negotiations of the Montreal and Kyoto Protocols, with their attendant need for a resource commitment to follow-up activities. Nevertheless, efforts continue to define and apply social responsibility concepts to TNC environmental practices, ranging from the Ceres Principles (box XII.2) developed in the aftermath of the Exxon Valdez oil spill to various initiatives related to forestry management and the protection of sensitive rain forest regions (IRRC, 1999c). TNCs may also be targeted more individually as particular events or actions unfold, such as Shell's Brent Spar decision. This particular case is noteworthy because Shell altered its course of action under concerted pressure from environmental groups, even though the company's original plans had been approved by the Government of the United Kingdom.

## **2. Business responses**

For the reasons discussed earlier, the business community remains generally cautious regarding international initiatives that call for expansive new commitments to TNC social responsibility obligations. More generally, however, the diverse membership of general business organizations makes it difficult to reach a consensus among various industries on a common position that reflects the interests and needs of the full business community. As with some intergovernmental institutions comprised of diverse country members, organizational dynamics can either stall action or drive it towards a lowest common denominator position.

However, some broadly inclusive business organizations such as the International Chamber of Commerce (ICC) and the International Organisation of Employers (IOE) have been able to define joint positions on social responsibility issues among their members and, sometimes, have even come up with codes or standards for their members. The ICC, for example, has developed and revised codes over the past half century dealing with international business practices in advertising, marketing and sales. It has also adopted a statement on Extortion and Bribery in Business Transactions (ICC, 1977) that recommended standards and outlined a complaint procedure aimed at discouraging such practices. Although the envisioned case reporting procedures went unused, the standards were recently updated (ICC, 1999b), in line with contemporary action taken against bribery and corruption by the OECD and OAS (OECD, 1999a; OAS, 1999) (chapter IV). Another relevant ICC initiative was the 1990 Business Charter for Sustainable Development (ICC, 1999d) which outlined 16 principles for environmental management in an action taken preliminary to the 1992 Rio Conference.

Other collective business groups are organized along national, sectoral and/or issue lines. National associations have been most occupied in developing input and positions to influence ICC activities. Japan's Keidanren organization, however, has been notable for sponsoring a set of "Guidelines for Investment Activities in Developing Countries" in 1973, subsequently revised several times and last issued in 1996 as the "Keidanren Charter for Good Corporate Behavior" (UNCTAD, 1994a; Keidanren, 1999). It is frequently cited by Japanese corporations as embodying relevant standards of conduct for their international operations. A few business-based groups with diverse memberships have organized along issue lines, particularly related to environmental concerns. For example, the World Business Council for Sustainable Development was formed in the preparatory phase of the UNCED Conference in Rio de Janeiro in 1992 by business leaders from a range of different industries. The Global Environmental Management Initiative (GEMI)



similarly promotes environmental standards among its members on a voluntary, self-enforcement basis.

Several business groups have organized around a broad social responsibility theme, often energized by top executive involvements. The Caux Round Table, with its statement of broad "Principles for Business" (CRT, 1999), as well as the Global Sullivan Principles launched in Accra, Ghana, in May 1999, and the Prince of Wales Business Leaders Forum, are examples of this type of activity.

Sectoral organizations representing certain industries or product lines have been even more dynamically engaged, generally prompted by events that cast the industry and its members in an unfavourable light, generating public pressure for action. Two prominent codes developed on the international level that include both general principles and some specific standards dealing with labour and working conditions come from the World Federation of the Sporting Goods Industry and the International Council of Toy Industries (ILO, 1998b). The latter code also covers environmental protection, which is the central focus of the "Responsible Care" initiative (ILO, 1998b) originated by the Canadian Chemical Producers Association in the aftermath of the disastrous gas leak in Bhopal, India; it was subsequently endorsed by over 40 chemical associations in various countries. Social responsibility concerns related to consumer issues prompted the development of a Code of Marketing Practices by the International Federation of Pharmaceutical Manufacturers Associations (IFPMA) (IFPMA, 1984). This code, which is still operational and is meant to be implemented by national pharmaceutical associations, was developed contemporaneously with the controversy surrounding the marketing of infant formula that led the World Health Organization to adopt an International Code of Marketing of Breast-milk Substitutes in 1981 (UNCTAD, 1996c).<sup>3</sup>

Many individual companies adopt their own codes of conduct that address social responsibility issues, sometimes drawing on an industry code or a set of international business principles. There is no broadly accurate count of these documents. Their numbers began to expand in the mid-1970s, particularly among United States TNCs caught up in a set of overseas bribery scandals. More recent code adoptions by additional TNCs from Europe and other regions have boosted the number of corporate codes well into the hundreds. Still, these numbers fall far short of the tens of thousands of TNCs engaged in FDI, with few representative corporations from among developing country TNCs. The vast majority of TNCs therefore remain neutral or simply inactive in terms of individual codes of conduct.

The content of existing individual TNC codes varies widely in purpose, coverage, specificity and implementation mechanisms (box XII.3). Those most relevant to TNC social responsibility issues respond directly to important external constituency concerns. To be functional, however, the codes must also provide practical internal guidance for corporate operations (Kline, 1985; IRRC, 1999a). Broad, hortatory principles have little credibility inside or outside a corporation if they do not address real operational issues and decision-making processes. Related to this, an increasing number of companies base their codes on internationally-agreed standards rather than their individually-defined norms. Sustained, explicit interest and involvement by top executives is also essential to underline a code's importance, giving it enough credence to stand against short-term profitability pressures. The sustainability of codes critically depends on whether or not they reflect the values and behavioural expectations of owners of companies, employees, customers and the communities within which companies operate.

Individual TNCs adopt codes of conduct for a variety of reasons, ranging from the personal interest and beliefs of the chief executive officer to explicit expectations voiced by important governmental or other public interest groups. Often TNC code development is reactive, sparked by instances of perceived misconduct by a firm or others in its industry. Sometimes firms are proactive yet still defensive, formulating codes designed to head off possible public criticism. Among the most common factors that impel TNCs to promulgate individual codes are the following: firms, or their business associates, have received criticism for their practices; the industry is "high risk" in terms of exposure to or involvement with recognized social

responsibility issues; the company has a “high-profile” name or product brand whose reputation and image is commercially important; and the firm’s sales are vulnerable to organized customer boycotts or other commercial sanctions.

Among prominent recent illustrations, these factors are evident in the impetus for individual corporate code adoptions by Reebok and Nike, responding to intense public criticism of labour conditions existing in the foreign plants of some of their contractors. These codes drew heavily on the prior experience of Levi Strauss & Co. which was among the pioneers in enunciating labour standards that contracting firms were expected to follow, with a risk of contract termination for violators. Levi Strauss was also unusual in explicitly identifying a country’s human rights record as an important factor in corporate foreign investment decisions. Publicized examples of the company’s actual application of these code standards lent credibility to their declaration (UNCTAD, 1994a).

### **Box XII.3. Royal Dutch/Shell: an illustration**

The Royal Dutch/Shell Group illustrates a number of points relating to individual TNC code development while also providing an unusually explicit link to international social responsibility standards. The third-largest TNC if measured by foreign assets (\$70 billion in 1997, table III.1), Shell operates in the environmentally-sensitive natural resources sector, employing over 100,000 workers in around 130 countries with diverse political and socio-economic characteristics. Recognizing that a common value framework was necessary for a devolution of decision-making throughout Shell’s global network, corporate management initiated in 1997 a revision of its “Statement of General Business Principles” first published in 1976 after extensive internal and external discussion, interviews and polling. The revision, which formed part of a wider corporate review that started in 1994, also coincided with two high-profile events that subjected the company to extensive public criticism for conduct relating to environmental management and human rights standards.

One controversy for Shell concerned the potential environmental impact of disposing of its Brent Spar oil platform in the North Sea, leading to its recycling as a floating dock. Before an accommodation was reached, the company sustained extensive organized protests and even had some service stations shot at or firebombed. The second controversy surrounded Shell’s activities in Nigeria where its oil operations were accused of causing substantial environmental damage, leading to significant and sometimes violent opposition from the local population. Nigeria’s then-ruling military regime used force to protect the Shell facilities and suppress local opposition involving leaders of ethnic groups opposed to the regime. Protesters criticized Shell’s involvement with the Nigerian regime and its failure to secure the dissidents’ safety.

Earlier versions of Shell’s code had cited its consistency with both the OECD Guidelines and the ILO Tripartite Declaration of Principles. The new version gives explicit support to human rights. Separately, the company has also publicly endorsed the United Nations’ Universal Declaration of Human Rights. Shell’s component companies are expected “to express support for fundamental human rights in line with the legitimate role of business and to give proper regard to health, safety and the environment consistent with their commitment to contribute to sustainable development”. To give practice to the Principles, Shell pledged to establish training programmes and procedures to help managers deal with human rights dilemmas as part of a “Social Responsibility Management System”. It also agreed to report on its performance with respect to the Principles and to permit independent auditing of the results and to work towards auditing of results across the economic, social and environmental pillars of sustainable development. Shell’s Chairperson, Mark Moody-Stuart, gives some credit for his own views on corporate social responsibility to a social activist who reportedly challenged him to reverse the standard business notion of a company and its stakeholders. Rather than seeing the corporation at the centre, surrounded by the individuals or groups it impacts or is affected by, the competing perspective would view the society as central, with the corporation as only one of many stakeholders in the society (Hamilton, 1998).

*Source:* UNCTAD.

Although most corporate codes appear to be associated with past or potential public criticism, backed by possible commercial sanctions for misdeeds, positive inducements can also play a role. For some corporations, proactive corporate social responsibility is perceived as good business. Individual codes can serve to enhance the corporate image and, quite possibly, bottom-line profitability as well. Corporations may explicitly advertise their compliance with evolving social responsibility standards to gain favourable public recognition, particularly on environmental issues that involve recycling, forestry management, CFC-free products, dolphin-friendly tuna fishing or no-animal-testing policies. Some surveys show roughly one-half or more of customers claim that their product purchases are influenced by “ethical” considerations (Wild, 1998). Social investment funds also serve to reward enterprises for good behaviour on various social responsibility criteria rather than just penalizing the objectionable conduct of other firms. Estimates suggest that these funds manage over \$1 trillion, of which over one-half is in socially screened portfolios, including mutual funds (ILO, 1998d).

The increased activities of civil society groups require changes in the way business responds to the expectations stakeholders put forward regarding the companies’ behaviour. In fact, companies see themselves confronted with increasing demands as to their accountability to, and interaction with, groups of civil society (Dommen, 1999). For many years, corporations were generally trusted to be good corporate citizens without any particular activities required to prove this proposition right. Over the past 20 to 30 years however, companies have been increasingly confronted with demands from NGOs in many (especially developed) countries to provide evidence on their activities and impacts in different social responsibility areas. Some companies responded to this charge by drafting codes of conduct, others by preparing special reports on issues pertaining to social responsibility (including environmental or social reports). But this is no longer enough: companies are now more and more asked to establish systematic and independent monitoring and auditing processes to demonstrate how corporate principles and policies are implemented in daily business practices (box XII.4).<sup>4</sup> In a further step, some companies are intensifying their interaction with stakeholders on social responsibility issues by actively soliciting stakeholders views on issues over which conflicts may arise or have already occurred. This process can be encapsulated in a four-step sequence:

#### **Box XII.4. Mattel: monitoring the Global Manufacturing Principles**

Mattel, Inc. is one of the largest toy companies in the world with annual sales of approximately \$5 billion in 1998. It is home to such brands as Barbie, Fisher-Price, Hot Wheels and Matchbox. Mattel has company-owned or controlled facilities in many countries, including China, India, Indonesia, Malaysia, Mexico and Thailand. These facilities account for over 70 per cent of the company’s total output. In addition, Mattel purchases goods and services from suppliers throughout the world.

In November 1997, Mattel announced the establishment of a code of conduct, the Global Manufacturing Principles (GMP) that would cover all of Mattel’s own production facilities and those of its primary contract manufacturers around the world. Mattel’s management is concerned that the company’s products meet its global quality standards regardless of the location of manufacturing; and that its products are made under conditions that are humane and that all workers engaged in producing goods for Mattel are treated fairly and equitably and in accordance with applicable national laws and customs. Nevertheless, Mattel also recognized the growing public and media criticism about human rights violations, sweatshops, employment of children, and unhealthy working conditions, that existed in certain locations. The GMP were the company’s response to ensure that Mattel was a responsible corporate citizen and that its products were manufactured under the best possible conditions. Specific provisions deal with wages and hours; restrictions against the use of child labour and forced labour, discrimination based on ethnic origin, individual characteristics or religious-personal beliefs; freedom of association, legal and ethical business practices, product safety and product quality, safe and healthy working environment; evaluation and monitoring, compliance and public disclosure.

Mattel expects that GMP will not be a static document. Instead, it is meant to be a proactive process subject to constant improvement and expansion in light of emerging socio-political and economic conditions. Thus, Mattel undertook to enhance the GMP standards for all new plants and it raised standards above those in the current GMP in plants that were undergoing significant expansion or renovation.

/...

**(Box XII.4, concluded)**

In announcing the GMP, Mattel also took another action that was new for a TNC: it voluntarily agreed to create an independent monitoring council that would inspect and verify the company's compliance with GMP and make its findings public without any restriction from the company. Three independent experts in codes of conduct, corporate responsibility and children's and labour issues in foreign countries were invited to create the Mattel Independent Monitoring Council for Global Manufacturing Principles (MIMCO), chaired by S. Prakash Sethi.<sup>a</sup> Mattel agreed to follow MIMCO recommendations -- subject to economic realities and competitive constraints -- to enhance already existing systems designed to support worker education, training and skills that could lead to significant improvement in workers' income and standard of living.

No system of compliance is credible unless it meets three criteria: public trust in the independence and reputation of the monitors for which the MIMCO initiative was designed; standards of conduct that are quantifiable and objectively measurable; and a disclosure process that is comprehensive, transparent, and frequent.

To meet the second and third criteria, MIMCO, in cooperation with Mattel, undertook a number of steps to ensure that formal audits would meet rigorous criteria for precision of standards, objectivity in performance measurement and evaluation, and transparency and clarity in public reporting of its findings. MIMCO has the final and unrestricted right, subject only to considerations of trade secrets and individual privacy, to determine the context and frequency of its report to the public.

- A three-phase audit schedule was established. In the first phase, MIMCO would audit all of the company-owned plants and those plants where Mattel controlled 100 per cent of the output. The second phase would include a statistically selected sample of the company's major suppliers where Mattel was responsible for over 70 per cent but less than 100 per cent of a plant's output. The third phase would include those plants where Mattel had control of between 40-70 per cent of the output. Each group of plants would be audited at least once every three years. MIMCO was authorized to undertake additional audits, at its own discretion, where these were warranted because of changing conditions.
- Mattel, in cooperation with MIMCO, set up an international task force of over 50 senior managers and technical experts. Their objective was to convert the GMP into operational standards that were quantifiable and objectively measurable to the maximum possible extent. Thus each single principle in the GMP was converted into a number of specific, quantifiable criteria that must be met to satisfy GMP's compliance requirements.
- The operating standards were designed to meet one of three criteria. At a minimum, they would meet the legal standards mandated by the country in which a plant was located. Where country-specific standards were not available, or were lower than Mattel standards, local plants would have to meet Mattel's own standards. As a long-term proposition, Mattel would endeavour to have its plants meet or exceed the best industry practices prevailing in their specific regions or localities. After having developed operational indicators for full-scale field audits during 1998, MIMCO audited all of Mattel's owned or controlled facilities in Asia, three plants in China, two in Indonesia, four in Malaysia and one in Thailand.<sup>b</sup>

**Public report of the MIMCO audit findings**

Under the agreement between MIMCO and Mattel, each plant manager is given an opportunity to respond to the observations made by the MIMCO audit team and, where appropriate, undertake to make the necessary changes in plant operations. The final report of this first audit by MIMCO to the public is expected to be available during the third quarter of 1999. It will identify each plant's compliance with the GMP as well as its shortcomings and proposed corrective actions.

*Source:* UNCTAD, based on Sethi, 1999.

<sup>a</sup> In addition, Mattel signed an initial, three-year agreement with the Zicklin School of Business at Baruch College, City University of New York, to oversee all aspects of the Council, including budgets.

<sup>b</sup> The auditing of the company's facilities in Mexico was postponed until the latter part of 1999, when all three plants Mattel is operating in the country would have become fully operational.

- the “trust me”- phase, in which companies did not face any expectations going beyond the respect of law and order;
- the “tell me”- phase in which companies were asked to give an account of their companies principles and impacts regarding certain social responsibility issues;
- the “show me”- phase, in which companies are asked by civil society to actually demonstrate that they adhere to their principles and standards; and
- the “join me”- phase, in which companies are asked to involve actively and interact with, stakeholders in the process of solving problems pertaining to social responsibility.

At present, companies can be found at different stages of the model. Many have not paid much attention to social responsibility issues, however. Those that have, do not necessarily respond in the same way to civil society expectations as individual companies find themselves under different pressures and, accordingly, respond differently. Still, there appears to be an overall trend that indicates that companies are putting more resources into responding to social responsibility demands and into interacting with civil society groups on issues pertaining to social responsibility.

### 3. Government actions

Recent government actions on TNC social responsibility themes centre around renewed interest and activity on previously-formulated international guidelines or codes of conduct. Initiatives in United Nations bodies relating to environment and labour issues, as well as continuing OECD reviews of the 1976 Guidelines for Multinational Enterprises (see chapter IV), comprise the primary focus of this activity. The United Nations work on human rights issues is also important and relevant, but to date has not focused particularly on how TNCs may relate to such issues. The following, in particular, deserve attention:

- The United Nations Conference on Environment and Development (UNCED) served as a catalyst for action on environmental principles related to business conduct. Governments, TNCs and an array of interested civil society organizations coalesced around discussions that bridged the negotiation of intergovernmental accords and related private sector initiatives, yielding a surge of activity. The 1992 Rio Declaration (UNFCCC, 1999) provides the basis for a number of principles relating to environmental responsibility and management (chapter X), some of which are reflected in business initiatives discussed above. The Montreal Protocol (UNEP, 1999a) on the ozone layer and the Kyoto Protocol (UNEP, 1999b) on climate change represent significant steps in developing international goals and standards for governments that could lead to a combination of regulatory and voluntary processes at the national level.
- The International Organization for Standardization (ISO), which is not part of the United Nations family, is a mixed public-private sector group whose membership is drawn from national standards-setting bodies that may or may not be government agencies. Driven largely by technical experts, this organization developed ISO 14001, a set of management system guidelines aimed more at process than outcome goals (box X.6). Although the standards are voluntary, a certification of compliance with ISO 14001 can be provided by outside auditors who review the facilities of signatory companies to certify that the company has established an environmental policy and management implementation system. This approach, of course, does not standardize particular outcomes; it focuses more on directing attention to environmental issues and encouraging professional procedures to address them. The ISO 14001 standards have gained support from some 5,000 companies, primarily in Europe and the Far East. United States-based firms currently appear more focused on meeting that country's specific regulatory requirements than on broader systems goals.
- A different model is presented by the ILO, a tripartite organization in which governments, business and labour have adopted a series of conventions setting out international labour standards, as well as the 1977 Tripartite Declaration of Principles Concerning Multinational



Enterprises and Social Policy (UNCTAD, 1996c). Among more than 180 Conventions adopted over the ILO's eighty-year history, seven core Conventions (Nos. 29, 87, 98, 100, 105, 111, 138) have proven most important in shaping the four basic principles advocated by the Organization: freedom of association and the right to bargain collectively; abolition of forced labour; equal opportunity and treatment in the workplace; and elimination of child labour (ILO, 1998d). These principles received renewed attention following a decision by the 1996 WTO Ministerial meeting to affirm that the ILO is the competent body to deal with issues involving core international labour standards. At a subsequent June 1998 conference, the ILO adopted an ILO Declaration on Fundamental Principles and Rights at Work (ILO, 1998e) in which all Member States committed themselves to apply the principles underlying the core conventions. Countries that ratify a convention should bring their legislation and national practices into line with the convention's standards, but not all countries have ratified all conventions. The 1998 Declaration includes in its follow-up a system of reporting intended to identify member States' needs in relation to the realization of the core principles and rights, and designing technical assistance efforts targeted to addressing those needs. In addition, for ratified conventions in particular, the ILO has an extensive system of supervision and enforcement which includes reporting as well as constitutionally-based mechanisms for examining complaints brought by workers' or employers' organizations, or member States. The conventions and the Declaration, which apply directly only to governments, contain provisions relevant to the conduct of the non-governmental partners of the Organization. Thus provisions of these instruments have been reflected or referred to in certain voluntary private initiatives on corporate responsibility.

- Although developed with input from business and labour advisory groups, the OECD Guidelines are a more strictly governmental undertaking to identify general TNC conduct standards that are consistent with "good corporate citizenship". A series of official reviews (OECD, 1997c) since the Guidelines' adoption resulted in periodic adjustments to the standards, including clarifications of labour-related provisions and the addition of a section on the environment. Last reviewed in 1994, the Guidelines are currently undergoing a new examination, due to be concluded in May 2000. Labour and environmental issues, along perhaps with consumer protection, lead the agenda of issues to be considered during the current review. Other topics may include creating more proactive mechanisms to promote and monitor business implementation of the voluntary Guidelines.

These developments represent the most active recent government initiatives at the international level that directly address TNC social responsibility issues. Considerably more governmental time and energy has, however, been devoted to formulating legal instruments aimed at improving the international climate for foreign investment (see chapter IV). For example, the dramatic proliferation of more than 1,700 bilateral investment treaties creates important rights for TNCs, usually enforceable through binding investment dispute settlement mechanisms (chapter IV). Investment provisions in regional trade arrangements such as NAFTA, which has labour and environmental side agreements, and MERCOSUR – which features a social charter – also aim at complementing the lowering of trade barriers with a parallel liberalization of regional investment regulations.

On the national level, a comparable emphasis on liberalization has marked FDI-related changes by governments (table IV.1). Parallel discussions of TNC social responsibility have been very limited. The Government of the United States created a set of business conduct standards (Kline, 1991) for its firms that were doing business in South Africa under the former apartheid regime. After brief subsequent consideration of formulating other country-specific codes, the United States administration decided to promote a set of five brief "Model Business Principles" that were developed in 1995 after consultation with business, labour and other NGOs (ILO, 1998b). A companion "Best Global Business Practices Program" offers an information clearinghouse to assist companies in developing individual codes of conduct that reflect the Principles, as well as to encourage similar behaviour among business partners, suppliers and subcontractors. In addition, the administration has fostered the development of industry-based

codes that address particular problem areas. For example, the White House Apparel Industry Partnership programme sought to establish a code of conduct and monitoring system to address so-called “sweatshop” issues involving abusive labour conditions in foreign plants that produce clothing for sale by retailers in the United States’ market. The Government of the United Kingdom supported the “Ethical Trading Initiative” in 1998 that brought together business, labour and NGOs to discuss standards and monitoring methods that address working condition issues in corporate supply chains (ILO, 1998b). The Government of India cooperated in developing the “Rugmark” label aimed at promoting child labour standards and later developed its own “Kaleen” labelling programme (Wild, 1998).

## **E. Outlook and policy implications**

Certain patterns appear to be emerging as a result of these most recent trends in how TNC social responsibility issues are being addressed. First impressions form around the striking growth in both the number of organizations and the proliferation of initiatives that have gained importance in this area. Social responsibility concerns claim increasing attention among both government and business policy-makers, largely due to the stimulus of civil society groups and activities. Although the range of specific issues is quite broad, the vast majority of recent undertakings fall under umbrella categories related to labour, the environment and human rights. Other issues - such as technology transfer, competitive practices, consumer protection and community relations - have attracted less recent attention or have been addressed in aspects related to the other three categories. Also, for the reason explained earlier, many of the issues that concern development and, therefore, are of particular interest to developing countries, have attracted little attention. Labour, the environment and human rights also all relate to existing United Nations instruments that furnish some common international ground in identifying core values while providing institutional processes that might help carry forward follow-up activities.

Although efforts continue to elaborate agreed standards to guide TNC social responsibility actions, there is also growing recognition of the importance of designing implementation steps that will give life to the standards’ application. Hence, more discussion is occurring related to monitoring mechanisms that might provide for review, evaluation, revision and performance improvements. Crucial monitoring questions regarding “what”, “who” and “how” remain unresolved in most cases, although there are clear efforts by civil society groups to encourage the use of management systems techniques and performance measures as well as independent auditors. One difficulty with implementation measures is the large variation among standards in their degree of specificity and applicability to particular industries and business operations. Conversely, the more specifically applicable standards and performance measures are to given products or sectors, the more proliferation occurs among institutional standards and follow-up mechanism, generating attendant time, information and resource demands. Indeed, the growth of activity in this area has been accompanied by an increasing overlap and, at times, seeming competition among proliferating standards and their sponsoring groups. A plethora of codes may contribute to the risk of inducing a “code fatigue” among corporations, particularly where an enterprise may be engaged in multiple lines of business in countries around the world. TNCs aligned in shifting patterns of multiple international strategic alliances may also find it difficult to meld the various standards and reporting systems adopted by different alliance partners.

A positive pattern emerging from recent social responsibility trends is the increased efforts at improved dialogue between TNCs and social interest groups. Early relationships were often marked by mistrust and misunderstandings that fed a cycle of antagonistic actions and reactions. Harsh public commentaries and revelations of corporate misconduct still serve to focus attention on specific TNCs. While this may be necessary, substantive longer-term improvements often depend on establishing a working dialogue or even partnership with corporate representatives where debates over differences are aimed more at identifying mutually acceptable solutions and practical implementation steps. For their part, TNCs that acknowledge social responsibility commitments in a global context often also recognize that social interest groups can open a window on the world that offers valuable perspectives, insights and access to human resources

that can assist an international corporation's search for better operational alternatives. Thus far, this pattern appears to develop more within certain industries and companies than others, often occurring in sectors that have experienced hostile clashes in the past.

A difficulty in this dialogue is to involve the various civil society groups that pursue social responsibility initiatives. Although civil society groups in some areas attempt to forge coalitions, or at least coordinate activities, corporations, business organizations and even governments often confront the task of selecting the most appropriate dialogue partners from among at times overlapping and sometimes competitive civil society groups. Furthermore, the representativeness of a given civil society group in terms of affected TNC constituencies is not always clear, particularly when social activists in developed home countries urge actions on behalf of people and interests located in host countries elsewhere. Although some civil society groups have expanded their international membership and seek to collaborate with local groups in many different countries, the decision-making leadership and institutional resources expended on many TNC social responsibility issues are often still heavily weighted towards the perspectives and priorities of the developed countries, especially institutions based in the United States and Europe. All this notwithstanding, civil society groups deserve considerable credit for putting social responsibility on the public agenda.

Trade unions – although showing solidarity in the drive to raise labour standards worldwide – face a diversity of perspectives and interests among different country organizations, including locations in which effective independent unions do not exist. Human rights organizations pressing TNCs to influence political developments in other countries sometimes confront a particularly complicated challenge to demonstrate that their advocated path towards agreed goals is in line with the preferences and priorities of the most affected foreign population. This dilemma is best exemplified in disputes, even among human rights groups pursuing the same ultimate goal, over whether TNCs should withdraw from a country with significant human rights abuses, or stay and work for change.

An examination of recent TNC social responsibility trends can show where patterns of interaction have emerged, but it can also indicate where they have not developed. The three categories of social responsibility issues that have in recent years attracted most attention have often been pursued independently of each other in terms of goal priorities. Advocacy groups cooperate and coordinate in efforts to press their agendas with government and business, but the collaboration is sometimes more tactical than substantive, playing off a few readily identifiable areas of overlapping interests, such as trade unions and human rights groups joining forces in supporting freedom of association and collective bargaining. Discussions are important among civil society groups, or with corporations and governments, regarding what trade-offs may exist and where priorities should lie in a practical world where attention, time and resources are allocated among many worthwhile objectives.

Discussion is especially crucial concerning the range of issues that fall outside the three dominant categories, where desirable goals may go unfulfilled due to lack of attention or devoted resources. Development issues are particularly important here. Also important are potentially detrimental side-effects on other worthy objectives that could result from unforeseen (although potentially discernible) impacts arising from specific actions taken to protect the environment, improve working conditions or alter political circumstances in an effort to aid human rights. A field in which such trade-offs or impacts may occur relates to a range of development goals, particularly for smaller developing countries and economies in transition.

Placed within the context of development goals and objectives, questions regarding TNC social responsibility can involve decisions regarding how the formulation and application of particular standards will affect the distribution of costs and benefits among companies, industries and countries. An illustration of this notion is the differences emerging between developed and developing country perspectives on appropriate TNC social responsibility standards relating to employment issues such as work hours. Proposals for a minimum "floor" that might substantially narrow the differences between developing and developed countries could significantly affect comparative economic advantages central to a country's development plans, with impacts on

inward FDI, export and import levels, and local business development. Many aspects of the demands for improvements may be justified against any cultural background and are believed unlikely to endanger the comparative advantage of developing countries. Careful study, however, is required to examine the dynamic relationship and interactive effects between development standards and the need for “positive measures” to improve workplace conditions in many countries. Even discrete measures such as the use of certification and labelling methods to signify compliance with labour or environmental standards could unintentionally reinforce the competitive powers of large TNCs, to the detriment of a developing country’s smaller national firms that may lack the resources to meet consistently a management system’s compliance, reporting and outside auditing requirements.

The fact that a discussion has now begun on some issues related to working conditions may aid in recognizing when and which measures may have indirect, unintended, consequences if used to establish globally applied standards without a full prior vetting of interests and impacts on the international level. From the perspective of developing countries, some recent social responsibility initiatives may give the impression that TNCs and civil society groups from developed countries are setting standards that can have major impacts on a country’s development goals, without developing country governments playing a substantial role in determining the standards’ content, implementation or likely impact. Despite all the best intentions, when backed by the power of consumers in the developed countries, such initiatives could function like non-tariff barriers or significantly raise the cost of competitive entry into global markets. Such fears are exacerbated when standards determined in other countries are transmitted directly through TNC investment channels into the host country. Recent cases show that this influence can even be projected without traditional TNC ownership links through the power wielded by large retailers and other firms that can set contractual conditions all along their global supply chain.

Many of the issues that emerge from recent trends in TNC social responsibility activities could be addressed effectively within a framework that provides for the broadest possible involvement of all relevant parties. Inclusiveness suggests that the United Nations could play a major role here. With his Davos speech, the Secretary-General of the United Nations initiated such discussions. Their intensification could take place within the framework of a more structured dialogue between all parties concerned that might include international organizations, such as the International Labour Organization, the United Nations Environment Programme and the United Nations High Commissioner for Human Rights, which have already made serious efforts with respect to issues of social responsibility. Development would have to be central to this dialogue, as this is the overriding concern of the majority of humankind and because it is, in any event, intimately linked to social, environmental and human rights objectives. UNCTAD would have a particular role to play in this respect. Building upon the proposal of a global compact made by the Secretary-General, the dialogue might examine how the nine core principles (box XII.1), as well as development considerations, could be translated into corporate practices. Through this process, a sharing of experiences, a stocktaking and analysis of existing efforts in this area as well as the identification of common elements and best practices. After all “companies can best promote human rights and improved labour and environmental standards by the way they conduct their own businesses and by the spread of good corporate practices” (UN, 1999, p.2); presumably, this applies to development considerations as well. Additionally, efforts might be made to assist capacity-building among civil society groups in developing countries, to reflect and represent the special needs of these countries in this dialogue and international discussions on social responsibility in general.

The growing economic interdependence of the world community, to which the liberalization of international investment and trade regimes has contributed significantly, has great potential for enhancing the living standards of people throughout the world. Greater efforts must be made, however, to manage the adjustment costs and social as well as economic disruption that accompany globalization. By assuming greater social responsibility, firms can assist in these efforts. This is in their international self-interest. It is precisely the purpose of the global compact to contribute to the emergence of “shared values and principles, which will give a human face to the global market” (Annan, 1999, p. 2), the foundation of a stable global society

and economy. Failure to build such a foundation could contribute to a backlash against the liberalization policies that, in the first place, provide the framework of legal rights within which firms pursue global business strategies. With these expanding global rights, however, come the corresponding responsibilities of “global corporate citizenship”, including concern for development, the priority of the vast majority of the world’s population. The societal boundaries for TNCs in the twenty-first century will be the global community.

## **Notes**

- <sup>1</sup> For an elaboration of the point that not all standards that have been identified as appropriate in one country have to be appropriate in another country, especially when they are at different stages of development, see Leisinger, forthcoming, pp. 10-12.
- <sup>2</sup> However, despite this source of potential conflict of interests, the international trade union movement has so far shown little sign of dispute on the issue.
- <sup>3</sup> A further example for industry-specific codes is provided by the United Nations Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (UNCRTD).
- <sup>4</sup> It should be noted that the monitoring processes themselves, including the one presented in box XII.4, and in particular the question whether they are truly “independent” are subjects of discussion between business and civil society.



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# ANNEXES

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**Annex table A.I.1. FDI inflows to developing economies and Central and Eastern Europe: comparison of data among UNCTAD, World Bank, Institute of International Finance and JP Morgan, 1997 and 1998**

(Millions of dollars)

Economy	UNCTAD <sup>a</sup>		World Bank <sup>b</sup>		IIF <sup>c</sup>		JP Morgan <sup>d</sup>	
	1997	1998	1997	1998	1997	1998	1997	1998
Argentina	8 094	5 697	6 600	5 600	..	..	7 500	7 250
Brazil	18 745	28 718	19 700	24 000	..	23 000	17 048	22 000
Chile	5 417	4 792	5 400	5 000	..	..	5 417	4 300
Colombia	5 701	2 983	..	..	..	..	5 436	4 100
Ecuador	695	830	..	..	..	..	577	680
Mexico	12 831	10 238	12 500	10 000	..	..	10 500	10 000
Peru	1 786	1 930	..	..	..	..	1 450	2 500
Venezuela	5 087	3 737	5 100	3 700	..	..	4 893	1 950
Latin America above (A)	58 356	58 926	..	..	50 900 <sup>e</sup>	50 700 <sup>e</sup>	52 821	52 780
Total Latin America and the Caribbean	68 255	71 652	61 600	57 900	..	..	..	..
China	44 236	45 460	44 200	42 000	..	42 000	44 236	24 500
India	3 351	2 258	..	..	..	..	3 200	2 500
Indonesia	4 673	-356	..	1 300	..	..	4 677	-
Korea, Republic of	2 844	5 143	..	..	..	600	2 844	2 000
Malaysia	5 106	3 727	5 100	5 000	..	..	2 500	150
Philippines	1 222	1 713	..	..	..	..	1 253	200
Taiwan Province of China	2 248	222	..	..	..	..	650	720
Thailand	3 733	6 969	3 700	4 800	..	..	3 029	500
Asia above (B)	67 413	65 136	..	..	50 600 <sup>f</sup>	54 100 <sup>f</sup>	62 389	30 570
Total South, East and South-East Asia and the Pacific	87 835	77 277	69 000	65 400	..	..	..	..
Morocco	1 079	258	..	800	..	..	1 200	800
South Africa <sup>g</sup>	1 705	371	1 700	1 100	..	..	1 725	1 000
Africa above (C)	2 784	629	..	1 900	600 <sup>h</sup>	3 100 <sup>h</sup>	2 925	1 800
Total Africa and West Asia <sup>i</sup>	12 295	12 510	10 600	10 700	..	..	..	..
Bulgaria	505	401	..	..	..	..	498	500
Czech Republic	1 301	2 540	..	..	..	..	1 275	900
Greece <sup>g</sup>	984	700	..	..	..	..	1 000	1 300
Hungary	2 085	1 935	..	..	..	..	1 653	1 520
Poland	4 908	5 129	4 900	5 500	3 100	4 500	3 100	5 000
Russian Federation	6 243	2 183	6 200	3 000	..	..	6 241	6 500
Turkey <sup>g</sup>	805	807	..	..	..	..	805	500
Europe above (D)	16 830	13 694	..	..	14 000 <sup>j</sup>	12 500 <sup>j</sup>	14 572	16 220
Total Europe <sup>k</sup> and Central Asia	22 534	21 833	22 300	20 900	..	..	..	..
Total above (A+B+C+D)	145 384	138 385	..	..	116 100	120 400	132 707	101 370
All developing economies and Central and Eastern Europe	191 065	183 449	163 400 <sup>l</sup>	155 000 <sup>l</sup>	..	..	..	..

Source: UNCTAD.

<sup>a</sup> Annex table B.1 in this Report.

<sup>b</sup> World Bank, 1999b.

<sup>c</sup> Institute of International Finance, 1999a and 1999b.

<sup>d</sup> JP Morgan, "Capital flows plunge to emerging economies", 7 October 1998.

<sup>e</sup> Includes Uruguay.

<sup>f</sup> Does not include Taiwan Province of China.

<sup>g</sup> To facilitate the comparison with other sources, this table follows the World Bank classification for Greece, South Africa and Turkey. According to United Nations classification, Greece and South Africa are developed.

<sup>h</sup> Includes Algeria, Egypt and Tunisia.

<sup>i</sup> Includes Turkey.

<sup>j</sup> Includes Romania and Slovakia.

<sup>k</sup> Includes Central, Eastern and Developing Europe. The data for developing countries only are not available in the World Bank's estimates.

<sup>l</sup> The totals above do not add up.

**Annex table A.I.2. Comparison between FDI inward stock and assets of foreign affiliates in selected host economies, latest available year**

(Billions of dollars)

Host economy	Year	FDI inward stock	Assets	Ratio of assets to FDI stock
<i>Developed countries :</i>				
Austria	1996	17.9	7.6 <sup>a</sup>	0.4
Finland	1997	9.5	25.9 <sup>b</sup>	2.7
Germany	1996	156.0	743.6	4.8
Japan	1995	33.5	131.7 <sup>c</sup>	3.9
United States	1996	594.1	2 614.0 <sup>d</sup>	4.4
<i>Developing economies :</i>				
China	1997	215.7	220.9	1.0
Brazil	1995	98.8	173.0	1.8
Hong Kong, China <sup>e</sup>	1996	4.3	6.2	1.5
India	1991	1.3	3.7	3.0
Malaysia <sup>f</sup>	1996	45.3	14.5	0.3
Singapore	1995	59.6	598.6	10.0
Taiwan Province of China	1995	15.7	83.4	5.3
Viet Nam	1996	5.3 <sup>g</sup>	5.9 <sup>h</sup>	1.1

Source: UNCTAD, based on UNCTAD, forthcoming b and UNCTAD FDI/TNC database.

<sup>a</sup> Refers to nominal capital only.

<sup>b</sup> Represents majority foreign-owned firms only and does not include the financial sector.

<sup>c</sup> Not including the banking and financial sectors. Data refer to firms with foreign participation of more than one third of the shares.

<sup>d</sup> Non-bank all affiliates.

<sup>e</sup> Data refer to the secondary sector only.

<sup>f</sup> Data are on an approval basis, and refer to the secondary sector only. The figure for assets represents fixed assets only.

<sup>g</sup> Data refer to the foreign equity shares in legal capital accumulated from 1988.

<sup>h</sup> As of end June.

**Annex table A.I.3. Receipts of royalties and licence fees by affiliated firms and by country, in Germany, Japan and the United States, 1985-1997**

(Millions of dollars)

Year	Germany <sup>a</sup>			Japan		United States		
	Intra-firm		Country as a whole	Japanese parent firms only (intra-firm only)	Country as a whole	Intra-firm		Country as a whole
	German parent firms only	Foreign affiliates in Germany				United States parent firms only	Foreign affiliates in the United States	
1985	464	83	546	..	723	..	..	6 680
1986	597	122	780	708	906	5 994	180	8 114
1987	698	146	997	..	1 293	7 668	229	10 183
1988	883	124	1 081	..	1 637	9 238	263	12 147
1989	899	106	1 122	1 034	2 016	10 612	349	13 818
1990	1 210	235	1 547	..	2 479	12 867	383	16 635
1991	..	345	1 515	..	2 866	13 523	583	17 819
1992	..	472	1 680	2 370	3 061	14 925	733	20 841
1993	..	498	1 596	..	3 861	14 936	752	21 694
1994	..	489	1 720	..	5 185	19 250	1 025	26 712
1995	1 486	642	2 174	3 919	6 005	21 399	1 460	30 289
1996	1 667	653	2 315	..	6 683	22 781	1 929	32 823
1997	1 659	509	2 282	..	7 303	23 457	2 058	33 676

Source: UNCTAD, based on IMF, Balance of Payments Statistics CD-ROM (February 1999); UNCTAD, FDI/TNC database; OECD, 1997a; Germany, Deutsche Bundesbank, 1990, 1997 and 1998; Japan, Science and Technology Agency, 1998; and United States, Department of Commerce, 1998b.

<sup>a</sup> Receipts for patents, inventions and processes. Data on the country as a whole for 1985 do not include non-affiliated firms.

**Annex table A.I.4. Payments of royalties and licence fees, by affiliated firms and by country, in Germany, the United States, India and the Republic of Korea, 1985-1997**

(Millions of dollars)

Year	Germany <sup>a</sup>			United States			India		Republic of Korea	
	Intra-firm		Country as a whole	Intra-firm		Country as a whole	Foreign affiliates in India <sup>b</sup>	Country as a whole	Foreign affiliates in the Republic of Korea <sup>b</sup>	Country as a whole
	Foreign affiliates in Germany	German parent firms only		Foreign affiliates in the United States	United States parent firms only					
1985	799	200	999	..	..	1 170	5	25	..	323
1986	1 224	249	1 556	799	118	1 401	..	25	..	473
1987	1 518	272	1 891	1 141	168	1 857	8	41	..	574
1988	1 761	310	2 186	1 285	141	2 601	..	108	676	815
1989	1 683	340	2 172	1 632	71	2 528	..	127	889	1 123
1990	2 272	490	2 935	1 967	239	3 136	13	72	1 087	1 364
1991	2 401	..	3 211	2 789	166	4 035	13	50	1 184	1 581
1992	2 532	..	3 211	3 207	189	5 162	..	69	851	1 629
1993	2 386	..	3 049	3 152	234	5 032	..	75	946	1 414
1994	2 287	..	3 087	3 514	420	5 852	..	94	1 276	1 720
1995	3 017	614	4 012	4 674	583	6 919	..	90	1 947	2 385
1996	2 338	903	3 602	4 740	766	7 854	..	118	..	2 431
1997	1 827	792	2 886	6 132	955	9 411	..	150	..	2 414

*Source:* UNCTAD, based on UNCTAD, forthcoming b; IMF, Balance of Payments Statistics (February 1999); OECD, 1997a; Germany, Deutsche Bundesbank, 1990, 1997 and 1998; and United States, Department of Commerce, 1998b.

<sup>a</sup> Payments for patents, inventions and processes. Data on the country as a whole for 1985 do not include non-affiliated firms.

<sup>b</sup> Includes payments from non-affiliated firms.



**Annex table A.I.5. Significance of value added of foreign affiliates in selected host economies**

Host economy	Year	Value added of foreign affiliates (million dollars)		Total value added (million dollars)		Value added of foreign affiliates as a percentage of total value added	
		Manufacturing	All industries	Manufacturing	All industries <sup>a</sup>	Manufacturing	All industries
<i>Developed countries :</i>							
France	1987	38 221 <sup>c</sup>	..	190 188	..	20.1	..
	1992	45 769 <sup>c</sup>	..	264 977	..	17.3	..
Japan	1995	24 953 <sup>e</sup>	32 947 <sup>e</sup>	982 725	2 947 833	2.5	1.1
	1991	1 068 <sup>g</sup>	..	13 324	..	8.0	..
Norway	1994	1 398 <sup>g</sup>	..	13 007	..	10.7	..
	1985	22 400	..	124 384	..	18.0	..
United Kingdom	1992	59 585	..	252 223	..	23.6	..
<i>Developing economies :</i>							
Hong Kong, China	1985	689 <sup>k</sup>	..	6 582	..	10.5	..
	1994	2 422 <sup>k</sup>	..	11 757	..	20.6	..
Malaysia	1985	1 472 <sup>m</sup>	..	4 879	..	30.2	..
	1994	10 794 <sup>m</sup>	..	18 874	..	57.2	..
Singapore	1980	2 561 <sup>n</sup>	..	4 004	..	64.0	..
	1994	14 500 <sup>n</sup>	..	20 593	..	70.4	..
Turkey	1986	979	..	14 376	..	6.8	..
	1990	2 432	..	28 866	..	8.4	..

*Source:* UNCTAD, based on UNCTAD, forthcoming b; UNCTAD FDI/TNC database; UNIDO Industrial Statistics Database; and IMF, International Financial Statistics CD-ROM (May 1999).

<sup>a</sup> Gross domestic product at factor cost.

<sup>b</sup> Majority foreign-owned affiliates only.

<sup>c</sup> Data do not include the food, beverages and tobacco industries and refer to firms with foreign participation of more than 20 per cent.

<sup>d</sup> Refers to firms with foreign participation of more than 50 per cent.

<sup>e</sup> Refers to firms with foreign participation of more than one third of the shares.

<sup>f</sup> Refers to non-financial firms with a balance sheet total of over 10 million guilders; majority foreign-owned affiliates only.

<sup>g</sup> Covers firms with more than 10 persons engaged and a foreign participation of more than 50 per cent.

<sup>h</sup> Includes data on non-financial enterprises with 20 or more employees for manufacturing and 50 or more employees for services (excluding real estate). Majority foreign-owned affiliates only.

<sup>i</sup> Non-bank all affiliates.

<sup>j</sup> Refers to foreign-funded enterprises with independent accounting systems.

<sup>k</sup> Data refer to plants with foreign ownership shares of 50 per cent or more and are based on the industrial survey data.

<sup>l</sup> Refers to fiscal year ending 31 March.

<sup>m</sup> Value added are estimated as revenue less purchases of materials and changes in stocks. The data refer to limited companies with annual revenues of five million ringgit or more. Foreign affiliates are defined as being foreign-controlled firms incorporated in Malaysia and branches of firms incorporated abroad.

<sup>n</sup> Refers to majority-foreign and wholly-foreign affiliates in the secondary sector, excluding those in rubber-processing and granite quarrying.

<sup>o</sup> Value added is referred to as the difference between total revenue and cost of brought-in raw materials, services and components.

**Annex table A.I.6. Significance of sales of foreign affiliates in manufacturing  
in selected host economies**

Host economy	Year	Sales of foreign affiliates (million dollars)	Total sales (million dollars)	Sales of foreign affiliates as a percentage of total sales
<i>Developed countries:</i>				
Finland	1985	925 <sup>b</sup>	36 967	2.5
	1996	12 183 <sup>b</sup>	83 719	14.6
Germany	1985	90 965 <sup>d</sup>	662 357	13.7
	1994	158 492 <sup>d</sup>	1 184 500	13.4
Italy	1985	45	212 913	0.021
	1993	108	438 809	0.025
Netherlands	1985	30 880 <sup>f</sup>	80 069	38.6
	1994	70 913 <sup>f</sup>	152 580	46.5
Sweden	1985	7 492 <sup>h</sup>	60 328	12.4
	1994	21 324 <sup>h</sup>	101 975	20.9
United States	1985	185 895 <sup>i</sup>	2 266 700	8.2
	1996	586 995 <sup>i</sup>	3 778 700	15.5
<i>Developing economies:</i>				
Hong Kong, China	1985	4 598 <sup>k</sup>	22 835	20.1
	1994	13 874 <sup>k</sup>	38 885	35.7
Malaysia	1985	6 246 <sup>m</sup>	18 359	34.0
	1994	39 478 <sup>m</sup>	75 034	52.6
Singapore	1980	10 295 <sup>n</sup>	15 278	67.4
	1994	49 498 <sup>n</sup>	65 878	75.1
Turkey	1986	2 527 <sup>p</sup>	36 913	6.8
	1990	1 935 <sup>p</sup>	72 969	2.7

Source : UNCTAD, based on UNCTAD, forthcoming b; UNCTAD FDI/TNC database; and UNIDO Industrial Statistics database.

a Production.

b Majority foreign-owned affiliates only.

c Data do not include the food, beverages and tobacco industries and refer to firms with foreign participation of more than 20 per cent.

d Refers to firms with foreign participation of more than 20 per cent (25 per cent until 1989).

e Refers to firms with foreign participation of 50 per cent in 1985 and more than one third in 1995, respectively, of the shares.

f Refers to non-financial firms with a balance sheet total of over 10 million guilders; majority foreign-owned affiliates only.

g Covers firms with more than 10 persons engaged and a foreign participation of more than 50 per cent.

h Includes data on non-financial enterprises with 20 or more employees for manufacturing and 50 or more employees for services (excluding real estate). Majority foreign-owned affiliates only.

i Non-bank all affiliates.

j Refers to foreign-funded enterprises with independent accounting systems. They account for a small minority of enterprises in China.

k Data represent total product sales, including sales of services and transfer of goods to associated companies and branches of manufacturing affiliates in the domestic market and abroad.

l Fiscal year ending 31 March.

m Pertains to limited companies only with annual revenues of five million ringgit or more. Foreign affiliates are defined as being foreign-controlled firms incorporated in Malaysia and branches of firms incorporated abroad.

n Refers to majority-foreign and wholly-foreign affiliates in the secondary sector, excluding those in rubber-processing and granite quarrying.

o Reflects annual turnover.

p Refers to the data on majority foreign-owned establishments with 25 or more persons engaged.

q Covers the period up to end-June only.

**Annex table A.I.7. Significance of employment in foreign affiliates in selected host economies**

		Number of employees in foreign affiliates		Number of total employees <sup>a</sup>		Number of employees in foreign affiliates as a percentage of total number of employees	
Host economy	Year	(Thousands)		(Thousands)			
		Manufacturing	All industries	Manufacturing	All industries	Manufacturing	All industries
<i>Developed countries:</i>							
Austria	1988	..	193.9	664.5	1 974.5	..	9.8
	1996	113.6	211.7	575.0	2 130.4	19.8	9.9
Finland	1992	22.5 <sup>b</sup>	32.7 <sup>b</sup>	424.0	1 827.0 <sup>c</sup>	5.3	1.8
	1997	51.1 <sup>b</sup>	125.8 <sup>b</sup>	410.0 <sup>d</sup>	1 870.0 <sup>d</sup>	12.5	6.7
France	1987	731.0 <sup>e</sup>	..	4 347.0	..	16.8	..
	1992	700.3 <sup>e</sup>	..	4 144.1	..	16.9	..
Germany	1985	638.0 <sup>f</sup>	..	9 604.1	..	6.6	..
	1996	1 058.0 <sup>f</sup>	1 650.0	8 111.0	32 188.0	13.0	5.1
Ireland	1985	76.3 <sup>g</sup>	..	186.4	..	40.9	..
	1990	88.3 <sup>g</sup>	..	193.8	..	45.6	..
Italy	1985	459.7	..	2 875.0	..	16.0	..
	1993	496.0	..	2 856.8	..	17.4	..
Japan <sup>h</sup>	1985	78.1	95.5	12 347.0	31 447.0	0.6	0.3
	1995	163.1	225.1	13 602.0	43 608.0	1.2	0.5
Netherlands	1985	151.1 <sup>i</sup>	249.6 <sup>i</sup>	993.0 <sup>j</sup>	5 145.0 <sup>j</sup>	15.2	4.9
	1994	205.6 <sup>i</sup>	..	1 075.0 <sup>j</sup>	6 692.0 <sup>j</sup>	19.1	..
Norway	1985	23.0 <sup>k</sup>	..	312.1	..	7.4	..
	1994	21.7 <sup>k</sup>	..	240.2	..	9.0	..
Sweden	1985	74.4 <sup>l</sup>	117.3 <sup>l</sup>	968.0 <sup>j</sup>	4 299.0 <sup>j</sup>	7.7	2.7
	1996	137.9 <sup>l</sup>	278.0 <sup>l</sup>	767.0 <sup>j</sup>	3 963.0 <sup>j</sup>	18.0	7.0
United Kingdom	1985	677.1	..	4 935.0	..	13.7	..
	1992	784.2	..	4 314.0	..	18.2	..
United States	1985	1455.2 <sup>m</sup>	2 862.2 <sup>m</sup>	20 879.0 <sup>j</sup>	107 150.0 <sup>j</sup>	7.0	2.7
	1996	2213.6 <sup>m</sup>	4 977.5 <sup>m</sup>	20 518.0 <sup>j</sup>	126 708.0 <sup>j</sup>	10.8	3.9
<i>Developing economies:</i>							
Brazil	1987	..	..	..	..	24.3	16.2
	1995	952.3	1 447.4	7 108.0	40 800.0	13.4	3.5
China	1987	..	210.0 <sup>n</sup>	32 092.0	96 543.0	..	0.2
	1997	..	5 987.9 <sup>n</sup>	50 830.0	146 680.0	..	4.1
Hong Kong, China	1985	86.4	..	847.6	2 182.4	10.2	..
	1994	67.5	324.6	423.0	2 533.2	16.0	12.8
Indonesia	1992	262.5 <sup>o</sup>	384.6 <sup>o</sup>	7 847.6 <sup>j</sup>	78 104.1 <sup>j</sup>	3.3	0.5
	1996	505.2 <sup>o</sup>	758.1 <sup>o</sup>	10 773.0 <sup>j</sup>	85 701.8 <sup>j</sup>	4.7	0.9
Malaysia	1985	141.0 <sup>p</sup>	..	473.3	..	29.8	..
	1994	529.2 <sup>p</sup>	..	1 211.3	..	43.7	..
Mexico	1985	424.5	532.1	994.1	..	42.7	..
	1993	906.6	1 097.9	5 078.0 <sup>j</sup>	32 833.0 <sup>j</sup>	17.9	3.3
Nepal	1998	44.7 <sup>q</sup>	69.2 <sup>q</sup>	2 303.6 <sup>r</sup>	..	1.9	..
Singapore	1980	149.4 <sup>s</sup>	..	287.2	..	52.0	..
	1996	197.4 <sup>s</sup>	..	378.7	..	52.1	..

/...

Annex table A.I.7 (concluded)

Host economy	Year	Number of employees in foreign affiliates		Number of total employees <sup>a</sup>		Number of employees in foreign affiliates as a percentage of total number of employees	
		(Thousands)		(Thousands)			
		Manufacturing	All industries	Manufacturing	All industries	Manufacturing	All industries
Sri Lanka	1985	40.6 <sup>t</sup>	44.7 <sup>t</sup>	169.0	781.1	24.0	5.7
	1996	197.6 <sup>t</sup>	240.2 <sup>t</sup>	363.3	1 089.0	54.4	22.1
Taiwan Province of China	1985	230.7	261.6	2 501.0	7 428.0	9.2	3.5
	1995	517.6	1 003.6	2 449.0	9 045.0	21.1	11.1
Turkey	1986	12.9 <sup>u</sup>	..	875.7	..	1.5	..
	1990	31.0 <sup>u</sup>	..	975.2	..	3.2	..
Viet Nam	1995	110.9	144.4	745.0 <sup>v</sup>	2 707.0 <sup>c</sup>	14.9	5.3

Source: UNCTAD, based on UNCTAD, forthcoming b; UNCTAD FDI/TNC database; UNIDO Industrial Statistics database; OECD, 1997a; and ILO, 1995 and 1998f.

- <sup>a</sup> The number of total employees refers to the number of paid employment, unless otherwise specified.
- <sup>b</sup> Refers to full-time employment only; majority foreign-owned affiliates only.
- <sup>c</sup> Total of ISIC divisions 2-9.
- <sup>d</sup> Methodology revised. Data for all industries refer to the total of ISIC divisions 2-9.
- <sup>e</sup> Data do not include the food, beverages and tobacco industries and refer to firms with foreign participation of more than 20 per cent.
- <sup>f</sup> Refers to firms with foreign participation of more than 20 per cent (25 per cent until 1989).
- <sup>g</sup> Refers to firms with foreign participation of more than 50 per cent.
- <sup>h</sup> Data exclude those for banks and other financial institutions. Foreign affiliates refer to firms with foreign participation of 50 per cent in 1985 and more than one third in 1995, respectively, of the shares.
- <sup>i</sup> Refers to non-financial firms with a balance sheet total of over 10 million guilders; majority foreign-owned affiliates only.
- <sup>j</sup> Data include both paid and unpaid employees.
- <sup>k</sup> Covers firms with more than 10 persons engaged and a foreign participation of more than 50 per cent.
- <sup>l</sup> Includes data on non-financial enterprises with 20 or more employees for manufacturing and 50 or more employees for services (excluding real estate). Majority foreign-owned affiliates only.
- <sup>m</sup> Non-bank all affiliates.
- <sup>n</sup> Data cover the urban areas only.
- <sup>o</sup> Data exclude those of the oil and gas sector, banking, non-bank institutions, insurance and leasing.
- <sup>p</sup> Estimates.
- <sup>q</sup> Refers to employment in approved investment projects, accumulated since 1994 up to March 1998.
- <sup>r</sup> 1994.
- <sup>s</sup> Refers only to majority-foreign and wholly foreign affiliates in the secondary sector, not including those in rubber processing and granite quarrying.
- <sup>t</sup> Refers to the cumulative number of estimated employment created by projects approved by the BOI since 1978, under section 17 of the BOI law which provides for incentives. As approvals cancelled or suspended are not included, the figures are over-estimated.
- <sup>u</sup> Refers to the data on majority foreign-owned establishments with 25 or more persons engaged.
- <sup>v</sup> Includes the mining sector.

**Annex table A.I.8. Significance of exports of foreign affiliates in selected host economies**

Host economy	Year	Exports of foreign affiliates (million dollars)		Total exports (million dollars)		Exports of foreign affiliates as a percentage of total exports	
		Primary and secondary sector	All sectors	Primary and secondary sector <sup>a</sup>	All sectors <sup>b</sup>	Primary and secondary sector	All sectors
<i>Developed countries :</i>							
Austria	1996	..	23 061	57 937	93 401	..	24.7
Canada	1990	56 808 <sup>c</sup>	65 047 <sup>c</sup>	128 180	144 773	44.3	44.9
	1994	74 092 <sup>c</sup>	83 503 <sup>c</sup>	164 302	183 707	45.1	45.5
Finland	1985	284 <sup>c</sup>	..	13 344	..	2.1	..
	1994	2 866 <sup>c</sup>	..	29 294	..	9.8	..
France	1987	32 281 <sup>d</sup>	..	141 250	..	22.9	..
	1992	50 283 <sup>d</sup>	..	224 833	..	22.4	..
Japan	1985	2 572 <sup>e</sup>	3 859 <sup>e</sup>	175 461	194 130	1.5	2.0
	1995	16 800 <sup>e</sup>	23 918 <sup>e</sup>	428 717	482 598	3.9	5.0
Sweden	1985	3 088 <sup>f</sup>	..	30 109	35 550	10.3	..
	1994	10 198 <sup>f</sup>	14 253 <sup>f</sup>	60 080	72 279	17.0	19.7
United States	1985	56 401	..	215 510	303 000	26.2	..
	1996	136 588	..	611 719	873 800	22.3	..
<i>Developing economies :</i>							
China	1991	12 047 <sup>g</sup>	12 047 <sup>g</sup>	58 919	65 898	20.4	18.3
	1997	74 706 <sup>g</sup>	74 900 <sup>g</sup>	182 670	207 251	40.9	36.1
Hong Kong, China	1985	3 116 <sup>h</sup>	..	16 671 <sup>i</sup>	..	18.7	..
	1997	9 667 <sup>h</sup>	..	27 307 <sup>i</sup>	..	35.4	..
India	1985	324 <sup>j</sup>	361 <sup>j</sup>	9 465	12 088	3.4	3.0
	1991	638 <sup>j</sup>	834 <sup>j</sup>	18 095	24 734	3.5	3.4
Malaysia	1985	2 703 <sup>k</sup>	..	15 133	..	17.9	..
	1994	28 874 <sup>k</sup>	..	56 590	..	51.0	..
Mexico	1990	6 007	6 093	40 711	48 866	14.8	12.5
	1993	10 950	11 174	51 885	61 477	21.1	18.2
Singapore	1985	9 269 <sup>l</sup>	..	14 806 <sup>i</sup>	..	62.6	..
	1996	44 511 <sup>l</sup>	..	73 465 <sup>i</sup>	..	60.6	..
Taiwan Province of China	1989	10 504 <sup>m</sup>	11 189 <sup>m</sup>	65 874	79 945	15.9	14.0
	1995	18 194 <sup>m</sup>	22 957 <sup>m</sup>	110 690	85 743	16.4	26.8

*Source:* UNCTAD, based on UNCTAD, forthcoming b; UNCTAD FDI/TNC database; and IMF, International Financial Statistics CD-ROM (May 1999).

<sup>a</sup> Merchandise exports.

<sup>b</sup> Exports of goods and non-factor services.

<sup>c</sup> Majority foreign-owned affiliates only.

<sup>d</sup> Data do not include the food, beverages and tobacco industries and refer to firms with foreign participation of more than 20 per cent.

<sup>e</sup> Data exclude those for banks and other financial institutions. Foreign affiliates refer to firms with foreign participation of 50 per cent in 1985 and more than one third in 1995, respectively, of the shares.

<sup>f</sup> Includes data on non-financial enterprises with 20 or more employees for manufacturing and 50 or more employees for services (excluding real estate); majority foreign-owned affiliates only.

<sup>g</sup> Data refer to exports of all foreign-invested enterprises located within China.

<sup>h</sup> Exports are value added on an f.o.b. basis and refer to total production sales in the foreign markets, including sales of services and transfers of goods to associated companies and branches of manufacturing affiliates abroad.

<sup>i</sup> Domestic exports.

<sup>j</sup> Refers to fiscal year ending 31 March.

<sup>k</sup> Exports include sales out of stocks held abroad. The data pertain to limited companies with annual revenues of five million ringgit or more. Foreign affiliates are defined as being foreign-controlled firms incorporated in Malaysia and branches of firms incorporated abroad.

<sup>l</sup> Refers to majority-foreign and wholly-foreign affiliates in the secondary sector, excluding those in rubber-processing and granite quarrying.

<sup>m</sup> Refers to direct and indirect exports of foreign affiliates.



Annex table A.I.9. Trade balance<sup>a</sup> of foreign affiliates and all firms in selected host economies

(Millions of dollars)

Host economy	Year	Foreign affiliates			All firms <sup>b</sup>		
		Exports	Imports	Balance	Exports	Imports	Balance
<i>Developed countries :</i>							
Austria	1996	23 061	27 059	-3 998	93 401	94 629	-1 228
Japan	1985	3 859 <sup>c</sup>	14 087 <sup>c</sup>	-10 228 <sup>c</sup>	194 130	148 957	45 173
	1995	23 917 <sup>c</sup>	42 383 <sup>c</sup>	-18 466 <sup>c</sup>	482 598	406 891	75 707
United States	1985	56 401 <sup>d</sup>	113 331 <sup>d</sup>	-56 930 <sup>d</sup>	303 000	417 200	-114 200
	1996	136 588 <sup>d</sup>	252 990 <sup>d</sup>	-116 402 <sup>d</sup>	873 800	965 000	-91 200
<i>Developing economies :</i>							
China	1991	12 047 <sup>e</sup>	16 907 <sup>e</sup>	-4 860 <sup>e</sup>	65 898	54 297	11 601
	1997	74 900 <sup>e</sup>	77 721 <sup>e</sup>	-2 821 <sup>e</sup>	207 251	166 754	40 497
Brazil	1997	21 745	19 371	2 374	60 753	81 900	-21 147
India	1985	360 <sup>f</sup>	302 <sup>f</sup>	58 <sup>f</sup>	12 088	17 588	-5 500
	1991	834 <sup>f</sup>	575 <sup>f</sup>	259 <sup>f</sup>	24 734	24 734	-
Malaysia	1985	2 703 <sup>g</sup>	2 822 <sup>g</sup>	- 119 <sup>g</sup>	17 131	15 530	1 601
	1994	28 874 <sup>g</sup>	17 584 <sup>g</sup>	11 290 <sup>g</sup>	66 217	67 411	-1 194
Mexico	1990	6 093	9 059	-2 966	48 866	51 768	-2 902
	1993	11 174	18 081	-6 907	61 477	77 307	-15 830
Taiwan Province of China	1989	11 189 <sup>h</sup>	7 344 <sup>h</sup>	3 845 <sup>h</sup>	79 945	63 035	16 910
	1995	22 957 <sup>h</sup>	18 545 <sup>h</sup>	4 412 <sup>h</sup>	85 743	71 159	14 584

Source: UNCTAD, based on UNCTAD FDI/TNC database; OECD, 1997a; and IMF, International Financial Statistics CD-ROM (May 1999).

<sup>a</sup> Exports minus imports.

<sup>b</sup> Trade in goods and non-factor services.

<sup>c</sup> Refers to firms with foreign participation of 50 per cent in 1985 and more than one third in 1995, respectively, of the shares.

<sup>d</sup> Merchandise trade shipped by and to affiliates. Data refer to non-bank all affiliates and do not include trade in services.

<sup>e</sup> Data refer to the trade of all foreign-invested enterprises located within China.

<sup>f</sup> Data refer to fiscal years ending 31 March. Imports refer to raw materials and capital goods.

<sup>g</sup> Exports include sales out of stocks held abroad, while imports include goods in transit. The data pertain to limited companies with annual revenues of five million ringgit or more. Foreign affiliates are defined as being foreign-controlled firms incorporated in Malaysia and branches of firms incorporated abroad.

<sup>h</sup> Exports refer to direct and indirect exports of foreign affiliates while imports represent imports of parts and raw materials.

**Annex table A.I.10. Significance of research and development expenditures of foreign affiliates  
in selected host economies**

Host economy	Year	Research and development expenditures of foreign affiliates (million dollars)		Total research and development expenditures (million dollars)		R & D expenditures of foreign affiliates as a percentage of total R & D expenditures	
		Manufacturing	All industries	Manufacturing	All industries	Manufacturing	All industries
<i>Developed countries :</i>							
Canada	1988	1 137	1 323	2 587	3 757	43.9	35.2
	1993	1 167	1 469	3 122	5 075	37.4	28.9
France	1992	2 648	..	17 761	19 992	14.9	..
Ireland	1984	40	40	64	67	62.3	59.5
	1991	171	180	268	284	63.9	63.3
Japan	1985	184	220	23 240	24 901	0.8	0.9
	1995	2 597	2 729	93 285	99 893	2.8	2.7
Sweden	1990	590	685	3 893	4 405	15.2	15.5
	1994	510	647	4 296	4 980	11.9	13.0
United States	1985	4 478	5 240	77 525	84 239	5.8	6.2
	1995	14 756	17 542	106 077	132 103	13.9	13.3
<i>Developing economies :</i>							
India	1985	3.0 <sup>a</sup>	3.6 <sup>a</sup>	..	..	..	..
	1990	6.9 <sup>a</sup>	9.5 <sup>a</sup>	..	554 <sup>b</sup>	..	1.7
Singapore	1987	26 <sup>c</sup>	..	90 <sup>d</sup>	..	29.0	..
	1994	449 <sup>c</sup>	..	480 <sup>b</sup>	..	93.5	..
Taiwan Province of China	1989	240	269	..	1 162	..	23.1
	1995	1 038	1 100	..	2 717	..	40.5

*Source:* UNCTAD, based on UNCTAD FDI/TNC database; OECD 1995b, 1997b and 1998d; and UNESCO, 1990 and 1996.

<sup>a</sup> Refers to fiscal year ending 31 March.

<sup>b</sup> Refers to the productive sector.

<sup>c</sup> Refers to majority-foreign and wholly-foreign affiliates in the secondary sector, excluding those in rubber-processing and granite quarrying.

<sup>d</sup> Refers to the manufacturing branch of the productive sector, accounting for 84 per cent.

Annex table A.I.11. Profits of foreign affiliates in manufacturing in selected economies

Profits in the manufacturing sector				
Host economy	Year	Profits of foreign affiliates (million dollars)		
		Foreign affiliates	All firms <sup>a</sup>	as a percentage of profits of all firms
<i>Developed countries :</i>				
Austria	1996	1 129.0	..	..
Canada	1988	8 841.3 <sup>b</sup>	61 539.4	14.4
	1993	5 077.1 <sup>b</sup>	57 980.8	8.8
Finland	1996	641.6 <sup>c</sup>	15 878.0	4.0
France	1987	9 467.8 <sup>d</sup>	71 475.5	13.2
	1992	13 335.0 <sup>d</sup>	104 825.8	12.7
Japan	1985	680.4 <sup>e</sup>	20 785.6 <sup>f</sup>	3.3
	1995	3 692.3 <sup>e</sup>	56 929.6 <sup>f</sup>	6.5
Netherlands	1985	1 039.6 <sup>g</sup>	7 172.5	14.5
	1994	4 213.7 <sup>g</sup>	22 213.4	19.0
Norway	1986	249.5 <sup>h</sup>	3 966.9	6.3
	1994	490.3 <sup>h</sup>	5 322.2	9.2
Sweden	1985	653.5 <sup>i</sup>	15 510.3	4.2
	1994	2 249.6 <sup>i</sup>	20 135.7	11.2
United Kingdom	1985	9 249.4 <sup>j</sup>	70 546.0	13.1
	1992	20 985.2 <sup>j</sup>	142 468.2	14.7
United States	1985	1 063.0 <sup>k</sup>	46 231.0 <sup>f</sup>	2.3
	1996	7 153.0 <sup>k</sup>	123 152.0 <sup>f</sup>	5.8
<i>Developing economies :</i>				
China	1995	8 476.0 <sup>l</sup>	..	..
	1997	10 053.8 <sup>l</sup>	..	..
India	1985	352.6 <sup>m</sup>	8 055.6	4.4
	1991	557.1 <sup>m</sup>	12 558.3	4.4
Malaysia	1985	311.7 <sup>n</sup>	3 419.3	9.1
	1994	2 595.7 <sup>n</sup>	13 690.8	19.0
Mexico	1985	1 895.0	14 885.5	12.7
	1993	7 549.0	21 978.6	34.3
Singapore	1987	1 909.3 <sup>o</sup>	4 874.4	39.2
	1996	7 767.2 <sup>o</sup>	17 421.3	44.6
Taiwan Province of China	1989	2 121.9 <sup>p</sup>	28 438.4	7.5
	1995	3 005.5 <sup>p</sup>	37 940.2	7.9
Viet Nam	1994	- 13.3 <sup>..</sup>	..	..
	1995	- 32.6	..	..

Source: UNCTAD, based on UNCTAD FDI/TNC database and UNIDO Industrial Statistics database.

- <sup>a</sup> Profits of all firms in the manufacturing sector refer to value added minus wages and salaries except for Japan and the United States. However, this methodology leaves domestic profits over-estimated because taxes and capital allowances other than profits are included.
- <sup>b</sup> Refers to majority foreign-owned affiliates only.
- <sup>c</sup> Profits before taxes of majority foreign-owned affiliates only.
- <sup>d</sup> Data do not include the food, beverages and tobacco industries and refer to firms with foreign participation of more than 20 per cent.
- <sup>e</sup> Data represent profits before taxes and exclude those for banks and other financial institutions. Foreign affiliates refer to firms with foreign participation of 50 per cent in 1985 and more than one third in 1995, respectively, of the shares.
- <sup>f</sup> Profits after tax.
- <sup>g</sup> Refers to net income of majority foreign-owned affiliates only. They represent non-financial firms with a balance sheet total of over 10 million guilders.
- <sup>h</sup> Covers firms with more than 10 persons engaged and a foreign participation of more than 50 per cent.
- <sup>i</sup> Includes data on non-financial enterprises with 20 or more employees for manufacturing and 50 or more employees for services (excluding real estate).
- <sup>j</sup> Data are defined as gross value added less wages and salaries.
- <sup>k</sup> Refers to net income of non-bank all affiliates.
- <sup>l</sup> Profits before taxes. Data refer to foreign-funded enterprises with independent accounting systems.
- <sup>m</sup> Profits before taxes, fiscal year ending 31 March.
- <sup>n</sup> Data represent gross profits before taxation. They pertain to limited companies with annual revenues of five million ringgit or more. Foreign affiliates are defined as being foreign-controlled firms incorporated in Malaysia and branches of firms incorporated abroad.
- <sup>o</sup> Data refer to net operating surplus at the original source. They cover majority-foreign and wholly-foreign affiliates in the secondary sector, excluding those in rubber-processing and granite quarrying.
- <sup>p</sup> Refers to profits before taxation.

Annex table A.I.12. Outward FDI flows from selected economies in Asia, by region

(Millions of dollars)

Host region	China <sup>a</sup>		Hong Kong, China <sup>b</sup>		Malaysia <sup>c</sup>		Pakistan		Philippines <sup>d</sup>		Rep. of Korea <sup>e</sup>		Singapore <sup>b</sup>		Taiwan POC <sup>a</sup>		Thailand <sup>f</sup>		Total	
	1991	1995	1987	1996	1987	1997	1987	1994	1992	1997	1992	1997	1987	1996	1987	1997	1987	1997	1987	1997
Africa	1.5	9.2	-	-	-	94.7	12.8	5.5	-	-	27.3	72.4	-	-	1.0	-	-	-	42.6	181.8
Latin America and the Caribbean	4.1	4.9	-	-	-	12.1	-	-	-	-	35.7	257.8	-	-	10.2	1 352.7	-	85.0	50.0	1 712.4
South, East and South-East Asia	10.3	49.0	1 944.4	25 253.8	80.9	1 542.5	1.2	2.5	1.0	20.1	491.4	1 392.4	157.4	10 687.9	17.8	786.4	128.8	272.9	2 833.2	40 007.6
West Asia	2.1	0.1	-	-	-	23.1	31.1	10.5	-	-	76.6	27.0	-	-	-	-	-	-	109.7	60.7
Central Asia	-	0.1	-	-	-	3.6	-	-	-	-	-	107.2	-	-	-	-	-	-	-	110.9
The Pacific	1.0	9.0	-	-	-	2.1	-	-	-	-	3.4	54.7	-	-	-	4.7	-	-	4.4	70.5
Developing economies, total	18.9	72.3	1 944.4	25 253.8	80.9	1 678.1	45.1	18.5	1.0	20.1	634.3	1 911.5	157.4	10 687.9	29.0	2 143.8	128.8	357.9	3 039.9	42 143.9
Developed countries	321.6	34.1	420.7	379.1	130.4	1 545.5	0.9	1.5	4.0	113.7	569.1	1 071.9	146.0	575.1	73.7	677.3	39.7	116.9	1 706.2	4 515.0
Central and Eastern Europe	22.0	0.1	-	-	-	1.8	-	-	-	-	14.9	120.9	-	-	-	-	-	-	36.8	122.8
Total world <sup>g</sup>	367.0	106.4	2 365.1	25 632.9	214.4	3 725.9	48.5	31.8	16.0	136.0	1 218.4	3 104.3	303.4	11 262.9	102.8	2 893.8	168.5	555.1	4 804.1	47 449.2

Source: UNCTAD FDI/TNC database.

Note: The data presented in this table are derived from national sources, and do not necessarily correspond to the data presented in annex table B.2 due to differences in the nature of the data.

<sup>a</sup> Data are on an approved basis. POC = Province of China.<sup>b</sup> Data refer to estimates based on inward flows of partner countries for which data are available.<sup>c</sup> Data represent equity investment abroad by residents, loans extended to non-residents and purchase of real estate abroad by residents. They do not include retained earnings. Data for 1987 represent transactions effected through the domestic banking system only.<sup>d</sup> Direct investments consist of cash (outward remittance of foreign exchange) and non-cash (conversion to equity of fees and loans) investments in equity shares.<sup>e</sup> Data refer to total amount invested and therefore do not take into account withdrawals. 1992 data are unrevised.<sup>f</sup> Data for 1997 are preliminary.<sup>g</sup> Includes amounts which cannot be allocated by region.

Annex table A.I.13. Outward FDI stock from selected economies in Asia, by region

(Millions of dollars)

Host region	China <sup>a</sup>		Hong Kong, China <sup>b</sup>		India <sup>c</sup>		Malaysia <sup>d</sup>		Pakistan <sup>e</sup>		Rep. of Korea <sup>f</sup>		Singapore <sup>g</sup>		Taiwan POC <sup>h</sup>		Thailand <sup>i</sup>		Total	
	1990	1995	1987	1996	1987	1992	1987	1987	1987	1994	1987	1987	1990	1996	1987	1997	1987	1997	1987	1997
Africa	49.2	104.4	-	-	-	145.0	-	140.7	89.6	82.8	11.6	362.8	-	-	3.7	87.3	-	-	154.1	923.0
Latin America and the Caribbean	58.1	90.9	-	-	-	-	-	179.5	0.2	0.1	16.2	810.5	-	-	17.6	5 225.2	-	69.4	92.1	6 375.5
South, East and South-East Asia	179.0	341.1	15 379.1	276 420.4	17.8	29.8	1 057.3	6 214.7	10.5	16.3	229.8	7 459.9	3 990.5	22 793.4	104.6	5 397.3	138.6	1 103.9	21 107.3	319 776.8
West Asia	12.7	21.4	-	-	-	-	-	36.0	81.1	118.6	183.3	194.9	-	-	-	-	-	-	277.1	370.9
Central Asia	-	4.7	-	-	-	-	-	7.5	-	-	-	-	-	-	-	-	-	-	-	12.2
The Pacific	9.7	28.6	-	-	-	-	-	48.4	-	-	84.9	385.7	-	-	4.5	31.0	-	-	99.1	493.7
Developing economies, total	310.6	592.9	15 379.1	276 420.4	17.8	174.8	1 057.3	6 626.8	181.4	217.8	525.8	9 213.8	3 990.5	22 793.4	130.4	10 740.7	138.6	1 173.3	21 731.5	327 953.9
Developed countries	689.7	1 162.0	1 507.7	3 333.8	10.9	108.4	670.5	5 321.3	12.0	16.1	413.6	7 535.7	2 135.8	10 069.7	244.2	4 490.7	49.1	547.2	5 733.5	32 584.9
Central and Eastern Europe	27.3	102.4	-	-	-	-	-	3.6	-	-	-	-	-	-	-	-	-	-	27.3	106.0
Total world <sup>j</sup>	1 028.7	1 858.5	16 886.8	279 754.3	97.0	293.9	1 811.9	12 736.9	196.6	266.3	939.4	16 749.5	7 808.4	39 800.2	374.6	15 313.6	189.2	1 950.5	29 332.6	368 723.7

Source: UNCTAD FDI/TNC database.

Note: The data presented in this table are derived from national sources, and do not necessarily correspond to the data presented in annex table B.4 due to differences in the nature of the data.

<sup>a</sup> Data are an accumulation of approved outward flows from 1980. POC = Province of China.<sup>b</sup> Data refer to estimates based on inward stock of partner countries for which data are available.<sup>c</sup> Data refer to fiscal years ending 31 March.<sup>d</sup> Stocks are an accumulation of flows from 1980. Data refer to equity investment abroad by residents, loans extended to non-residents and purchase of real estate abroad by residents. They do not include retained earnings.<sup>e</sup> Data refer to cumulative outward flow data since 1972.<sup>f</sup> Stocks are an accumulation of flows since 1968 and are based on actual investments less withdrawals. 'Africa' includes South Africa and Vanuatu. 'Asia' includes Guam and Japan. Australia and New Zealand are included in the 'Pacific'. Malta, Slovenia and Turkey are included in 'Developed countries'.<sup>g</sup> Data for 1990 refer only to direct equity investment while those for 1996 represent total direct investment (i.e. including intracompany loans). The series are compiled since 1976.<sup>h</sup> Data are an accumulation of flows since 1952 are on an approval basis.<sup>i</sup> Data are an accumulation of net equity investment flows abroad since 1978. Data for 1997 are preliminary.<sup>j</sup> Includes amounts which cannot be allocated by region.



Annex table A.I.14. Outward FDI flows from selected countries in Latin America, by region

(Millions of dollars)

Host region	Argentina <sup>a</sup>		Brazil <sup>b</sup>		Chile <sup>a</sup>		Colombia <sup>c</sup>		Mexico <sup>a</sup>		Peru <sup>d</sup>		Venezuela <sup>a</sup>		Total	
	1986	1992	1986	1991	1986	1992 <sup>e</sup>	1986	1992	1986	1992	1986	1990	1986	1992 <sup>e</sup>	1986	1992
Africa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Latin America and the Caribbean	0.3	15.6	76.4	1 415.1	0.1	0.7	12.4	15.5	1.2	3.2	0.8	1.0	-2.1	5.8	89.0	1 457.0
South, East and South-East Asia	0.2	1.8	-	-	-	-	-	-	-	-	-	-	-	-	0.2	1.8
West Asia	-	-	-	-	-	-	1.6	-	-	-	-	-	-	-	1.6	-
Developing countries, total	0.5	17.4	76.4	1 415.1	0.1	0.7	14.0	15.5	1.2	3.2	0.8	1.0	-2.1	5.8	90.8	1 458.8
Memorandum :																
Developed countries	9.4	17.4	58.6	201.8	-1.0	13.7	0.6	58.4	315.0	737.8	-	-	444.0	5.9	826.6	1 035.0
Central and Eastern Europe	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Unspecified	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total world <sup>f</sup>	9.9	34.8	135.0	1 616.9	-0.9	14.4	14.6	73.9	316.2	741.0	0.8	1.0	441.9	11.7	917.4	2 493.8

Source: UNCTAD, based on the Economic Commission for Latin America and the Caribbean, 1993; UNCTAD FDI/TNC database and other international and national sources.

Note: The data presented in this table are derived from national sources, and do not necessarily correspond to the data presented in annex table B.2 due to differences in the nature of the data.

<sup>a</sup> Data refer to estimates based on information on inward flows of partner countries for which data are available. Therefore, they may be underestimated.

<sup>b</sup> Data are based on registrations in the Central Bank of Brazil in the year in which remittances were carried out. Such data do not include investments of the Brazilian TNC, Itaipu Binacional but include state-owned TNCs in the petroleum and telecommunications industries.

<sup>c</sup> Data are based on variations in foreign direct capital stock between two consecutive years.

<sup>d</sup> Data refer to authorized investments by the Commission on Foreign Investment and Technologies (CONITE).

<sup>e</sup> The total values in 1992 as reported by the IMF are \$378 million for Chile and \$156 million for Venezuela respectively. The difference between the totals above and those of the IMF are unknown.

<sup>f</sup> Includes amounts which cannot be allocated by region.

**Annex table A.I.15. Outward FDI stock from selected countries in Latin America, by region**  
(Millions of dollars)

Host region	Argentina <sup>a</sup>		Brazil <sup>b</sup>		Chile		Colombia <sup>d</sup>		Mexico <sup>a</sup>		Peru <sup>e</sup>		Venezuela <sup>a</sup>		Total	
	1986	1992	1986	1991	1986 <sup>a</sup>	1992 <sup>c</sup>	1986	1992	1986	1992	1986	1990	1986	1992	1986	1992
Africa	-	-	16.1	16.1	-	17.1	-	-	-	-	-	-	-	-	16.1	33.3
Latin America and the Caribbean	101.5	485.7	583.7	2 490.4	16.1	647.6	258.3	316.2	43.6	66.1	22.2	46.9	113.8	123.8	1 139.2	4 176.8
South, East and South-East Asia	-	-	16.4	16.4	-	2.8	-	-	-	0.1	-	-	-	-	16.4	19.3
West Asia	-	-	13.8	13.8	-	-	9.2	6.0	-	-	3.8	3.8	-	-	26.8	23.6
Developing countries, total	101.5	485.7	630.3	2 537.0	16.1	667.5	267.5	322.2	43.6	66.2	26.0	50.7	113.8	123.8	1 198.7	4 253.1
Memorandum :																
Developed countries	292.0	721.5	866.5	1 585.8	14.0	44.2	48.3	174.1	847.0	1 298.4	12.5	12.7	476.0	475.0	2 556.3	4 311.7
Central and Eastern Europe	-	-	-	-	-	0.4	-	-	-	-	-	-	-	-	-	0.4
Total world <sup>f</sup>	393.5	1 207.2	1 496.8	4 122.8	30.1	713.0	315.8	496.3	890.6	1 364.5	38.5	63.4	589.8	598.8	3 755.0	8 565.9

*Source:* UNCTAD, based on the Economic Commission for Latin America and the Caribbean, 1993; UNCTAD FDI/TNC database and other international and national sources.

*Note:* The data presented in this table are derived from national sources, and do not necessarily correspond to the data presented in annex table B.4 due to differences in the nature of the data.

<sup>a</sup> Data refer to estimates based on information on inward stock of partner countries for which data are available. Therefore, they may be underestimated.

<sup>b</sup> Data are based on cumulative flows of registered FDI since 1984. Such data do not include investments of the Brazilian TNC, Itaipu Binacional but include state-owned TNCs in the petroleum and telecommunications industries. Data were converted into United States dollars at the exchange rate prevailing on the date of each authorized remittance abroad.

<sup>c</sup> Data reflect cumulative flows of FDI from 1975. Data include investments regulated by Chapter XII, Letter "A" (Formal Foreign Exchange Market) as well as investments regulated by Chapter XII, Letter "B" (Informal Foreign Exchange Market).

<sup>d</sup> Data reflect the net accumulated value of FDI at 31 December of each year as registered in the Foreign Exchange Office of the Banco de la Republica.

<sup>e</sup> Data refer to accumulated amount of outward investment authorized by the Commission on Foreign Investment and Technologies (CONITE).

<sup>f</sup> Includes amounts which cannot be allocated by region.

Annex table A.I.16. FDI inflows, by industry, 1988

(Values in millions of dollars and shares in percentages)

Sector/industry	Developed countries <sup>a</sup>			Developing economies						World <sup>e</sup>		
	Developed countries <sup>a</sup>			Africa <sup>b</sup>		South-East Asia <sup>c</sup>		Latin America and the Caribbean <sup>d</sup>		World <sup>e</sup>		
	Value	Share		Value	Share	Value	Share	Value	Share	Value	Share	Share
<b>All industries</b>	<b>93 170</b>	<b>100.0</b>		<b>639</b>	<b>100.0</b>	<b>18 457</b>	<b>100.0</b>	<b>7 572</b>	<b>100.0</b>	<b>26 668</b>	<b>100.0</b>	<b>119 837</b>
<b>Primary</b>	<b>8 577</b>	<b>9.2</b>		<b>65</b>	<b>10.1</b>	<b>1 044</b>	<b>5.7</b>	<b>678</b>	<b>9.0</b>	<b>1 787</b>	<b>6.7</b>	<b>10 364</b>
Agriculture, hunting, forestry and fishing	1	-		7	1.0	483	2.6	79	1.0	569	2.1	570
Mining, quarrying and petroleum	8 576	9.2		58	9.1	561	3.0	599	7.9	1 219	4.6	9 794
Unspecified primary	-	-		-	-	-	-	-	-	-	-	-
<b>Manufacturing</b>	<b>34 974</b>	<b>37.5</b>		<b>183</b>	<b>28.7</b>	<b>14 140</b>	<b>76.6</b>	<b>3 479</b>	<b>45.9</b>	<b>17 802</b>	<b>66.8</b>	<b>52 776</b>
Food, beverages and tobacco	5 502	5.9		9	1.5	743	4.0	222	2.9	974	3.7	6 476
Textiles, clothing and leather	2 638	2.8		136	21.3	887	4.8	- 29	-0.4	994	3.7	3 632
Wood and wood products	335	0.4		-	-	477	2.6	243	3.2	720	2.7	1 055
Publishing, printing and reproduction of recorded media	5 510	5.9		-	-	26	0.1	-	-	26	0.1	5 536
Coke, petroleum products and nuclear fuel	-2 897	-3.1		-	-	230	1.2	-102	-1.4	128	0.5	-2 769
Chemicals and chemical products	5 721	6.1		1	0.1	3 306	17.9	70	0.9	3 376	12.7	9 098
Rubber and plastic products	1 850	2.0		-	-	466	2.5	433	5.7	899	3.4	2 748
Non-metallic mineral products	3 388	3.6		-	-	249	1.4	83	1.1	333	1.2	3 721
Basic metals	1 673	1.8		-	-	987	5.3	631	8.3	1 618	6.1	3 291
Fabricated metal products	1 168	1.3		-	-	-	-	-	-	-	-	1 168
Machinery and equipment	4 255	4.6		-	-	513	2.8	510	6.7	1 023	3.8	5 278
Electric machinery	2 785	3.0		-	-	1 873	10.2	192	2.5	2 066	7.7	4 850
Office, accounting and computing machinery	2 082	2.2		-	-	-	-	-	-	-	-	2 082
Electrical machinery and apparatus	18	-		-	-	1 873	10.1	192	2.5	2 065	7.7	2 084
Radio, television and communication apparatus	685	0.7		-	-	-	-	-	-	-	-	685
Precision instruments	1 046	1.1		-	-	7	-	-	-	7	-	1 053
Transport equipment	- 223	-0.2		-	-	152	0.8	85	1.1	237	0.9	14
Motor vehicles, trailers and semi-trailers	- 233	-0.2		-	-	152	0.8	- 1	-	151	0.6	- 82
Other transport equipment	10	-		-	-	-	-	86	1.1	86	0.3	96
Other manufacturing	2 223	2.4		24	3.7	154	0.8	70	0.9	248	0.9	2 471
Unspecified manufacturing	-	-		13	2.1	4 071	22.1	1 071	14.1	5 155	19.3	5 155

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Annex table A.I.16. FDI inflows, by industry, 1988 (concluded)

(Values in millions of dollars and shares in percentages)

Sector/industry	Developing economies									
	Developed countries <sup>a</sup>		Africa <sup>b</sup>		South-East Asia <sup>c</sup>		Latin America and the Caribbean <sup>d</sup>		Total	
	Value	Share	Value	Share	Value	Share	Value	Share	Value	Share
<b>Services</b>	<b>39 999</b>	<b>42.9</b>	<b>254</b>	<b>39.7</b>	<b>2 994</b>	<b>16.2</b>	<b>3 407</b>	<b>45.0</b>	<b>6 654</b>	<b>25.0</b>
Electricity, gas and water	764	0.8	-	-	-	-	-	-	-	764
Construction	590	0.6	20	3.1	616	3.3	26	0.3	662	2.5
Trade	7 376	7.9	34	5.3	378	2.0	433	5.7	845	3.2
Hotels and restaurants	2 656	2.9	53	8.4	432	2.3	-	-	486	1.8
Transport, storage and communications	878	0.9	31	4.8	226	1.2	292	3.9	549	2.1
Finance	12 639	13.6	58	9.1	253	1.4	546	7.2	857	3.2
Real estate	3 824	4.1	39	6.1	631	3.4	9	0.1	679	2.5
Rental activities	-	-	-	-	-	-	-	-	-	-
Business services	7 262	7.8	-	-	7	-	-	-	7	-
Computer and related activities	586	0.6	-	-	-	-	-	-	-	-
Research and development	-	-	-	-	7	-	-	-	7	-
Other business activities	6 676	7.2	-	-	-	-	-	-	-	-
Other services	4 010	4.3	19	3.0	449	2.4	2 100	27.7	2 568	9.6
Public administration and defence	-	-	-	-	-	-	-	-	-	-
Education	1	-	-	-	-	-	-	-	-	-
Health and social services	-	-	-	-	5	-	-	-	5	-
Community, social and personal service activities	672	0.7	-	-	-	-	-	-	-	-
Others	3 337	3.6	19	3.0	444	2.4	2 100	27.7	2 563	9.6
Unspecified services	-	-	-	-	2	-	-	-	2	-
<b>Unspecified</b>	<b>9 620</b>	<b>10.3</b>	<b>137</b>	<b>21.5</b>	<b>279</b>	<b>1.5</b>	<b>9</b>	<b>0.1</b>	<b>424</b>	<b>1.6</b>
									<b>10 044</b>	<b>8.4</b>

Source: UNCTAD, FDI/TNC database.

<sup>a</sup> Based on FDI inflows to France, Germany, Iceland, Netherlands, Sweden, United Kingdom and the United States that accounted for 71 per cent of total inflows to developed countries in 1988.<sup>b</sup> 1992. Based on inflows to Ethiopia, Kenya (approval basis), Mauritius (approval basis) and Morocco that accounted for 15 per cent of total inflows to Africa in 1992.<sup>c</sup> Based on actual inflows to Hong Kong (China), India (1992), Pakistan, Philippines, Republic of Korea, Singapore, Thailand, as well as inflows on an approval basis to Bangladesh, Cambodia (1994), China, Indonesia (1989), Lao People's Democratic Republic, Malaysia, Myanmar (1989), Nepal, Sri Lanka, Taiwan Province of China and Viet Nam. They accounted for 99 per cent of total inflows to South, East and South-East Asia in 1988.<sup>d</sup> Based on inflows to Argentina (1989), Bolivia, Brazil, Chile, Colombia, Costa Rica, Mexico (approval basis), Paraguay (1990), Peru, Trinidad and Tobago and Venezuela that accounted for 88 per cent of total inflows to Latin America and the Caribbean in 1988.<sup>e</sup> Not including Central and Eastern Europe.

Annex table A.I.17. FDI inflows, by industry, 1997

(Values in millions of dollars and shares in percentages)

Sector/industry	Developed countries <sup>a</sup>			Developing economies						World <sup>e</sup>		
	Africa <sup>b</sup>			South-East Asia <sup>c</sup>		Latin America and the Caribbean <sup>d</sup>		Total				
	Value	Share		Value	Share	Value	Share	Value	Share	Value	Share	Share
<b>All Industries</b>	<b>198 513</b>	<b>100.0</b>	<b>581</b>	<b>100.0</b>	<b>100.0</b>	<b>42 515</b>	<b>100.0</b>	<b>161 895</b>	<b>100.0</b>	<b>360 408</b>	<b>100.0</b>	<b>100.0</b>
<b>Primary</b>	<b>8 591</b>	<b>4.3</b>	<b>89</b>	<b>15.3</b>	<b>2.8</b>	<b>3 998</b>	<b>9.4</b>	<b>7 466</b>	<b>4.6</b>	<b>16 057</b>	<b>4.5</b>	
Agriculture, hunting, forestry and fishing	373	0.2	35	6.0	1.1	418	1.0	1 795	1.1	2 168	0.6	
Mining, quarrying and petroleum	8 218	4.1	54	9.2	1.7	3 580	8.4	5 671	3.5	13 889	3.9	
Unspecified primary	-	-	-	-	-	-	-	-	-	-	-	
<b>Manufacturing</b>	<b>70 281</b>	<b>35.4</b>	<b>187</b>	<b>32.1</b>	<b>59.5</b>	<b>10 307</b>	<b>24.2</b>	<b>81 189</b>	<b>50.1</b>	<b>151 470</b>	<b>42.0</b>	
Food, beverages and tobacco	4 495	2.3	13	2.2	1.8	3 307	7.8	5 420	3.3	9 915	2.8	
Textiles, clothing and leather	2 975	1.5	112	19.3	0.8	65	0.2	1 147	0.7	4 123	1.1	
Wood and wood products	2 285	1.2	11	1.8	5.1	120	0.3	6 152	3.8	8 438	2.3	
Publishing, printing and reproduction of recorded media	889	0.4	-	-	0.1	-	-	67	-	956	0.3	
Coke, petroleum products and nuclear fuel	4 576	2.3	-	-	2.0	367	0.9	2 743	1.7	7 319	2.0	
Chemicals and chemical products	19 368	9.8	2	0.3	11.5	728	1.7	14 402	8.9	33 770	9.4	
Rubber and plastic products	1 533	0.8	-	-	0.1	319	0.8	462	0.3	1 996	0.6	
Non-metallic mineral products	1 665	0.8	6	0.9	1.9	257	0.6	2 483	1.5	4 148	1.2	
Basic metals	5 540	2.8	-	-	3.5	131	0.3	4 260	2.6	9 799	2.7	
Fabricated metal products	2 553	1.3	-	-	0.0	-	-	1	-	2 554	0.7	
Machinery and equipment	8 078	4.1	-	-	1.9	2 291	5.4	4 508	2.8	12 586	3.5	
Electric machinery	3 922	2.0	-	-	4.2	355	0.8	5 400	3.3	9 322	2.6	
Office, accounting and computing machinery	1 522	0.8	-	-	-	-	-	-	-	1 522	0.4	
Electrical machinery and apparatus	- 91	-	-	-	3.8	355	0.8	4 882	3.0	4 791	1.3	
Radio, television and communication apparatus	2 490	1.3	-	-	0.4	-	-	518	0.3	3 008	0.8	
Precision instruments	2 799	1.4	-	-	0.1	-	-	62	-	2 860	0.8	
Transport equipment	4 488	2.3	-	-	0.5	223	0.5	778	0.5	5 267	1.5	
Motor vehicles, trailers and semi-trailers	4 103	2.1	-	-	0.5	223	0.5	778	0.5	4 881	1.4	
Other transport equipment	386	0.2	-	-	-	-	-	-	-	386	0.1	
Other manufacturing	2 562	1.3	20	3.5	2.0	462	1.1	2 843	1.8	5 404	1.5	
Unspecified manufacturing	2 553	1.3	24	4.1	24.2	1 682	4.0	30 461	18.8	33 014	9.2	

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Annex table A.I.17. FDI inflows, by industry, 1997 (concluded)

(Values in millions of dollars and shares in percentages)

Sector/Industry	Developing economies									
	Developed countries <sup>a</sup>		Africa <sup>b</sup>		South-East Asia <sup>c</sup>		Latin America and the Caribbean <sup>d</sup>		Total	
	Value	Share	Value	Share	Value	Share	Value	Share	Value	Share
<b>Services</b>	<b>105 241</b>	<b>53.0</b>	<b>243</b>	<b>41.8</b>	<b>42 472</b>	<b>35.8</b>	<b>24 076</b>	<b>56.6</b>	<b>66 791</b>	<b>41.3</b>
Electricity, gas and water	6 435	3.2	-	-	3 958	3.3	7 270	17.1	11 227	6.9
Construction	2 439	1.2	16	2.7	3 384	2.8	254	0.6	3 653	2.3
Trade	24 119	12.2	27	4.7	4 163	3.5	1 373	3.2	5 563	3.4
Hotels and restaurants	- 75	-	2	0.3	3 677	3.1	271	0.6	3 949	2.4
Transport, storage and communications	5 349	2.7	22	3.8	9 743	8.2	2 303	5.4	12 068	7.5
Finance	38 908	19.6	129	22.2	1 873	1.6	5 253	12.4	7 255	4.5
Real estate	7 384	3.7	31	5.3	7 304	6.1	91	0.2	7 426	4.6
Rental activities	- 740	-0.4	-	-	-	-	- 1	-	- 1	-
Business services	14 181	7.1	-	-	20	-	5 596	13.2	5 616	3.5
Computer and related activities	1 127	0.6	-	-	-	-	-	-	-	-
Research and development	84	-	-	-	20	-	-	-	20	-
Other business activities	12 970	6.5	-	-	-	-	5 596	13.2	5 596	3.5
Other services	5 841	2.9	16	2.8	7 803	6.6	207	0.5	8 026	5.0
Public administration and defence	-	-	-	-	114	0.1	-	-	114	0.1
Education	46	-	1	0.1	-	-	-	-	1	-
Health and social services	-	-	-	-	2 183	1.8	-	-	2 183	1.3
Community, social and personal service activities	1 404	0.7	-	-	-	-	26	0.1	26	-
Other	4 390	2.2	16	2.7	5 506	4.6	181	0.4	5 703	3.5
Unspecified services	1 400	0.7	-	-	547	0.5	1 461	3.4	2 008	1.2
<b>Unspecified</b>	<b>14 400</b>	<b>7.3</b>	<b>62.5</b>	<b>10.8</b>	<b>2 252</b>	<b>1.9</b>	<b>4 134</b>	<b>9.7</b>	<b>6 448</b>	<b>4.0</b>
									<b>20 848</b>	<b>5.8</b>

Source: UNCTAD, FDI/TNC database.

a Based on FDI inflows to Belgium/Luxembourg, Canada, Denmark, Finland, France, Iceland, Italy, Netherlands, Norway, Sweden, Switzerland, United Kingdom and the United States that accounted for 83 per cent of total inflows to developed countries in 1997.

b 1995. Based on inflows to Ethiopia, Kenya (approval basis), Mauritius (approval basis) and Morocco that accounted for 10 per cent of total inflows to Africa in 1995.

c Based on actual inflows to China, Hong Kong (China), India, Pakistan (1996), Philippines, Singapore (1996), Thailand, as well as inflows on an approval basis to Bangladesh, Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar (1996), Nepal, Republic of Korea, Sri Lanka, Taiwan Province of China and Viet Nam (1996). They accounted for 99 per cent of total inflows to South, East and South-East Asia in 1997.

d Based on inflows to Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Mexico, Paraguay, Peru, Trinidad and Tobago and Venezuela that accounted for 90 per cent of total inflows to Latin America and the Caribbean in 1997.

e Not including Central and Eastern Europe.

Annex table A.I.18. FDI inward stock, by industry, 1988

(Values in millions of dollars and shares in percentages)

Sector/Industry	Developed countries <sup>a</sup>			Developing economies						World <sup>e</sup>		
	Africa <sup>b</sup>		Share	South-East Asia <sup>c</sup>		Share	Latin America and the Caribbean <sup>d</sup>		Total	Share	Value	Share
	Value	Share		Value	Share		Value	Share				
<b>All Industries</b>	<b>726 966</b>	<b>100.0</b>		<b>4 513</b>	<b>100.0</b>		<b>68 329</b>	<b>100.0</b>	<b>39 379</b>	<b>100.0</b>	<b>839 186</b>	<b>100.0</b>
<b>Primary</b>	<b>86 443</b>	<b>11.9</b>		<b>2 338</b>	<b>51.8</b>		<b>5 730</b>	<b>8.4</b>	<b>3 480</b>	<b>8.8</b>	<b>97 992</b>	<b>11.7</b>
Agriculture, hunting, forestry and fishing	1 844	0.3		47	1.0		1 216	1.8	402	1.0	3 509	0.4
Mining, quarrying and petroleum	84 599	11.6		6	0.1		4 515	6.6	3 078	7.8	92 197	11.0
Unspecified primary	-	-		2 286	50.6		-	-	-	-	2 286	0.3
<b>Manufacturing</b>	<b>277 763</b>	<b>38.2</b>		<b>940</b>	<b>20.8</b>		<b>42 192</b>	<b>61.7</b>	<b>26 518</b>	<b>67.3</b>	<b>347 412</b>	<b>41.4</b>
Food, beverages and tobacco	24 654	3.4		-	-		2 648	3.9	2 606	6.6	29 909	3.6
Textiles, clothing and leather	11 068	1.5		-	-		3 064	4.5	922	2.3	15 054	1.8
Wood and wood products	7 466	1.0		-	-		1 886	2.8	897	2.3	10 250	1.2
Publishing, printing and reproduction of recorded media	9 597	1.3		-	-		159	0.2	-	-	9 755	1.2
Coke, petroleum products and nuclear fuel	45 308	6.2		-	-		1 602	2.3	910	2.3	47 820	5.7
Chemicals and chemical products	36 358	5.0		-	-		8 049	11.8	5 930	15.1	50 337	6.0
Rubber and plastic products	5 133	0.7		-	-		930	1.4	879	2.2	6 941	0.8
Non-metallic mineral products	10 061	1.4		-	-		1 258	1.8	692	1.8	12 011	1.4
Basic metals	20 973	2.9		-	-		7 616	11.1	2 352	6.0	30 941	3.7
Fabricated metal products	5 376	0.7		-	-		189	0.3	-	-	5 565	0.7
Machinery and equipment	30 038	4.1		-	-		2 768	4.1	3 751	9.5	36 558	4.4
Electric machinery	26 856	3.7		-	-		8 879	13.0	2 795	7.1	38 530	4.6
Office, accounting and computing machinery	12 220	1.7		-	-		-	-	-	-	12 220	1.5
Electrical machinery and apparatus	3 413	0.5		-	-		8 878	13.0	2 795	7.1	15 086	1.8
Radio, television and communication apparatus	11 223	1.5		-	-		1	0.0	-	-	11 223	1.3
Precision instruments	4 815	0.7		-	-		249	0.4	-	-	5 064	0.6
Transport equipment	10 692	1.5		-	-		1 555	2.3	3 791	9.6	16 038	1.9
Motor vehicles, trailers and semi-trailers	9 847	1.4		-	-		1 555	2.3	-	-	11 402	1.4
Other transport equipment	845	0.1		-	-		-	-	3 791	9.6	4 636	0.6
Other manufacturing	5 498	0.8		-	-		844	1.2	993	2.5	7 334	0.9
Unspecified manufacturing	23 870	3.3		940	20.8		496	0.7	-	-	25 306	3.0

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(Values in millions of dollars and shares in percentages)

Source: UNCTAD, FDI/TNC database.

<sup>1</sup> Based on inward stock in Australia, Austria, Canada, Germany, Iceland, Italy, Norway, Switzerland, United Kingdom and United States that accounted for 76 per cent of total inward stock in developed countries in 1998.

Based on inward stock in Namibia (1990) Nigeria and Swaziland that accounted for 26 per cent of total inward stock in Africa in 1988.

based on inward stock in Namibia (1970), Nigeria and Swaziland that accounted for 2.0 per cent of total inward stock in Africa in 1900. Based on actual inward stock in Hong Kong (China), India, Indonesia (1992), Pakistan, Philippines, Republic of Korea, Singapore, Thailand, as well as inward stock on an approval basis in Bangladesh, Cambodia (1994), Lao People's Democratic Republic, Malaysia, Nepal, Sri Lanka, Taiwan Province of China and Viet Nam. They accounted for 99 per cent of total inward stock in South, East and South-East Asia in 1988.

Based on inward stock in Bolivia, Brazil, Colombia, Peru and Venezuela, accounting for 38 per cent of total inward stock in Latin America and the Caribbean in 1988.

Not including Central and Eastern Europe.

Annex table A.I.19. FDI inward stock, by industry, 1997

(Values in millions of dollars and shares in percentages)

Sector/Industry	Developing economies												
	Developed countries <sup>a</sup>			Africa <sup>b</sup>		South-East Asia <sup>c</sup>		Latin America and the Caribbean <sup>d</sup>		World <sup>e</sup>			
	Value	Share		Value	Share	Value	Share	Value	Share	Value	Share		
All Industries	1 849 909	100.0		3 212	100.0	903 473	100.0	83 995	100.0	990 680	100.0	2 840 590	100.0
Primary	141 169	7.6		1 716	53.4	30 958	3.4	4 817	5.7	37 491	3.8	178 661	6.3
Agriculture, hunting, forestry and fishing	3 022	0.2		72	2.2	15 678	1.7	539	0.6	16 288	1.6	19 310	0.7
Mining, quarrying and petroleum	138 147	7.5		332	10.3	15 281	1.7	4 279	5.1	19 892	2.0	158 039	5.6
Unspecified primary	-	-		1 312	40.8	-	-	-	-	1 312	0.1	1 312	-
Manufacturing	617 691	33.4		862	26.8	555 587	61.5	32 549	38.8	588 997	59.5	1 206 688	42.5
Food, beverages and tobacco	65 747	3.6		-	-	11 781	1.3	4 674	5.6	16 455	1.7	82 202	2.9
Textiles, clothing and leather	23 314	1.3		-	-	12 584	1.4	1 331	1.6	13 915	1.4	37 229	1.3
Wood and wood products	22 582	1.2		-	-	30 655	3.4	2 048	2.4	32 703	3.3	55 285	1.9
Publishing, printing and reproduction of recorded media	18 896	1.0		-	-	449	-	-	-	449	-	19 345	0.7
Coke, petroleum products and nuclear fuel	58 220	3.1		-	-	14 709	1.6	11	-	14 720	1.5	72 940	2.6
Chemicals and chemical products	126 929	6.9		-	-	79 663	8.8	5 338	6.4	85 001	8.6	211 930	7.5
Rubber and plastic products	11 429	0.6		-	-	2 316	0.3	3 005	3.6	5 322	0.5	16 750	0.6
Non-metallic mineral products	18 121	1.0		-	-	11 143	1.2	1 430	1.7	12 573	1.3	30 694	1.1
Basic metals	42 174	2.3		-	-	34 679	3.8	3 302	3.9	37 981	3.8	80 155	2.8
Fabricated metal products	12 683	0.7		-	-	-	-	-	-	-	-	12 683	0.4
Machinery and equipment	55 078	3.0		-	-	7 417	0.8	3 325	4.0	10 742	1.1	65 820	2.3
Electric machinery	54 733	3.0		-	-	33 861	3.7	2 815	3.4	36 676	3.7	91 408	3.2
Office, accounting and computing machinery	22 025	1.2		-	-	-	-	-	-	-	-	22 025	0.8
Electrical machinery and apparatus	6 394	0.3		-	-	33 232	3.7	2 815	3.4	36 046	3.6	42 440	1.5
Radio, television and communication apparatus	26 314	1.4		-	-	630	0.1	-	-	630	0.1	26 944	0.9
Precision instruments	14 165	0.8		-	-	273	-	-	-	273	-	14 437	0.5
Transport equipment	32 878	1.8		-	-	4 367	0.5	3 583	4.3	7 950	0.8	40 828	1.4
Motor vehicles, trailers and semi-trailers	29 104	1.6		-	-	4 367	0.5	3 360	4.0	7 727	0.8	36 831	1.3
Other transport equipment	3 775	0.2		-	-	-	-	223	0.3	223	-	3 998	0.1
Other manufacturing	23 528	1.3		-	-	5 755	0.6	445	0.5	6 200	0.6	29 728	1.0
Recycling	22	-		-	-	-	-	-	-	-	-	22	-
Unspecified manufacturing	37 194	2.0		862	26.8	305 934	33.9	1 244	1.5	308 040	31.1	345 234	12.2

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Annex table A.I.19. FDI inward stock, by industry, 1997 (concluded)

(Values in millions of dollars and shares in percentages)

Sector/Industry	Developed countries <sup>a</sup>						Developing economies					
	Africa <sup>b</sup>		South-East Asia <sup>c</sup>		Latin America and the Caribbean <sup>d</sup>		Total		World <sup>e</sup>			
	Value	Share	Value	Share	Value	Share	Value	Share	Value	Share	Value	Share
<b>Services</b>	<b>1 033 389</b>	<b>55.9</b>	<b>635</b>	<b>19.8</b>	<b>296 280</b>	<b>32.8</b>	<b>46 607</b>	<b>55.5</b>	<b>343 521</b>	<b>34.7</b>	<b>1 376 911</b>	<b>48.5</b>
Electricity, gas and water	23 851	1.3	-	-	18 893	2.1	7 571	9.0	26 464	2.7	50 315	1.8
Construction	10 994	0.6	72	2.2	21 128	2.3	479	0.6	21 679	2.2	32 673	1.2
Trade	254 385	13.8	76	2.4	28 688	3.2	5 566	6.6	34 330	3.5	288 715	10.2
Hotels and restaurants	21 562	1.2	-	-	18 695	2.1	69	0.1	18 764	1.9	40 325	1.4
Transport, storage and communications	26 621	1.4	20	0.6	30 783	3.4	5 054	6.0	35 857	3.6	62 477	2.2
Finance	393 298	21.3	12	0.4	10 311	1.1	6 259	7.5	16 582	1.7	409 880	14.4
Real estate	59 619	3.2	-	-	147 395	16.3	1 445	1.7	148 840	15.0	208 458	7.3
Rental activities	805	-	-	-	-	-	-	-	-	-	805	-
Business services	171 790	9.3	-	-	1 590	0.2	20 048	23.9	21 638	2.2	193 428	6.8
Computer and related activities	3 156	0.2	-	-	-	-	-	-	-	-	3 156	0.1
Research and development	82	-	-	-	1 584	0.2	-	-	1 584	0.2	1 666	0.1
Other business activities	168 551	9.1	-	-	6	-	20 048	23.9	20 054	2.0	188 606	6.6
Other services	69 891	3.8	146	4.5	17 499	1.9	51	0.1	17 696	1.8	87 587	3.1
Public administration and defence	-	-	-	-	19	-	-	-	19	-	19	-
Education	522	-	-	-	99	-	-	-	99	-	621	-
Health and social services	6 445	0.3	-	-	4 409	0.5	-	-	4 409	0.4	10 855	0.4
Community, social and personal service activities	9 094	0.5	-	-	6	-	51	0.1	57	-	9 151	0.3
Others	53 829	2.9	146	4.5	12 967	1.4	-	-	13 112	1.3	66 942	2.4
Unspecified tertiary	575	-	310	9.6	1 298	0.1	64	0.1	1 672	0.2	2 247	0.1
<b>Unspecified</b>	<b>57 660</b>	<b>3.1</b>	<b>-</b>	<b>-</b>	<b>20 649</b>	<b>2.3</b>	<b>22</b>	<b>-</b>	<b>20 671</b>	<b>2.1</b>	<b>78 330</b>	<b>2.8</b>

Source: UNCTAD, FDI/TNC database.

<sup>a</sup> Based on inward stock in Australia, Austria (1996), Canada, Denmark (1996), Finland, France (1996), Germany (1996), Iceland, Italy, Netherlands (1996), Norway, Switzerland, United Kingdom and United States that accounted for 81 per cent of total inward stock in developed countries in 1997.

<sup>b</sup> Based on inward stock in Namibia (1994), Nigeria (1992), and Swaziland (1993) that accounted for 30 per cent of total inward stock in Africa in 1994.

<sup>c</sup> Based on actual inward stock in Hong Kong (China), India (1995), Pakistan (1996), Philippines, Singapore (1996), Thailand and Viet Nam (1996), as well as inward stock on an approval basis in Bangladesh, Cambodia, China, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar (1996), Nepal, Republic of Korea, Sri Lanka and Taiwan Province of China. They accounted for 99 per cent of total inward stock in South, East and South-East Asia in 1997.

<sup>d</sup> Based on inward stock in Brazil, Colombia, and Peru, accounting for 38 per cent of total inward stock in Latin America and the Caribbean in 1997.

<sup>e</sup> Not including Central and Eastern Europe.



Annex table A.1.20. FDI outward stock of developed countries, by industry, 1988

(Values in millions of dollars and shares in percentages)

Sector/Industry	Australia	Austria <sup>a</sup>	Canada <sup>b</sup>	Finland <sup>c</sup>	France <sup>d</sup>	Germany	Iceland <sup>e</sup>	Italy	Japan <sup>f</sup>	Norway <sup>g</sup>	Switzerland	United Kingdom <sup>h</sup>	United States	Total	Share
<b>Total</b>	<b>26 513</b>	<b>1 702</b>	<b>66 877</b>	<b>5 708</b>	<b>51 464</b>	<b>104 186</b>	<b>56</b>	<b>36 906</b>	<b>185 734</b>	<b>3 973</b>	<b>48 907</b>	<b>183 709</b>	<b>347 179</b>	<b>1 062 915</b>	<b>100.0</b>
<b>Primary</b>	<b>5 014</b>	<b>15</b>	<b>15 629</b>	-	<b>63</b>	<b>2 105</b>	-	<b>3 661</b>	<b>16 031</b>	<b>654</b>	-	<b>42 813</b>	<b>43 174</b>	<b>129 159</b>	<b>12.2</b>
Agriculture, hunting, forestry and fishing	51	-	-	-	63	72	-	80	1 844	-	-	1 341	542	3 992	0.4
Mining, quarrying and petroleum	4 963	15	15 629	-	-	2 033	-	3 581	14 188	654	-	41 472	42 632	125 167	11.8
<b>Manufacturing</b>	<b>6 764</b>	<b>627</b>	<b>4 450</b>	<b>3 338</b>	<b>31 993</b>	<b>63 523</b>	<b>50</b>	<b>11 974</b>	<b>49 628</b>	<b>1 811</b>	<b>30 337</b>	<b>66 456</b>	<b>150 327</b>	<b>421 279</b>	<b>39.6</b>
Food, beverages and tobacco	1 808	29	-	-	2 915	627	50	1 051	1 971	-	-	15 292	16 973	40 716	3.8
Textiles, clothing and leather	-	63	-	-	708	1 079	-	-	2 680	-	-	5 763	1 616	11 909	1.1
Wood and wood products	-	-	2 530	-	260	1 089	-	-	2 100	-	-	-	6 665	12 644	1.2
Publishing, printing and reproduction of recorded media	-	-	-	-	-	81	-	-	-	-	-	-	1 064	1 145	0.1
Coke, petroleum products and nuclear fuel	147	269	-	818	7 306	523	-	-	-	-	-	16 557	7 730	33 349	3.1
Chemicals and chemical products	-	-	-	-	5 015	21 416	-	-	6 317	-	-	-	31 896	64 644	6.1
Rubber and plastic products	-	-	-	-	1 717	1 354	-	-	-	-	-	-	6 327	9 398	0.9
Non-metallic mineral products	-	-	-	-	3 579	1 355	-	-	-	-	-	-	2 962	7 896	0.7
Basic metals	1 571	231	-	1 311	2 247	2 647	-	3 057	7 661	-	-	1 659	2 616	22 999	2.2
Fabricated metal products	-	-	-	-	-	1 358	-	-	-	-	-	-	5 357	6 715	0.6
Machinery and equipment	-	-	1 921	-	144	5 860	-	-	4 718	-	-	3 726	9 729	26 098	2.5
Electric machinery	-	10	-	-	4 172	11 394	-	-	10 197	-	-	8 239	28 967	62 978	5.9
Office, accounting and computing machinery	-	-	-	-	487	1 077	-	-	-	-	-	8 239	19 267	29 070	2.7
Electrical machinery and apparatus	-	-	-	-	3 684	10 317	-	-	10 197	-	-	-	743	24 941	2.3
Radio, television and communication apparatus	-	10	-	-	-	-	-	-	-	-	-	-	8 957	8 967	0.8
Precision instruments	-	-	-	-	-	790	-	-	-	-	-	-	7 864	8 654	0.8
Transport equipment	-	25	-	-	3 667	13 859	-	-	6 955	-	-	1 724	19 353	45 584	4.3
Motor vehicles, trailers and semi-trailers	-	25	0	-	-	13 180	-	-	6 955	-	-	1 724	18 467	40 352	3.8
Other transport equipment	-	-	-	-	-	679	-	-	-	-	-	-	886	1 565	0.1
Other manufacturing	-	-	-	-	-	47	-	-	-	-	-	13 495	1 208	14 750	1.4
Unspecified manufacturing	3 238	-	-	1 210	263	44	-	7 866	7 029	1 811	30 337	-	-	51 799	4.9

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Annex table A.1.20. FDI outward stock of developed countries, by industry, 1988 (concluded)

(Values in millions of dollars and shares in percentages)

Sector/Industry	Australia	Austria <sup>a</sup>	Canada <sup>b</sup>	Finland <sup>c</sup>	France <sup>d</sup>	Germany	Iceland <sup>e</sup>	Italy	Japan <sup>f</sup>	Norway <sup>g</sup>	Switzerland	United Kingdom <sup>h</sup>	United States	Total	Share
<b>Services</b>	<b>14 561</b>	<b>1 061</b>	<b>25 317</b>	<b>1 784</b>	<b>19 408</b>	<b>38 558</b>	<b>6</b>	<b>21 271</b>	<b>119 554</b>	<b>1 355</b>	<b>18 570</b>	<b>74 441</b>	<b>146 658</b>	<b>482 543</b>	<b>45.4</b>
Electricity, gas and water	-	27	-	-	-	1 114	-	-	-	-	-	-	618	1 758	0.2
Construction	-	21	-	-	673	780	-	-	1 421	-	-	2 463	922	6 280	0.6
Trade	909	293	8 047	337	2 160	3 795	6	3 823	19 709	122	-	17 934	42 425	99 560	9.4
Hotels and restaurants	-	3	-	-	385	-	-	-	-	-	-	-	4 029	4 417	0.4
Transport, storage and communications	690	2	-	-	715	1 004	-	267	4 299	426	-	3 284	2 973	13 660	1.3
Finance	11 904	181	17 270	1 219	12 401	15 019	-	16 601	41 993	807	-	22 224	83 602	223 222	21.0
Real estate	-	-	-	-	153	280	-	-	20 625	-	-	-	1 806	22 863	2.2
Rental activities	-	-	-	-	-	-	-	-	-	-	-	-	1 392	1 392	0.1
Business services	-	534	-	-	1 710	12 688	-	-	-	-	-	-	3 778	18 709	1.8
Computer and related activities	-	-	-	-	-	-	-	-	-	-	-	-	691	691	0.1
Research and development	-	-	-	-	-	-	-	-	-	-	-	-	60	60	0.0
Other business activities	0	534	-	-	1710	12 688	-	-	-	-	-	-	3 027	17 958	1.7
Other services	522	-	-	228	1 262	3 878	-	580	-	-	-	28 536	5 113	40 118	3.8
Education	-	-	-	-	-	-	-	-	-	-	-	-	87	87	0.0
Health and social services	-	-	-	-	176	-	-	-	-	-	-	-	611	787	0.1
Community, social and personal service activities	-	-	-	-	-	-	-	-	-	-	-	-	1 097	1 097	0.1
Others	522	-	-	228	1 085	3 878	-	580	-	-	-	28 536	3 318	38 146	3.6
Unspecified services	536	-	-	-	-50	-	-	-	31 508	-	18 570	-	-	50 564	4.8
<b>Unspecified</b>	<b>175</b>	<b>-</b>	<b>21 480</b>	<b>586</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>522</b>	<b>152</b>	<b>-</b>	<b>-</b>	<b>7 020</b>	<b>29 934</b>	<b>2.8</b>

Source: UNCTAD, FDI/TNC database.

Note: The data presented in this table are derived from national sources, and do not necessarily correspond to the data presented in annex table B.4 due to differences in the nature of the data.

<sup>a</sup> Austria combines manufacture of petroleum products with chemical, rubber and plastic products.<sup>b</sup> Canada's energy and metallic minerals is placed in mining, quarrying and petroleum. Wood products include paper. Machinery and equipment includes motor vehicles. Trade is retail trade and other services.<sup>c</sup> Finland's manufacture of metal includes engineering.<sup>d</sup> France's manufacture of food also includes some agriculture and manufacture of wood includes printing & publishing.<sup>e</sup> Iceland's manufacture of wood includes publishing & printing.<sup>f</sup> Japan data is on a notification basis.<sup>g</sup> Norway's trade includes hotels and restaurants, finance includes real estate and commercial services.<sup>h</sup> United Kingdom's manufacture of textiles includes wood products and printing & publishing. Petroleum products combines chemicals and plastics. Metal and mechanical products are combined. Office and communications equipment are combined. Real estate and business services are combined.

Annex table A.1.21. FDI outward stock of developed countries, by industry, 1997

(Values in millions of dollars and shares in percentages)

Sector / industry	Australia	Austria <sup>a</sup>	Canada <sup>b</sup>	Denmark <sup>c</sup>	Finland <sup>d</sup>	France <sup>e</sup>	Germany <sup>f</sup>	Iceland <sup>g</sup>	Italy	Japan <sup>h</sup>	Netherlands <sup>i</sup>	Norway <sup>j</sup>	Switzerland <sup>k</sup>	United Kingdom <sup>l</sup>	United States	Total	Share
<b>Total</b>	<b>44 231</b>	<b>12 450</b>	<b>143 938</b>	<b>27 622</b>	<b>20 297</b>	<b>192 965</b>	<b>303 501</b>	<b>268</b>	<b>125 075</b>	<b>689 837</b>	<b>201 430</b>	<b>25 440</b>	<b>159 228</b>	<b>371 120</b>	<b>860 723</b>	<b>3 178 126</b>	<b>100.0</b>
<b>Primary</b>	<b>5 312</b>	<b>116</b>	<b>35 644</b>	<b>50</b>	<b>3 272</b>	<b>12 319</b>	<b>2 010</b>	<b>29</b>	<b>8 348</b>	<b>42 724</b>	<b>49 248</b>	<b>5 541</b>	-	<b>57 499</b>	<b>63 726</b>	<b>285 858</b>	<b>9.0</b>
Agriculture, hunting, forestry and fishing	25	-	-	17	3 272	18	117	29	183	4 963	126	-	-	483	737	9 989	0.3
Mining, quarrying and petroleum	5 288	116	35 644	34	-	12 301	1 874	-	8 165	37 761	49 121	5 541	-	57 016	62 989	275 870	8.7
<b>Manufacturing</b>	<b>19 599</b>	<b>3 268</b>	<b>9 248</b>	<b>6 695</b>	<b>14 135</b>	<b>69 615</b>	<b>132 465</b>	<b>125</b>	<b>37 330</b>	<b>204 760</b>	<b>49 638</b>	<b>13 070</b>	<b>69 261</b>	<b>141 754</b>	<b>296 972</b>	<b>1 067 934</b>	<b>33.6</b>
Food, beverages and tobacco	-	297	-	2 271	-	14 450	2 249	114	3 685	10 213	17 104	-	-	43 837	42 660	136 879	4.3
Textiles, clothing and leather	-	395	-	84	-	1 299	2 741	2	1 970	10 855	-	-	497	16 571	3 203	37 618	1.2
Wood and wood products	-	-	4 328	320	-	1 205	1 429	2	-	6 756	-	-	-	-	14 182	28 222	0.9
Publishing, printing and reproduction of recorded media	-	-	-	-	-	-	992	-	-	-	-	-	-	-	-	3 474	0.1
Coke, petroleum products and nuclear fuel	-	709	-	-	-	1 091	1 723	-	-	-	-	-	13 744	43 713	8 679	69 859	2.2
Chemicals and chemical products	-	-	-	1 733	3 136	14 733	36 977	2	6 332	29 163	-	-	23 998	-	73 488	189 562	6.0
Rubber and plastic products	-	-	-	336	-	2 814	2 331	1	-	-	-	-	-	-	9 644	15 126	0.5
Non-metallic mineral products	-	-	-	-	-	-	2 973	-	-	-	-	-	-	-	5 747	8 720	0.3
Basic metals	-	854	-	185	7 739	9 206	2 433	-	5 289	23 256	20 499	-	10 554	6 941	5 363	92 319	2.9
Fabricated metal products	-	-	-	-	-	-	2 439	-	-	-	-	-	-	-	9 369	11 808	0.4
Machinery and equipment	-	-	4 920	1 060	-	7 746	13 130	4	7 875	19 154	-	-	-	-	16 808	70 698	2.2
Electric machinery	-	199	-	118	-	3 047	22 629	-	-	50 230	-	-	-	71	50 589	126 883	4.0
Office, accounting and computing machinery	-	-	-	-	-	2 120	732	-	-	-	-	-	-	71	17 776	20 699	0.7
Electrical machinery and apparatus	-	-	-	-	-	-	20 947	-	-	50 230	-	-	-	-	-	71 177	2.2
Radio, television and communication apparatus	-	199	-	118	-	927	950	-	-	-	-	-	-	-	32 813	35 007	1.1
Precision instruments	-	-	-	-	-	-	1 652	-	-	-	-	-	-	-	14 065	15 717	0.5
Transport equipment	-	52	-	34	-	7 078	38 287	-	4 392	28 207	-	-	-	7 088	36 439	121 576	3.8
Motor vehicles, trailers and semi-trailers	-	52	-	-	-	7 078	37 659	-	4 392	28 207	-	-	-	7 088	33 284	117 760	3.7
Other transport equipment	-	-	-	34	-	-	628	-	-	-	-	-	-	-	3 155	3 817	0.1
Other manufacturing	-	761	-	-	3 259	-	450	-	-	26 926	12 035	-	-	23 532	4 254	71 217	2.2
Recycling	-	-	-	-	-	-	30	-	-	-	-	-	-	-	-	30	-
Unspecified manufacturing	19 599	-	-	555	-	6 947	-	-	7 787	-	-	13 070	20 468	-	-	68 425	2.2

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Annex table A.1.21. FDI outward stock of developed countries, by industry, 1997 (concluded)

(Values in millions of dollars and shares in percentages)

Sector / industry	Australia	Austria <sup>a</sup>	Canada <sup>b</sup>	Denmark <sup>c</sup>	Finland <sup>d</sup>	France <sup>e</sup>	Germany <sup>f</sup>	Iceland <sup>g</sup>	Italy	Japan <sup>h</sup>	Netherlands <sup>i</sup>	Norway <sup>j</sup>	Switzerland <sup>k</sup>	United Kingdom <sup>l</sup>	United States	Total	Share
<b>Services</b>	<b>16 211</b>	<b>9 066</b>	<b>62 074</b>	<b>19 447</b>	<b>1 766</b>	<b>109 939</b>	<b>169 026</b>	<b>114</b>	<b>79 397</b>	<b>429 115</b>	<b>102 544</b>	<b>6 473</b>	<b>89 968</b>	<b>171 865</b>	<b>500 026</b>	<b>1 767 031</b>	<b>55.6</b>
Electricity, gas and water	-	159	-	185	-	7 528	2 383	-	-	-	-	-	-	2 205	15 953	28 413	0.9
Construction	965	445	-	320	-	1 200	1 488	-	-	5 795	1 278	-	-	5 011	1 374	17 876	0.6
Trade	941	1 597	15 989	7 957	217	6 821	8 356	56	5 205	74 878	19 330	1 832	5 011	28 568	90 152	266 908	8.4
Hotels and restaurants	-	192	-	219	-	4 957	169	-	-	-	-	-	-	8 701	7 151	21 388	0.7
Transport, storage and communications	1 309	47	-	2 052	-	4 856	2 481	48	1 793	37 642	4 858	1 521	1 734	11 454	24 438	56 590	1.8
Finance	12 735	2 459	46 085	2 187	519	49 360	50 213	6	51 367	124 812	33 061	3 120	81 383	74 289	314 069	845 666	26.6
Real estate	-	358	-	892	582	2 356	1 153	-	-	91 479	-	-	-	32 481	1 208	130 509	4.1
Rental activities	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7 433	7 433	0.2
Business services	1 570	3 707	-	4 492	-	32 272	97 081	4	-	-	-	-	-	-	26 517	165 644	5.2
Computer and related activities	-	-	-	84	-	2 432	1 380	-	-	-	-	-	-	-	11 845	15 741	0.5
Research and development	-	-	-	-	-	909	-	-	-	-	-	-	-	-	782	1 691	0.1
Other business activities	1 570	3 707	-	4 407	-	28 932	95 701	3	-	-	-	-	-	-	13 890	148 211	4.7
Other services	-	103	-	34	448	589	5 702	-	-	94 508	44 018	-	1 840	9 157	11 731	168 129	5.3
Education	-	-	-	-	-	-	76	-	-	-	-	-	-	-	59	135	-
Health and social services	-	-	-	-	-	-	-	-	-	-	-	-	-	-	78	78	-
Community, social and personal service activities	-	-	-	-	-	-	430	-	-	-	-	-	-	-	3 714	4 144	0.1
Others	-	103	-	34	448	589	5 196	-	-	94 508	44 018	-	1 840	9 157	7 880	163 772	5.2
Unspecified services	1 309	-	-	1 110	-	-	-	-	21 033	-	-	-	-	-	-	58 477	1.8
<b>Unspecified</b>	<b>3 108</b>	<b>-</b>	<b>36 953</b>	<b>1 430</b>	<b>1 124</b>	<b>1 091</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>13 239</b>	<b>-</b>	<b>357</b>	<b>- 1</b>	<b>2</b>	<b>- 1</b>	<b>57 302</b>	<b>1.8</b>

Source : UNCTAD, FDI/TNC database.

Note: The data presented in this table are derived from national sources, and do not necessarily correspond to the data presented in annex table B.4 due to differences in the nature of the data.

<sup>a</sup> Austria combines manufacture of petroleum products with chemical, rubber and plastic products. 1996 data.<sup>b</sup> Canada's energy and metallic minerals is placed in mining, quarrying and petroleum. Wood products include paper. Machinery and equipment includes motor vehicles. Trade is retail trade and other services.<sup>c</sup> Denmark manufacture of wood also includes publishing & printing. 1996 data.<sup>d</sup> Finland's manufacture of metal includes engineering.<sup>e</sup> France's manufacture of food also includes some agriculture and manufacture of wood includes printing & publishing.<sup>f</sup> Germany's other business activities include an unspecified component of \$398 million, which mainly related to rental activities and research and development. It also includes holding companies. Education includes health and services.<sup>g</sup> Iceland's manufacture of wood includes publishing & printing. 1996 data.<sup>h</sup> Japan's data on a notification basis. Therefore, the data are overestimated. 1996 data.<sup>i</sup> Netherlands's mining, quarrying and petroleum includes the manufacture of petroleum products and chemicals, manufacture of metal includes electrical engineering and finance is banking and insurance.<sup>j</sup> Norway's trade includes hotels and restaurants; finance includes real estate and commercial services.<sup>k</sup> Switzerland's manufacture of petroleum products includes electronic, optical and watch making. Manufacture of metals includes machinery.<sup>l</sup> United Kingdom's manufacture of textiles includes wood products and printing & publishing. Petroleum products combines chemicals and plastics. Metal and mechanical products are combined. Office and communications equipment are combined. Real estate and business services are combined.

**Annex table A.II.1. FDI inflows and investment opportunities in Africa, by industrial sectors, 1996-1998 and 2000-2003**

Sector/industry	FDI inflows received during 1996-1998			Countries that identified sector to offer the best investment opportunities in 2000-2003
	Considerable <sup>a</sup>	Little <sup>b</sup>	None	
Agriculture	Côte d'Ivoire Gambia, The Kenya Madagascar Malawi Mali Mozambique Sudan Uganda Zambia Zimbabwe	Algeria Botswana Burkina Faso Cameroon Cape Verde Ethiopia Ghana Mauritius Morocco Namibia Rwanda South Africa Tanzania, United Republic of Togo Tunisia	Algeria Congo, Democratic Republic of Niger Seychelles	Algeria Cameroon Egypt Ethiopia Gambia, The Ghana Kenya Madagascar Malawi Mali Mozambique Niger Tanzania, United Republic of Togo Uganda
Fishing and aquaculture	Côte d'Ivoire Egypt <sup>c</sup> Gambia, The <sup>c</sup> Madagascar Mozambique Namibia Uganda	Algeria Botswana Cameroon Cape Verde Ghana Malawi Mauritius Morocco Rwanda South Africa Sudan Tanzania, United Republic of Togo Tunisia Zambia Zimbabwe	Congo, Democratic Republic of Ethiopia Niger Seychelles	Egypt Gambia, The Madagascar Mozambique Tanzania, United Republic of Togo
Forestry	Cameroon Egypt Sudan Zimbabwe	Botswana Ghana Madagascar Malawi Mozambique South Africa Tanzania, United Republic of Togo Tunisia Uganda Zambia	Algeria Cape Verde Congo, Democratic Republic of Ethiopia Gambia, The Mauritius Namibia Niger Rwanda Seychelles	Algeria Congo, Democratic Republic of Mozambique South Africa Tanzania, United Republic of Togo Zimbabwe
Mining and quarrying	Botswana Burkina Faso Congo, Democratic Republic of Côte d'Ivoire Ethiopia Ghana Madagascar Mali Namibia Niger Sudan Tanzania, United Republic of Togo Zimbabwe	Gambia, The Malawi Morocco South Africa Tunisia Uganda Zambia	Algeria Cameroon Cape Verde Egypt Mauritius Rwanda Seychelles	Algeria Congo, Democratic Republic of Côte d'Ivoire Egypt Ethiopia Gambia, The Madagascar Mozambique Niger Tanzania, United Republic of Zimbabwe
Petroleum, gas and related products	Algeria Burkina Faso Cameroon Côte d'Ivoire Egypt Namibia South Africa Tanzania, United Republic of	Botswana Congo, Democratic Republic of Ethiopia Gambia, The Ghana Morocco Niger Rwanda Sudan Tunisia	Cape Verde Madagascar Malawi Mauritius Seychelles Togo Uganda Zambia	Algeria Gambia, The Mozambique Niger

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**Annex table A.II.1. FDI inflows and investment opportunities in Africa, by industrial sectors, 1996-1998 and 2000-2003 (continued)**

Sector/industry	FDI inflows received during 1996-1998			Countries that identified sector to offer the best investment opportunities in 2000-2003
	Considerable <sup>a</sup>	Little <sup>b</sup>	None	
Food and beverages	Botswana Côte d'Ivoire Egypt Ethiopia Gambia, The Kenya Madagascar Mozambique Rwanda Seychelles South Africa Tanzania, United Republic of Togo Tunisia Uganda Zambia Zimbabwe	Algeria Burkina Faso Cameroon Cape Verde Ghana Malawi Mali Mauritius Morocco Namibia Sudan	Congo, Democratic Republic of Niger Sudan	Botswana Cameroon Côte d'Ivoire Ethiopia Gambia, The Ghana Kenya Malawi Mali Morocco Niger Senegal Seychelles South Africa Togo Uganda Zambia Zimbabwe
Tobacco	Burkina Faso Egypt Malawi Mozambique Seychelles Tanzania, United Republic of Tunisia	Botswana Cameroon Côte d'Ivoire Ethiopia Kenya South Africa Sudan Zimbabwe	Algeria Cape Verde Congo, Democratic Republic of Gambia, The Ghana Madagascar Mauritius Morocco Namibia Niger Togo	Malawi Mozambique
Textiles, leather, clothing	Botswana Cape Verde Egypt Gambia, The Madagascar Malawi Mali Mauritius Niger Tanzania, United Republic of Tunisia Zambia Zimbabwe	Algeria Burkina Faso Côte d'Ivoire Ethiopia Ghana Kenya Morocco Mozambique Namibia South Africa Sudan Togo	Cameroon Congo, Democratic Republic of Rwanda Seychelles	Botswana Ethiopia Gambia, The Ghana Kenya Madagascar Malawi Mali Mauritius Morocco Mozambique Niger Senegal Seychelles Uganda Zambia Zimbabwe
Pharmaceuticals and chemical products	Algeria Côte d'Ivoire Egypt Ethiopia Gambia, The Mauritius Seychelles Tunisia Zimbabwe	Botswana Cape Verde Ghana Kenya Malawi Mali Morocco Mozambique Namibia Niger South Africa Sudan Tanzania, United Republic of Togo Uganda Zambia	Congo, Democratic Republic of Madagascar Rwanda	Algeria Botswana Gambia, The Kenya Malawi Mauritius Mozambique Senegal Seychelles South Africa Uganda
Metals and metal products	Burkina Faso Egypt Ethiopia Zambia	Botswana Gambia, The Ghana Mauritius	Algeria Cameroon Cape Verde Congo, Democratic Republic of	Botswana Congo, Democratic Republic of Mozambique Zambia

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**Annex table A.II.1. FDI inflows and investment opportunities in Africa, by industrial sectors, 1996-1998 and 2000-2003 (continued)**

Sector/industry	FDI inflows received during 1996-1998			Countries that identified sector to offer the best investment opportunities in 2000-2003
	Considerable <sup>a</sup>	Little <sup>b</sup>	None	
	Zimbabwe	Morocco Mozambique Namibia South Africa Sudan Tanzania, United Republic of Tunisia	Côte d'Ivoire Madagascar Malawi Niger Rwanda Seychelles Togo Uganda	Zimbabwe
Mechanical and electrical equipment	Botswana Egypt Gambia, The Tanzania, United Republic of Tunisia	Cameroon Cape Verde Côte d'Ivoire Ghana Kenya Madagascar Malawi Mauritius Morocco Mozambique Rwanda South Africa Tanzania, United Republic of Zambia Zimbabwe	Algeria Burkina Faso Congo, Democratic Republic of Ethiopia Namibia Niger Seychelles Sudan Togo Uganda	Algeria Botswana Gambia, The Senegal
Motor vehicles	Botswana Egypt Gambia, The South Africa Tunisia	Ghana Morocco Namibia Rwanda Seychelles Tanzania, United Republic of Zimbabwe	Algeria Cameroon Cape Verde Congo, Democratic Republic of Ethiopia Madagascar Malawi Mauritius Niger Sudan Togo Uganda Zambia	Algeria Botswana South Africa
Non-metallic mineral products	Burkina Faso Côte d'Ivoire Egypt Tanzania, United Republic of	Ethiopia Gambia, The Malawi Morocco Niger South Africa Togo Tunisia Zambia	Algeria Cape Verde Congo, Democratic Republic of Madagascar Mauritius Namibia Rwanda Seychelles Uganda	Ethiopia Gambia, The Niger Zambia
Telecom-munications	Botswana Burkina Faso Congo, Democratic Republic of Côte d'Ivoire Egypt Gambia, The Ghana Madagascar Malawi Mali Mauritius Namibia Seychelles South Africa Sudan Tanzania, United Republic of Zambia Zimbabwe	Cape Verde Kenya Morocco Mozambique Rwanda Togo Tunisia Uganda	Algeria Ethiopia Niger	Botswana Cameroon Congo, Democratic Republic of Ethiopia Gambia, The Kenya Malawi Mali Mauritius Morocco Mozambique Niger Senegal Togo Uganda Zimbabwe
Finance and insurance	Botswana Cameroon	Algeria Burkina Faso	Ethiopia Niger	Algeria Botswana

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**Annex table A.II.1. FDI inflows and investment opportunities in Africa, by industrial sectors, 1996-1998 and 2000-2003 (concluded)**

Sector/industry	FDI inflows received during 1996-1998			Countries that identified sector to offer the best investment opportunities in 2000-2003
	Considerable <sup>a</sup>	Little <sup>b</sup>	None	
	Côte d'Ivoire Egypt Gambia, The Ghana Malawi Mauritius Mozambique Namibia Seychelles	Cape Verde Congo, Democratic Republic of Kenya Madagascar Mali Morocco Rwanda South Africa Tanzania, United Republic of Togo Uganda Zambia Zimbabwe	Sudan	Ethiopia Gambia, The Ghana Madagascar Malawi Mauritius Seychelles Uganda Zimbabwe
Transport and storage	Botswana Cameroon Egypt Gambia, The Madagascar Mauritius Namibia Sudan Tunisia	Burkina Faso Cape Verde Côte d'Ivoire Ghana Malawi Mali Morocco Mozambique Rwanda Seychelles South Africa Tanzania, United Republic of Togo Uganda Zambia Zimbabwe	Algeria Congo, Democratic Republic of Ethiopia Niger	Botswana Congo, Democratic Republic of Côte d'Ivoire Egypt Gambia, The Malawi Mauritius Morocco Uganda
Tourism	Botswana Burkina Faso Cape Verde Côte d'Ivoire Egypt Ethiopia Gambia, The Ghana Madagascar Malawi Mali Mauritius Mozambique Namibia Seychelles Tanzania, United Republic of Tunisia Zambia	Kenya Mali Morocco South Africa Sudan Togo Uganda Zimbabwe	Algeria Cameroon Congo, Democratic Republic of Niger Rwanda	Botswana Cameroon Côte d'Ivoire Egypt Ethiopia Gambia, The Ghana Madagascar Malawi Mali Mauritius Morocco Mozambique Niger Seychelles South Africa Tanzania, United Republic of Uganda Zambia
Other	Cape Verde <sup>d</sup> Mauritius <sup>e</sup> Morocco <sup>f</sup> Namibia <sup>g</sup>	Seychelles Uganda <sup>g</sup>	Congo, Democratic Republic of Gambia, The <sup>h</sup>	Egypt Gambia, The <sup>h</sup> Mauritius <sup>e</sup> Niger <sup>i</sup> Uganda <sup>g</sup>

Source: UNCTAD.

Notes: Based on a survey among African investment promotion agencies including investment promotion agencies from Algeria, Botswana, Burkina Faso, Cameroon, Cape Verde, Egypt, Ethiopia, Congo, Democratic Republic of, Côte d'Ivoire, Gambia, The, Ghana, Kenya, Madagascar, Malawi, Mali, Mauritius, Morocco, Mozambique, Namibia, Niger, Rwanda, Senegal, Seychelles, South Africa, Sudan, Togo, Tunisia, Uganda, Zambia and Zimbabwe. A response also received from the Zanzibar Investment Promotion Agency which appears in the table under "United Republic of Tanzania".

<sup>a</sup> The term "considerable" is defined as a share of ten per cent or more in total accumulated FDI inflows into the country in 1996-1998.

<sup>b</sup> The term "little" is defined as a share of less than ten per cent in total accumulated FDI inflows into the country in 1996-1998.

<sup>c</sup> The responses of the country may not correspond to the criterion defining the classification "considerable", i.e. that the industry has received ten or more per cent of total accumulated FDI inflows in 1996-1998, as the agency has marked more than ten industries as having received "considerable" FDI inflows.

<sup>d</sup> Shoes.

<sup>e</sup> Information technology.

<sup>f</sup> Banking.

<sup>g</sup> Infrastructure development.

<sup>h</sup> Offshore facilities.

<sup>i</sup> Handicrafts.

Annex table A.II.2. Geographical sources of inward FDI stock in Central and Eastern European countries, latest year available

(Percentage)

Host country and year	Belarus, 1998 <sup>a</sup>	Bosnia and Herzegovina, 1998 <sup>a</sup>	Bulgaria, 1998 <sup>a</sup>	Croatia, 1998	Czech Republic, 1997	Estonia, 1998	Hungary, 1997	Latvia, 1998	Lithuania, 1998	Macedonia, FYR, 1997	Moldova, Republic, 1998	Poland, 1997	Romania, 1998	Russian Federation, 1998 <sup>a</sup>	Slovakia, 1998	Slovenia, 1997	Ukraine, 1998
<b>Home region and country</b>																	
<b>Central and Eastern Europe</b>	<b>11</b>	<b>23</b>	<b>2</b>	<b>3</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>13</b>	<b>3</b>	<b>3</b>	<b>32</b>	<b>1</b>	<b>4</b>	<b>10</b>	<b>15</b>	<b>7</b>	<b>7</b>
Russian Federation	..	..	2	-	-	2	1	9	..	..	29	-	-	..	..	..	7
Croatia	..	17	..	..	..	-	..	..	..	..	..	-	..	..	..	15	-
<b>European Union</b>	<b>65</b>	<b>30</b>	<b>63</b>	<b>41</b>	<b>81</b>	<b>77</b>	<b>59</b>	<b>53</b>	<b>57</b>	<b>87</b>	<b>23</b>	<b>77</b>	<b>60</b>	<b>22</b>	<b>71</b>	<b>75</b>	<b>25</b>
Austria	3	4	5	24	10	2	11	1	..	21	1	4	5	1	20	31	-
Belgium-Luxembourg	..	..	18	2	2	-	4	-	..	..	6	2	5	..	..	-	-
Denmark	..	3	..	1	-	5	-	16	4	..	..	4	-	..	2	-	-
Finland	..	..	..	..	..	27	-	4	19	..	..	1	..	3	..	-	-
France	-	3	1	2	1	-	6	-	..	2	..	11	7	1	7	8	-
Germany	25	17	16	3	31	3	25	8	7	17	6	22	10	8	20	14	8
Greece	..	..	4	..	..	..	-	..	..	39	4	-	2	..	..	..	..
Italy	9	4	..	2	2	1	3	-	..	3	..	5	8	2	..	8	-
Netherlands	25	..	7	1	28	2	14	3	..	..	..	22	15	2	8	4	9
Sweden	..	..	..	4	3	32	1	7	22	5	..	2	2	2	..	..	-
United Kingdom	3	-	5	3	5	4	8	8	5	..	..	4	5	6	13	5	8
<b>Other developed countries</b>																	
Japan	..	..	..	..	1	-	2	..	..	..	..	-	-	2	..	-	..
Switzerland-Liechtenstein	3	..	4	6	2	5	3	4	..	..	6	3	2	2	..	4	6
United States	17	..	7	42	6	5	15	11	16	..	19	12	7	30	11	5	18
<b>Developing countries</b>																	
Cyprus	..	..	7	-	1	..	1	-	..	..	1	..	2	26	..	-	5
Korea, Republic of	..	..	2	..	..	..	1	..	..	..	..	2	6	..	..	..	7
Kuwait	..	21	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Turkey	..	12	2	..	..	-	-	..	..	..	..	-	5	..	..	-	..
<b>Other and not specified</b>	<b>4</b>	<b>13</b>	<b>13</b>	<b>8</b>	<b>7</b>	<b>11</b>	<b>19</b>	<b>20</b>	<b>24</b>	<b>10</b>	<b>20</b>	<b>5</b>	<b>13</b>	<b>17</b>	<b>9</b>	<b>-</b>	<b>31</b>
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Source: UNCTAD, FDI/TNC database.

<sup>a</sup> Based on commitment data.

**Annex table A.II.3. Sectoral and industrial distribution of inward FDI stock in Central and Eastern European countries, latest year available**  
(Per cent)

Host country and year	Belarus, 1998 <sup>a</sup>	Bosnia and Herzegovina, 1998 <sup>a</sup>	Bulgaria, 1998 <sup>a</sup>	Croatia, 1997	Czech Republic, 1997	Estonia, 1998	Hungary, 1997	Latvia, 1998	Lithuania, 1998	Moldova, Republic, 1998	Poland, 1997	Romania, 1998	Russian Federation, 1998 <sup>a</sup>	Slovakia, 1998	Slovenia, 1997	Ukraine 1998
<b>PRIMARY SECTOR</b>	<b>54</b>	<b>..</b>	<b>-</b>	<b>..</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>..</b>	<b>..</b>	<b>1</b>	<b>11</b>	<b>13</b>	<b>1</b>	<b>-</b>	<b>4</b>
Agriculture, hunting, forestry & fishing	-	..	-	..	-	1	1	1	..	..	-	11	-	-	-	3
Mining, quarrying & petroleum	54	..	-	..	1	-	1	-	..	..	-	-	13	1	-	1
<b>SECONDARY SECTOR</b>	<b>46</b>	<b>33</b>	<b>54</b>	<b>60</b>	<b>45</b>	<b>30</b>	<b>39</b>	<b>18</b>	<b>25</b>	<b>33</b>	<b>45</b>	<b>46</b>	<b>35</b>	<b>47</b>	<b>38</b>	<b>43</b>
Food, beverages & tobacco	20	..	..	3	10	..	10	6	..	..	14	..	17	..	4	21
Textiles, leather & clothing	8	..	..	..	2	..	2	2	..	..	1	..	..	..	2	1
Wood, paper, publishing & printing	4	..	..	..	2	..	3	3	..	..	6	..	5	..	7	..
Coke & petroleum products	-	..	..	..	2	..	2	-	..	..	-	..	..	..	-	..
Chemicals & chemical products	..	..	..	43	3	..	4	3	..	..	6	..	3	..	8	5
Rubber & plastic	..	..	..	..	..	..	2	-	..	..	4	..	..	..	2	..
Non-metallic mineral products	2	..	..	12	10	..	2	1	..	..	..	..	..	..	3	..
Basic metals & metal products	-	..	..	..	4	..	3	2	..	..	3	..	9	..	2	4
Machinery & equipment	11	..	..	..	-	..	1	1	..	..	2	..	..	..	5	13
Electrical machinery & apparatus	..	..	..	3	4	..	5	-	..	..	1	..	..	..	4	..
Automotive	..	..	..	..	9	..	4	-	..	..	8	..	..	..	1	..
Other and unspecified secondary	..	..	..	..	-	..	-	-	..	..	..	..	..	..	-	..
<b>TERTIARY SECTOR</b>	<b>..</b>	<b>63</b>	<b>43</b>	<b>18</b>	<b>43</b>	<b>66</b>	<b>59</b>	<b>79</b>	<b>67</b>	<b>56</b>	<b>44</b>	<b>31</b>	<b>40</b>	<b>51</b>	<b>53</b>	<b>40</b>
Electricity & water distribution	..	..	..	..	4	1	14	2	..	36	-	..	..	-	10	..
Construction	..	10	1	..	2	1	2	-	..	..	2	3	..	2	-	6
Wholesale trade & distributive trade	..	26	21	2	14	23	13	16	21	20	17	4	12	19	13	16
Hotels & restaurants (tourism)	..	..	5	..	1	1	2	1	..	..	-	..	..	1	1	..
Transport, storage & telecommunications	..	6	6	..	9	10	8	31	36	..	3	12	25	4	2	5
Finance (& banking & insurance)	..	..	10	16	11	22	11	23	10	..	18	3	3	22	14	7
Real estate, rental activities & business	..	..	..	..	1	7	8	4	..	..	4	2	1	2	11	..
Public administration, health & social services	..	..	..	..	-	1	1	1	..	..	..	8	..	-	1	4
Other and unspecified tertiary	..	21	..	-	-	..	..	-	..	..	-	..	..	..	-	2
<b>UNSPECIFIED</b>	<b>..</b>	<b>5</b>	<b>3</b>	<b>22</b>	<b>11</b>	<b>2</b>	<b>-</b>	<b>2</b>	<b>8</b>	<b>11</b>	<b>10</b>	<b>11</b>	<b>11</b>	<b>-</b>	<b>8</b>	<b>12</b>

Source: UNCTAD, FDI/TNC database.

<sup>a</sup> Based on commitment data.



Annex table A.III.1. Cross-border M&amp;A deals with values of over \$1 billion announced in 1998

Deal value (Billion dollars)	Acquiring company	Home economy	Industry of acquiring company	Acquired company	Host economy	Industry of acquired company
55.0	British Petroleum Co PLC (BP)	United Kingdom	Petroleum exp/imp/ref/dist	Amoco Corp	United States	Petroleum exp/imp/ref/dist
40.5	Daimler-Benz AG	Germany	Automotive	Chrysler Corp	United States	Automotive
31.8	ZENECA Group PLC	United Kingdom	Pharmaceuticals	Astra AB	Sweden	Pharmaceuticals
21.2	Hoechst AG-Life Sciences Divs	Germany	Chemicals/pharmaceuticals	Rhone-Poulenc SA-Life Sciences	France	Pharmaceuticals
12.6	Scottish Power PLC	United Kingdom	Electric utility	PacificCorp	United States	Utilities
11.5	Total SA	France	Petroleum exp/imp/ref/dist	Petrofina SA	Belgium	Petroleum exp/imp/ref/dist
10.3	Universal Studios Inc	United States	Media	PolyGram NV(Philips Electrn)	Netherlands	Media
9.1	Deutsche Bank AG	Germany	Banking	Bankers Trust New York Corp	United States	Banking
9.0	Northern Telecom Ltd(BCE Inc)	Canada	Telecommunications	Bay Networks Inc	United States	Data networking prods
8.8	Texas Utilities Co	United States	Electric and gas utility	Energy Group PLC	United Kingdom	Electric utility/coal mining
8.6	VIAG AG	Germany	Diversified	Alusuisse-Lonza AG	Switzerland	Chemicals
6.9	Enso Oy	Finland	Paper, lumber, chemicals	Stora Kopparbergs Bergslags AB	Sweden	Forestry; pulp products
6.9	Teleglobe Inc	Canada	Telecommunications	Excel Communications Inc	United States	Telecommunications
6.1	Astra AB	Sweden	Pharmaceuticals	Astra Merck Inc(Merck & Co)	United States	Pharmaceuticals
5.9	Suez Lyonnaise des Eaux	France	Diversified	Societe Generale de Belgique	Belgium	Banking
5.3	Total SA	France	Petroleum exp/imp/ref/dist	Petrofina SA	Belgium	Petroleum exp/imp/ref/dist
5.1	Aeropuertos Argentina 2000	United States	Airports	Argentina-Airports(33)	Argentina	Own, operate airports
5.1	Alcatel Alsthom CGE	France	Telecommunications	DSC Communications Corp	United States	Telecommunications
5.0	British Telecom-Worldwide Ast	United Kingdom	Telecommunications	AT&T-Worldwide Assets, Ops	United States	Telecommunications
5.0	Investor Group	Spain	Investor group	TELESP(Telebras/Brazil)	Brazil	Telecommunications
4.7	Hong Kong Monetary Authority	Hong Kong, China	Government agency	HSBC Holdings PLC	United Kingdom	Banking
4.6	Pearson PLC	United Kingdom	Publishing	Simon & Schuster-Educ, Prof	United States	Publishing
4.1	B&O PLC(Kingfisher PLC)	United Kingdom	Trading	Castorama Dubois	France	Trading
3.8	National Grid Co PLC	United Kingdom	Electric utility	New England Electric System	United States	Electric utility
3.7	Akzo Nobel NV	Netherlands	Chemicals	Courtauld PLC	United Kingdom	Chemicals
3.6	Owens-Illinois Inc	United States	Glass, plastic containers	BTR PLC-Global Packaging &	Australia	Packaging
3.2	AXA-UAP	France	Insurance	Royale Belge SA	Belgium	Insurance
3.2	Electricite de France (EDF)	France	Electric utility	London Electricity(Energy Po)	United Kingdom	Electric utility
3.1	Investor Group	Portugal	Investor group	Telesp Celular Participacoes	Brazil	Telecommunications
3.0	Bass PLC	United Kingdom	Food and beverages	Saison Holdings BV	Netherlands	Tourism
2.9	Canadian National Railway Co	Canada	Railroad services	Illinois Central Corp	United States	Railroad services
2.8	Metro AG(Metro Holding AG)	Germany	Trading	Metro Holding-Wrldwd Whl	Denmark	Trading
2.8	Koninklijke Ahold NV	Netherlands	Trading	Giant Food Inc	United States	Trading
2.6	Bowater Inc	United States	Paper and lumber	Avenor Inc	Canada	Paper, pulp, lumber
2.5	Union Pacific Resources Group	United States	Petroleum exp/imp/ref/dist	Norcen Energy Resources Ltd	Canada	Petroleum exp/imp/ref/dist
2.5	Ciba Specialty Chemicals Hldgs	Switzerland	Chemicals	Allied Colloids Group PLC	United Kingdom	Chemicals
2.4	Enron Corp	United States	Own, operate gas pipelines	Wessex Water PLC	United Kingdom	Utilities
2.4	Shareholders	Australia	Investor group	Coca-Cola Beverages(Coca-Cola)	United Kingdom	Food and beverages
2.4	Telecom Italia(T Treasury)	Italy	Telecommunications	Telekom Austria	Austria	Telecommunications
2.3	Anglo American Corp of SA Ltd	South Africa	Diversified	Minorco SA	Luxembourg	Mining
2.3	MCI Communications Corp	United States	Telecommunications services	Embratel(Telebras/Brazil)	Brazil	Telecommunications
2.1	Marsh & McLennan Cos Inc	United States	Insurance	Sedgwick Group PLC	United Kingdom	Insurance
2.1	Boston Scientific Corp	United States	Catheters	Schneider Worldwide	Switzerland	Catheters
2.1	ABN-AMRO Holding NV	Netherlands	Banking	Banco Real SA	Brazil	Banking
1.9	Bacardi Corp	United States	Food and beverages	Diageo-Dewar's, Bombay Gin	United Kingdom	Food and beverages

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Annex table A.III.1. Cross-border M&amp;A deals with values of over \$1 billion announced in 1998 (concluded)

Deal value (Billion dollars)	Acquiring company	Home economy	Industry of acquiring company	Acquired company	Host economy	Industry of acquired company
1.9	El du Pont de Nemours and Co	United States	Chemicals	Herberts Paints(Hoechst AG)	Germany	Paints
1.9	Coca-Cola Co	United States	Food and beverages	Cadbury Schweppes-Soft Drinks	United Kingdom	Food and beverages
1.9	NTL Inc	United States	Telecommunications	Diamond Cable Communications	United Kingdom	Cable television services
1.9	Framatome Connectors Intl	France	Electronics	Berg Electronics Corp	United States	Electronics
1.8	Swiss Reinsurance Co	Switzerland	Insurance	Life Re Corp	United States	Insurance
1.8	Investor Group	Italy	Investor group	Telecentro Sul (Telebrás)	Brazil	Telecommunications
1.8	Cable & Wireless PLC	United Kingdom	Telecommunications services	MCI Communications Corp-Whl	United States	Telecommunications
1.7	Valeo SA	France	Automotive	ITT Inds-Automotive Electrical	United States	Automotive electrical system
1.7	Deutsche Telekom AG(Germany)	Germany	Telecommunications	France Telecom SA(France)	France	Telecommunications
1.6	Giovanni Agnelli & Co	Italy	Holding company/diversified	Exor Group (IFI)	Luxembourg	Financial services
1.6	Epic Energy Inc.	Canada	Petroleum exploration/dist	Australia-Dampier to Bunbury	Australia	Pipelines
1.6	Texas Utilities Co	United States	Electric and gas utility	Energy Group PLC	United Kingdom	Electric utility,mining
1.6	Deutsche Verkehrs-Bank AG	Germany	Banking	Long-European Shipping Fin Div	United Kingdom	Financial services
1.5	Fortis International NV	Netherlands	Insurance	ASLK-CGER Banque	Belgium	Banking
1.5	Singapore Telecommunications	Singapore	Telecommunications	Binariang (Tegas Sari)	Malaysia	Telecommunications,postal services
1.5	Pax International Inc	Japan	Investment company	Quesar International Inc	United States	Medical laboratories
1.5	ING Groep NV	Netherlands	Insurance	BHF Bank	Germany	Banking
1.4	EMAP PLC	United Kingdom	Publishing/media	Petersen Companies Inc	United States	Publishing
1.4	Ispat International	Netherlands	Steel	Inland Steel Co	United States	Steel
1.4	Monsanto Co	United States	Chemicals	Cargili-International Seed Ope	Mexico	Research seeds
1.4	Reed Elsevier PLC	United Kingdom	Publishing	Matthieu Bender & Co	United States	Publishing
1.4	General Electric Co PLC	United Kingdom	Electronics	Tracor Inc	United States	Electronics
1.3	Cendant Corp	United States	Services/trading	National Parking Corp Ltd	United Kingdom	Trading
1.3	Investor Group	United States	Investor group	Electrificadora del Caribe,	Colombia	Electric utility
1.3	Anvescap PLC	United Kingdom	Financial services	Chancellor LGT Asset Mgmt	United States	Financial services
1.3	Bertelsmann AG	Germany	Publishing	Random House Inc	United States	Publishing
1.3	Assicurazioni Generali	Spain	Insurance	Banca della Svizzera Italiana	Switzerland	Banking
1.2	National Power PLC	United Kingdom	Electric utility	Union Fenosa Generacion SA	Spain	Electric utility
1.2	Investor Group	United Kingdom	Investor group	CBS Corp-Westinghouse Nuclear	United States	Pvd energy systems,govt svcs
1.2	Investor Group	France	Investor group	Electrafina SA	Belgium	Oil and gas exploration, prodn
1.2	SAirGroup	Switzerland	Passenger airline	Lufthansa-Unternehmen KG	Germany	Travel agency
1.2	Nestle SA	Switzerland	Food and beverages	Spiller's Petfoods(Dalgety)	United Kingdom	Food and beverages
1.2	Investor Group	Spain	Investor group	Telesudeste Celular(Telebrás)	Brazil	Telecommunications
1.1	Artemis SA	France	Holding company	Christie's International PLC	United Kingdom	Holding company
1.1	Bayer AG	Germany	Pharmaceuticals	Chiron Diagnostics Corp	United States	Research laboratories
1.1	Thyssen Aufzuege AG(Thyssen)	Germany	Elevators,conveyors	Dover Corp-Elevator Business	United States	Elevator maintenance services
1.1	Placer Dome Inc	Canada	Mining	Getchell Gold Corp	United States	Mining
1.1	AEP Resources Inc	United States	Electric utility	Citipower Ltd(Energy Corp)	Australia	Electric utility
1.1	Imperial Tobacco Group PLC	United Kingdom	Food and beverages	Douwe Egbert Van Nelle Tobacco	Netherlands	Food and beverages
1.1	Salomon Smith Barney Holdings	United States	Financial services	Nikko Securities Co Ltd	Japan	Financial services
1.1	Investor Group	Netherlands	Investor group	BTR PLC-Australia Building	Australia	Plastic,rubber products
1.0	Investor Group	Spain	Investor group	Cia Riograndense de Telecomun	Brazil	Telecommunications
1.0	British Telecommunications PLC	United Kingdom	Telecommunications	Concert Commun(British MCI)	United States	Networking services
1.0	Havas SA(Vivendi SA)	France	Holding company	Cendant Software Corp	United States	Software

Source: UNCTAD, based on data provided by Securities Data Company, Inc. (New York).

**Annex table A.VII.1. The hundred leading industrial R&D performers in the United States, 1996**

Rank 1996	Rank 1986	Company	R&D (Million dollars)	R&D/sales (Per cent)	Rank 1996	Rank 1986	Company	R&D (Million dollars)	R&D/sales (Per cent)
1	1	General Motors	8,900.0	5.6	51	67	Emerson Electric	398.7	3.6
2	3	Ford Motor	6,821.0	4.6	52	37	Goodyear Tire & Rubber	374.5	2.9
3	2	IBM	3,934.0	5.2	53	–	Chiron	371.1	30.7
4	9	Hewlett-Packard	2,718.0	7.1	54	49	Deere	370.3	3.3
5	20	Motorola	2,394.0	8.6	55	19	McDonnell Douglas	355.0	2.6
6	4	Lucent Technologies <sup>a</sup>	2,056.0	13.0	56	–	Silicon Graphics	353.5	12.1
7	66	TRW <sup>b</sup>	1,981.0	20.1	57	42	Honeywell	353.3	4.8
8	18	Johnson & Johnson	1,905.0	8.8	58	99	Tandem Computers	345.4	18.2
9	46	Intel	1,808.0	8.7	59	24	AlliedSignal	345.0	2.5
10	31	Pfizer	1,684.0	14.9	60	25	Unisys	342.9	5.4
11	12	Chrysler	1,600.0	2.7	61	56	Baxter International	340.0	6.3
12	22	Merck	1,487.3	7.5	62	41	Raytheon	323.3	2.6
13	–	Microsoft	1,432.0	16.5	63	62	AMP	315.1	5.8
14	47	American Home Products	1,429.1	10.1	64	–	Novell	275.6	20.0
15	5	General Electric	1,421.0	1.8	65	45	Mobil	275.0	0.4
16	35/63	Bristol Myers Squibb	1,276.0	8.5	66	73	Eaton	267.0	3.8
17	33	Pharmacia & Upjohn	1,266.0	17.4	67	29	Northrop Grumman	255.0	3.2
18	23	Procter & Gamble	1,221.0	3.5	68	–	Bay Networks	253.2	12.3
19	38	Abbott Laboratories	1,204.8	10.9	69	–	Automatic Data Processing	249.6	7.0
20	11	Boeing	1,200.0	5.3	70	55	PPG Industries	239.1	3.3
21	26	Lilly	1,189.5	16.2	71	–	Cummins Engine	235.0	4.5
22	26	Texas Instruments	1,181.0	11.9	72	–	Boston Scientific	212.3	14.5
23	8	United Technologies	1,122.0	4.8	73	–	Genzyme	211.5	40.8
24	10	Digital Equipment	1,062.3	7.3	74	–	DSC Communications	210.1	15.2
25	13	Xerox	1,044.0	6.0	75	82	Ingersoll-Rand	209.3	3.1
26	6	Dupont	1,032.0	2.7	76	–	General Instrument	209.3	7.8
27	7	Eastman Kodak	1,028.0	6.4	77	83	Kimberly-Clark	207.9	1.6
28	16	3M	947.0	6.7	78	–	Gillette	204.0	2.1
29	–	Rhone-Poulenc	882.1	16.3	79	–	LSI Logic	200.5	16.2
30	21/51	Lockheed Martin	784.0	2.9	80	–	Whirlpool	197.0	2.3
31	15	Dow Chemical	761.0	3.8	81	–	Case	193.0	3.6
32	17	Monsanto	728.0	7.9	82	–	Micron Technology	191.9	5.3
33	53	Schering-Plough	722.8	12.8	83	86	Corning	191.3	5.2
34	28	Rockwell International	691.0	6.7	84	–	RJR Nabisco	191.0	1.1
35	–	Sun Microsystems, Inc.	657.1	9.3	85	69	FMC	189.4	3.8
36	4	AT&T <sup>a</sup>	640.0	1.2	86	74	Rohm & Haas	187.0	4.7
37	75	Apple Computer	604.0	6.1	87	84	Textron	185.0	2.0
38	58	Warner-Lambert	554.8	7.7	88	–	Eastman Chemical	184.0	3.8
39	54	ITT Industries	535.2	6.1	89	48	Chevron	182.0	0.5
40	–	Amgen	528.3	23.6	90	–	Tellabs	181.9	20.9
41	14	Exxon	520.0	0.4	91	–	Analog Devices	177.8	14.9
42	–	Seagate Technology	519.1	6.0	92	–	Storage Technology	176.4	8.7
43	78	Philip Morris	515.0	0.9	93	–	Lam Research	173.0	13.6
44	–	Applied Materials	481.4	11.6	94	44	Shell Oil	173.0	0.6
45	32	NCR	444.0	6.4	95	–	Sybase	172.0	17.0
46	–	Genentech	434.1	51.3	96	52	Amoco	171.0	0.5
47	61	Caterpillar	410.0	2.5	97	72	Alcoa	165.5	1.3
48	–	Compaq Computer	407.0	2.2	98	–	Johnson Controls	165.0	1.6
49	60	Advanced Micro Devices	400.7	20.5	99	–	Dana	164.0	2.1
50	–	Cisco Systems	399.3	9.7	100	64	NYNEX	163.1	1.2

*Source:* National Science Board, 1998, Appendix table 4-23.

*Note:* – denotes company unranked in 1986.

<sup>a</sup> Lucent Technologies was split off from AT&T in 1996.

<sup>b</sup> TRW restated its R&D expenses reported to the Securities and Exchange Commission in 1996 to include all "sponsor-supported" R&D, which means that federal R&D funds are now included in the company's total.

**Annex table A.VII.2. R&D propensities and skills base in major country groups**

(Simple averages, latest year available)

Countries and regions <sup>a</sup>	Scientists/engineers in R&D		Total R&D (Per cent of GNP)	Sector of performance (Per cent)		Source of financing (Per cent distribution)		Source of financing (Per cent of GNP)	
	Per million population	Numbers		Productive Sector	Higher education	Productive enterprises	Government	Productive enterprises	Productive sector
Developed countries <sup>b</sup>	<b>1 102</b>	<b>2 704,205</b>	<b>1.94</b>	<b>53.7</b>	<b>22.9</b>	<b>53.5</b>	<b>38.0</b>	<b>1.037</b>	<b>1.043</b>
Developing economies <sup>c</sup>	<b>514</b>	<b>1 034,333</b>	<b>0.39</b>	<b>13.7</b>	<b>22.2</b>	<b>10.5</b>	<b>55.0</b>	<b>0.041</b>	<b>0.054</b>
Sub-Saharan Africa (excl. South Africa)	83	3,193	0.28	-	38.7	0.6	60.9	0.002	0.000
North Africa	423	29,675	0.40	..	..	..	..	..	..
Latin America & Caribbean	339	107,508	0.45	18.2	23.4	9.0	78.0	0.041	0.082
Asia (excluding Japan)	<b>783</b>	<b>893,957</b>	<b>0.72</b>	<b>32.1</b>	<b>25.8</b>	<b>33.9</b>	<b>57.9</b>	<b>0.244</b>	<b>0.231</b>
Newly industrialized economies <sup>d</sup>	2 121	189,212	1.50	50.1	36.6	51.2	45.8	0.768	0.751
New newly industrialized economies <sup>e</sup>	121	18,492	0.20	27.7	15.0	38.7	46.5	0.077	0.055
South Asia <sup>f</sup>	125	145,919	0.85	13.3	10.5	7.7	91.8	0.065	0.113
West Asia	296	50,528	0.47	9.7	45.9	11.0	51.0	0.051	0.045
China	350	422,700	0.50	31.9	13.7	..	..	..	0.160
Central and Eastern Europe <sup>g</sup>	1 857	946,162	0.77	35.7	21.4	37.3	47.8	0.288	0.275
World (79-84 countries)	<b>1 304</b>	<b>4 684 700</b>	<b>0.92</b>	<b>36.6</b>	<b>24.7</b>	<b>34.5</b>	<b>53.2</b>	<b>0.318</b>	<b>0.337</b>

*Source:* UNCTAD, based on UNESCO, 1997.<sup>a</sup> Only including countries with data, and with over one million inhabitants in 1995.<sup>b</sup> United States, Canada, Western Europe, Japan, Australia and New Zealand.<sup>c</sup> Including Israel, South Africa, and former socialist economies in Asia.<sup>d</sup> Hong Kong, China; Republic of Korea; Singapore; Taiwan Province of China.<sup>e</sup> Indonesia, Malaysia, Thailand, Philippines.<sup>f</sup> India, Pakistan, Bangladesh, Nepal.<sup>g</sup> Including Russian Federation.

Annex table A.VIII.1. Top 25 developing economy exporters, ranked by export values, 1997

(Million dollars)

High-technology manufacturers			Medium-technology manufacturers		Low-technology manufacturers		Resource-based manufactures		Total manufactures		Total merchandise exports		
1	Singapore	72 935	Republic of Korea	China	33 033	China	90 285	China	13 892	China	165 082	China	182 792
2	Taiwan Province of China	40 682	Mexico	Taiwan Province of China	31 724	Taiwan Province of China	36 447	Singapore	13 412	Republic of Korea	125 853	Republic of Korea	136 151
3	Republic of Korea	39 246	China	Republic of Korea	24 030	Republic of Korea	32 230	Republic of Korea	12 544	Singapore	116 422	Singapore	124 988
4	Malaysia	37 455	Taiwan Province of China	Mexico	21 503	Mexico	20 681	Malaysia	11 544	Taiwan Province of China	103 987	Taiwan Province of China	111 319
5	Mexico	34 061	Singapore	Turkey	19 163	Turkey	14 181	Indonesia	10 045	Mexico	93 602	Mexico	110 047
6	China	31 534	Brazil	Hong Kong, China	12 145	Thailand	13 304	Thailand	7 433	Malaysia	69 055	Malaysia	78 729
7	Thailand	18 235	Malaysia	India	10 336	India	13 252	Brazil	7 152	Thailand	46 406	Thailand	58 086
8	Hong Kong, China	7 720	Thailand	Thailand	7 308	Thailand	11 774	India	7 045	Brazil	31 976	Indonesia	53 444
9	Philippines	6 976	Argentina	Indonesia	4 554	Indonesia	9 277	Venezuela	6 530	Indonesia	27 029	Brazil	52 986
10	Indonesia	3 082	Indonesia	Singapore	3 563	Singapore	9 101	Argentina	6 211	India	26 693	India	34 721
11	Brazil	2 830	India	Brazil	3 332	Brazil	8 928	Mexico	5 928	Hong Kong, China	26 291	Hong Kong, China	27 307
12	India	1 986	Hong Kong, China	Malaysia	3 145	Malaysia	8 492	Kuwait	5 757	Turkey	22 744	Argentina	26 264
13	Turkey	1 518	Slovenia	Pakistan	2 727	Pakistan	6 969	Taiwan Province of China	5 354	Argentina	13 899	Turkey	26 245
14	Slovenia	1 214	Turkey	Philippines	2 718	Philippines	2 912	Turkey	3 619	Philippines	12 563	Philippines	25 228
15	Argentina	713	Colombia	Tunisia	1 199	Tunisia	2 897	Algeria	2 367	Venezuela	9 163	Venezuela	22 729
16	Croatia	510	Venezuela	Slovenia	1 092	Slovenia	2 627	Chile	2 270	Slovenia	7 811	Chile	16 678
17	Tunisia	497	Chile	Argentina	1 075	Argentina	2 221	Philippines	1 624	Pakistan	7 492	Kuwait	14 126
18	Colombia	290	Morocco	Macau	1014	Macau	1918	Egypt	1 285	Kuwait	6326	Algeria	13 894
19	Pakistan	175	Philippines	Colombia	933	Colombia	1 579	Hong Kong, China	1 198	Tunisia	4 909	Colombia	11 530
20	Costa Rica	142	Oman	Croatia	858	Croatia	1484	Croatia	1121	Chile	4 338	Pakistan	8 632
21	Oman	141	Tunisia	Venezuela	814	Venezuela	1 327	Colombia	1 034	Colombia	4 185	Slovenia	8 369
22	Venezuela	126	Trinidad & Tobago	Egypt	668	Egypt	1 176	Slovenia	967	Croatia	3 944	Oman	7 631
23	Chile	101	Croatia	Morocco	641	Morocco	1052	Trinidad & Tobago	859	Egypt	2 746	Peru	6 759
24	Guatemala	83	Kuwait	Mauritius	371	Mauritius	1 014	Morocco	787	Algeria	2 590	Tunisia	5 559
25	Uruguay	67	Jordan	Chile	349	Chile	784	Peru	667	Macau	2 108	Ecuador	5 214
All developing economies		302 319			188 295		295 912		130 649		937 214		
Share of top five economies (%)		74.2			68.8		65.5		47.0		64.5		
Share of top ten economies (%)		96.6			88.9		84.7		73.3		86.0		

Source: Calculated from United Nations Comtrade data, based on technological classification described in box VIII.1.

Notes: Several countries, exporters of medium- and low-technology manufactures, whose data were not available for 1997, were excluded.  
Hong Kong, China's figures exclude re-exports.  
Singapore's data includes re-exports.  
Data for Taiwan Province of China refer to 1995.



Annex table A.VIII.2. Top 25 developing economy exporters, ranked by per capita exports 1997

(Dollars)

	High-technology manufacturers			Medium-technology manufacturers			Low-technology manufacturers			Resource-based manufactures			Total manufactures			Total merchandise exports		
1	Singapore	21 207	Singapore	5 572	Macau	4 252	Singapore	3 900	Singapore	33 852	Singapore	36 343						
2	Taiwan Province of China	1 894	Slovenia	1 419	Singapore	2 646	Kuwait	3 325	Taiwan Province of China	4 841	Kuwait	8 158						
3	Malaysia	1 782	Taiwan Province of China	1 001	Hong Kong, China	2 129	Trinidad and Tobago	657	Macau	4 673	Taiwan Province of China	5 182						
4	Hong Kong, China	1 235	Republic of Korea	723	Taiwan Province of China	1 697	Malaysia	549	Hong Kong, China	4 207	Macau	4 755						
5	Republic of Korea	858	Trinidad and Tobago	511	New Caledonia	1 492	Slovenia	503	Slovenia	4 064	Hong Kong, China	4 370						
6	Slovenia	632	Hong Kong, China	503	Slovenia	1 367	Venezuela	287	Kuwait	3 654	Slovenia	4 355						
7	Mexico	361	Malaysia	492	Mauritius	888	Republic of Korea	274	Malaysia	3 286	Suriname	3 931						
8	Thailand	308	Oman	357	Republic of Korea	705	Taiwan Province of China	249	Republic of Korea	2 753	Malaysia	3 746						
9	Saint Kitts and Nevis	268	Mexico	336	Malaysia	404	Croatia	249	New Caledonia	1 492	Oman	3 178						
10	Macau	177	Kuwait	214	Croatia	330	Barbados	229	Trinidad and Tobago	1 485	Republic of Korea	2 978						
11	Barbados	126	Croatia	143	Tunisia	311	Hong Kong, China	192	Mauritius	1 052	New Caledonia	2 839						
12	Croatia	113	Argentina	128	Trinidad and Tobago	279	Belize	192	Mexico	993	Trinidad and Tobago	1 947						
13	Philippines	99	Thailand	124	Turkey	226	Argentina	174	Croatia	877	Mauritius	1 402						
14	Oman	59	Barbados	111	Mexico	219	Uruguay	165	Thailand	784	Mexico	1 167						
15	Cyprus	57	Tunisia	87	Thailand	199	Cyprus	158	Oman	681	Chile	1 140						
16	Tunisia	53	Brazil	74	Uruguay	188	Oman	157	Barbados	634	Venezuela	998						
17	Costa Rica	40	Chile	74	Barbados	164	Chile	155	Tunisia	526	Thailand	982						
18	China	26	Uruguay	70	Cyprus	158	Macau	135	Uruguay	459	Croatia	965						
19	Kuwait	25	Macau	69	Costa Rica	105	Thailand	126	Cyprus	437	Costa Rica	944						
20	Turkey	24	Aruba	56	Jamaica	95	Costa Rica	125	Venezuela	402	Saint Kitts and Nevis	878						
21	Uruguay	21	Cyprus	53	Oman	90	St. Vincent & Grenadines	114	Argentina	390	Uruguay	847						
22	Saint Lucia	21	Venezuela	48	Saint Lucia	89	Mauritius	86	Turkey	362	Barbados	802						
23	Argentina	20	Costa Rica	47	Belize	85	Algeria	80	Saint Kitts and Nevis	341	Argentina	736						
24	Brazil	17	Mauritius	46	Kuwait	80	Aruba	70	Costa Rica	339	Belize	708						
25	Trinidad and Tobago	17	Turkey	43	China	74	Tunisia	70	Chile	297	Tunisia	596						

Source: Calculated from United Nations Comtrade database and United Nations population data.

Notes: see previous table.

**Annex table A.VIII.3. Fifty fastest growing manufactures in world trade (ranked by 1995 value)**

(Thousands of dollars and growth rates)

Products	1980	1990	1995	1980-1990	1990-1995	1980-1995
	(dollars)			(Per cent)		
Transistors, valves, etc.	14 004 674.8	59 011 528.2	171 332 926.0	15.5	23.8	18.2
Automatic data processing equipment	12 519 552.6	67 365 905.1	126 772 756.3	18.3	13.5	16.7
Telecom equipment, parts and accessories	19 217 642.0	56 642 011.1	112 415 281.5	11.4	14.7	12.5
Office, auto data processg. mach. parts and access	9 062 439.2	47 946 595.9	91 072 281.1	18.1	13.7	16.6
Electrical machinery nes	14 358 445.4	36 646 242.5	76 543 953.4	9.8	15.9	11.8
Medicinal, pharmaceutical products	14 010 041.0	36 149 984.6	69 982 251.8	9.9	14.1	11.3
Switchgear and parts	12 998 098.4	35 277 313.1	63 652 991.4	10.5	12.5	11.2
Other machinery for special industries	15 631 790.9	37 569 262.2	59 653 723.6	9.2	9.7	9.3
Articles of plastic	8 229 219.7	28 697 381.3	48 581 432.9	13.3	11.1	12.6
Furniture, parts thereof	10 028 971.1	28 914 250.0	45 432 784.0	11.2	9.5	10.6
Base metal mfrs. nes	10 748 136.6	23 737 422.2	37 384 495.2	8.2	9.5	8.7
Heating, cooling equipment	11 245 094.6	22 966 210.1	36 721 071.1	7.4	9.8	8.2
Misc. chemical products	9 537 343.6	21 077 459.6	34 289 914.8	8.3	10.2	8.9
Pumps, centrifuges etc.	8 508 092.7	19 685 753.4	31 634 399.1	8.8	10.0	9.1
Toys, sporting goods, etc.	8 135 113.1	19 262 501.5	30 439 444.4	9.0	9.6	9.2
Products of condensation etc.	6 976 488.3	16 153 494.9	28 150 211.4	8.8	11.7	9.7
Electrical distributing equipment	5 138 985.8	13 244 294.2	26 319 527.6	9.9	14.7	11.5
Rotating electric plant	6 616 880.8	13 090 171.4	23 733 435.2	7.1	12.6	8.9
Paper, precut, articles	5 075 175.8	13 025 054.2	21 559 895.9	9.9	10.6	10.1
Under garments knitted	3 402 276.9	11 841 892.7	21 254 218.9	13.3	12.4	13.0
Electric power mach nes	3 397 887.9	10 532 824.3	21 191 083.7	12.0	15.0	13.0
Pigments, paints, etc.	4 540 557.8	11 730 840.5	18 845 784.6	10.0	9.9	10.0
Special textile fabric products	4 504 933.2	11 072 104.5	18 477 580.8	9.4	10.8	9.9
Organic-inorganic compounds	5 188 875.3	11 573 724.4	18 408 869.9	8.4	9.7	8.8
Perfumery, cosmetics, etc.	2 811 643.8	10 068 919.9	18 048 458.6	13.6	12.4	13.2
Radio broadcast receivers	5 891 175.9	11 311 544.6	17 773 471.8	6.7	9.5	7.6
Cycles motorised or not	6 033 784.9	9 753 365.6	17 167 026.9	4.9	12.0	7.2
Carboxylic acids etc.	4 406 885.9	9 835 284.0	16 934 817.5	8.4	11.5	9.4
Road motor vehicles nes	3 617 450.7	6 556 187.1	16 533 990.8	6.1	20.3	10.7
Other manufactured goods	4 395 706.7	10 433 868.6	16 481 189.7	9.0	9.6	9.2
Medical instruments nes	2 904 063.0	9 897 238.5	16 249 645.4	13.0	10.4	12.2
Glass	3 565 503.4	9 255 212.8	15 264 775.6	10.0	10.5	10.2
Edible products, preps nes	2 763 492.1	7 326 821.1	14 995 678.1	10.2	15.4	11.9
Plumbing, heating, lighting equipment	3 493 506.0	8 702 347.6	13 663 974.9	9.6	9.4	9.5
Wood manufactures nes	3 216 526.8	7 789 873.0	13 295 017.8	9.2	11.3	9.9
Alcohol, phenols etc.	3 872 198.9	7 748 424.9	12 194 057.4	7.2	9.5	7.9
Electro-medical, x-ray equipment	2 676 684.4	7 622 701.7	11 972 090.4	11.0	9.4	10.5
Photo apparatus, equip nes	4 334 850.1	7 251 639.3	11 391 120.0	5.3	9.5	6.7
Under garments not knit	2 218 981.4	6 861 475.8	11 344 282.1	12.0	10.6	11.5
Soap, cleansing etc. preps	3 065 944.0	6 939 155.8	10 840 813.1	8.5	9.3	8.8
Knitted fabrics	2 560 452.9	6 015 005.5	10 426 564.3	8.9	11.6	9.8
Steel, copper nails, nuts, etc.	2 944 676.1	6 575 905.5	10 408 511.1	8.4	9.6	8.8
Travel goods, handbags	2 608 658.7	6 298 910.9	10 161 569.1	9.2	10.0	9.5
Rubber articles nes	1 809 572.7	4 774 651.8	8 783 728.9	10.2	13.0	11.1
Optical instruments	1 144 402.9	3 809 393.9	7 686 558.5	12.8	15.1	13.5
Starch, insulin, gluten, etc.	1 683 432.6	4 620 307.1	7 281 886.1	10.6	9.5	10.3
Materials of rubber	1 703 188.5	3 971 692.9	6 302 300.2	8.8	9.7	9.1
Meat prepd, prsrd, nes etc.	1 961 346.8	3 937 916.4	5 827 232.5	7.2	8.2	7.5
Steam engines, turbines	1 435 522.9	1 577 354.2	2 628 606.2	0.9	10.8	4.1
Meters and counters nes	0 637 533.0	1 343 730.7	2 408 064.5	7.7	12.4	9.3
Total 50 products	300 833 902.6	833 493 151.1	1539 915 746.1	10.7	13.1	11.5
Total world manufactured exports	1053 639 630.8	2454 795 891.4	2529 753 907.9	8.8	8.5	8.7

Source: United Nations Comtrade database.

**Annex table A.VIII.4. Shares of intra-firm trade in the international trade of United States parent companies and their foreign affiliates, by industry, 1977, 1983, 1993, 1996**  
(Percentage)

Sector and industry	Majority-owned affiliates					Parent firms				
	Share of US parents exports in total US exports to majority-owned affiliates					Share of intra-firm exports in total parent exports				
	1977	1983	1993	1996		1977	1983	1993	1996	
Petroleum	81.4	70.0	80.0	75.3	81.5	82.8	66.5	62.3	36.9	13.8
Manufacturing	83.9	86.6	86.9	87.2	83.8	88.4	89.1	90.2	40.5	43.0
Food	57.0	74.3	87.0	92.1	91.1	76.1	71.9	66.6	19.7	20.5
Chemicals	88.6	84.6	87.5	88.9	79.7	76.2	84.3	84.5	44.5	41.4
Primary and fabricated metals	79.2	77.6	70.1	70.1	73.0	77.4	53.8	51.1	25.1	23.8
Machinery	93.2	96.1	93.8	93.5	87.9	93.8	94.0	90.5	42.3	61.5
Electronics	85.9	90.1	96.0	93.0	93.3	90.2	89.0	91.5	34.1	32.6
Transport equipment	80.4	82.4	78.1	77.7	91.6	95.2	94.4	96.5	46.7	49.3
Other	83.8	88.6	89.6	91.4	53.9	63.7	73.3	76.9	39.6	37.0
Services	64.3	57.0	71.3	66.9	74.1	74.5	76.3	83.7	13.5	11.0
Business services	..	89.2	..	97.6	..	..	..	..	..	18.6
Computer and data processing services	..	..	..	97.6	..	..	..	94.0	..	..
Trade	67.7	56.9	..	..	74.1	69.5	84.9	83.2	11.6	9.3
Wholesales trade	..	55.8	74.1	74.1	..	69.5	87.6	84.0	11.0	9.3
Retail trade	..	67.9	..	..	..	..	79.1	78.5	64.3	..
Finance	..	49.6	25.0	5.6	..	23.9	35.5	..	25.5	11.2
Other	51.4	59.6	..	..	74.2	93.2	23.1	85.1	32.0	24.1
Other industries	66.7	70.0	84.4	44.3	..	0.0	87.6	83.2	2.9	8.6
All industries	81.7	82.8	86.1	85.6	81.3	86.0	86.3	87.3	33.9	33.8

Source: UNCTAD, based on United States Department of Commerce, United States Direct Investment Abroad, 1966, 1977 and Bureau of Economic Analysis, <http://www.bea.doc.gov/>

Notes on trade by majority-owned affiliates:

Petroleum wholesale trade is included in Petroleum instead of Services

Exports:

Other services include: (services other than business services)

Construction, transportation, communication, electric, gas, and sanitary services in 1996

Only construction in 1993

Transportation and communication in 1983

Construction, transportation and communication in 1977

Other industries include:

Agriculture, forestry, fishing and mining in 1996 and 1993

Only mining in 1983; agriculture, forestry and fishing only in 1977

Imports:

Other services include: (services other than business services and motion picture when available)

Construction and communication in 1996

Construction and communication in 1993

Agriculture, forestry, fishing, retail trade, construction, transportation, communication and public utilities in 1983

Agriculture, forestry, fishing, construction, transportation, communication and public utilities and other services in 1977

Other industries include:

Agriculture, forestry, fishing, mining, transportation, electric, gas, and sanitary services in 1996

Agriculture, forestry, fishing, mining, communication and public utilities in 1993

Only mining in 1983

Trade includes only wholesales in 1983

Notes on trade by parent firms:

Petroleum wholesale trade is included in Petroleum instead of Services

Exports:

Other services include: (services other than business services and motion picture when available)

Construction, transportation, communication, electric, gas, and sanitary services in 1996

Only construction in 1993

Agriculture, forestry, fishing, construction, transportation, retail trade, communication and public utilities in 1983

Construction, transportation and communication in 1977

Other industries include:

Agriculture, forestry, fishing and mining in 1996

Agriculture, forestry, fishing, mining, communication and public utilities in 1993

Only mining in 1983; agriculture, forestry and fishing only in 1977

Imports:

Other services include: (services other than business services and motion picture when available)

Finance and services in 1996

Services in 1993

Finance and services in 1983

Zero in 1977

Other industries include:

Agriculture, forestry, fishing, mining, construction, transportation, communication, electric, gas, and sanitary services in 1996

Finance, agriculture, forestry, fishing, mining, construction, transportation, communication and public utilities in 1993

Agriculture, forestry, fishing, mining, construction, transportation, retail trade, communication and public utilities in 1983

Finance, agriculture, forestry, fishing, mining, construction, transportation, communication and public utilities in 1983

Trade includes only wholesales in 1983

**Annex table A.VIII.5. Value and relative importance of sales of United States foreign affiliates to other foreign affiliates of United States TNCs, by region and economy, 1977, 1983, 1993 and 1996**

(Percentage and billions of dollars)

	Value (billions of dollars)				Share in total intra-firm exports of foreign affiliates (percentage)			
	1977	1983	1993	1996	1977	1983	1993	1996
<b>All countries</b>	49.8	73.0	170.6	253.3	37.2	53.2	60.9	61.4
<b>Developed countries</b>	35.0	58.7	142.1	205.1	66.5	65.0	67.6	68.3
<b>Western Europe</b>								
<b>Europe <sup>a</sup></b>	33.3	55.8	134.3	196.7	84.9	84.9	86.2	84.7
Austria	0.1	0.4	1.1	..	83.7	97.0	87.4	..
Belgium	3.5	6.0	10.7	13.7	90.7	92.1	91.7	88.5
Denmark	0.3	0.2	0.7	1.0	..	71.3	86.6	86.2
Finland	..	0.0	..	0.2	..	..	..	65.2
France	4.2	5.9	14.6	18.9	92.8	86.8	85.0	84.7
Germany	7.0	12.7	29.7	38.5	87.1	90.0	89.6	90.2
Greece	..	0.1	0.1	..	..	93.6	95.2	..
Ireland	0.5	1.8	8.5	11.7	..	89.6	89.4	83.7
Italy	1.0	1.8	5.4	6.5	76.9	89.2	86.6	83.5
Luxembourg	0.2	0.3	0.7	..	76.4	94.7	85.2	..
Netherlands	4.1	7.3	16.5	31.1	75.5	92.3	83.8	87.9
Norway	..	1.2	0.8	..	..	53.7	62.7	..
Portugal	0.0	0.1	0.7	1.2	93.0	95.8	97.6	90.9
Spain	0.6	1.7	5.8	9.8	92.6	94.9	93.8	93.5
Sweden	0.5	0.5	0.8	1.5	93.6	93.0	82.9	91.5
Switzerland	2.3	4.6	10.2	18.3	86.7	85.5	86.4	92.4
United Kingdom	8.1	11.1	27.3	37.3	82.4	73.6	81.3	74.4
<b>North America</b>								
Canada	0.9	1.1	1.7	2.3	7.8	5.3	3.9	4.0
<b>Other developed countries</b>								
Australia	0.3	0.8	1.7	2.0	..	85.6	94.4	90.6
Israel <sup>b</sup>	..	..	0.2	0.1	..	..	27.5	13.1
Japan	0.5	..	4.3	3.7	..	59.4	70.2	65.3
New Zealand	..	0.0	0.1	0.5	56.2	..	53.6	57.7
South Africa	..	0.1	0.1	0.2	..	..	56.3	90.9
<b>Developing economies</b>	..	14.3	28.5	48.2	..	30.5	40.9	42.9
<b>Latin America and the Caribbean</b>	4.9	9.4	9.8	12.2	34.4	42.7	37.1	27.3
<b>South America</b>	1.0	2.1	2.6	4.6	51.1	65.1	51.0	56.9
Argentina	0.3	0.8	0.9	1.7	93.0	89.6	90.0	95.0
Brazil	0.5	0.9	0.9	1.8	65.1	55.1	33.5	47.2
Chile	..	0.0	0.2	0.1	..	75.0	79.8	38.5
Colombia	..	0.0	0.4	0.7	..	41.3	71.5	70.6
Ecuador	..	..	0.0	0.0	..	..	19.1	9.2
Peru	..	..	0.0	..	..	..	..	..
Venezuela	..	0.0	0.1	0.1	..	37.5	86.3	25.4
<b>Central America</b>	0.4	0.8	1.7	3.0	41.7	34.7	16.3	13.9
Costa Rica	..	..	0.3	0.3	..	..	86.5	30.0
Guatemala	..	..	0.1	0.1	..	..	69.1	51.0
Honduras	..	..	0.1	..	..	..	57.7	..
Mexico	0.1	0.2	0.8	2.0	33.3	17.9	8.3	10.2
Panama	..	0.4	0.4	0.4	..	74.9	89.2	85.0
Other	..	0.2	0.0	..	..	28.2	..	..
<b>Caribbean</b>	3.4	6.5	5.6	4.5	30.7	39.4	50.0	30.6
Bahamas	..	0.6	0.0	0.0	..	31.5	26.8	59.0
Barbados	0.0	0.1	8.3	19.8	..	..	..	..
Bermuda	2.4	2.6	3.4	3.5	33.6	45.9	54.1	39.8
Dominican Republic	..	..	..	0.1	..	18.7	..	..
Jamaica	..	..	0.2	..	..	48.5	..	..

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**Annex table A.VIII.5. Value and relative importance of sales of United States foreign affiliates to other foreign affiliates of United States TNCs, by region and economy, 1977, 1983, 1993 and 1996 (concluded)**

(Percentage and billions of dollars)

	Value (billions of dollars)				Share in total intra-firm exports of foreign affiliates (percentage)			
	1977	1983	1993	1996	1977	1983	1993	1996
Netherlands Antilles	..	2.8	..	0.0	..	41.7	..	..
Trinidad and Tobago	..	..	..	..	..	..	..	..
United Kingdom Islands, Caribbean	..	0.1	0.3	0.6	28.6	45.9	75.7	..
<b>Africa <sup>c</sup></b>	..	0.9	0.6	1.9	52.0	15.2	39.2	..
Egypt	..	..	0.1	0.8	..	..	..	..
Liberia	0.0	..	..	..	6.6	..	..	..
Nigeria	0.0	..	0.2	0.2	..	..	7.8	8.6
Other	0.1	1.3	0.2	0.7	..	19.7	..	55.2
<b>West Asia <sup>d</sup></b>	..	..	1.6	1.5	..	..	74.1	58.1
Saudi Arabia	..	..	0.0	..	..	..	19.0	..
United Arab Emirates	..	..	0.3	0.2	..	..	..	97.8
Other	..	..	1.1	..	..	..	..	..
<b>Asia and Pacific <sup>e</sup></b>	..	..	22.6	38.8	..	..	48.8	55.8
China	..	..	0.2	1.0	..	..	..	52.8
Hong Kong, China	1.0	..	2.2	4.6	41.3	..	35.4	53.9
India	0.0	..	0.0	0.0	..	..	20.8	48.1
Indonesia	..	..	0.4	2.8	..	..	21.7	83.2
Korea, Republic of	..	..	0.3	0.4	..	..	32.0	42.2
Malaysia	0.2	..	1.8	2.2	39.9	..	45.4	37.9
Philippines	..	..	0.6	1.1	..	..	59.2	55.3
Singapore	0.3	..	8.8	15.8	29.6	..	50.3	52.5
Taiwan, Province of China	..	..	1.1	1.5	..	..	53.1	49.0
Thailand	..	..	1.2	3.1	..	..	56.8	82.1
Turkey <sup>f</sup>	..	0.0	0.3	0.4	..	..	93.3	93.0
Other	..	..	0.0	0.2	..	..	..	89.7

Source: UNCTAD, based on United States Direct Investment Abroad, Department of Commerce, various years.

<sup>a</sup> Includes Turkey.

<sup>b</sup> Israel is included in developing countries in 1966, 1977 and 1983.

<sup>c</sup> Aggregate figure includes South Africa.

<sup>d</sup> Aggregate figure includes Israel.

<sup>e</sup> Aggregate figure includes Australia, Japan and New Zealand.

<sup>f</sup> Turkey is included in developed countries in 1966, 1977 and 1983.

Notes: Total intra-firm exports include sales by affiliates to parents and to other foreign affiliates.



**Annex table A.VIII.6. Export propensities of United States majority-owned foreign affiliates in manufacturing, 1966-1996**  
(Percentage)

	1966	1977	1983	1993	1996
<b>All countries</b>	18.6	30.8	35.1	40.7	42.0
<b>Developed countries</b>	20.4	33.2	36.6	40.9	42.1
<b>Western Europe</b>					
<b>Europe <sup>a</sup></b>	25.8	37.7	40.5	42.7	44.6
Austria	..	..	41.9	38.3	..
Belgium <sup>b</sup>	51.0	71.5	70.9	64.9	67.5
Denmark	..	..	53.0	..	39.8
Finland	..	..	..	..	54.8
France	17.7	32.5	35.1	34.6	38.7
Germany	25.3	35.1	43.1	40.4	39.5
Greece	..	..	32.1	11.3	..
Ireland	..	80.0	83.6	88.2	80.2
Italy	19.4	26.9	26.9	30.0	33.5
Luxembourg	..	..	90.6	...	..
Netherlands	47.1	61.4	65.4	62.5	61.6
Norway	..	37.5	8.6	31.3	24.4
Portugal	..	..	41.3	32.2	44.0
Spain	2.3	19.3	31.1	33.7	41.5
Sweden	...	32.5	34.6	32.5	44.2
Switzerland	33.9	50.7	54.8	39.4	59.3
United Kingdom	25.3	31.3	28.0	40.3	41.3
<b>North America</b>					
Canada	16.1	29.9	36.1	45.8	46.7
<b>Other developed countries</b>					
Australia	4.8	..	..	21.8	23.5
Israel <sup>c</sup>	..	27.8	..	..	46.4
Japan	9.6	10.4	14.7	16.1	9.9
New Zealand	..	8.0	..	..	..
South Africa <sup>d</sup>	..	..	2.9	5.0	..
<b>Developing economies</b>	8.4	17.9	26.9	39.6	41.6
<b>Latin America and the Caribbean</b>	6.2	9.7	15.3	23.5	31.9
<b>South America</b>	..	7.9	12.2	15.2	15.7
Argentina	..	..	12.1	20.2	26.8
Brazil	..	8.9	15.9	16.3	12.7
Chile	..	..	..	..	25.4
Colombia	5.9	3.9	3.5	7.2	11.2
Ecuador	..	..	12.2	10.0	..
Peru	12.2	1.0	3.2	..	..
Venezuela	..	..	1.0	5.7	..
Other	..	..	..	6.9	..
<b>Central America</b>	..	13.5	21.2	31.8	51.6
Costa Rica	..	..	..	36.0	49.9
Guatemala	..	..	..	26.8	29.8
Honduras	..	..	..	4.5	12.2
Mexico	3.2	10.5	19.8	32.1	52.6
Panama	..	32.4	47.3	40.6	6.3
Other	..	33.4	27.1	..	51.1
<b>Caribbean</b>	..	42.1	55.7	76.6	84.2
Bahamas	..	61.5	..	..	...
Barbados	..	..	..	..	29.4
Bermuda	..	..	..	28.6	..
Dominican Republic	..	..	..	..	76.4
Jamaica	..	..	..	..	61.2

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**Annex table A.VIII.6. Export propensities of United States majority-owned foreign affiliates in manufacturing, 1966-1996 (concluded)**

(Percentage)

	1966	1977	1983	1993	1996
Netherlands Antilles	..	10.0	..	..	0.0
Trinidad and Tobago	..	..	..	17.0	..
United Kingdom Islands, Caribbean	..	..	100.0	100.0	..
Other	..	..	24.9	..	..
<b>Africa <sup>e</sup></b>	..	..	..	..	20.9
Nigeria	..	0.7	0.6	..	..
<b>West Asia <sup>f</sup></b>	..	20.3	..	..	44.0
Saudi Arabia	..	..	..	3.8	1.3
United Arab Emirates	..	..	..	..	..
Other	..	13.3	..	..	43.4
<b>Asia and Pacific <sup>g</sup></b>	..	..	60.1	40.2	37.1
China	..	..	..	..	33.9
Hong Kong, China	..	..	74.6	54.6	39.4
India	..	3.4	..	..	8.3
Indonesia	..	40.8	..	..	..
Korea, Republic of	..	67.9	28.1	18.6	..
Malaysia	..	76.2	75.5	85.1	68.8
Philippines	19.9	25.8	27.8	37.5	45.1
Singapore	..	93.2	92.0	86.1	78.8
Taiwan, Province of China	..	71.4	58.2	40.4	43.3
Thailand	..	..	..	61.2	..
Turkey <sup>h</sup>	..	0.9	1.0	..	..
Other	..	0.9	11.7	..	..

*Source:* UNCTAD, based on United States Direct Investment Abroad, Department of Commerce, various years.

<sup>a</sup> Includes Turkey.

<sup>b</sup> Includes Luxembourg in 1966.

<sup>c</sup> Israel is included in developing countries in 1966, 1983 and 1993.

<sup>d</sup> South Africa is included in developing countries in 1966.

<sup>e</sup> Aggregate figure includes South Africa.

<sup>f</sup> Aggregate figure includes Israel.

<sup>g</sup> Aggregate figure includes Australia, Japan and New Zealand.

<sup>h</sup> Turkey is included in developed countries in 1966, 1993 and 1996.

*Notes:* exports (sales to the United States plus sales to other countries) as per cent of total sales.

**Annex table A.VIII.7. United States majority owned foreign affiliates' shares in host-economy exports of manufactures, 1966-1996**

(Percentage)

	1966	1977	1983	1993	1996
<b>All countries</b>	7.7	9.2	9.1	9.2	9.6
<b>Developed countries</b>	8.6	10.1	10.1	10.1	13.8
<b>Western Europe</b>					
<b>Europe</b>					
Austria	..	3.0	4.6	3.2	..
Belgium <sup>a</sup>	11.3	18.5	17.0	12.8	13.8
Denmark	..	..	4.2	..	..
Finland	..	..	..	..	3.0
France	7.2	10.8	9.9	10.3	11.5
Germany	7.0	10.1	12.0	11.7	11.2
Greece	..	..	5.2	2.0	..
Ireland	..	41.7	54.0	52.3	43.0
Italy	4.7	4.9	4.5	5.1	5.5
Netherlands	11.0	19.8	23.5	21.3	20.4
Norway	..	3.3	3.0	2.3	3.5
Portugal	..	..	6.9	5.1	6.4
Spain	2.0	11.0	14.6	14.5	15.2
Sweden	..	3.3	3.4	2.6	4.0
Switzerland	7.1	4.1	4.1	2.4	..
United Kingdom	18.3	18.4	18.5	25.4	24.1
<b>North America</b>					
Canada	61.8	67.0	54.9	52.1	45.3
<b>Other developed countries</b>					
Australia	..	..	..	33.2	39.9
Israel <sup>b</sup>	..	2.4	..	..	..
Japan	..	0.4	0.7	1.5	1.1
New Zealand <sup>c</sup>	..	7.7	..	..	..
South Africa <sup>d</sup>	..	..	3.0	0.8	..
<b>Developing countries</b>	9.5	10.1	8.3	7.9	8.0
<b>Latin America and the Caribbean</b>					
<b>South America</b>					
Argentina	..	..	29.3	24.8	39.2
Brazil	..	32.7	24.0	16.4	18.5
Chile	..	..	..	..	28.1
Colombia	42.8	8.5	11.0	6.1	11.1
Ecuador	..	..	..	10.7	..
Peru	..	2.7	3.4	..	..
Venezuela	..	..	12.8	10.3	..
<b>Central America</b>					
Costa Rica	..	..	..	41.2	49.5
Guatemala	..	..	..	16.8	15.9
Honduras	..	..	..	21.1	21.3
Mexico	24.5	41.5	21.7	22.6	28.4
Panama	..	..	..	..	15.0
<b>Caribbean</b>					
Bahamas	..	8.3	..	..	..
Barbados	..	..	..	2.4	9.2
Bermuda	..	..	..	6.4	..
Dominican Republic	..	..	..	..	..
Trinidad and Tobago	..	..	..	1.4	..

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**Annex table A.VIII.7. United States majority owned foreign affiliates' shares in host-economy exports of manufactures, 1966-1996**

(Percentage)

	1966	1977	1983	1993	1996
<b>Africa <sup>e</sup></b>					
Egypt	..	..	..	..	..
Nigeria	..	5.7	37.0	..	..
<b>West Asia <sup>f</sup></b>					
Saudi Arabia	..	..	..	0.1	..
<b>Asia and Pacific <sup>g</sup></b>					
China	..	..	..	..	1.6
Hong Kong, China	..	..	5.8	10.0	..
India	..	0.5	..	..	..
Indonesia	..	3.2	..	..	..
Korea, Republic of	..	..	..	0.9	..
Malaysia	..	37.1	37.2	13.8	11.1
Philippines	..	52.6	36.1	22.6	11.4
Singapore	..	23.5	20.4	25.1	21.4
Thailand	..	..	..	7.2	..
Turkey <sup>h</sup>	..	0.5	0.0	..	..

*Source:* UNCTAD, based on United States Direct Investment Abroad, Department of Commerce, various years; and COMTRADE database.

<sup>a</sup> Includes Luxembourg in 1966.

<sup>b</sup> Israel is included in developed countries only in 1977.

<sup>c</sup> New Zealand is included in developing countries in 1993.

<sup>d</sup> South Africa is included in developing countries in 1995.

<sup>e</sup> Aggregate figure includes South Africa.

<sup>f</sup> Aggregate figure includes Israel.

<sup>g</sup> Aggregate figure includes Australia, Japan and New Zealand.

<sup>h</sup> Turkey is included in developed countries in 1966, 1993 and 1995.

*Notes:* Affiliates' exports equal the sales to the United States plus the sales to other countries.

**Annex table A.IX.1. Employment in United States parent firms and their foreign affiliates, 1996, and employee growth rate, 1990-1996<sup>a</sup>**  
(Thousands of employees and percentage)

Industrial sector	Employment in parent firms			Employment in foreign affiliates																	
				Total in all affiliates			Total in developing country affiliates			Latin America			Africa <sup>b</sup>			West Asia			Developing Asia <sup>c</sup>		
	employees	growth rate	Annual	employees	growth rate	Annual	employees	growth rate	Annual	employees	growth rate	Annual	employees	growth rate	Annual	employees	growth rate	Annual	employees	growth rate	Annual
All industries	18 775	0.3		7 617	1.8		2 668	3.9		1 529	2.3		68	-2.7		31	4.4		1 040	7.4	
Petroleum	484	-3.5		236	0.0		112	..		39	4.4		16	..		12	..		44	..	
Manufacturing	8 949	-1.5		4 478	0.6		1 858	2.5		1 043	-0.1		34	1.6		9	8.1		772	7.0	
Food and kindred products	958	-3.0		557	3.5		292	..		188	7.4		6	-2.2		2	58.7		97	..	
Chemicals and allied products	1 038	-3.4		611	0.8		223	..		136	-2.5		7	5.9		3	..		78	..	
Primary and fabricated metals	575	-0.6		245	0.9		68	..		39	-8.7		4	0.2		1	12.2		24	..	
Machinery, except electrical	1 152	-0.5		527	-1.3		172	..		48	-6.8		1	..		1	..		122	7.7	
Electric & electronic equipment	1 193	1.3		839	2.7		530	..		222	4.5		1	..		0	-10.9		306	..	
Transportation equipment	1 684	-2.8		708	-3.4		219	..		186	-4.1		2	..		1	..		31	..	
Other manufacturing	2 350	-1.0		992	1.4		374	..		224	0.5		16	..		2	..		132	..	
Wholesale trade	685	7.0		563	0.5		132	..		53	4.4		4	4.0		1	0.0		74	..	
Finance (except depository institutions), insurance, and real estate	1 070	-0.3		196	2.8		54	..		25	9.8		1	..		0	0.0		28	8.4	
Services	2 381	6.4		829	9.2		144	6.9		105	9.1		5	-6.8		6	3.3		29	4.5	
Other industries	5 205	1.2		1 314	3.6		382	..		265	11.4		8	..		3	..		105	..	

Source: UNCTAD, United States Department of Commerce, *U.S. Direct Investment Abroad: Operations of U.S. Parent Companies and their Foreign Affiliates*, various issues.

<sup>a</sup> Figures are for nonbank parent companies and nonbank foreign affiliates of nonbank United States parents.

<sup>b</sup> Figures exclude data for South Africa.

<sup>c</sup> Includes also, developing Pacific island countries.

Note: As country data for some industries were not available, the table includes estimates, using the median of the range indicated for the category concerned. Totals do not add due to such estimates and due to rounding.



Annex table A.IX.2. Employment in Japanese parent firms and their affiliates, 1995, and employee growth rate, 1990-1995

(Thousands of employees and percentage)

Sector/industry	Employment in parent firms			Employment in foreign affiliates																	
				Total in all affiliates			Total in developing country affiliates			Latin America			Africa <sup>a</sup>			West Asia			Developing Asia <sup>b</sup>		
	employees	growth rate <sup>c</sup>	Annual	employees	growth rate	Annual	employees	growth rate	Annual	employees	growth rate	Annual	employees	growth rate	Annual	employees	growth rate	Annual	employees	growth rate	Annual
All industries	3 421	2.7	7.4	2 219	7.4	11.1	1 382	11.1	112.1	-0.5	15.3	0.4	11.5	9.3	1 236	12.8					
Primary sector	9	-6.4	4.0	40	4.0	..	..	..	3.8	0.6	..	..	..	..	18	8.1					
Agriculture, hunting, forestry and fishing	2	-20.2	7.0	25	7.0	..	..	..	0.9	-17.2	..	..	..	..	16	9.5					
Mining, quarrying and petroleum	7	1.8	-0.2	14	-0.2	..	..	..	2.9	15.8	..	..	..	..	3	0.9					
Secondary sector	2 609	3.0	7.4	1 775	7.4	11.1	1 202	11.1	95.8	-1.2	11.8	5.4	2.7	-2.3	1 089	12.9					
Manufacture of food, beverages and tobacco	131	5.3	17.1	72	17.1	..	..	..	7.7	17.7	..	..	..	..	46	24.7					
Manufacture of textiles, clothing and leather	101	11.3	8.9	139	8.9	7.6	124	7.6	7.6	-13.6	0.1	-33.7	..	..	117	11.0					
Wood and wood products	34	-0.6	-0.0	19	-0.0	..	..	..	2.4	-3.8	..	..	..	..	10	27.6					
Coke, petroleum products and nuclear fuel	24	4.9	-24.9	1	-24.9	..	..	..	0.1	-41.1	..	..	..	..	1	21.7					
Chemicals and chemical products	291	7.3	11.0	121	11.0	..	..	..	4.7	-4.1	..	..	..	..	61	17.1					
Non-metallic mineral products	74	3.6	-5.0	27	-5.0	..	..	..	4.4	15.0	..	..	..	..	18	-2.5					
Manufacture of Basic metals	141	-1.8	15.6	67	15.6	..	..	..	14.5	49.9	0.3	-38.2	..	..	30	23.0					
Machinery and equipment	199	4.7	0.5	90	0.5	..	..	..	3.9	-10.4	..	..	..	..	38	16.4					
Electrical machinery and apparatus	689	2.0	7.5	603	7.5	10.7	460	10.7	14.6	-11.2	0.6	-8.1	0.2	-22.6	444	12.3					
Precision instruments	56	-4.6	6.5	42	6.5	..	..	..	..	..	..	..	..	35	8.4						
Manufacture of motor vehicles and other transport equipment	597	2.8	10.1	372	10.1	..	..	..	32.8	1.5	7.7	33.7	..	..	182	14.8					
Other manufacturing	274	2.5	2.4	212	2.4	..	..	..	2.4	-8.3	..	..	..	..	107	10.1					
Tertiary sector	803	2.1	8.0	404	8.0	14.3	158	14.3	13.0	5.4	3.6	51.1	8.8	50.8	129	13.2					
Construction	226	4.1	5.8	19	5.8	..	..	..	0.4	-18.2	..	..	..	..	15	9.2					
Trade	299	2.8	9.2	278	9.2	11.6	74	11.6	8.2	8.3	0.4	5.2	4.9	44.2	60	11.0					
Other service activities	278	-	5.5	108	5.5	..	..	..	3.9	5.8	..	..	4.0	72.7	54	17.5					

Source: UNCTAD, FDI/TNC database.

<sup>a</sup> Figures exclude data for South Africa.<sup>b</sup> Figures are for South, East and South-East Asia and developing Pacific island countries.<sup>c</sup> For 1989-1995.

**Annex table A.IX.3. Selected export processing zones in selected developing economies and economies in transition: some features, latest year**

Economy	Zone features		Economic performance			Industrial organization	
	Number and type of zones	Main types of incentive	Total estimated employment	Main investor countries	Main sectors	Labour laws	Workers' organization
Antigua and Barbuda	1 FTZ	tax and duty free			offshore banking, data processing	labour laws apply	
Argentina	2 FTZs	tax and duty free					
Bahamas	1 FTZ	tax and duty free					
Bangladesh	2 public EPZs; 3 public and 1 private EPZ under construction	10-year tax holiday, duty-free imports and exports	2.2 million <sup>a</sup>	Republic of Korea, Bangladesh, Japan, Hong Kong (China)	garments, leather, shoes, electronics	EPZs -exempt from Industrial Relations Ordinance	EPZ-trade unions and strikes prohibited
Belize	1 EPZ	20-year tax holiday, duty-free imports and exports					
Brazil	1 EPZ	tax and duty free				Constitution guarantees workers rights	
Cape Verde	2 EPZs	10-year tax holiday, duty-free imports, training grant					
Chile	2 EPZs	tax and duty free					
China	6 SEZs, 34 ETDZ	duty-free imports and exports, tax rebates	18 million in foreign-invested firms	Hong Kong (China), Taiwan Province of China, Japan, United States		all labour laws apply	single trade union (ACFTU)
Colombia	10 EPZs 10, 2 Free Ports, 3 Tourist zones	tax exempt, duty-free imports and exports				all labour laws apply	
Costa Rica	9 EPZs	8-year tax holiday, duty-free imports and exports	26 000	Costa Rica, United State	textiles, garments	labour laws apply	little trade union presence
Cuba	1 Free Zone; 3 additional planned	tax incentives					
Curacao	2 FTZs, 1 industrial zone	2 per cent profit tax, duty-free import and exports		European Community, United States	trading, distribution.		
Dominican Republic	43 EPZs	15 to 20-year tax holiday	200 000	United States	garments, electronics	labour laws apply	trade unions present
Egypt	11 EPZs	tax and duty exempt	67 000				
El Salvador	6 EPZs	10-year tax holiday, duty-free imports and exports	60 000			labour laws apply	
Fiji	1 Tax Free Zone	tax exempt	15 000	Fiji, Australia, Singapore	garments, food		
Ghana	6 EPZs	10-year tax holiday, duty-free imports and exports				labour laws apply	
Guatemala	2 EPZs	10 to 12-year tax holiday, duty-free imports and exports	67 000				
Haiti	4 EPZs planned			Haiti	garments	labour laws apply	little trade union presence
Honduras	15 EPZs/FTZs	permanent exemption from all taxes	95 000	United States	garments	labour laws apply	trade unions present, also association
Hong Kong, China	entire territory: Free Port	none		United Kingdom, China, United States	electronics	labour laws apply	trade unions active

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**Annex table A.IX.3. Selected export processing zones in selected developing economies and economies in transition: some features, latest year (continued)**

Economy	Zone features		Economic performance			Industrial organization	
	Number and type of zones	Main types of incentive	Total estimated employment	Main investor countries	Main sectors	Labour laws	Workers' organization
India	7 EPZs	5-year tax holiday, duty-free imports				labour laws apply, EPZs are "public utilities" in terms of Industrial Disputes Act	
Indonesia	26 EPZs	12-year tax holiday, duty-free imports and exports		Japan, United Kingdom, Singapore		labour laws apply	trade unions active
Islamic Republic of Iran	14 SEZs, Free-Trade-Industrial Zones	15-year tax holiday, duty-free imports and exports				labour laws apply	
Ivory Coast	1 EPZ						
Jamaica	3 Free Zones	tax and duty exempt	6 000			labour laws apply	trade unions not present
Kenya	15 EPZs	10-year tax holiday, duty-free imports	3 000			exempt from Factories Act and Industrial Registration Act	
Madagascar	1 EPZ	5-year tax holiday, duty-free imports and exports	25 000		garments, leather	labour law apply	
Malaysia	15 Free Industrial Zones			Japan, Singapore, United States		labour laws apply with some except. for pioneer industries	restrictions in electronics and pioneer industries
Mauritius	stand alone plants enjoy privileges	10 to 20-year tax holiday, no customs duty	82 000	Mauritius, Hong Kong (China)	garments, flowers	labour laws apply with some exceptions	no trade union presence
Mexico	107 EPZs		1 million				
Namibia	3 EPZs	unlimited tax holiday				labour laws apply, moratorium on strikes and lockouts	
Nepal	1 EPZ	export industries are tax and duty free			garments		
Nicaragua	1 public FZ, 5 private FZ planned	15-year tax holiday, duty-free imports and exports	13 000	Taiwan, Province of China, Republic of Korea			
Pakistan	4 EPZs; 9 new zones planned	5-year tax holiday, for foreign employment, duty-free imports and exports				not all provisions of labour laws apply	
Panama	2 EPZs, 1 FZ	tax rebates based on exports and employment					
Philippines	110 EPZs approved, of which 56 active	4 to 8-year tax holiday, duty-free imports and exports	609 000 <sup>b</sup>	Japan, Philippines, United States	electrical machinery	labour laws apply	trade unions present
Puerto Rico	4 FTZs	duty-free imports					
Saint Lucia	EPZ	tax and duty free					
Senegal	1 EPZ	tax and duty free				not all labour laws apply	

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**Annex table A.IX.3. Selected export processing zones in selected developing economies and economies in transition: some features, latest year (concluded)**

Economy	Zone features		Economic performance			Industrial organization	
	Number and type of zones	Main types of incentive	Total estimated employment	Main investor countries	Main sectors	Labour laws	Workers' organization
Federal Republic of Yugoslavia	1 FZ	5-year tax holiday, duty-free imports and exports					
Singapore				Singapore, Japan, United States	electronics, chemical	labour laws apply	trade unions present
Sri Lanka	6 EPZs	10 to 20-year holiday for new, large export projects or thrust industries	estimates range between 90 000	Republic of Korea, Hong Kong (China)	apparel, services, rubber	labour laws apply	no trade unions present, zones have employee councils
Thailand	3 Investment Zones, 5 EPZs and several specialized EPZs	3-year tax holiday, duty-free imports and exports		Japan, European Community, United States	electrical appliances	labour laws apply	trade unions present
Togo	1 EPZ	10-year tax holiday, duty-free imports and exports	10 000			labour laws apply	trade unions not present
Trinidad and Tobago	17 EPZs	tax and duty exempt	3 000			labour laws apply	trade unions not present
Tunisia		10-years of tax free exports, no customs duties	30 000			labour laws apply	
Turkey	14 EPZs	tax and duty free					strikes and lock-outs prohibited
Uruguay	1 FZ	tax and duty free			warehousing, logistics		
Viet Nam	EPZs	4-year tax holiday, duty-free imports and exports					
Zimbabwe	7 EPZs	5-year tax holiday, duty-free imports and exports	6 000		food, timber, clothing	labour laws apply	trade unions present

*Source:* UNCTAD, based on van Heerden, 1999 and WEPZA newsletters 1996-1999.

<sup>a</sup> Includes employment in the in-bond garment sector.

<sup>b</sup> includes direct and indirect employment.

Notes: The information provided is not necessarily complete. Employment data are estimates. Blank spaces in cells indicate non-availability of information on an item.

EPZ = Export Processing Zone

FTZ = Free Trade Zone

FT = Free Trade

FZ = Free Zone

ETDZ = Economic and Technological Development Zone.

Annex table A.IX.4. Labour standards and FDI in developing countries

Member States	Trade union			Conventions ratified										FDI as percentage of GDP (1997)	FDI as percentage of GFCF (1997)
	Year	Union membership (thousands)	Membership as per cent of wage and salary earners	Forced Labour 1930 C.29	Abolition of Forced Labour 1957 C.105	Freedom of Association and Protection of the Right to Organise, 1948 C.87	The Right to Organise and Collective Bargaining, 1949 C.98	Equal Remuneration, 1951 C.100	Discrimination (Employment and Occupation), 1958 C.111	Minimum Age, 1973 C.138	Working Environment (Air pollution, Noise and Vibration), 1977 C.148	Minimum Wages Fixing, 1970 C.131			
<b>Africa</b>	1.2	6.5													
<b>North Africa</b>	1.2	5.6													
Algeria	..	..	38.8	X	X	X	X	X	X	X	..	..	0.0	0.1	
Egypt	1995	3313	..	X	X	X	X	X	X	0	X	X	1.2	6.1	
Libyan Arab Jamahiriya	..	..	..	X	X	—	X	X	X	X	..	X	0.4	3.0	
Morocco	1994	290	..	X	X	+	X	X	X	0	..	..	3.2	15.6	
Sudan	..	..	..	X	X	*	X	X	X	*	..	..	1.0	3.8	
Tunisia	1994	220	..	X	X	X	X	X	X	X	..	..	1.7	6.8	
<b>Other Africa</b>	1.3	7.4													
Angola	..	..	..	X	X	0	X	X	X	0	..	..	6.4	55.7	
Benin	..	..	..	X	X	X	X	X	X	0	..	..	0.1	0.8	
Botswana	1995	45	..	X	X	X	X	X	X	X	..	..	2.0	8.8	
Burkina Faso	..	..	..	X	X	X	X	X	X	X	..	X	0.0	0.2	
Burundi	..	..	..	X	X	X	X	X	X	0	..	..	0.1	2.0	
Cameroon	1995	250	..	X	X	X	X	X	X	0	..	X	0.5	3.1	
Cape Verde	1995	15	..	X	X	X	X	X	X	*	..	..	2.9	9.3	
Central African Republic	..	..	..	X	X	X	X	X	X	*	..	..	0.6	5.6	
Chad	..	..	..	X	X	X	X	X	X	*	..	..	1.5	13.3	
Comoros	..	..	..	X	X	X	X	X	X	—	..	..	0.9	4.0	
Congo	..	..	..	X	0	X	0	0	0	0	..	..	0.4	2.4	
Cote d'Ivoire	..	..	..	X	X	X	X	X	X	*	..	..	3.2	21.5	
Democratic Republic of the Congo	..	..	..	X	*	*	X	X	*	*	..	..	0.0	0.4	
Djibouti	..	..	..	X	X	X	X	X	—	—	..	..	1.0	7.9	
Equatorial Guinea	..	..	..	—	—	—	—	X	—	X	..	..	21.5	105.8	
Eritrea	1995	18	..	+	+	+	+	+	+	+	..	..	..	..	
Ethiopia	1995	152	..	*	0	X	X	0	X	0	..	..	0.2	1.6	
Gabon	1995	5	..	X	X	X	X	X	X	*	..	..	-2.0	-8.5	
Gambia	..	..	..	*	*	*	*	*	*	*	..	..	3.7	19.8	
Ghana	1990	700	..	X	X	X	X	X	X	*	X	..	2.9	12.3	
Guinea	1995	13	..	X	X	X	X	X	X	*	X	..	0.5	3.4	
Guinea-Bissau	..	..	..	X	X	—	X	X	X	—	..	..	0.7	5.5	
Kenya	1995	500	..	X	X	+	X	X	+	X	..	X	0.2	1.1	
Lesotho	..	..	..	X	*	X	X	+	+	*	..	..	3.5	4.2	
Liberia	..	..	..	X	X	X	X	*	X	*	..	..	..	15.2	
Madagascar	..	..	..	X	X	X	X	X	X	0	..	..	0.5	3.8	
Malawi	..	..	..	*	*	*	X	X	X	*	..	..	0.1	0.8	
Mali	1995	103	..	X	X	X	X	X	X	+	..	..	1.6	6.7	



Annex table A.IX.4. Labour standards and FDI in developing countries (continued)

Member States	Trade union		Conventions ratified										FDI as percentage of GDP (1997)	FDI as percentage of GFCF (1997)
	Year	Union membership (thousands)	Membership as per cent of wage and salary earners	Forced Labour 1930 C.29	Abolition of Forced Labour 1957 C.105	Freedom of Association and Protection of the Right to Organise, 1948 C.87	The Right to Organise and Collective Bargaining, 1949 C.98	Equal Remuneration, 1951 C.100	Discrimination (Employment and Occupation), 1958 C.111	Minimum Age, 1973 C.138	Working Environment (Air pollution, Noise and Vibration), 1977 C.148	Minimum Wages Fixing, 1970 C.131		
Mauritania	1995	15	..	X	X	X	0	0	X	0	..	..	0.3	1.8
Mauritius	1995	106	29.2	X	X	+	X	+	+	X	..	..	1.4	5.0
Mozambique	..	..	..	*	X	X	X	X	X	—	..	..	2.4	3.7
Namibia	1995	55	..	*	*	X	X	*	*	*	..	..	3.9	18.5
Niger	..	..	..	X	X	X	X	X	X	X	X	X	0.0	0.4
Nigeria	1990	3520	..	X	X	X	X	X	#	+	..	..	1.1	7.2
Rwanda	..	..	..	0	X	X	X	X	X	X	..	..	0.1	0.9
Sao Tome and Principe	..	..	..			X	X	X	X	0	..	..	..	..
Senegal	1995	184	..	X	X	X	X	X	X	0	..	..	0.7	3.5
Seychelles	..	..	..	X	X	X	0	0	0	0	..	..	10.1	28.7
Sierra Leone	..	..	..	X	X	X	X	X	X	*	..	..	0.4	6.5
Somalia	..	..	..	X	X	—	—	—	X	—	..	..	..	0.4
South Africa	1995	3154	40.9	X	X	X	X	0	X	0	..	..	..	..
Swaziland	1995	21	22.4	X	X	X	X	X	X	—	..	X	-0.2	-0.6
Tanzania, United Republic of	1995	470	..	X	X	#	X	*		X	X	X	2.1	13.0
Togo	..	..	..	X	0	X	X	X	X	X	..	..	0.1	0.5
Uganda	1995	63	..	X	X	+	X	+	+	+	..	..	3.0	19.2
Zambia	1995	273	..	X	X	X	X	X	X	X	X	X	1.8	4.8
Zimbabwe	1995	250	..	X	X	+	X	X	0	+	..	..	0.9	4.0
<b>Latin America and the Caribbean</b>	3.2	16.2	..											
<b>South America</b>	3.0	15.2	..											
Argentina	1995	3200	38.7	X	X	X	X	X	X	X	..	..	2.0	9.9
Bolivia	1994	276	..	+	X	X	X	X	X	X	..	X	7.7	44.3
Brazil	1991	15205	43.5	X	X	+	X	X	X	+	X	X	2.3	11.9
Chile	1993	684	..	X	X	X	X	X	X	X	..	..	7.0	27.9
Colombia	1995	840	..	X	X	X	X	X	X	0	..	..	7.6	40.0
Ecuador	1995	300	..	X	X	X	X	X	X		X	X	2.9	15.3
Guyana	1995	70	..	X	X	X	X	X	X	X	..	X	12.1	27.2
Paraguay	1995	109	..	X	X	X	X	X	X	*	..	..	2.2	9.5
Peru	1991	442	..	X	X	X	X	X	X	+	..	..	3.1	12.6
Suriname	..	..	..	X	X	X	X			0	..	..	..	1.2
Uruguay	1993	151	..	X	X	X	X	X	X	+	..	..	..	..
Venezuela	1995	1153	17.1	X	X	X	X	X	X	X	X	X	0.8	6.7
<b>Other Latin America and the Caribbean</b>	1995	3.8	19.3	X	X	X	X	X	X	X	..	..	5.8	34.4
Antigua and Barbuda	1995	14	53.8	X	X	X	X	0	X	X	..	..	5.5	15.0

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Annex table A.IX.4. Labour standards and FDI in developing countries (continued)

Member States	Trade union		Conventions ratified										FDI as percentage of GDP (1997)	FDI as percentage of GFCF (1997)
	Year	Union membership (thousands)	Membership as per cent of wage and salary earners	Forced Labour 1930 C.29	Abolition of forced Labour 1957 C.105	Freedom of Association and Protection of the Right to Organise, 1948 C.87	The Right to Organise and Collective Bargaining, 1949 C.98	Equal Remuneration, 1951 C.100	Discrimination (Employment and Occupation), 1958 C.111	Minimum Age, 1973 C.138	Working Environment (Air pollution, Noise and Vibration), 1977 C.148	Minimum Wages Fixing, 1970 C.131		
Bahamas	..	..	..	X	X	#	X	*	*	*	..	..	6.9	32.7
Barbados	..	..	..	X	X	X	X	X	X	0	..	..	0.8	8.4
Belize	..	..	..	X	X	X	X	*	*	*	..	..	1.9	9.1
Costa Rica	1995	139	16.6	X	X	X	X	X	X	X	X	X	0.6	3.1
Cuba	1995	2772	70.2	X	X	X	X	X	X	X	X	X	..	..
Dominica	..	..	..	X	X	X	X	X	X	X	..	..	8.9	27.8
Dominican Republic	1995	450	..	X	X	X	X	X	X	*	..	..	2.7	11.4
El Salvador	1995	103	21.7	X	X	*	*	0	X	X	..	X	0.4	2.3
Grenada	..	..	..	X	X	X	X	X	+	+	..	..	7.9	24.7
Guatemala	1994	89	3.0	X	X	X	X	X	X	X	X	X	0.5	3.5
Haiti	..	..	..	X	X	X	X	X	X	—	..	..	0.2	1.3
Honduras	1994	106	..	X	X	X	X	X	X	X	..	..	2.6	10.9
Jamaica	..	..	..	X	X	X	X	X	X	+	..	..	2.6	8.5
Mexico	1991	7000	42.8	X	X	X	*	X	X	+	..	X	3.1	15.9
Nicaragua	1995	280	..	X	X	X	X	X	X	+	..	X	8.6	24.7
Panama	1991	90	20.1	X	X	X	X	X	X	0	..	..	11.8	39.8
Saint Kitts and Nevis	..	..	..	*	*	*	*	*	*	*	..	..	10.4	32.0
Saint Lucia	..	..	..	X	X	X	X	X	X	—	..	..	..	..
Saint Vincent and the Grenadines..	..	..	..	X	X	*	X	*	*	*	..	..	16.2	48.5
Trinidad and Tobago	..	..	..	X	X	X	X	X	X	—	..	..	17.0	109.0
<b>Asia</b>	2.4												8.3	
<b>West Asia</b>	0.7												3.2	
Bahrain	..	..	..	X	X	#	#	#	*	*	..	..	0.2	2.0
Cyprus	1995	161	56.5	X	X	X	X	X	X	X	..	..	2.1	10.6
Iran, Islamic Republic of	..	..	..	X	X	+	+	X	X	+	..	..	0.3	1.2
Iraq	..	..	..	X	X	+	X	X	X	X	X	X	..	..
Jordan	..	..	..	X	X	+	X	X	X	X	..	..	5.1	20.3
Kuwait	..	..	..	X	X	+	*	*	X	+	..	..	0.1	0.4
Lebanon	..	..	..	X	X	+	X	X	X	+	..	X	1.4	10.8
Oman	..	..	..	X	*	*	*	*	*	*	..	..	0.3	1.3
Qatar	..	..	..	X	+	+	+	+	X	+	..	..	0.7	3.1
Saudi Arabia	..	..	..	X	X	+	*	+	X	+	..	..	2.0	11.0
Syrian Arab Republic	..	..	..	X	X	X	X	X	X	+	..	X	0.2	0.6
Turkey	1995	2667	33.7	X	X	X	X	X	X	X	..	..	0.4	1.6
United Arab Emirates	..	..	..	X	X	#	#	X	#	X	..	..	0.2	0.9
Yemen	..	..	..	X	X	X	X	X	X	*	..	X	-2.4	-10.5

Annex table A.IX.4. Labour standards and FDI in developing countries (continued)

Member States	Trade union			Conventions ratified									FDI as percentage of GFCF (1997)
	Year	Union membership (thousands)	Membership as per cent of wage and salary earners	Forced labor, 1930 C.29	Abolition of forced labor, 1957 C.105	Freedom of Association and Protection of the Right to organise, 1948 C.87	The Right to organise and Collective Bargaining, 1949 C.98	Equal Remuneration, 1951 C.100	Discrimination (Employment and Occupation), 1958 C.111	Minimum age, 1973 C.138	Working Environment (Air pollution, Noise and Vibration), 1977 C.148	Minimum Wages Fixing, 1970 C.131	
<b>Central Asia</b>	4.3												465.3
Armenia	1995	1707	63.8	X	X	X	X	X	X	X	X	X	3.1
Azerbaijan	..	..	..	X	X	X	X	X	X	X	X	X	23.2
Georgia	..	..	..	X	X	X	X	X	X	X	X	X	2.5
Kazakhstan	..	..	..	X	X	X	X	X	X	X	X	X	6.6
Kyrgyzstan	..	..	..	X	X	X	X	X	X	X	X	X	4.8
Tajikistan	..	..	..	X	X	X	X	X	X	X	X	X	0.2
Turkmenistan	..	..	..	X	X	X	X	X	X	X	X	X	2.5
Uzbekistan	..	..	..	X	X	X	X	X	X	X	X	X	0.4
<b>South, East and South-east Asia</b>	8.8												
Afghanistan	2.6	8.8		—	X	—	—	X	X	—	..	..	..
Bangladesh	1995	1721	7.5	X	X	X	X	X	X	X	..	..	0.4
Cambodia	..	..	..	X	X	X	X	X	X	X	..	..	7.2
China	1995	103996	92.0	—	—	—	—	X	+	0	..	..	4.8
India	1991	6100	27.0	X	0	X	X	X	X	+	..	..	1.0
Indonesia	1995	1000	3.4	X	0	X	X	X	X	0	..	..	4.2
Korea, Republic of	1995	1615	12.7	X	X	X	X	X	X	0	..	..	2.2
Lao People's Democratic Republic	..	..	..	X	0	0	0	0	X	X	..	..	0.6
Malaysia	1995	706	13.4	X	—	0	0	0	0	0	..	..	5.1
Mongolia	..	..	..	0	0	X	X	X	X	X	..	..	5.2
Myanmar	..	..	..	X	—	X	—	—	—	—	..	..	0.8
Nepal	..	..	..	X	X	X	X	X	X	X	..	..	0.0
Pakistan	1994	984	..	X	X	X	X	X	X	X	..	..	0.5
Philippines	1995	3587	38.2	X	X	X	X	X	X	X	..	..	1.2
Singapore	1995	235	15.9	X	—	—	—	—	—	—	..	..	1.5
Sri Lanka	1991	1640	29.5	X	X	—	X	—	—	—	..	..	6.2
Thailand	1995	416	4.2	X	X	X	X	X	X	+	..	..	9.0
Viet Nam	..	..	..	—	—	—	—	X	—	+	..	..	2.8
<b>The Pacific</b>	4.5												2.4
Fiji	..	..	..	X	X	X	X	X	X	—	..	..	6.8
Papua New Guinea	..	..	..	X	X	X	X	X	X	X	..	..	..
Solomon Islands	..	..	..	X	—	X	X	X	X	—	..	..	0.6
<b>DEVELOPING EUROPE</b>	2.1	16.6											5.7
Bosnia and Herzegovina	..	..	..	X	X	X	X	X	X	X	X	X	31.4
Croatia	..	..	..	X	X	X	X	X	X	X	X	X	5.7
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Annex table A.IX.4. Labour standards and FDI in developing countries (concluded)

Member States	Trade union			Conventions ratified										
	Year	Union membership (thousands)	Membership as per cent of wage and salary earners	Forced Labour 1930 C.29	Abolition of Forced Labour 1957 C.105	Freedom of Association and Protection of the Right to Organise, 1948 C.87	The Right to Organise and Collective Bargaining, 1949 C.98	Equal Remuneration, 1951 C.100	Discrimination (Employment and Occupation), 1958 C.111	Minimum Age, 1973 C.138	Working Environment (Air pollution, Noise and Vibration), 1977 C.148	Minimum Wages Fixing, 1970 C.131	FDI as percentage of GDP (1997)	FDI as percentage of GFCF (1997)
Malta	1994	77	65.1	X	X	X	X	X	X	X	X	X	3.9	15.0
Slovenia	..	..	..	X	X	X	X	X	X	X	X	X	1.8	7.5
Yugoslavia	..	..	..	X	—	X	X	X	X	X	X	X	0.8	..
The former Yugoslav Republic of Macedonia	..	..	..	X	*	X	X	X	X	X	X	X	..	..
<b>Central and Eastern Europe</b>	2.2	10.9												
Albania	X	X	X	X	X	X	X	..	..	2.0	..	..	1.5	6.0
Belarus	1995	4134	88.0	X	X	X	X	X	X	X	..	..	4.9	43.4
Bulgaria	1993	1810	58.2	X	0	X	X	X	X	X	..	..	2.5	8.0
Czech Republic	1995	1886	42.8	X	X	X	X	X	X	+	X	..	5.7	29.5
Estonia	1995	167	36.1	X	X	X	X	X	*	+	..	..	4.8	23.6
Hungary	1995	1860	60.0	X	X	X	X	X	X	X	X	..	9.4	..
Latvia	..	..	..	0	X	X	X	X	X	0	X	X	3.7	..
Lithuania	..	..	..	X	X	X	X	X	X	X	..	X	3.2	16.3
Moldova, Republic of	..	..	..	0	X	X	X	0	X	0	..	..	3.6	17.1
Poland	1995	3420	33.8	X	X	X	X	X	X	X	..	..	3.5	18.2
Romania	1993	3700	..	X	X	X	X	X	X	X	..	X	1.4	7.2
Russian Federation	1996	42356	75.0	X	X	X	X	X	X	X	X	..	0.8	2.2
Slovakia	1995	1150	61.7	X	X	X	X	X	X	X	X	..	1.3	6.8
Ukraine	1995	21850	..	X	+	X	X	X	X	X	..	..	..	..

Source: ILOLEX, ILO's database on International Labour Standards, ILO, 1997a and UNCTAD FDI/TNC database.

Notes:

- a Membership as per cent of total paid employees for 1992.
- b Membership as per cent of total paid employees for 1993.
- c Membership as per cent of total paid employees for 1990.
- d Membership as per cent of total paid employees for 1989.
- e Membership as per cent of total paid employees for 1994.

Explanation of symbols in the table:

X Convention ratified.

O Formal ratification process already initiated (with or without mention of time-frame); approval of ratification by the competent body, although the ILO Director-General has not yet received the formal instrument of ratification or it is incomplete (concerns chiefly Minimum Agr Convention) or is a non-original copy.

\* Convention currently being studied or examined; preliminary consultations with the social partners.

+ Ratification will be examined after amendment/adoption of a Constitution, Labour Code, legislation, etc.

# Divergences between the Convention and national legislation.

| Ratification not considered/deferred.

— No reply, or a reply containing No information.

**Annex table A.X.1. TNC provisions of Agenda 21**

*Agenda 21* states that TNCs, along with other industrial actors, should,<sup>a</sup>

*in the area of global corporate environmental management:*

- |   |   |
|---|---|
| 1. introduce policies and commitments to adopt equivalent or not less stringent standards of operation as in the country of origin [chapters 19.53(d) and 20.30]; | 6. Strengthen partnerships to implement the principles and criteria for sustainable development [chapter 30.7];   |
| 2. recognize environmental management as among the highest corporate priorities and as a key determinant to sustainable development [chapter 30.3];               | 7. have a special role and interest in promoting cooperation in technology transfer and in building a trained human resource pool and infrastructure in host countries [chapter 34.27]; |
| 3. be encouraged to establish worldwide corporate policies on sustainable development [chapter 30.22];  | 8. share their environmental management experiences with the local authorities, national Governments, and international organizations [chapter 30.22];                                  |
| 4. ensure responsible and ethical management of processes from the point of view of health, safety and environmental aspects [chapter 30.26];                     | 9. Report annually on their environmental record as well as on their use of energy and natural resources [chapter 30.10 (a)];   |
| 5. establish environmental management systems, including environmental auditing of production or distribution sites [chapter 20.13(i)];                           |   |

*in the area of environmentally sound production and consumption patterns:*

- |   |  |
|---|--|
| 10. play a major role in reducing impacts on resource use and the environment through more efficient production processes, preventive strategies, cleaner production technologies and procedures throughout the product life cycle [chapters 30.2 and 30.4] | 14. establish cleaner production demonstration projects/ networks by sector and by country [chapter 20.19(b)];   |
| 11. integrate cleaner production approaches into the design of products and management practices [chapter 20.18(c)];  | 15. integrate cleaner production principles and case studies into training programmes and organize environmental training programmes for the private sector and other groups in developing countries [chapters 8.3(c) and 20.19(b)]; |
| 12. arrange for environmentally sound technologies to be available to affiliates in developing countries [chapter 30.22];   | 16. consider establishing environmental partnership schemes with small- and medium-sized enterprises [chapter 30.23];  |
| 13. increase research and development of environmentally sound technologies and environmental management systems in collaboration with academia, scientific/engineering establishments, and indigenous people [chapter 30.25];                              |  |

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Annex table A.X.1. TNC provisions of Agenda 21 (concluded)

*in the area of risk and hazard minimization:*

- |   |  |
|---|--|
| <p>17. undertake research into the phase-out of those processes that pose the greatest environmental risk based on the hazardous wastes generated [chapter 20.18(b)];</p> <p>18. encourage affiliates to modify procedures in order to reflect local ecological conditions [chapter 30.22];</p> <p>19. provide data for substances produced that are needed specifically for the assessment of potential risks to human health and the environment [chapter 19.16];</p> <p>20. develop emergency response procedures and on-site and off-site emergency response plans [chapter 19.50(h)];</p> <p>21. apply a “responsible care” approach to chemical products, taking into account the total life cycle of such products [chapters 19.5 1 (b) and 20.18(d)];</p> | <p>22. Adopt, on a voluntary basis, community right-to-know programmes based on international guidelines, including sharing information on the causes of accidental releases or potential releases and the means to prevent them [chapter 19.5 1 (c)];</p> <p>23. make available to governments the information necessary to maintain inventories of hazardous wastes, treatment/disposal sites, contaminated sites that require rehabilitation, and information on exposure and risks [chapter 20.23(a)];</p> <p>24. report annually on routine emissions of toxic chemicals to the environment even in the absence of host country requirements [chapter 19.5 1 (c)];</p> <p>25. phase out, where appropriate, and dispose of any banned chemicals that are still in stock or in use, in an environmentally sound manner [chapter 19.53(j)];</p> |
|---|--|

*in the area of full-cost environmental accounting:*

- |   |  |
|---|--|
| <p>26. be invited to participate at the international level in assessing the practical implementation of moving toward greater reliance on pricing systems that internalize environmental costs [chapter 8.37];</p> <p>27. cooperate in developing methodologies for the valuation of non-marketed natural resources and the standardization of data collection [chapter 8.50];</p> | <p>28. work towards the development and implementation of concepts and methodologies for the internalization of environmental costs into accounting and pricing mechanisms [chapter 30.9];</p> <p>29. work with governments to identify and implement an appropriate mix of economic instruments and normative measures such as laws, legislation, and standards [chapter 30.8];</p> |
|---|--|

*in the area of international environmental support activities:*

- |   |   |
|---|---|
| <p>30. develop an internationally agreed upon code of principles for the management of trade in chemicals [chapter 19.51(a)];</p> | <p>31. be full participants in the implementation and evaluation of activities related to Agenda 21 [chapter 30.1].</p> |
|---|---|

Source: UNCTAD 1996b.

<sup>a</sup> Bracketed references are to the original Agenda 21 chapters.



## Annex B. Statistical annex

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## DEFINITIONS AND SOURCES

### A. General definitions

#### 1. Transnational corporation

Transnational corporations are incorporated or unincorporated enterprises comprising parent enterprises and their foreign affiliates. A *parent enterprise* is defined as an enterprise that controls assets of other entities in countries other than its home country, usually by owning a certain equity capital stake. An equity capital stake of 10 per cent or more of the ordinary shares or voting power for an incorporated enterprise, or its equivalent for an unincorporated enterprise, is normally considered as a threshold for the control of assets.<sup>1</sup> A *foreign affiliate* is an incorporated or unincorporated enterprise in which an investor, who is resident in another economy, owns a stake that permits a lasting interest in the management of that enterprise (an equity stake of 10 per cent for an incorporated enterprise or its equivalent for an unincorporated enterprise). In the *World Investment Report*, subsidiary enterprises, associate enterprises and branches are all referred to as *foreign affiliates* or *affiliates*.

- *Subsidiary*: an incorporated enterprise in the host country in which another entity directly owns more than a half of the shareholders' voting power and has the right to appoint or remove a majority of the members of the administrative, management or supervisory body.
- *Associate*: an incorporated enterprise in the host country in which an investor owns a total of at least 10 per cent, but not more than a half, of the shareholders' voting power.
- *Branch*: a wholly or jointly owned unincorporated enterprise in the host country which is one of the following: (i) a permanent establishment or office of the foreign investor; (ii) an unincorporated partnership or joint venture between the foreign direct investor and one or more third parties; (iii) land, structures (except structures owned by government entities), and /or immovable equipment and objects directly owned by a foreign resident; (iv) mobile equipment (such as ships, aircraft, gas- or oil-drilling rigs) operating within a country other than that of the foreign investor for at least one year.

#### 2. Foreign direct investment

*Foreign direct investment* (FDI) is defined as an investment involving a long-term relationship and reflecting a lasting interest and control of a resident entity in one economy (foreign direct investor or parent enterprise) in an enterprise resident in an economy other than that of the foreign direct investor (FDI enterprise or affiliate enterprise or foreign affiliate).<sup>2</sup> FDI implies that the investor exerts a significant degree of influence on the management of the enterprise resident in the other economy. Such investment involves both the initial transaction between the two entities and all subsequent transactions between them and among foreign affiliates, both incorporated and unincorporated. FDI may be undertaken by individuals as well as business entities.

*FDI flows* comprise capital provided (either directly or through other related enterprises) by a foreign direct investor to an FDI enterprise, or capital received from an FDI enterprise by a foreign direct investor. There are three components in FDI: equity capital, reinvested earnings and intra-company loans.

- *Equity capital* is the foreign direct investor's purchase of shares of an enterprise in a country other than its own.
- *Reinvested earnings* comprise the direct investor's share (in proportion to direct equity participation) of earnings not distributed as dividends by affiliates or earnings not remitted to the direct investor. Such retained profits by affiliates are reinvested.



- *Intra-company loans* or *intra-company debt transactions* refer to short- or long-term borrowing and lending of funds between direct investors (parent enterprises) and affiliate enterprises.

*FDI stock* is the value of the share of their capital and reserves (including retained profits) attributable to the parent enterprise, plus the net indebtedness of affiliates to the parent enterprise.<sup>3</sup> FDI flow and stock data used in the *World Investment Report* are not always defined as above, because these definitions are often not applicable to disaggregated FDI data. For example, in analysing geographical and industrial trends and patterns of FDI, data based on approvals of FDI may also be used because they allow a disaggregation at the country or industry level. Such cases are denoted accordingly.

### **3. Non-equity forms of investment**

Foreign direct investors may also obtain an effective voice in the management of another business entity through means other than acquiring an equity stake. These are non-equity forms of FDI, and they include, *inter alia*, subcontracting, management contracts, turnkey arrangements, franchising, licensing and product sharing. Data on transnational corporate activity through these forms are usually not separately identified in balance-of-payments statistics. These statistics, however, usually present data on royalties and licensing fees, defined as “receipts and payments of residents and nonresidents for: (i) the authorized use of intangible non-produced, non-financial assets and proprietary rights such as trade-marks, copyrights, patents, processes, techniques, designs, manufacturing rights, franchises, etc., and (ii) the use, through licensing agreements, of produced originals or prototypes, such as manuscripts, films, etc.”<sup>4</sup>

## **B. Availability, limitations and estimates of foreign-direct-investment data presented in the *World Investment Report***

### **1. FDI flows**

Data on FDI flows in annex tables B.1 and B.2, as well as most of the tables in the text, are on a net basis (capital transactions’ credits less debits between direct investors and their foreign affiliates). Net decreases in assets or net increases in liabilities are recorded as credits (recorded with a positive sign in the balance of payments), while net increases in assets or net decreases in liabilities are recorded as debits (recorded with a negative sign in the balance of payments). In the annex tables, as well as in the tables in the text, the negative signs are deleted for practical use. Hence, FDI flows with a negative sign in the *World Investment Report* indicate that at least one of the three components of FDI (equity capital, reinvested earnings or intra-company loans) is negative and not offset by positive amounts of the remaining components. These are instances of reverse investment or disinvestment.

The most reliable and comprehensive data on FDI flows that are readily available from international sources and follow the above definition are reported by the International Monetary Fund (IMF). For the purpose of assembling balance-of-payments statistics for its member countries, IMF collects and publishes data annually on FDI inflows and outflows in the *Balance of Payments Statistics Yearbook*. The same data are also available in IMF’s *International Financial Statistics* for certain countries. Therefore, data from IMF used in the *World Investment Report* were obtained directly from IMF’s CD-ROMs containing balance-of-payments statistics and international financial statistics.

Data obtained from the IMF constitute one of the main sources for the reported data on FDI flows. For this year’s *World Investment Report*, *International Financial Statistics* and *Balance-of-Payments* CD-ROMs, June 1999, were used.

In those cases in which economies do not report to IMF (e.g., Taiwan Province of China), or their reporting does not cover the entire 1980-1998 period that is used in the *World Investment Report*, data from UNCTAD FDI/TNC database, which contains published or unpublished

national official FDI data obtained from central banks, statistical offices or national authorities, were used. These data were also used to reflect the latest data revisions that are not yet included in the IMF data.

Finally, in those countries for which data were not available from either of the above-mentioned sources or only partial data (quarterly or monthly) were available, estimates were made, using the following three methodologies:

- Data are annualized if the data are only partially available (monthly or quarterly) from either the IMF or national official sources.
- Data on the FDI outflows of the Organisation for Economic Co-operation and Development (OECD), as presented in its publication, *Geographical Distribution of Financial Flows to Developing Countries*, are used as proxy for FDI inflows in selected developing countries and periods. As these data are based on FDI outflows to developing countries from the member countries of the Development Assistance Committee (DAC) of OECD,<sup>5</sup> inflows of FDI to developing countries may be underestimated.
- UNCTAD's estimates are used if the data cannot be estimated by one of the above methodologies.

Not all countries record every component of FDI flows. Tables 1 and 2 summarize the availability of each component of FDI during 1980-1997 from the IMF for, respectively, FDI inward flows and FDI outward flows. Comparison of data among countries should therefore be made bearing these limitations in mind.

**Table 1. List of economies for which at least one component of foreign direct investment inward flows is not available <sup>a</sup> from the IMF, 1980-1997**

<i>Equity investment</i>	<i>Reinvested earnings</i>	<i>Intra-company loans</i>
Developed countries:		
Canada, Denmark <sup>b</sup> , Iceland <sup>c</sup> , Ireland, Israel, Japan <sup>d</sup> , Sweden, Switzerland <sup>b</sup> and the United Kingdom <sup>e</sup>	Austria, Belgium and Luxembourg, Denmark, France <sup>g</sup> , Finland <sup>f</sup> , Greece <sup>h</sup> , Iceland <sup>d</sup> , Ireland <sup>d</sup> , Italy, Japan <sup>i</sup> , Norway <sup>k</sup> , Portugal <sup>i</sup> , Spain, Sweden <sup>m</sup> , South Africa and Switzerland <sup>b</sup>	Austria <sup>n</sup> , <sup>o</sup> , Denmark <sup>f</sup> , <sup>p</sup> , Greece <sup>o</sup> , Iceland <sup>k</sup> , Italy, Japan <sup>d</sup> , Spain <sup>i</sup> and Switzerland <sup>e</sup>
Developing economies:		
Africa:		
Algeria <sup>q</sup> , Angola <sup>h</sup> , <sup>q</sup> , Benin, Botswana <sup>f</sup> , Burkina Faso <sup>s</sup> , Burundi <sup>i</sup> , <sup>u</sup> , Cameroon <sup>u</sup> , Cape Verde <sup>c</sup> , Chad <sup>e</sup> , <sup>i</sup> , <sup>v</sup> , Central African Republic <sup>f</sup> , <sup>q</sup> , <sup>r</sup> , Comoros <sup>i</sup> , <sup>q</sup> , <sup>w</sup> , Congo <sup>x</sup> , <sup>y</sup> , Côte d'Ivoire <sup>u</sup> , <sup>z</sup> , Djibouti, Egypt, Equatorial Guinea <sup>i</sup> , <sup>aa</sup> , Ethiopia, Gabon <sup>u</sup> , <sup>ab</sup> , Gambia <sup>v</sup> , <sup>w</sup> , Guinea <sup>c</sup> , <sup>ac</sup> , <sup>ad</sup> , Kenya <sup>ab</sup> , Lesotho <sup>c</sup> , <sup>i</sup> , Liberia <sup>m</sup> , <sup>y</sup> , Libyan Arab Jamahiriya, Madagascar <sup>i</sup> , Malawi <sup>q</sup> , Mali, Mauritania <sup>u</sup> , Mauritius, Morocco <sup>n</sup> , Mozambique <sup>c</sup> , <sup>aa</sup> , Namibia <sup>i</sup> , Niger <sup>p</sup> , Nigeria, Rwanda <sup>q</sup> , Senegal <sup>aa</sup> , Seychelles <sup>w</sup> , Sierra Leone, Somalia, Sudan <sup>e</sup> , <sup>ae</sup> , <sup>af</sup> , Togo <sup>q</sup> , Uganda <sup>h</sup> , United Republic of Tanzania <sup>k</sup> , Zambia <sup>i</sup> , <sup>q</sup> and Zimbabwe <sup>i</sup>	Algeria, Angola <sup>h</sup> , <sup>q</sup> , Benin <sup>y</sup> , Botswana <sup>f</sup> , Burkina Faso <sup>y</sup> , Burundi, Cameroon <sup>u</sup> , <sup>ag</sup> , <sup>ah</sup> , Cape Verde <sup>w</sup> , <sup>aa</sup> , Chad <sup>k</sup> , <sup>ai</sup> , Central African Republic <sup>m</sup> , <sup>o</sup> , <sup>ae</sup> , Comoros <sup>w</sup> , <sup>ai</sup> , Congo <sup>y</sup> , Côte d'Ivoire <sup>u</sup> , Djibouti <sup>k</sup> , <sup>u</sup> , Egypt, Equatorial Guinea, Ethiopia, Gabon <sup>u</sup> , <sup>ab</sup> , Gambia <sup>y</sup> , <sup>w</sup> , Ghana <sup>aj</sup> , Guinea <sup>aa</sup> , <sup>ac</sup> , Kenya <sup>aa</sup> , Lesotho, Liberia <sup>b</sup> , <sup>aj</sup> , Libyan Arab Jamahiriya <sup>p</sup> , Madagascar, Malawi, Mali <sup>i</sup> , <sup>ac</sup> , Mauritania, Mauritius <sup>i</sup> , <sup>i</sup> , <sup>ac</sup> , Morocco <sup>n</sup> , Mozambique, Namibia <sup>i</sup> , Niger <sup>i</sup> , <sup>u</sup> , Nigeria, Rwanda <sup>q</sup> , Senegal <sup>aa</sup> , Sierra Leone <sup>u</sup> , <sup>ak</sup> , Somalia, Sudan, Togo <sup>i</sup> , <sup>ai</sup> , Tunisia, Uganda <sup>k</sup> , United Republic of Tanzania, Zambia <sup>q</sup> , <sup>aj</sup> and Zimbabwe <sup>b</sup>	Algeria, Angola <sup>i</sup> , <sup>aa</sup> , Benin <sup>s</sup> , Botswana <sup>f</sup> , Burkina Faso <sup>o</sup> , Burundi, Cameroon <sup>u</sup> , <sup>am</sup> , Cape Verde, Chad <sup>r</sup> , <sup>ai</sup> , <sup>an</sup> , Central African Republic <sup>i</sup> , Comoros <sup>y</sup> , <sup>w</sup> , Congo <sup>y</sup> , Côte d'Ivoire <sup>u</sup> , Djibouti, Equatorial Guinea <sup>i</sup> , <sup>o</sup> , Ethiopia, Gabon <sup>u</sup> , Gambia <sup>f</sup> , <sup>s</sup> , Ghana <sup>s</sup> , Guinea <sup>o</sup> , <sup>ac</sup> , Kenya <sup>o</sup> , <sup>ao</sup> , Lesotho, Liberia <sup>b</sup> , <sup>aj</sup> , Libyan Arab Jamahiriya <sup>o</sup> , Madagascar, Malawi, Mauritania, Morocco <sup>i</sup> , Mozambique, Namibia <sup>i</sup> , Niger <sup>u</sup> , Rwanda <sup>ad</sup> , Senegal <sup>aa</sup> , Seychelles <sup>ap</sup> , Sierra Leone <sup>u</sup> , <sup>ak</sup> , Somalia <sup>m</sup> , Sudan <sup>aj</sup> , Togo <sup>q</sup> , Uganda, United Republic of Tanzania, Zambia <sup>i</sup> , <sup>q</sup> and Zimbabwe <sup>aq</sup> , <sup>am</sup>
Latin America and the Caribbean:		
Antigua and Barbuda <sup>c</sup> , <sup>aa</sup> , Aruba, Colombia, Costa Rica <sup>aa</sup> , <sup>ad</sup> , Dominica <sup>m</sup> , <sup>aa</sup> , Dominican Republic <sup>aa</sup> , El Salvador <sup>u</sup> , <sup>ad</sup> , Grenada <sup>m</sup> , <sup>aa</sup> , Guyana, Haiti <sup>aa</sup> , <sup>ad</sup> , Honduras <sup>f</sup> , <sup>z</sup> , Jamaica <sup>i</sup> , <sup>r</sup> , <sup>w</sup> , Netherlands Antilles <sup>u</sup> , Nicaragua <sup>k</sup> , Paraguay <sup>i</sup> , <sup>r</sup> , Peru <sup>t</sup> , Saint Kitts and Nevis <sup>c</sup> , <sup>ai</sup> , Saint Lucia <sup>c</sup> , <sup>aa</sup> ,	Antigua and Barbuda <sup>c</sup> , <sup>aa</sup> , Aruba, Bahamas, Barbados <sup>w</sup> , Belize <sup>e</sup> , Bolivia <sup>x</sup> , Chile <sup>w</sup> , Dominica <sup>c</sup> , <sup>aa</sup> , Dominican Republic <sup>k</sup> , <sup>aa</sup> , El Salvador <sup>q</sup> , Grenada <sup>c</sup> , <sup>aa</sup> , Guyana <sup>m</sup> , <sup>aj</sup> , Haiti, Netherlands Antilles <sup>u</sup> , <sup>at</sup> , Nicaragua <sup>k</sup> , Paraguay <sup>i</sup> , <sup>i</sup> , Peru <sup>aj</sup> , Saint Kitts and Nevis <sup>c</sup> , <sup>i</sup> , Saint Lucia <sup>w</sup> , <sup>aa</sup> , Saint Vincent and the	Argentina, Antigua and Barbuda <sup>aa</sup> , Aruba <sup>i</sup> , Belize, Bolivia <sup>w</sup> , <sup>ai</sup> , Brazil <sup>b</sup> , <sup>u</sup> , Chile, Costa Rica <sup>aa</sup> , Dominica <sup>c</sup> , <sup>aa</sup> , Dominican Republic <sup>k</sup> , <sup>aa</sup> , Ecuador, El Salvador <sup>q</sup> , Grenada <sup>c</sup> , <sup>aa</sup> , Guatemala <sup>w</sup> , <sup>ac</sup> , Guyana, Haiti, Netherlands Antilles <sup>u</sup> , <sup>at</sup> , Nicaragua, Paraguay <sup>i</sup> , <sup>w</sup> , Peru <sup>aj</sup> , Saint Kitts and Nevis <sup>i</sup> , Saint Lucia <sup>aa</sup> , Saint Vincent and the

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**(Table 1, concluded)**

<i>Equity investment</i>	<i>Reinvested earnings</i>	<i>Intra-company loans</i>
Latin America and the Caribbean:		
Saint Vincent and the Grenadines <sup>c,aa</sup> , Suriname <sup>u,ar</sup> , Trinidad and Tobago <sup>u</sup> , and Uruguay <sup>ap,as</sup>	Grenadines <sup>c,aa,at</sup> , Suriname, Trinidad and Tobago <sup>u</sup> , Uruguay <sup>c,ap</sup> and Venezuela <sup>j</sup>	Grenadines <sup>aa,at</sup> , Suriname <sup>u</sup> , Trinidad and Tobago <sup>u</sup> , Uruguay <sup>c,ap</sup> and Venezuela <sup>j</sup>
Developing Europe:		
Croatia	Croatia and TFYR Macedonia	Croatia, Slovenia and TFYR Macedonia
West Asia:		
Bahrain <sup>f</sup> , Cyprus, Islamic Republic of Iran <sup>au</sup> , Jordan <sup>av</sup> , Kuwait <sup>z,ad</sup> , Saudi Arabia, Syrian Arab Republic <sup>z</sup> and Yemen <sup>l</sup>	Bahrain, Cyprus <sup>aw</sup> , Islamic Republic of Iran, Jordan, Kuwait, Saudi Arabia, Syrian Arab Republic, Turkey <sup>au</sup> and Yemen <sup>l</sup>	Bahrain <sup>b,u</sup> , Islamic Republic of Iran, Jordan, Kuwait, Oman, Saudi Arabia, Syrian Arab Republic, Turkey and Yemen <sup>l</sup>
Central Asia:		
Armenia <sup>ax</sup>	Armenia	Armenia
South, East and South-East Asia:		
Cambodia <sup>r</sup> , Indonesia <sup>b</sup> , Lao People's Democratic Republic, Malaysia, Maldives, Mongolia <sup>r</sup> , Myanmar <sup>o</sup>	Bangladesh, Cambodia <sup>n</sup> , China, Indonesia, Republic of Korea <sup>o</sup> , Lao People's Democratic Republic, Malaysia, Maldives <sup>c</sup> , Mongolia, Myanmar, Pakistan <sup>n</sup> , Singapore, Sri Lanka <sup>c</sup> and Thailand	Bangladesh <sup>c</sup> , Cambodia, China, Republic of Korea, <sup>ay</sup> Lao People's Democratic Republic <sup>u</sup> , Maldives, Mongolia, Myanmar, Pakistan <sup>n</sup> , Singapore, Sri Lanka <sup>j</sup>
The Pacific:		
Kiribati <sup>b</sup> , Papua New Guinea <sup>f</sup> , Tonga <sup>m</sup> and Vanuatu	Kiribati <sup>l</sup> , Solomon Islands and Tonga	Kiribati, Solomon Islands <sup>m</sup> and Tonga <sup>c</sup>
Central and Eastern Europe:		
Albania <sup>f</sup> , Bulgaria <sup>g</sup> , Czech Republic <sup>n</sup> , Hungary <sup>f</sup> , Latvia <sup>r</sup> , Lithuania <sup>n</sup> , Republic of Moldova <sup>y</sup> , Romania <sup>f</sup> , Russian Federation, <sup>ay</sup> Slovakia <sup>x</sup> and Ukraine	Albania, Bulgaria, Czech Republic, Hungary, Latvia, Lithuania <sup>y</sup> , Republic of Moldova, Poland <sup>g</sup> , Romania, Russian Federation, Slovakia and Ukraine	Albania, Bulgaria, Czech Republic, Hungary, <sup>j</sup> Latvia, Lithuania <sup>y</sup> , Republic of Moldova <sup>y</sup> , Poland <sup>x</sup> , Romania, Russian Federation, <sup>ay</sup> Slovakia <sup>y</sup> and Ukraine

Source: UNCTAD, based on International Monetary Fund *International Financial Statistics* CD ROM, June 1999.

<sup>a</sup> Countries for which data are not available at least one year are all reported in the table.

<sup>b</sup> 1980-1982	<sup>s</sup> 1982-1997	<sup>aj</sup> 1985-1997
<sup>c</sup> 1980-1985	<sup>t</sup> 1980-1984	<sup>ak</sup> 1981
<sup>d</sup> 1985-1990	<sup>u</sup> 1996-1997	<sup>al</sup> 1991-1993
<sup>e</sup> 1980-1983	<sup>v</sup> 1990	<sup>am</sup> 1983-1984
<sup>f</sup> 1980	<sup>w</sup> 1980-1986	<sup>an</sup> 1990-1991
<sup>g</sup> 1982-1993	<sup>x</sup> 1986	<sup>ao</sup> 1981-1986
<sup>h</sup> 1980-1990	<sup>y</sup> 1988-1997	<sup>ap</sup> 1989-1993
<sup>i</sup> 1980-1989	<sup>z</sup> 1990-1992	<sup>aq</sup> 1987-1997
<sup>j</sup> 1980-1995	<sup>aa</sup> 1997	<sup>ar</sup> 1985-1986
<sup>k</sup> 1980-1991	<sup>ab</sup> 1993-1994	<sup>as</sup> 1982-1985
<sup>l</sup> 1985-1997	<sup>ac</sup> 1992	<sup>at</sup> 1987
<sup>m</sup> 1980-1981	<sup>ad</sup> 1994	<sup>au</sup> 1980-1993
<sup>n</sup> 1982-1989	<sup>ae</sup> 1986-1988	<sup>av</sup> 1988-1996
<sup>o</sup> 1991-1997	<sup>af</sup> 1990-1995	<sup>aw</sup> 1986-1997
<sup>p</sup> 1983-1997	<sup>ag</sup> 1989-1990	<sup>ax</sup> 1993-1994
<sup>q</sup> 1992-1997	<sup>ah</sup> 1992-1993	<sup>ay</sup> 1980-1996
<sup>r</sup> 1988	<sup>ai</sup> 1993-1997	

**Table 2. List of economies for which at least one component of foreign direct investment outward flows is not available <sup>a</sup> from the IMF, 1980-1997**

<i>Equity investment</i>	<i>Reinvested earnings</i>	<i>Intra-company loans</i>
Developed countries:		
Canada, Denmark <sup>b</sup> , Iceland <sup>c</sup> , Ireland, Israel, Japan <sup>d</sup> , Sweden, Switzerland <sup>e</sup> and the United Kingdom <sup>e</sup>	Austria, Belgium and Luxembourg, Denmark, France <sup>g</sup> , Finland <sup>f</sup> , Iceland <sup>h</sup> , Ireland <sup>h</sup> , Italy, Japan <sup>i</sup> , Netherlands <sup>j</sup> , Norway, Portugal <sup>i,k</sup> , South Africa, Spain and Switzerland <sup>e</sup>	Austria <sup>m</sup> , Denmark <sup>f,n</sup> , Iceland <sup>o</sup> , Ireland, Italy, Spain <sup>n</sup> and Switzerland <sup>e</sup>
Developing economies:		
Africa:		
Algeria <sup>p</sup> , Angola <sup>h,q</sup> , Benin, Botswana, Burundi <sup>i,r</sup> , Burkina Faso, Cape Verde, Cameroon <sup>l</sup> , Egypt <sup>h,p</sup> , Kenya <sup>s,t</sup> , Mauritius, Namibia <sup>u</sup> , Niger <sup>v,w</sup> , Senegal <sup>l</sup> and Seychelles	Algeria, Angola, Benin, Burundi, Cameroon, Central African Republic, Chad, Comoros, Egypt, Gabon, Guinea, Kenya <sup>x</sup> , Libyan Arab Jamahiriya, Mauritania, Mauritius, Morocco <sup>j,r</sup> , Namibia <sup>y</sup> , Niger, Senegal, Swaziland <sup>j</sup> , Tunisia and Zimbabwe	Algeria, Angola, Botswana <sup>z</sup> , Burkina Faso, Burundi, Cameroon, Cape Verde, Central African Republic, Chad, Comoros, Gabon, Guinea, Kenya <sup>o,aa</sup> , Libyan Arab Jamahiriya, Mauritania, Mauritius <sup>s</sup> , Morocco <sup>o</sup> , Namibia <sup>n</sup> , Niger <sup>l</sup> , Senegal <sup>j</sup> , Seychelles <sup>ab</sup> , Tunisia and Zimbabwe
Latin America and the Caribbean:		
Barbados, Belize, Colombia, Costa Rica <sup>y</sup> , Haiti, Jamaica <sup>j</sup> , Netherlands Antilles <sup>l</sup> and Venezuela	Argentina, Belize, Bolivia, Brazil, Chile <sup>ac</sup> , Dominican Republic, Haiti, Jamaica, Netherlands Antilles <sup>h,l</sup> , Peru, Trinidad and Tobago, Uruguay and Venezuela <sup>k</sup>	Argentina, Bolivia, Barbados <sup>z</sup> , Belize, Brazil <sup>p</sup> , Chile, Costa Rica, Dominican Republic, Netherlands Antilles, Peru, Trinidad and Tobago, Uruguay and Venezuela <sup>l</sup>
Developing Europe:		
	Malta and Slovenia	Malta <sup>ad</sup> and Slovenia
West Asia:		
Cyprus, Jordan and Turkey	Cyprus, Jordan, Kuwait and Turkey	Cyprus <sup>l</sup> , Jordan <sup>j</sup> , Kuwait and Turkey
Central Asia		
	Kazakhstan	Kazakhstan
South, East and South-East Asia:		
Indonesia and Sri Lanka <sup>y</sup>	Bangladesh, China, India, Indonesia, Republic of Korea <sup>j,r</sup> , Pakistan, Philippines, Singapore, Sri Lanka and Thailand	Bangladesh, China <sup>aa</sup> , India, Indonesia, Pakistan, Philippines, Singapore, Sri Lanka and Thailand
The Pacific:		
Fiji <sup>d,j</sup> and Papua New Guinea	Fiji <sup>l</sup> and Papua New Guinea	Fiji <sup>j</sup>
Central and Eastern Europe:		
Republic of Moldova and the Russian Federation <sup>ae</sup>	Belarus, Bulgaria <sup>af</sup> , Czech Republic, Estonia <sup>ag</sup> , Hungary, Latvia <sup>ag</sup> , Lithuania, Republic of Moldova, <sup>af</sup> Poland <sup>ah</sup> , Romania, Russian Federation <sup>ae</sup> and Slovakia	Belarus, Bulgaria <sup>ae</sup> , Czech Republic, Estonia <sup>aj</sup> , Hungary <sup>ag</sup> , Lithuania <sup>af</sup> , Republic of Moldova <sup>ae</sup> , Poland <sup>f</sup> , Romania, Russian Federation <sup>ae</sup> and Slovakia. <sup>aj</sup>

*Source:* UNCTAD, based on International Monetary Fund *International Financial Statistics* CD ROM, June 1999.

<sup>a</sup> Countries for which data are not available at least one year are all reported in the table.

<sup>b</sup> 1980-1982

<sup>c</sup> 1980-1985

<sup>d</sup> 1985-1990

<sup>e</sup> 1980-1983

<sup>f</sup> 1980

<sup>g</sup> 1983-1993

<sup>h</sup> 1980-1989

<sup>i</sup> 1980-1995

<sup>j</sup> 1997

<sup>k</sup> 1980-1984

<sup>l</sup> 1996-1997

<sup>m</sup> 1982-1997

<sup>n</sup> 1983-1997

<sup>o</sup> 1980-1987

<sup>p</sup> 1992-1997

<sup>q</sup> 1991-1997

<sup>r</sup> 1980-1994

<sup>s</sup> 1980-1988

<sup>t</sup> 1990-1997

<sup>u</sup> 1990-1991

<sup>v</sup> 1981-1982

<sup>w</sup> 1986-1997

<sup>x</sup> 1988-1997

<sup>y</sup> 1995-1997

<sup>z</sup> 1984-1996

<sup>aa</sup> 1990-1996

<sup>ab</sup> 1989-1993

<sup>ac</sup> 1980-1991

<sup>ad</sup> 1993

<sup>ae</sup> 1980-1996

<sup>af</sup> 1995-1996

<sup>ag</sup> 1992-1995

<sup>ah</sup> 1990

<sup>ai</sup> 1992

<sup>aj</sup> 1993-1994

## **a. FDI inflows**

As mentioned above, one of the main sources for annex table B.1 is the IMF.

Data obtained from national official sources were used for the period, 1980-1998, or part of it, to complement and reflect the latest data revisions as of 1 July 1999. Those countries and economies for which national official sources data were used for the period 1980-1998, or part of it, are listed below.

Period	Economy
1998	Barbados, Ghana, Italy and Kyrgyzstan.
1997-1998	Denmark, Tajikistan, Tunisia and Uruguay
1996-1998	Chile, Dominican Republic, Estonia, Fiji, Finland, the Gambia, Iceland, Mauritius, Nicaragua, Norway, Portugal and United Republic of Tanzania.
1995-1998	Austria and Belgium and Luxembourg.
1994-1998	Azerbaijan, Japan, TFYR Macedonia, Republic of Moldova, Ukraine and Zambia.
1993-1998	Albania, Croatia, Kazakhstan, Kuwait, Latvia, Lithuania, Seychelles, Slovenia, Romania, Poland and Uganda.
1992-1998	Argentina, Belarus, Canada, Guyana and Mongolia.
1991-1998	Bulgaria, Romania and Sweden.
1990-1998	Angola, Australia, Bolivia, Botswana, Brazil, Costa Rica, Czech Republic, Egypt, Ethiopia, France, Guatemala, Honduras, Kenya, Republic of Korea, Indonesia, Israel, Jamaica, Lao People's Democratic Republic, Malawi, Mexico, Morocco, Mozambique, Namibia, Netherlands, Paraguay, Philippines, Rwanda, Singapore, Slovakia, South Africa, Spain, Thailand, United Kingdom, Venezuela, Viet Nam and Zimbabwe.
1989-1998	Armenia, Germany and Hungary.
1988-1998	Colombia and Peru.
1986-1998	Ecuador, Swaziland and the United States.
1980-1998	Taiwan Province of China.
1996-1997	Benin, Burkina Faso, Senegal and Switzerland.
1994-1997	Georgia.
1996	Bahrain, Niger and Togo.
1995-1996	Uzbekistan.
1994-1995	Turkmenistan.
1993-1995	Myanmar.

In the case of unavailability of data from the above-mentioned sources, estimates were applied by annualizing quarterly data obtained from the IMF for the economies and the years listed below.

Year	Latest quarter	Economy
1998	First quarter	Jordan, Vanuatu
	Second quarter	Nepal, New Zealand, Sudan
	Third quarter	Bangladesh, Ireland, Turkey
1994	Second quarter	Tonga

One of the main methodologies for estimating FDI inflows for economies for which the data are not available is that OECD data on outward flows from DAC member countries are used as proxy for FDI inflows. Those economies for which this methodology is applied for the period 1980-1997, or part of it, are listed below (these data were available until 1997 at the time of the compilation of inflow data).

Period	Economy
1997	Bahrain, El Salvador, Niger, Togo and Tonga.
1996-1997	Cameroon, Comoros, Gabon, Mauritania and Sierra Leone.
1995-1997	Central African Republic, Chad and Lesotho.
1993-1997	Congo.
1992-1997	Algeria.
1991-1997	Libyan Arab Jamahiriya.
1988-1997	Liberia.
1987-1997	Democratic People's Republic of Korea.
1986-1997	Somalia.

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Period	Economy
1984-1997	Guinea-Bissau.
1982-1997	Macau.
1980-1997	Afghanistan, Democratic Republic of Congo and Samoa.
1996	Cyprus.
1995-1996	Bosnia and Herzegovina.
1995	Brunei Darussalam.
1990-1995	Burkina Faso.
1984-1995	Qatar.
1980-1995	United Arab Emirates.
1992-1993	Zambia.
1985-1993 and 1995-1996	New Caledonia
1980-1992	Hong Kong, China.
1985-1991 and 1993-1994	Benin
1980-1991	Nepal and United Republic of Tanzania.
1980-1990	Uganda.
1988-1989	Malawi.
1985-1989	Namibia.
1980-1989 and 1997	Islamic Republic of Iran.
1980-1989 and 1993-1997	Iraq.
1980-1989 and 1993-1996	Lebanon.
1980-1989	Bermuda, Cayman Islands, Cuba, Ethiopia, Kuwait, Syrian Arab Republic and Virgin Islands.
1981-1988 and 1997	Equatorial Guinea.
1981-1988 and 1996-1997	Djibouti.
1980-1988 and 1997	Myanmar.
1980-1986	India.
1980-1985 and 1997	Madagascar.
1980-1985	Guinea and Maldives.
1980-1984 and 1996-1997	Burundi.
1980-1984	Angola.
1980 and 1983-1991 and 1996-1997	Djibouti.
1982-1983 and 1990-1995	Sudan.
1981-1985	Mozambique.

UNCTAD's estimates using national and secondary sources and information have been applied to the economies or the periods if FDI inflows data from the above-mentioned sources are not available. Those countries and economies for which UNCTAD's estimates were used for the period 1980-1998, or part of it, are listed below.

Period	Economy
1998	Afghanistan, Algeria, Burkina Faso, Burundi, Cameroon, Cape Verde, Central African Republic, Chad, Comoros, Congo, Democratic People's Republic of Korea, Democratic Republic of Congo, Côte d'Ivoire, Djibouti, Equatorial Guinea, Gabon, Georgia, Greece, Guinea, Guinea-Bissau, Iraq, Lesotho, Liberia, Libyan Arab Jamahiriya, Macau, Madagascar, Malaysia, Maldives, Mali, Malta, Mauritania, Niger, Nigeria, Oman, Papua New Guinea, Pakistan, Samoa, Saudi Arabia, Senegal, Sierra Leone, Solomon Islands, Somalia, Switzerland, Togo, Turkmenistan, Yemen, and Zambia.
1997-1998	Antigua and Barbuda, Bosnia and Herzegovina, Cyprus, Dominica, Grenada, Haiti, Lebanon, New Caledonia, Saint Lucia, Saint Vincent and the Grenadines and Uzbekistan.
1996-1998	Brunei Darussalam, Netherlands Antilles, Qatar, Suriname, Trinidad and Tobago and United Arab Republic.
1995-1998	Gibraltar, Kiribati, Saint Kitts and Nevis and Tonga.
1993-1998	Hong Kong, China.
1990-1998	Bermuda, Cayman Islands, Cuba and Virgin Islands.
1990-1993 and 1998	Islamic Republic of Iran.
1990-1992 and 1998	Syrian Arab Republic.
1988-1989	Viet Nam.
1987-1990	India.
1987-1988 and 1990-1991	Nicaragua.
1994 and 1998	Benin.
1994, 1996 and 1998	El Salvador.
1989-1992	Uruguay.
1982-1983 and 1998	Belize.
1981 and 1998	Bahrain.

## ***b. FDI outflows***

As mentioned above, one of the main sources for annexe table B.2 is the IMF.

Data obtained from national official sources were also used for the period, 1980-1998, or part of it, to complement and reflect the latest data revisions as of 1 July 1999. Those economies for which national official sources data were used are listed below.

Period	Economy
1998	Italy and Tajikistan.
1997-1998	Denmark, Tunisia and Seychelles.
1996-1998	Chile, Iceland, Finland, TFYR Macedonia, Norway and Portugal.
1995-1998	Austria, Belgium and Luxembourg, Bulgaria, Fiji, Kazakhstan, Lithuania and Uganda.
1994-1998	Canada, Jamaica, Japan, Republic of Moldova and Ukraine.
1993-1998	Croatia, Czech Republic, Estonia, Hungary, Indonesia, Latvia, Philippines, Poland and the Russian Federation.
1992-1998	Argentina, Mexico and Slovakia.
1991-1998	Sweden.
1990-1998	Australia, Bolivia, Botswana, Brazil, Colombia, Egypt, France, Israel, Republic of Korea, Kuwait, Morocco, Namibia, Netherlands, Nigeria, Romania, Singapore, South Africa, Spain, United Kingdom and Venezuela.
1989-1998	Germany.
1988-1998	Slovenia.
1986-1998	Swaziland.
1983-1998	Zimbabwe.
1980-1998	Malaysia, Taiwan Province of China and United States.
1996-1997	Benin, Burkina Faso, Peru, Senegal and Switzerland.
1996	Mali and Togo.
1992-1995	Albania.
1990-1994	Bangladesh.

In the case of unavailability of data from the above-mentioned sources, estimates were applied by annualizing quarterly data obtained from the IMF for the economies and the years listed below.

Year	Latest quarter	Economy
1998	Third quarter	Belarus, Ireland and Turkey.

In the case of countries for which FDI outflows data were unavailable from the above mentioned sources, three methodologies are used to calculate UNCTAD's estimates.

## ***i. Proxy***

FDI inflows to large recipient economies were used as a proxy. Those economies for which this methodology were used for the period 1980-1998, or part of it, are listed below.

Proxy countries	Period	Economy
United States only.	1998	Cape Verde.
	1997-1998	Guinea and Uganda.
	1996-1998	Madagascar, Netherlands Antilles, Papua New Guinea, Samoa and Tonga.
	1995-1998	Angola, El Salvador and Nicaragua.
	1994-1998	Côte d'Ivoire and Guatemala.
	1993-1998	Antigua and Barbuda, Cuba, Ecuador, Ethiopia, Guyana, Honduras, Saint Kitts and Nevis, Trinidad and Tobago and Virgin Islands.
	1992-1998	Haiti.
	1981-1998	Bermuda, Panama and United Arab Emirates.
	1989-1997	Uruguay.
	1982-1997	Lebanon.
	1980-1997	Liberia.
	1996	Syrian Arab Republic.

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Proxy countries	Period	Economy
	1995-1996	Gabon.
	1992-1996	Bosnia and Herzegovina and Iraq.
	1988-1996	Oman.
	1981-1996	Saudi Arabia.
	1995	Central African Republic and Chad.
	1992 and 1997-1998	Dominican Republic.
	1992-1994 and 1998	Peru.
	1984-1989	Ireland.
	1984-1988	Argentina.
	1981-1991	Bahrain and Mexico.
	1981-1988	Bahamas.
China, United States, Germany and Sweden.	1997-1998	Hong Kong, China.
European Union, China, United States and Japan.	1996	Hong Kong, China.
European Union, China and United States.	1980-1995	Hong Kong, China.
European Union.	1992-1996	Islamic Republic of Iran.
European Union and United States.	1991-1996	Greece.
	1980-1992	India, Indonesia and Philippines.
United States, Germany and Sweden.	1997-1998	Greece.
United States and Sweden.	1997-1998	Saudi Arabia.
Germany only.	1997-1998	Islamic Republic of Iran.
Japan only.	1998	Nepal.
Sweden only.	1997-1998	Cyprus.

## ii. Mergers and acquisitions

Data on mergers and acquisitions and their growth rates were used to estimate FDI outflows. Those economies for which this methodology were used for the period, 1980-1998, or part of it, are listed below.

Period	Economy
1998	Bangladesh and Libyan Arab Jamahiriya.
1997-1998	Oman
1995-1998	Qatar
1992-1998	Bahrain
1996 and 1998	Ghana
1995-1996	Nepal
1992-1996	Brunei Darussalam
1993	Cambodia

## iii . UNCTAD's estimates based on information from national and secondary sources

Those economies for which information from national and secondary sources and information were used for the period 1980-1998, or part of it, are listed below.

Period	Economy
1998	Barbados, Belize, Costa Rica, Lebanon, Liberia, Pakistan, Senegal, Switzerland and Uruguay.
1997-1998	Bosnia and Herzegovina, Gabon, Iraq, Jordan, Niger, Syrian Arab Republic and Vanuatu.
1996-1998	Albania, Burundi, Cameroon, Central African Republic, Chad and Sri Lanka.
1995-1998	Kiribati, Malawi and Mongolia.
1994-1998	Cambodia and Myanmar.
1992-1998	Viet Nam.
1980-1998	Cayman Islands.
1995 and 1997-1998	Mali and Togo.

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Period	Economy
1991 and 1997-1998	Brunei Darussalam.
1996	Cyprus and Kazakhstan.
1995-1996	Bangladesh.
1995	Aruba, Guinea and TFYR Macedonia.
1994-1995	Tonga.
1991-1995	Papua New Guinea.
1995 and 1998	Benin and Burkina Faso.
1995 and 1997	Ghana and Madagascar.
1993	Tunisia.
1991-1992	Angola.
1988-1992	Trinidad and Tobago.
1990	Poland.
1990-1995 and 1998	Kenya.

Up to 1994, the United States data on FDI outflows and outward stocks were adjusted for the financial sector of the Netherlands Antilles. This is because considerable intra-company loans between United States parent enterprises and their financial affiliates in the Netherlands Antilles are in many respects more akin to portfolio investment than to FDI. However, since that year the United States Department of Commerce has changed its methodology in reporting FDI outward flows to Netherlands Antilles by excluding investment in the finance sector reported under intra-company loans.

## 2. FDI stocks

Annex tables B.3 and B.4, as well as some tables in the text, present data on FDI stocks at book value or historical cost, reflecting prices at the time when the investment was made.

For a large number of countries (as indicated in the footnotes of annex tables B.3 and B.4), FDI stocks are estimated by either cumulating FDI flows over a period of time or adding flows to an FDI stock that has been obtained for a particular year from national official sources or the IMF data series on assets and liabilities of direct investment.

In this year's *Report* the IMF data on assets and liabilities of direct investment were also used for some countries. Those economies for which IMF data were used for the period, 1980-1998, or part of it, are listed below.

Country/economy	Inward stock	Outward stock
Austria	1980-1985	None
Belgium and Luxembourg	1981-1994	1981-1997
Cambodia	1995-1997	None
Colombia	None	1980-1997
Finland	1980	1980
Japan	1980-1996	1980-1996
Malaysia	1980-1994	None
Norway	None	1980-1987
Romania	1990-1998	1990-1998
Swaziland	1981-1997	1980-1997
Sweden	None	1982-1985
Venezuela	None	1980-1997

## C. Data revisions and updates

All FDI data and estimates in the *World Investment Report* are continuously revised. Because of the on-going revision, FDI data reported in the *World Investment Report* may differ from those reported in earlier *Reports* or other publications of UNCTAD. In particular, recent FDI data are being revised in many countries according to the fifth edition of the IMF's balance-of-payments manual.

Africa, in particular, illustrates the case where due to data revisions, the reported data in this year's *Report* differ from those reported in previous *World Investment Reports*. For this year's report the outflow data of DAC member countries as reported by the OECD replaced UNCTAD's estimates for a number of countries in Africa.

In compiling data for this year's *Report*, requests for verifications and revisions were made to national official sources for virtually all countries and economies. In addition, web sites of certain national official sources were consulted for published data.

Below is a list of countries and economies for which data was obtained through either means.

Communiqué	Web site
Albania, Angola, Armenia, Australia, Austria, Azerbaijan, Barbados, Belarus, Belgium and Luxembourg, Bolivia, Botswana, Brazil, Bulgaria, Canada, Colombia, Costa Rica, Croatia, Czech Republic, Denmark, Ecuador, Egypt, Ethiopia, Fiji, Finland, France, Gambia, Germany, Ghana, Guatemala, Guyana, Hong Kong (China), Hungary, Iceland, India, Indonesia, Israel, Italy, Jamaica, Kazakhstan, Kenya, Kuwait, Lao People's Democratic Republic, Lithuania, Malawi, Malaysia, Mauritius, Mexico, Moldova, Mongolia, Morocco, Mozambique, Namibia, Netherlands, New Zealand, Nigeria, Norway, Pakistan, Paraguay, Peru, Philippines, Portugal, Romania, Russian Federation, Rwanda, Seychelles, Singapore, South Africa, Spain, Sweden, Switzerland, Tajikistan, Thailand, Tunisia, Uganda, Ukraine, United Kingdom, Uruguay, Venezuela, Viet Nam, Zambia and Zimbabwe.	Argentina, Republic of Korea, Chile, Dominican Republic, Estonia, Honduras, Japan, Kyrgyzstan, Nicaragua, Swaziland, United Republic of Tanzania, Taiwan Province of China and United States.

## D. Definitions and sources of the data in annex tables B.5-9

### *Annex tables B.5 and B.6*

These two annex tables show the ratio of inward and outward FDI flows to gross fixed capital formation (annex table B.5) and inward and outward FDI stock to GDP (annex table B.6), respectively. All of these data are in current prices. The data on both gross fixed capital formation and GDP were obtained from IMF's international-financial-statistics CD-ROM, June 1999. For some economies such as Taiwan Province of China, the data are supplemented from national sources.

For annex table B.5, figures exceeding 100 per cent may result from the fact that for some countries the reported data on gross fixed capital formation do not necessarily accurately reflect the value of capital formation and that FDI flows do not necessarily translate into capital formation.

Data on FDI are from annex tables B.1-B.4.

### *Annex tables B.7, B.8 and B.9*

Data on cross-border M&As are obtained from the KPMG. This consulting firm collects information through a variety of secondary sources including newspapers and other periodicals, and a quarterly meeting of the 42-member KPMG Corporate Finance Network. Annex tables B.7, B.8 and B.9 present information on all M&As (including minority-held investments) as well



as majority-owned M&As that result in an equity holding of more than 50 per cent. Cross-border M&As are recorded in both directions of transactions; i.e., when a cross-border M&A takes place, it registers as both a sale in the country of the target firm, and as a purchase in the home country of the acquiring firm. Data showing cross-border M&A activities on an industrial basis refer only to sales figures (annex table B.9). Thus, if a food company acquires a chemical company, this transaction is recorded in the chemical industry.

## Notes

- <sup>1</sup> In some countries such as the United Kingdom, a stake of 20 per cent or more is a threshold.
- <sup>2</sup> This general definition of FDI is based on OECD, *Detailed Benchmark Definition of Foreign Direct Investment*, second edition (Paris, OECD, 1992) and International Monetary Fund, *Balance of Payments Manual*, fifth edition (Washington, D.C., IMF, 1993).
- <sup>3</sup> There are, however, some exceptions. For example, in the case of Germany, loans granted by affiliate enterprises to their parent enterprises are not deducted from the stock.
- <sup>4</sup> International Monetary Fund, *op. cit.*, p. 40.
- <sup>5</sup> Includes Austria, Belgium, Canada, Denmark, Finland, France, Germany, Italy, Japan, Netherlands, Norway, Spain, Sweden, United Kingdom and United States.

Annex table B.1. FDI inflows, by host region and economy, 1987-1998

(Millions of dollars)

Host region/economy	1987-1992 (Annual average)	1993	1994	1995	1996	1997	1998
<b>World</b>	<b>173 530</b>	<b>219 421</b>	<b>253 506</b>	<b>328 862</b>	<b>358 869</b>	<b>464 341</b>	<b>643 879</b>
<b>Developed countries</b>	<b>136 628</b>	<b>133 850</b>	<b>146 379</b>	<b>208 372</b>	<b>211 120</b>	<b>273 276</b>	<b>460 431</b>
<b>Western Europe</b>	<b>75 507</b>	<b>78 684</b>	<b>84 345</b>	<b>121 522</b>	<b>115 346</b>	<b>134 915</b>	<b>237 425</b>
<b>European Union</b>	<b>72 651</b>	<b>76 754</b>	<b>77 504</b>	<b>115 516</b>	<b>108 922</b>	<b>126 194</b>	<b>230 009</b>
Austria	648	1 129	2 117	1 904	4 426	2 384	5 915
Belgium and Luxembourg	7 214	10 750	8 514	10 811	14 060	12 452	20 889
Denmark	897	1 713	5 006	4 139	773	2 801	6 623
Finland	377	864	1 496	1 044	1 109	2 114	11 115
France	12 092	16 439	15 580	23 681	21 960	23 178	28 039
Germany	2 560	368	7 134	12 026	5 636	9 606	19 877
Greece	938	977	981	1 053	1 058	984	700 <sup>a</sup>
Ireland	615	1 121	838	1 447	2 618	2 727	6 820 <sup>a</sup>
Italy	4 317	4 383	2 163	4 878	3 523	3 700	2 611
Netherlands	7 147	8 549	7 326	12 151	14 763	9 416	31 859
Portugal	1 676	1 534	1 270	685	1 368	2 544	1 771
Spain	9 943	9 605	9 384	6 839	6 732	6 388	11 307
Sweden	2 070	3 842	6 350	14 454	5 070	10 910	19 358
United Kingdom	22 156	15 481	9 346	20 404	25 825	36 990	63 124
<b>Other Western Europe</b>	<b>2 856</b>	<b>1 929</b>	<b>6 841</b>	<b>6 006</b>	<b>6 424</b>	<b>8 720</b>	<b>7 417</b>
Gibraltar	48	40 <sup>a</sup>	- 1 <sup>a</sup>	1 <sup>a</sup>	1 <sup>a</sup>	1 <sup>a</sup>	1 <sup>a</sup>
Iceland	- 2	- 1	2	13	82	149	112
Norway	320	992	2 736	2 393	3 262	3 629	3 597
Switzerland	2 490	899	4 104	3 599	3 078	4 942	3 707
<b>North America</b>	<b>52 110</b>	<b>48 283</b>	<b>53 299</b>	<b>68 031</b>	<b>85 864</b>	<b>120 729</b>	<b>209 875</b>
Canada	5 899	4 749	8 204	9 259	9 411	11 465	16 500
United States	46 211	43 534	45 095	58 772	76 453	109 264	193 375
<b>Other developed countries</b>	<b>9 011</b>	<b>6 884</b>	<b>8 735</b>	<b>18 819</b>	<b>9 910</b>	<b>17 632</b>	<b>13 130</b>
Australia	6 312	4 003	4 596	12 735	5 102	8 598	6 568
Israel	187	429	355	1 306	1 389	1 455	1 839
Japan	911	119	908	41	228	3 224	3 192
New Zealand	1 625	2 350	2 543	3 744	2 432	2 650	1 160 <sup>a</sup>
South Africa	- 24	- 17	334	993	760	1 705	371
<b>Developing countries</b>	<b>35 326</b>	<b>78 813</b>	<b>101 196</b>	<b>106 224</b>	<b>135 343</b>	<b>172 533</b>	<b>165 936</b>
<b>Africa</b>	<b>3 010</b>	<b>3 469</b>	<b>5 313</b>	<b>4 145</b>	<b>5 907</b>	<b>7 657</b>	<b>7 931</b>
<b>North Africa</b>	<b>1 214</b>	<b>1 518</b>	<b>2 330</b>	<b>1 180</b>	<b>1 886</b>	<b>3 048</b>	<b>2 643</b>
Algeria	-	- 59 <sup>a</sup>	22 <sup>a</sup>	- 24 <sup>a</sup>	447 <sup>a</sup>	630 <sup>a</sup>	500 <sup>a</sup>
Egypt	806	493	1 256	598	636	891	1 076
Libyan Arab Jamahiriya	52	31 <sup>a</sup>	69 <sup>a</sup>	9 <sup>a</sup>	209 <sup>a</sup>	10 <sup>a</sup>	150 <sup>a</sup>
Morocco	203	491	551	332	354	1 079	258
Sudan- 6	- <sup>a</sup>	- <sup>a</sup>	- <sup>a</sup>	-	98	10 <sup>a</sup>	-
Tunisia	160	562	432	264	238	339	650
<b>Other Africa</b>	<b>1 797</b>	<b>1 950</b>	<b>2 984</b>	<b>2 965</b>	<b>4 021</b>	<b>4 609</b>	<b>5 288</b>
Angola	178	302	170	472	181	412	396
Benin	3	- <sup>a</sup>	- <sup>a</sup>	1 <sup>a</sup>	25	27	26 <sup>a</sup>
Botswana	47	- 287	- 14	70	71	100	168
Burkina Faso	2	13 <sup>a</sup>	- <sup>a</sup>	2 <sup>a</sup>	17	13	14 <sup>a</sup>
Burundi	-	-	-	2	- <sup>a</sup>	- <sup>a</sup>	- <sup>a</sup>
Cameroon	4	5	- 9	7	89 <sup>a</sup>	70 <sup>a</sup>	94 <sup>a</sup>
Cape Verde	1	4	2	26	29	12	15 <sup>a</sup>
Central African Republic	-	- 10	4	- <sup>a</sup>	3 <sup>a</sup>	4 <sup>a</sup>	4 <sup>a</sup>
Chad	6	15	27	12 <sup>a</sup>	23 <sup>a</sup>	37 <sup>a</sup>	35 <sup>a</sup>
Comoros	3	-	-	-	- <sup>a</sup>	- <sup>a</sup>	- <sup>a</sup>
Congo	12	150 <sup>a</sup>	3 <sup>a</sup>	-60 <sup>a</sup>	20 <sup>a</sup>	- 14 <sup>a</sup>	15 <sup>a</sup>
Congo, Democratic Republic of	- 11	7 <sup>a</sup>	- 2 <sup>a</sup>	- 22 <sup>a</sup>	25 <sup>a</sup>	- 7 <sup>a</sup>	- <sup>a</sup>

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**Annex table B.1. FDI inflows, by host region and economy, 1987-1998 (continued)**

(Millions of dollars)

Host region/economy	1987-1992 (Annual average)	1993	1994	1995	1996	1997	1998
Côte d'Ivoire	- 1	88	78	212	206	327	250 <sup>a</sup>
Djibouti	-	1	1	3	20 <sup>a</sup>	25 <sup>a</sup>	25 <sup>a</sup>
Equatorial Guinea	10	22	17	127	376	.. <sup>a</sup>	200 <sup>a</sup>
Ethiopia	1	4	21	32	13	68	178
Gabon	56	- 114	- 100	- 113	312 <sup>a</sup>	143 <sup>a</sup>	300 <sup>a</sup>
Gambia	6	11	10	8	12	13	14
Ghana	14	125	233	107	120	82	45
Guinea	20	3	-	-	24	17	15 <sup>a</sup>
Guinea-Bissau	2	.. <sup>a</sup>	.. <sup>a</sup>	.. <sup>a</sup>	1 <sup>a</sup>	10 <sup>a</sup>	8 <sup>a</sup>
Kenya	31	2	4	32	13	40	42
Lesotho	11	15	19	.. <sup>a</sup>	19 <sup>a</sup>	12 <sup>a</sup>	30 <sup>a</sup>
Liberia	201	- 54 <sup>a</sup>	17 <sup>a</sup>	5 <sup>a</sup>	- 132 <sup>a</sup>	291 <sup>a</sup>	200 <sup>a</sup>
Madagascar	12	15	6	10	10	245 <sup>a</sup>	100 <sup>a</sup>
Malawi	12	11	9	25	44	22	70
Mali	- 1	4	17	111	84	39	30 <sup>a</sup>
Mauritania	4	16	2	7	4 <sup>a</sup>	.. <sup>a</sup>	6 <sup>a</sup>
Mauritius	25	15	20	19	37	57	13
Mozambique	12	32	35	45	73	64	213
Namibia	44	55	98	153	129	91	96
Niger	22	- 34	- 11	7	15	- 7 <sup>a</sup>	.. <sup>a</sup>
Nigeria <sup>b</sup>	845	1 345	1 959	1 079	1 593	1 539	1 500 <sup>a</sup>
Rwanda	12	6	.. <sup>a</sup>	2	2	3	7
Senegal	18	-	67	32	10	148	20 <sup>a</sup>
Seychelles	19	4	15	41	30	44	55
Sierra Leone	12	- 7	- 3	- 2	19 <sup>a</sup>	10 <sup>a</sup>	30 <sup>a</sup>
Somalia	- 2	.. <sup>a</sup>	.. <sup>a</sup>	.. <sup>a</sup>	.. <sup>a</sup>	.. <sup>a</sup>	.. <sup>a</sup>
Swaziland	62	72	63	52	17	- 10	19
Togo	9	.. <sup>a</sup>	3	.. <sup>a</sup>	21	5 <sup>a</sup>	5 <sup>a</sup>
Uganda	-	55	88	125	120	175	210
United Republic of Tanzania	3	20	50	120	150	158	172
Zambia	102	2 <sup>a</sup>	40	97	117	207	222
Zimbabwe	- 8	38	41	118	81	135	444
<b>Latin America and the Caribbean</b>	<b>12 400</b>	<b>20 009</b>	<b>31 451</b>	<b>32 921</b>	<b>46 162</b>	<b>68 255</b>	<b>71 652</b>
<b>South America</b>	<b>5 510</b>	<b>7 974</b>	<b>14 999</b>	<b>18 950</b>	<b>31 711</b>	<b>46 686</b>	<b>49 973</b>
Argentina	1 803	2 763	3 432	5 279	6 513	8 094	5 697
Bolivia	53	124	130	374	474	731	872
Brazil	1 513	1 294	2 589	5 475	10 496	18 745	28 718
Chile	927	1 034	2 583	2 977	4 724	5 417	4 792
Colombia	464	960	1 444	968	3 123	5 701	2 983
Ecuador	150	469	531	470	491	695	830
Guyana	49 <sup>c</sup>	70	107	74	92	52	44
Paraguay	51	75	138	156	246	240	195
Peru	50	687	3 108	2 056	3 225	1 786	1 930
Suriname	- 119	- 47	- 30	- 21	7	12 <sup>a</sup>	10 <sup>a</sup>
Uruguay	16	173	155	157	137	126	164
Venezuela	553	372	813	985	2 183	5 087	3 737
<b>Other Latin America and the Caribbean</b>	<b>6 890</b>	<b>12 036</b>	<b>16 452</b>	<b>13 970</b>	<b>14 450</b>	<b>21 569</b>	<b>21 680</b>
Antigua and Barbuda	42	15	25	31	19	28	20 <sup>a</sup>
Aruba	93 <sup>c</sup>	- 18	- 73	- 6	84	196	82
Bahamas	9	27	23	107	88	210	235
Barbados	10	9	13	12	13	15	16
Belize	14	9	15	21	17	12	12 <sup>a</sup>
Bermuda	1 671	2 707	1 079	1 350	2 100	1 700	2 400 <sup>a</sup>
Cayman Islands	22	675	532	490	410	2 000 <sup>a</sup>	3 500 <sup>a</sup>
Costa Rica	145	247	298	396	427	483	552
Cuba	3	3	14	9	12	13	30 <sup>a</sup>
Dominica	15	13	23	54	18	20	20 <sup>a</sup>
Dominican Republic	127	225	360	404	358	421	691
El Salvador	15	16	.. <sup>a</sup>	38	25	42 <sup>a</sup>	200 <sup>a</sup>
Grenada	15	20	19	20	18	22	20 <sup>a</sup>
Guatemala	133	134	60	70	71	78	584
Haiti	3	- 3	.. <sup>a</sup>	7	4	5	6 <sup>a</sup>

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Annex table B.1. FDI inflows, by host region and economy, 1987-1998 (continued)

(Millions of dollars)

Host region/economy	1987-1992 (Annual average)	1993	1994	1995	1996	1997	1998
Honduras	47	52	42	69	90	128	99
Jamaica	85	78	130	147	184	203	350
Mexico	4 310	6 715	12 362	9 526	9 186	12 831	10 238
Netherlands Antilles	18	11	22	10	11	103 <sup>a</sup>	151 <sup>a</sup>
Nicaragua	3	39	40	75	97	173	184
Panama	- 113	156	411	289	330	1 275	1 186
Saint Kitts and Nevis	26	14	15	20	17	25	25 <sup>a</sup>
Saint Lucia	34	34	32	30	23	45	40 <sup>a</sup>
Saint Vincent and the Grenadines	9	31	47	31	18	42	40 <sup>a</sup>
Trinidad and Tobago	117	379	516	299	320	1 000	800 <sup>a</sup>
Virgin Islands	37	447	447	470	510	500	200 <sup>a</sup>
<b>Developing Europe</b>	<b>82</b>	<b>274</b>	<b>417</b>	<b>470</b>	<b>1 060</b>	<b>970</b>	<b>1 297</b>
Bosnia and Herzegovina	..	..	..	- <sup>a</sup>	- 2 <sup>a</sup>	1 <sup>a</sup>	10 <sup>a</sup>
Croatia	..	105	113	101	540	503	873
Malta	46	56	152	183	325	128	130 <sup>a</sup>
Slovenia	37 <sup>d</sup>	113	128	176	186	321	165
TFYR Macedonia	..	..	24	10	12	17	119
Yugoslavia (former)	..	..	..	..	..	..	..
<b>Asia</b>	<b>19 613</b>	<b>54 835</b>	<b>63 844</b>	<b>68 126</b>	<b>82 035</b>	<b>95 505</b>	<b>84 880</b>
<b>West Asia</b>	<b>1 019</b>	<b>3 710</b>	<b>1 562</b>	<b>- 418</b>	<b>621</b>	<b>4 638</b>	<b>4 579</b>
Bahrain	58	- 5	- 31	- 27	47	26 <sup>a</sup>	10 <sup>a</sup>
Cyprus	83	83	75	119	259 <sup>a</sup>	175 <sup>a</sup>	200 <sup>a</sup>
Iran, Islamic Republic	- 129	- 50 <sup>a</sup>	2	17	26	380 <sup>a</sup>	300 <sup>a</sup>
Iraq	2	- <sup>a</sup>	- <sup>a</sup>	2 <sup>a</sup>	- <sup>a</sup>	- <sup>a</sup>	- <sup>a</sup>
Jordan	21	- 34	3	13	16	361	223 <sup>a</sup>
Kuwait	7	13	- <sup>a</sup>	7	347	20	- 10
Lebanon	2	7 <sup>a</sup>	23 <sup>a</sup>	22 <sup>a</sup>	64 <sup>a</sup>	150 <sup>a</sup>	230 <sup>a</sup>
Oman	103	142	76	46	75	49	50 <sup>a</sup>
Qatar	10	72 <sup>a</sup>	132 <sup>a</sup>	94 <sup>a</sup>	35 <sup>a</sup>	55 <sup>a</sup>	70 <sup>a</sup>
Saudi Arabia	- 35	1 369	350	-1 877	-1 129	2 575	2 400 <sup>a</sup>
Syrian Arab Republic	67	176	251	100	89	80	100 <sup>a</sup>
Turkey	578	636	608	885	722	805	807 <sup>a</sup>
United Arab Emirates	52	401 <sup>a</sup>	62 <sup>a</sup>	399 <sup>a</sup>	130 <sup>a</sup>	100 <sup>a</sup>	100 <sup>a</sup>
Yemen	198	897	11	- 218	- 60	- 138	100 <sup>a</sup>
<b>Central Asia</b>	<b>25</b>	<b>1 327</b>	<b>897</b>	<b>1 479</b>	<b>2 017</b>	<b>3 032</b>	<b>3 023</b>
Armenia	8 <sup>e</sup>	-	9	24	18	52	232
Azerbaijan	..	..	22	155	591	1 067	1 085
Georgia	..	..	8	5	45	111	251 <sup>a</sup>
Kazakhstan	17	1 271	660	964	1 137	1 321	1 158
Kyrgyzstan	..	10	38	96	47	84	102
Tajikistan	..	..	10	15	16	4	30
Turkmenistan	..	..	100	100	108	108	80 <sup>a</sup>
Uzbekistan	..	45	50	120	55	285 <sup>a</sup>	85 <sup>a</sup>
<b>South, East and South-East Asia</b>	<b>18 569</b>	<b>49 798</b>	<b>61 386</b>	<b>67 065</b>	<b>79 397</b>	<b>87 835</b>	<b>77 277</b>
Afghanistan	- <sup>f</sup>	- <sup>a</sup>	- <sup>a</sup>	- <sup>a</sup>	- <sup>a</sup>	-	- <sup>a</sup>
Bangladesh	2	14	11	2	14	141	317 <sup>a</sup>
Brunei Darussalam	1	14	6	13 <sup>a</sup>	11 <sup>a</sup>	5 <sup>a</sup>	4 <sup>a</sup>
Cambodia	..	54	69	151	294	204	140 <sup>a</sup>
China	4 652	27 515	33 787	35 849	40 180	44 236	45 460
Hong Kong, China	1 886	3 657 <sup>a</sup>	4 131 <sup>a</sup>	3 279 <sup>a</sup>	5 521 <sup>a</sup>	6 000 <sup>a</sup>	1 600 <sup>a</sup>
India	58	550	973	2 144	2 426	3 351	2 258
Indonesia	999	2 004	2 109	4 346	6 194	4 673	- 356
Korea, Democratic People's Republic	102	6 <sup>a</sup>	7 <sup>a</sup>	14 <sup>a</sup>	- <sup>a</sup>	- <sup>a</sup>	- <sup>a</sup>
Korea, Republic of	907	588	809	1 776	2 325	2 844	5 143
Lao People's Democratic Republic	4	36	59	88	128	86	45
Macau	-	- 4 <sup>a</sup>	4 <sup>a</sup>	2 <sup>a</sup>	6 <sup>a</sup>	3 <sup>a</sup>	- <sup>a</sup>
Malaysia	2 387	5 006	4 342	4 178	5 078	5 106	3 727 <sup>a</sup>
Maldives	5	7	9	7	8	8	7 <sup>a</sup>
Mongolia	..	8	7	10	16	25	19
Myanmar	96	149	91	115	38 <sup>a</sup>	124 <sup>a</sup>	40 <sup>a</sup>

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**Annex table B.1. FDI inflows, by host region and economy, 1987-1998 (continued)**

(Millions of dollars)

Host region/economy	1987-1992 (Annual average)	1993	1994	1995	1996	1997	1998
Nepal	2	4 <sup>a</sup>	6 <sup>a</sup>	5 <sup>a</sup>	19	23	9 <sup>a</sup>
Pakistan	227	347	419	720	919	714	497 <sup>a</sup>
Philippines	518	1 238	1 591	1 478	1 517	1 222	1 713
Singapore	3 674	4 686	8 550	7 206	7 884	9 710	7 218
Sri Lanka	57	194	166	56	120	430	345 <sup>a</sup>
Taiwan Province of China	1 127	917	1 375	1 559	1 864	2 248	222
Thailand	1 656	1 805	1 364	2 068	2 336	3 733	6 969
Viet Nam	206 <sup>e</sup>	1 002	1 500	2 000	2 500	2 950	1 900
<b>The Pacific</b>	<b>220</b>	<b>226</b>	<b>170</b>	<b>562</b>	<b>180</b>	<b>146</b>	<b>175</b>
Fiji	43	91	68	70	27	34	91
Kiribati	-	-	-	- <sup>a</sup>	- <sup>a</sup>	1 <sup>a</sup>	- <sup>a</sup>
New Caledonia	10	20 <sup>a</sup>	10	- <sup>a</sup>	- <sup>a</sup>	10 <sup>a</sup>	5 <sup>a</sup>
Papua New Guinea	138	62	57	455	111	29	30 <sup>a</sup>
Samoa	2	2 <sup>a</sup>	3 <sup>a</sup>	3 <sup>a</sup>	1 <sup>a</sup>	20 <sup>a</sup>	10 <sup>a</sup>
Solomon Islands	10	23	2	2	6	21	10 <sup>a</sup>
Tonga	-	2	- <sup>a</sup>	- <sup>a</sup>	2 <sup>a</sup>	1 <sup>a</sup>	1 <sup>a</sup>
Vanuatu	16	26	30	31	33	30	28 <sup>a</sup>
<b>Central and Eastern Europe</b>	<b>1 576</b>	<b>6 757</b>	<b>5 932</b>	<b>14 266</b>	<b>12 406</b>	<b>18 532</b>	<b>17 513</b>
Albania	..	68	53	70	90	48	45
Belarus	..	18	11	15	73	200	144
Bulgaria	34 <sup>c</sup>	40	105	90	109	505	401
Czech Republic	533 <sup>c</sup>	653	868	2 561	1 429	1 301	2 540
Czechoslovakia (former)	..	..	..	..	..	..	..
Estonia	..	162	214	201	151	267	581
Hungary	675	2 339	1 146	4 453	1 983	2 085	1 935
Latvia	..	45	214	180	382	521	274
Lithuania	..	30	31	73	152	355	926
Moldova, Republic of	..	14	28	67	24	72	85
Poland	183	1 715	1 875	3 659	4 498	4 908	5 129
Romania	61 <sup>f</sup>	94	342	420	265	1 229	2 063
Russian Federation	..	1 211	640	2 016	2 479	6 243	2 183
Slovakia	91 <sup>c</sup>	168	245	195	251	177	466
Ukraine	..	200	159	267	521	624	743
<i>Memorandum:</i>							
<b>Least developed countries: <sup>g</sup></b>							
<b>Total</b>	<b>969</b>	<b>1 662</b>	<b>816</b>	<b>1 411</b>	<b>1 780</b>	<b>2 480</b>	<b>2 948</b>
Africa	623	453	525	1 217	1 295	1 954	2 236
Latin America and the Caribbean	3	- 3	-	7	4	5	6
Asia and the Pacific	343	1 212	290	187	481	520	706
Asia	313	1 161	255	150	440	448	658
West Asia	198	897	11	- 218	- 60	- 138	100
South, East and South-East Asia	115	264	244	367	500	586	558
The Pacific	29	51	35	37	41	73	48
<b>Oil-exporting countries: <sup>h</sup></b>							
<b>Total</b>	<b>10 752</b>	<b>19 742</b>	<b>25 203</b>	<b>21 085</b>	<b>27 195</b>	<b>37 355</b>	<b>27 455</b>
Africa	2 112	2 716	3 803	2 234	3 726	4 022	4 681
North Africa	1 017	1 027	1 779	848	1 531	1 870	2 376
Other Africa	1 095	1 688	2 024	1 386	2 195	2 151	2 305
Latin America and the Caribbean	5 183	8 059	14 352	11 655	12 654	20 344	16 477
South America	756	965	1 474	1 829	3 749	6 513	5 439
Other Latin America and the Caribbean	4 427	7 094	12 878	9 825	9 506	13 831	11 038
Asia	3 457	8 967	7 048	7 197	10 815	12 989	6 297
Central Asia	-	-	-	-	-	-	2
West Asia	69	1 943	591	-1 339	- 468	3 205	2 920
South, East and South-East Asia	3 388	7 024	6 457	8 537	11 283	9 784	3 375

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**Annex table B.1. FDI inflows, by host region and economy, 1987-1998 (concluded)**

(Millions of dollars)

Host region/economy	1987-1992 (Annual average)	1993	1994	1995	1996	1997	1998
All developing countries minus China	30 574	51 298	67 409	70 374	95 163	128 297	120 476
Asia and the Pacific	19 809	55 061	64 015	68 689	82 215	95 651	85 055
Africa including South Africa	2 986	3 452	5 647	5 138	6 667	9 362	8 302

*Source:* UNCTAD, FDI/TNC database.<sup>a</sup> Estimates. For details, see "definitions and sources" in annex B.<sup>b</sup> For Nigeria, FDI inflows excluding reinvested earnings in Oil Prospecting companies are as follows:

1990	1991	1992	1993	1994	1995	1996	1997	1998
1 300	557	678	1 933	357	796	81	140	111

<sup>c</sup> Annual average from 1990 to 1992.<sup>d</sup> Annual average from 1988 to 1992.<sup>e</sup> Annual average from 1989 to 1992.<sup>f</sup> Annual average from 1991 to 1992.<sup>g</sup> Least developed countries include: Afghanistan, Angola, Bangladesh, Benin, Burkina Faso, Burundi, Cambodia, Cape Verde, Central African Republic, Chad, Comoros, Democratic Republic of Congo, Djibouti, Equatorial Guinea, Ethiopia, Gambia, Guinea, Guinea-Bissau, Haiti, Kiribati, Lao People's Democratic Republic, Lesotho, Liberia, Madagascar, Malawi, Maldives, Mali, Mauritania, Mozambique, Myanmar, Nepal, Niger, Rwanda, Samoa, Sierra Leone, Solomon Islands, Somalia, Sudan, Togo, Uganda, United Republic of Tanzania, Vanuatu, Yemen and Zambia. Not included are Bhutan, Eritrea, Sao Tome and Principe and Tuvalu due to unavailability of data.<sup>h</sup> Oil-exporting countries include: Algeria, Angola, Bahrain, Brunei Darussalam, Cameroon, Congo, Ecuador, Egypt, Gabon, Indonesia, Islamic Republic of Iran, Iraq, Kuwait, Libyan Arab Jamahiriya, Malaysia, Mexico, Nigeria, Oman, Qatar, Saudi Arabia, Trinidad and Tobago, Tunisia, United Arab Emirates and Venezuela.



Annex table B.2. FDI outflows, by home region and economy, 1987-1998

(Millions of dollars)

Host region/economy	1987-1992 (Annual average)	1993	1994	1995	1996	1997	1998
<b>World</b>	<b>198 670</b>	<b>247 425</b>	<b>284 915</b>	<b>358 573</b>	<b>379 872</b>	<b>475 125</b>	<b>648 920</b>
<b>Developed countries</b>	<b>184 680</b>	<b>207 378</b>	<b>242 029</b>	<b>306 025</b>	<b>319 820</b>	<b>406 668</b>	<b>594 699</b>
<b>Western Europe</b>	<b>110 957</b>	<b>108 295</b>	<b>136 018</b>	<b>175 511</b>	<b>203 942</b>	<b>240 238</b>	<b>406 220</b>
<b>European Union</b>	<b>103 758</b>	<b>98 799</b>	<b>123 036</b>	<b>160 411</b>	<b>181 817</b>	<b>218 428</b>	<b>386 161</b>
Austria	1 030	1 189	1 256	1 131	1 934	1 947	3 013
Belgium and Luxembourg	6 174	4 904	1 371	11 712	8 067	7 741	23 111
Denmark	1 496	1 373	4 162	2 969	2 510	4 210	4 008
Finland	1 440	1 401	4 354	1 494	3 595	5 288	19 812
France	22 492	19 732	24 381	15 760	30 419	35 591	40 587
Germany	17 112	17 200	18 857	39 052	50 819	40 288	86 591
Greece	26 <sup>b</sup>	- 16 <sup>a</sup>	- 90 <sup>a</sup>	66 <sup>a</sup>	- 18 <sup>a</sup>	4 <sup>a</sup>	- 47 <sup>a</sup>
Ireland	379	220	438	820	727	1 008	705 <sup>a</sup>
Italy	4 964	9 271	5 638	6 925	6 049	10 225	12 076
Netherlands	12 317	12 141	17 726	20 022	31 638	21 474	38 310
Portugal	245	147	287	688	776	1 918	2 946
Spain	2 249	3 046	3 947	4 131	5 520	12 466	18 387
Sweden	7 442	1 362	6 700	11 215	4 667	12 639	22 465
United Kingdom	26 393	26 829	34 009	44 424	35 114	63 630	114 195
<b>Other Western Europe</b>	<b>7 199</b>	<b>9 496</b>	<b>12 982</b>	<b>15 100</b>	<b>22 125</b>	<b>21 810</b>	<b>20 059</b>
Gibraltar	..	..	..	..	..	..	..
Iceland	11	14	23	25	62	51	99
Norway	1 057	718	2 166	2 865	5 911	5 013	2 544
Switzerland	6 131	8 764	10 793	12 210	16 152	16 746	17 416 <sup>a</sup>
<b>North America</b>	<b>35 384</b>	<b>80 548</b>	<b>82 545</b>	<b>103 540</b>	<b>87 718</b>	<b>131 999</b>	<b>159 406</b>
Canada	5 545	5 711	9 293	11 466	12 885	22 044	26 577
United States	29 839	74 837	73 252	92 074	74 833	109 955	132 829
<b>Other developed countries</b>	<b>38 340</b>	<b>18 534</b>	<b>23 465</b>	<b>26 974</b>	<b>28 161</b>	<b>34 432</b>	<b>29 073</b>
Australia	3 668	2 508	2 480	3 846	5 915	5 914	2 533
Israel	203	640	594	567	638	592	830
Japan	33 549	13 834	18 521	22 630	23 428	25 993	24 152
New Zealand	697	1 276	1 725	- 336	- 1 878	- 416	28
South Africa	223	276	146	267	57	2 349	1 531
<b>Developing countries</b>	<b>13 946</b>	<b>39 756</b>	<b>42 600</b>	<b>52 089</b>	<b>58 947</b>	<b>65 031</b>	<b>52 318</b>
<b>Africa</b>	<b>1 118</b>	<b>654</b>	<b>453</b>	<b>454</b>	<b>- 26</b>	<b>1 418</b>	<b>511</b>
<b>North Africa</b>	<b>113</b>	<b>23</b>	<b>73</b>	<b>100</b>	<b>33</b>	<b>144</b>	<b>115</b>
Algeria	14	..	..	..	..	..	..
Egypt	22	- <sup>a</sup>	43	93	5	129	46
Libyan Arab Jamahiriya	52	..	..	..	..	..	50 <sup>a</sup>
Morocco	23 <sup>c</sup>	23	24	12	27	9	20
Sudan..	..	..	..	..	..	..	Tunisia
2 -a 6 - 5	1	6	-	..	..	..	..
<b>Other Africa</b>	<b>1 005</b>	<b>631</b>	<b>380</b>	<b>355</b>	<b>- 59</b>	<b>1 274</b>	<b>396</b>
Angola	..	2	- 2	- 1 <sup>a</sup>	- 1 <sup>a</sup>	- 1 <sup>a</sup>	- 1 <sup>a</sup>
Benin	..	..	..	- <sup>a</sup>	12	12	10 <sup>a</sup>
Botswana	4	9	9	41	- 1	- 4	1
Burkina Faso	..	..	..	- <sup>a</sup>	-	1	1 <sup>a</sup>
Burundi	-	-	-	-	- <sup>a</sup>	- <sup>a</sup>	- <sup>a</sup>
Cameroon	23	22	-	-	8 <sup>a</sup>	8 <sup>a</sup>	5 <sup>a</sup>
Cape Verde	-	-	-	-	-	-	- <sup>a</sup>
Central African Republic	4	5	7	6 <sup>a</sup>	6 <sup>a</sup>	5 <sup>a</sup>	5 <sup>a</sup>
Chad	10	11	-	12 <sup>a</sup>	8 <sup>a</sup>	10 <sup>a</sup>	5 <sup>a</sup>
Comoros	..	..	..	..	..	..	..
Congo	..	..	..	..	..	..	..
Congo, Democratic Republic of	..	..	..	..	..	..	..
Côte d'Ivoire	..	..	- <sup>a</sup>	- <sup>a</sup>	- 2 <sup>a</sup>	- <sup>a</sup>	- <sup>a</sup>

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Annex table B.2. FDI outflows, by home region and economy, 1987-1998 (continued)

(Millions of dollars)

Host region/economy	1987-1992 (Annual average)	1993	1994	1995	1996	1997	1998
Djibouti	..	..	..	..	..	..	..
Equatorial Guinea	..	..	..	..	..	..	..
Ethiopia	..	1 <sup>a</sup>	- 1 <sup>a</sup>	..	..	..	..
Gabon	16	2	-	- 1 <sup>a</sup>	- 1 <sup>a</sup>	15 <sup>a</sup>	4 <sup>a</sup>
Gambia	..	..	..	..	..	..	..
Ghana	..	..	..	..	150 <sup>a</sup>	..	30 <sup>a</sup>
Guinea	..	..	..	..	..	..	..
Guinea-Bissau	..	..	..	..	..	..	..
Kenya 6	..	..	..	..	2	1 <sup>a</sup>	..
Lesotho	..	..	..	..	..	..	..
Liberia	115	57 <sup>a</sup>	85 <sup>a</sup>	- 96	- 430 <sup>a</sup>	1 028 <sup>a</sup>	167 <sup>a</sup>
Madagascar	..	..	..	..	..	- 1 <sup>a</sup>	..
Malawi	..	..	..	..	2 <sup>a</sup>	..	6 <sup>a</sup>
Mali	..	..	..	..	2	..	..
Mauritania	..	..	..	..	..	..	..
Mauritius	9	33	1	4	3	3	14
Mozambique	..	..	..	..	..	..	..
Namibia	2 <sup>c</sup>	9	- 6	- 4	- 22	-	- 2
Niger	10	6	- 2	7	7	4 <sup>a</sup>	6 <sup>a</sup>
Nigeria	764	436	178	335	134	195	114
Rwanda	..	..	..	..	..	..	..
Senegal	7	-	17	- 3	2	-	10 <sup>a</sup>
Seychelles	2	1	13	16	13	4	3
Sierra Leone	..	..	..	..	..	..	..
Somalia	..	..	..	..	..	..	..
Swaziland	17	28	65	21	- 7	- 36	5
Togo	..	..	..	-	7	2 <sup>a</sup>	3 <sup>a</sup>
Uganda	..	..	..	3	- 1	- 4 <sup>a</sup>	..
United Republic of Tanzania	..	..	..	..	..	..	..
Zambia	..	..	..	..	..	..	..
Zimbabwe	16	7	13	13	51	28	9
<b>Latin America and the Caribbean</b>	<b>1 309</b>	<b>7 575</b>	<b>6 255</b>	<b>7 510</b>	<b>7 202</b>	<b>15 598</b>	<b>15 455</b>
<b>South America</b>	<b>714</b>	<b>2 900</b>	<b>3 301</b>	<b>3 984</b>	<b>4 091</b>	<b>8 174</b>	<b>8 037</b>
Argentina	197	704	952	1 523	1 576	3 170	1 957
Bolivia	2	2	2	2	2	3	3
Brazil	226	580	618	1 163	520	1 660	2 609
Chile	93	434	911	757	1 163	1 950	2 799
Colombia	32	240	149	256	328	809	529
Ecuador	..	- 1 <sup>a</sup>	- 2 <sup>a</sup>	2 <sup>a</sup>	1 <sup>a</sup>	..	..
Guyana	..	2	..	-	- 1	..	..
Paraguay	..	..	..	..	..	..	..
Peru	..	21 <sup>a</sup>	..	8	- 16	85	- 4 <sup>a</sup>
Suriname	..	..	..	..	..	..	..
Uruguay	- 2	32 <sup>a</sup>	- 6 <sup>a</sup>	- 26 <sup>a</sup>	11 <sup>a</sup>	22 <sup>a</sup>	5 <sup>a</sup>
Venezuela	167	886	677	299	507	476	140
<b>Other Latin America and the Caribbean</b>	<b>595</b>	<b>4 674</b>	<b>2 954</b>	<b>3 526</b>	<b>3 111</b>	<b>7 423</b>	<b>7 418</b>
Antigua and Barbuda	..	- 1 <sup>a</sup>	- 1 <sup>a</sup>	- 2 <sup>a</sup>	- 1 <sup>a</sup>	- 2 <sup>a</sup>	..
Aruba	..	..	..	..	-	- 2	1
Bahamas	- 21	-	-	-	-	-	1
Barbados	2	3	1	3	4	1	3 <sup>a</sup>
Belize	2 <sup>b</sup>	2	2	2	6	4	1 <sup>a</sup>
Bermuda	26	- 16 <sup>a</sup>	378 <sup>a</sup>	501 <sup>a</sup>	- 311 <sup>a</sup>	2 429 <sup>a</sup>	2 365 <sup>a</sup>
Cayman Islands	7	400 <sup>a</sup>	300 <sup>a</sup>	450 <sup>a</sup>	400 <sup>a</sup>	1 800 <sup>a</sup>	2 900 <sup>a</sup>
Costa Rica	4	2	5	6	5	7	6 <sup>a</sup>
Cuba	..	..	..	..	..	1 <sup>a</sup>	..
Dominica	..	..	..	..	..	..	..
Dominican Republic	..	11	12	15	14	1 <sup>a</sup>	1 <sup>a</sup>
El Salvador	..	..	..	..	3 <sup>a</sup>	..	..
Grenada	..	..	..	..	..	..	..
Guatemala	..	..	- 20 <sup>a</sup>	- 24 <sup>a</sup>	2 <sup>a</sup>	1 <sup>a</sup>	2 <sup>a</sup>
Haiti	- 7 <sup>c</sup>	- 1 <sup>a</sup>	..	1 <sup>a</sup>	1 <sup>a</sup>	..	..
Honduras	..	- 1 <sup>a</sup>	- 3 <sup>a</sup>	- 2 <sup>a</sup>	- 2 <sup>a</sup>	- 1 <sup>a</sup>	- 1 <sup>a</sup>

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(Millions of dollars)							
Host region/economy	1987-1992 (Annual average)	1993	1994	1995	1996	1997	1998
<b>Jamaica</b>	..	..	53	66	93	57	82
Mexico	202	- 110	1 058	- 263	38	1 108	1 363
Netherlands Antilles	2	- 2	1	-	402 <sup>a</sup>	-1 856 <sup>a</sup>	162 <sup>a</sup>
Nicaragua	..	..	..	.. <sup>a</sup>	.. <sup>a</sup>	.. <sup>a</sup>	.. <sup>a</sup>
Panama	379	- 494 <sup>a</sup>	- 210 <sup>a</sup>	329 <sup>a</sup>	829 <sup>a</sup>	432 <sup>a</sup>	1 362 <sup>a</sup>
Saint Kitts and Nevis	..	- 1 <sup>a</sup>	- 1 <sup>a</sup>	- 2 <sup>a</sup>	- 2 <sup>a</sup>	- 2 <sup>a</sup>	- 1 <sup>a</sup>
Saint Lucia	..	..	..	..	..	..	..
Saint Vincent and the Grenadines	..	..	..	..	..	..	..
Trinidad and Tobago	-	1 <sup>a</sup>	1 <sup>a</sup>	1 <sup>a</sup>	1 <sup>a</sup>	1 <sup>a</sup>	1 <sup>a</sup>
Virgin Islands	..	4 882 <sup>a</sup>	1 378 <sup>a</sup>	2 444 <sup>a</sup>	1 639 <sup>a</sup>	3 444 <sup>a</sup>	- 830 <sup>a</sup>
<b>Developing Europe</b>	<b>10</b>	<b>22</b>	<b>7</b>	<b>67</b>	<b>89</b>	<b>253</b>	<b>145</b>
Bosnia and Herzegovina	-	1 <sup>a</sup>	4 <sup>a</sup>	.. <sup>a</sup>	.. <sup>a</sup>	.. <sup>a</sup>	.. <sup>a</sup>
Croatia	..	19	7	6	24	185	92
Malta	..	-	- 1	56	54	35	40
Slovenia	10 <sup>d</sup>	1	- 3	6	9	31	11
TFYR Macedonia	..	..	..	-a	-	1	1
Yugoslavia (former)	..	..	..	..	..	..	..
<b>Asia</b>	<b>11 495</b>	<b>31 476</b>	<b>35 886</b>	<b>44 060</b>	<b>51 681</b>	<b>47 741</b>	<b>36 182</b>
<b>West Asia</b>	<b>849</b>	<b>777</b>	<b>- 1 315</b>	<b>- 884</b>	<b>2 114</b>	<b>2 087</b>	<b>1 861</b>
Bahrain	19 <sup>d</sup>	150 <sup>a</sup>	120 <sup>a</sup>	.. <sup>a</sup>	90 <sup>a</sup>	200 <sup>a</sup>	90 <sup>a</sup>
Cyprus	6	12	6	7	8 <sup>a</sup>	382 <sup>a</sup>	2 <sup>a</sup>
Iran, Islamic Republic	..	50 <sup>a</sup>	6 <sup>a</sup>	3 <sup>a</sup>	.. <sup>a</sup>	61 <sup>a</sup>	17 <sup>a</sup>
Iraq	-	.. <sup>a</sup>	.. <sup>a</sup>	.. <sup>a</sup>	.. <sup>a</sup>	.. <sup>a</sup>	.. <sup>a</sup>
Jordan	-	- 53	- 23	- 27	- 43	10 <sup>a</sup>	10 <sup>a</sup>
Kuwait	585	654	-1 515	-1 022	1 740	969	1 873
Lebanon	4	- 2 <sup>a</sup>	- 2 <sup>a</sup>	- 2 <sup>a</sup>	- 2 <sup>a</sup>	- 3 <sup>a</sup>	3 <sup>a</sup>
Oman	- 1 <sup>d</sup>	- 3 <sup>a</sup>	5 <sup>a</sup>	1 <sup>a</sup>	1 <sup>a</sup>	10 <sup>a</sup>	10 <sup>a</sup>
Qatar	..	..	..	30 <sup>a</sup>	40 <sup>a</sup>	20 <sup>a</sup>	20 <sup>a</sup>
Saudi Arabia	215	- 53 <sup>a</sup>	81 <sup>a</sup>	13 <sup>a</sup>	180 <sup>a</sup>	195 <sup>a</sup>	- 472 <sup>a</sup>
Syrian Arab Republic	..	..	..	..	1 <sup>a</sup>	3 <sup>a</sup>	2 <sup>a</sup>
Turkey	14	14	49	113	110	251	307 <sup>a</sup>
United Arab Emirates	8	7 <sup>a</sup>	- 42 <sup>a</sup>	1 <sup>a</sup>	- 11 <sup>a</sup>	- 11 <sup>a</sup>	.. <sup>a</sup>
Yemen	..	..	..	..	..	..	..
<b>Central Asia</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1</b>	<b>8</b>
Armenia	..	..	..	..	..	..	..
Azerbaijan	..	..	..	..	..	..	..
Georgia	..	..	..	..	..	..	..
Kazakhstan	..	..	..	-	.. <sup>a</sup>	1	8
Kyrgyzstan	..	..	..	..	..	..	..
Tajikistan	..	..	..	..	..	..	-
Turkmenistan	..	..	..	..	..	..	..
Uzbekistan	..	..	..	..	..	..	..
<b>South, East and South-East Asia</b>	<b>10 646</b>	<b>30 700</b>	<b>37 201</b>	<b>44 944</b>	<b>49 567</b>	<b>45 653</b>	<b>34 312</b>
Afghanistan	..	..	..	..	..	..	..
Bangladesh	.. <sup>c</sup>	-	-	.. <sup>a</sup>	.. <sup>a</sup>	3	10 <sup>a</sup>
Brunei Darussalam	.. <sup>b</sup>	50 <sup>a</sup>	.. <sup>a</sup>	20 <sup>a</sup>	40 <sup>a</sup>	10 <sup>a</sup>	10 <sup>a</sup>
Cambodia	..	2 <sup>a</sup>	.. <sup>a</sup>	.. <sup>a</sup>	.. <sup>a</sup>	.. <sup>a</sup>	.. <sup>a</sup>
China	1 336	4 400	2 000	2 000	2 114	2 563	1 600
Hong Kong, China	3 520	17 713 <sup>a</sup>	21 437 <sup>a</sup>	25 000 <sup>a</sup>	26 531 <sup>a</sup>	24 407 <sup>a</sup>	18 762 <sup>a</sup>
India	8	-	83	117	239	113	19
Indonesia	18	356	609	603	600	178	44
Korea, Democratic People's Republic	..	..	..	..	..	..	..
Korea, Republic of	910	1 340	2 461	3 552	4 670	4 449	4 756
Lao People's Democratic Republic	..	..	..	..	..	..	..
Macau	..	..	..	..	..	..	..
Malaysia	366	1 464	2 591	3 091	4 133	3 425	1 921
Maldives	..	..	..	..	..	..	..
Mongolia	..	..	..	1 <sup>a</sup>	1 <sup>a</sup>	2 <sup>a</sup>	1 <sup>a</sup>
Myanmar	..	..	.. <sup>a</sup>	.. <sup>a</sup>	.. <sup>a</sup>	.. <sup>a</sup>	.. <sup>a</sup>

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Annex table B.2. FDI outflows, by home region and economy, 1987-1998 (continued)



(Millions of dollars)

Host region/economy	1987-1992 (Annual average)	1993	1994	1995	1996	1997	1998
<b>Nepal</b>	..	..	..	.. <sup>a</sup>	1 <sup>a</sup>	.. <sup>a</sup>	.. <sup>a</sup>
Pakistan	10	- 2	-	-	7	- 24	5 <sup>a</sup>
Philippines	-	374	302	399	182	136	160
Singapore	847	2 152	4 577	6 281	6 274	4 722	3 108
Sri Lanka	2	7	8	7	1 <sup>a</sup>	1 <sup>a</sup>	1 <sup>a</sup>
Taiwan Province of China	3 507	2 611	2 640	2 983	3 843	5 222	3 794
Thailand	121	232	492	887	931	447	122
Viet Nam	..	.. <sup>a</sup>	.. <sup>a</sup>	1 <sup>a</sup>	.. <sup>a</sup>	.. <sup>a</sup>	.. <sup>a</sup>
<b>The Pacific</b>	<b>14</b>	<b>29</b>	<b>-</b>	<b>- 3</b>	<b>-</b>	<b>22</b>	<b>25</b>
Fiji	15	29	-	- 3	-	22	25
Kiribati	..	..	-	.. <sup>a</sup>	.. <sup>a</sup>	.. <sup>a</sup>	.. <sup>a</sup>
New Caledonia	..	..	..	..	..	..	..
Papua New Guinea	- 1	.. <sup>a</sup>	.. <sup>a</sup>	.. <sup>a</sup>	.. <sup>a</sup>	.. <sup>a</sup>	.. <sup>a</sup>
Samoa	..	..	..	..	.. <sup>a</sup>	.. <sup>a</sup>	-
Solomon Islands	..	..	..	..	..	..	..
Tonga	.. <sup>c</sup>	-	.. <sup>a</sup>	.. <sup>a</sup>	.. <sup>a</sup>	.. <sup>a</sup>	.. <sup>a</sup>
Vanuatu	..	..	..	..	..	.. <sup>a</sup>	.. <sup>a</sup>
<b>Central and Eastern Europe</b>	<b>44</b>	<b>292</b>	<b>286</b>	<b>460</b>	<b>1 105</b>	<b>3 425</b>	<b>1 903</b>
Albania	..	7	9	12	10 <sup>a</sup>	10 <sup>a</sup>	1 <sup>a</sup>
Belarus	..	..	..	..	..	2	2 <sup>a</sup>
Bulgaria	..	..	..	8	29	- 2	-
Czech Republic	..	90	120	37	153	25	55
Czechoslovakia (former)	12 <sup>e</sup>	..	..	..	..	..	..
Estonia	..	6	2	2	40	137	6
Hungary	14 <sup>b</sup>	11	49	43	- 3	431	481
Latvia	..	- 5	- 65	- 65	3	6	54
Lithuania	..	..	..	1	-	27	4
Moldova, Republic of	..	..	18	-	-	-	- 1
Poland	9	18	29	42	53	45	163
Romania	10 <sup>c</sup>	7	1	3	2	5	23
Russian Federation	..	142	101	358	771	2 603	1 027
Slovakia	..	15	14	8	52	93	92
Ukraine	..	..	8	10	- 5	42	- 4
<i>Memorandum:</i>							
<b>Least Developed countries: <sup>f</sup></b>							
<b>Total</b>	<b>137</b>	<b>84</b>	<b>89</b>	<b>- 66</b>	<b>- 385</b>	<b>1 061</b>	<b>212</b>
Africa	140	83	88	- 67	- 387	1 058	202
Latin America and the Caribbean	- 4	- 1	-	1	1	-	-
Asia and the Pacific	-	2	-	-	1	3	10
Asia	-	2	-	-	1	3	10
West Asia	..	..	..	..	..	..	..
South, East and South-East Asia	-	2	-	-	1	3	10
The Pacific	-	-	-	-	-	..	..
<b>Oil-exporting countries: <sup>g</sup></b>							
<b>Total</b>	<b>2 448</b>	<b>3 940</b>	<b>3 798</b>	<b>3 121</b>	<b>7 530</b>	<b>6 875</b>	<b>5 211</b>
Africa	868	486	207	340	168	232	192
North Africa	65	23	30	7	28	15	69
Other Africa	803	463	177	334	140	217	122
Latin America and the Caribbean	370	778	1 736	41	549	1 588	1 507
South America	169	887	677	303	510	479	143
Other Latin America and the Caribbean	201	- 109	1 059	- 262	39	1 109	1 364
Asia	1 210	2 676	1 855	2 740	6 813	5 056	3 513
Central Asia	-	-	-	-	-	-	1
West Asia	826	805	- 1 345	- 974	2 040	1 444	1 537
South, East and South-East Asia	384	1 870	3 200	3 714	4 773	3 613	1 975

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**Annex table B.2. FDI outflows, by home region and economy, 1987-1998 (concluded)**

(Millions of dollars)							
Host region/economy	1987-1992 (Annual average)	1993	1994	1995	1996	1997	1998
All developing countries minus China	12 598	35 356	40 600	50 089	56 833	62 468	50 718
Asia and the Pacific	11 510	31 505	35 886	44 057	51 682	47 763	36 206
Africa including South Africa	1 329	930	598	721	31	3 767	2 042

Source: UNCTAD, FDI/TNC database.

<sup>a</sup> Estimates. For details, see "definitions and sources" in annex B.

<sup>b</sup> Annual average from 1991 to 1992.

<sup>c</sup> Annual average from 1990 to 1992.

<sup>d</sup> Annual average from 1988 to 1992.

<sup>e</sup> Annual average from 1989 to 1991.

<sup>f</sup> Least developed countries include: Afghanistan, Angola, Bangladesh, Benin, Burkina Faso, Burundi, Cambodia, Cape Verde, Central African Republic, Chad, Comoros, Democratic Republic of Congo, Djibouti, Equatorial Guinea, Ethiopia, Gambia, Guinea, Guinea-Bissau, Haiti, Kiribati, Lao People's Democratic Republic, Lesotho, Liberia, Madagascar, Malawi, Maldives, Mali, Mauritania, Mozambique, Myanmar, Nepal, Niger, Rwanda, Samoa, Sierra Leone, Solomon Islands, Somalia, Sudan, Togo, Uganda, United Republic of Tanzania, Vanuatu, Yemen and Zambia. Not included are Bhutan, Eritrea, Sao Tome and Principe and Tuvalu due to unavailability of data.

<sup>g</sup> Oil-exporting countries include: Algeria, Angola, Bahrain, Brunei Darussalam, Cameroon, Congo, Ecuador, Egypt, Gabon, Indonesia, Islamic Republic of Iran, Iraq, Kuwait, Libyan Arab Jamahiriya, Malaysia, Mexico, Nigeria, Oman, Qatar, Saudi Arabia, Saudi Arabia, Trinidad and Tobago, Tunisia, United Arab Emirates and Venezuela.



Annex table B.3. FDI inward stock, by host region and economy, 1980, 1985, 1990, 1995, 1997 and 1998 <sup>a</sup>

(Millions of dollars)

Host region/economy	1980	1985	1990	1995	1997	1998
<b>World</b>	<b>506 602</b>	<b>782 298</b>	<b>1 768 456</b>	<b>2 789 585</b>	<b>3 436 651</b>	<b>4 088 068</b>
<b>Developed countries</b>	<b>373 658</b>	<b>545 060</b>	<b>1 394 853</b>	<b>1 982 346</b>	<b>2 312 383</b>	<b>2 785 449</b>
<b>Western Europe</b>	<b>200 410</b>	<b>253 824</b>	<b>784 371</b>	<b>1 144 001</b>	<b>1 308 040</b>	<b>1 571 427</b>
<b>European Union</b>	<b>185 336</b>	<b>236 228</b>	<b>737 932</b>	<b>1 066 934</b>	<b>1 230 247</b>	<b>1 486 237</b>
Austria	3 163	3 762	9 884	17 532	17 810	25 386
Belgium and Luxembourg	7 306	18 447	58 388	116 692 <sup>b</sup>	143 204 <sup>b</sup>	164 093 <sup>b</sup>
Denmark	4 193	3 613	9 192	21 976 <sup>c</sup>	25 139 <sup>c</sup>	31 762 <sup>c</sup>
Finland	540	1 339	5 132	8 465	9 530	15 523
France	22 862 <sup>d</sup>	33 636 <sup>d</sup>	86 508	143 670	141 135	179 186
Germany	36 630	36 926	111 232	165 914	208 917	228 794 <sup>e</sup>
Greece	4 524	8 309	14 016 <sup>f</sup>	19 306 <sup>f</sup>	21 348 <sup>f</sup>	22 048 <sup>f</sup>
Ireland	3 749	4 649	5 502 <sup>g</sup>	11 706 <sup>g</sup>	17 051 <sup>g</sup>	23 871 <sup>g</sup>
Italy	8 892	18 976	57 985	63 456	81 145	105 397
Netherlands	19 167	25 071	73 567	123 896	127 426	169 522
Portugal	2 530 <sup>h</sup>	3 463 <sup>h</sup>	9 436 <sup>h</sup>	17 246	18 076	21 130
Spain	5 141	8 939	65 916	112 136	100 805	118 926
Sweden	3 626	5 071	12 461	31 089	42 402	53 790
United Kingdom	63 014	64 028	218 713	213 850	276 258	326 809
<b>Other Western Europe</b>	<b>15 074</b>	<b>17 597</b>	<b>46 438</b>	<b>77 067</b>	<b>77 793</b>	<b>85 190</b>
Gibraltar	..	32 <sup>i</sup>	197 <sup>i</sup>	363 <sup>i</sup>	365 <sup>i</sup>	366 <sup>i</sup>
Iceland	.. <sup>j, k</sup>	98 <sup>j</sup>	147	129	333	426
Norway	6 572 <sup>l</sup>	7 407 <sup>l</sup>	12 402	19 513	20 705	24 303
Switzerland	8 506	10 058	33 693	57 063	56 390	60 096 <sup>e</sup>
<b>North America</b>	<b>137 195</b>	<b>249 249</b>	<b>507 783</b>	<b>658 888</b>	<b>819 309</b>	<b>1016 798</b>
Canada	54 149	64 634	112 872	123 335	137 658	141 772
United States	83 046	184 615	394 911	535 553	681 651	875 026 <sup>e</sup>
<b>Other developed countries</b>	<b>36 053</b>	<b>41 987</b>	<b>102 699</b>	<b>179 457</b>	<b>185 035</b>	<b>197 224</b>
Australia	13 173	25 049	73 620	100 390	100 773	104 977
Israel <sup>m</sup>	727	1 131	1 964	4 483	7 327	9 166
Japan	3 270	4 740	9 850	33 531	27 080	30 272 <sup>e</sup>
New Zealand	2 363	2 043	8 066	26 177	31 509	34 093
South Africa	16 519	9 024	9 198	14 875	18 345	18 716 <sup>e</sup>
<b>Developing countries</b>	<b>132 945</b>	<b>237 239</b>	<b>370 644</b>	<b>769 262</b>	<b>1 055 656</b>	<b>1 219 271</b>
<b>Africa</b>	<b>13 781</b>	<b>23 431</b>	<b>37 625</b>	<b>54 949</b>	<b>67 705</b>	<b>75 278</b>
<b>North Africa</b>	<b>4 547</b>	<b>9 273</b>	<b>15 457</b>	<b>22 445</b>	<b>27 159</b>	<b>29 652</b>
Algeria <sup>m</sup>	1 320	1 281	1 316	1 221	2 299	2 799
Egypt <sup>n</sup>	2 257	5 699	11 039	14 098	15 624	16 700
Libyan Arab Jamahiriya	..	..	..	..	..	..
Morocco <sup>m</sup>	189	441	917	3 032	4 465	4 724
Sudan	..	29 <sup>i</sup>	.. <sup>i, k</sup>	.. <sup>i, k</sup>	90 <sup>i</sup>	100 <sup>i</sup>
Tunisia <sup>m</sup>	781	1 822	2 193	4 102	4 680	5 330
<b>Other Africa</b>	<b>9 234</b>	<b>14 159</b>	<b>22 168</b>	<b>32 504</b>	<b>40 546</b>	<b>45 626</b>
Angola <sup>m</sup>	61	675	1 024	2 922	3 514	3 911
Benin <sup>m</sup>	32	34	36	51	104	130
Botswana	506 <sup>o</sup>	755 <sup>o</sup>	1 117 <sup>o</sup>	908	967	1 135
Burkina Faso <sup>m</sup>	18	24	38	54	84	98
Burundi <sup>m</sup>	7	23	29	33	34	34
Cameroon <sup>m</sup>	330	1 123	1 042	1 060	1 219	1 313
Cape Verde	..	..	4 <sup>p</sup>	38 <sup>p</sup>	78 <sup>p</sup>	93 <sup>p</sup>
Central African Republic <sup>m</sup>	50	77	95	73	80	84

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Annex table B.3. FDI inward stock, by host region and economy, 1980, 1985, 1990, 1995, 1997 and 1998<sup>a</sup> (continued)

(Millions of dollars)

Host region/economy	1980	1985	1990	1995	1997	1998
Chad <sup>m</sup>	123	186	242	303	364	399
Comoros	..	..	15 <sup>q</sup>	17 <sup>q</sup>	18 <sup>q</sup>	19 <sup>q</sup>
Congo <sup>r</sup>	309	479	564	666	672	687
Congo, Democratic Republic of <sup>n</sup>	440	351	277	271	289	289
Côte d'Ivoire <sup>m</sup>	530	699	975	1 138	1 671	1 921
Djibouti <sup>s</sup>	3	3	6	14	59	84
Equatorial Guinea	..	5 <sup>t</sup>	25 <sup>t</sup>	239 <sup>t</sup>	615 <sup>t</sup>	815 <sup>t</sup>
Ethiopia <sup>m</sup>	109	114	120	178	259	438
Gabon <sup>m</sup>	511	833	1 208	954	1 409	1 709
Gambia <sup>m</sup>	21	23	40	86	110	125
Ghana <sup>m</sup>	229	272	316	823	1 024	1 069
Guinea <sup>s</sup>	2	2	70	132	173	188
Guinea-Bissau <sup>n</sup>	-	4	8	16	27	35
Kenya <sup>m</sup>	344	434	626	689	742	784
Lesotho	4 <sup>u</sup>	19 <sup>u</sup>	79 <sup>u</sup>	123 <sup>u</sup>	153 <sup>u</sup>	183 <sup>u</sup>
Liberia	..	104 <sup>i</sup>	1 297 <sup>i</sup>	1 263 <sup>i</sup>	1 423 <sup>i</sup>	1 623 <sup>i</sup>
Madagascar <sup>m</sup>	37	48	83	149	404	504
Malawi <sup>m</sup>	100	104	154	219	285	355
Mali <sup>r</sup>	13	34	39	151	274	304
Mauritania <sup>m</sup>	.. <sup>k</sup>	33	51	86	91	97
Mauritius <sup>m</sup>	20	37	162	248	341	354
Mozambique <sup>m</sup>	15	17	42	202	338	551
Namibia	1 994 <sup>v</sup>	2 010 <sup>v</sup>	2 047	1 708	1 585	1 473
Niger <sup>m</sup>	188	203	284	317	325	325
Nigeria <sup>m</sup>	2 405	4 417	8 072	14 065	17 198	18 698
Rwanda <sup>m</sup>	54	133	213	231	235	242
Senegal <sup>m</sup>	150	191	277	389	547	567
Seychelles <sup>w</sup>	37	87	187	275	349	404
Sierra Leone <sup>m</sup>	77	66	.. <sup>k</sup>	.. <sup>k</sup>	15	45
Somalia <sup>r</sup>	29	4	.. <sup>k</sup>	.. <sup>k</sup>	.. <sup>k</sup>	.. <sup>k</sup>
Swaziland	243 <sup>x</sup>	104	336	534	407	426 <sup>e</sup>
Togo <sup>m</sup>	176	210	264	273	300	305
Uganda <sup>m</sup>	9	7	4	275	570	780
United Republic of Tanzania <sup>m</sup>	47	91	89	295	603	775
Zambia <sup>m</sup>	25	119	682	900	1 224	1 446
Zimbabwe <sup>y</sup>	-	1	.. <sup>k</sup>	156	372	817
<b>Latin America and the Caribbean</b>	<b>47 694</b>	<b>76 810</b>	<b>114 090</b>	<b>255 025</b>	<b>345 911</b>	<b>415 614</b>
<b>South America</b>	<b>29 224</b>	<b>42 088</b>	<b>66 191</b>	<b>167 894</b>	<b>236 639</b>	<b>285 058</b>
Argentina	5 344	6 563	7 443	27 734	39 953	45 466
Bolivia	420	592	708	1 554	2 794 <sup>z</sup>	3 666 <sup>z</sup>
Brazil	17 480	25 665	37 143	98 839	128 080 <sup>aa</sup>	156 798 <sup>aa</sup>
Chile	886	2 321	10 067	15 547	25 688 <sup>aa</sup>	30 481 <sup>aa</sup>
Colombia	1 061	2 231	3 500	6 408	11 221	14 204 <sup>e</sup>
Ecuador	719	982	1 626	3 434 <sup>ab</sup>	4 621 <sup>ab</sup>	5 451 <sup>ab</sup>
Guyana <sup>m</sup>	.. <sup>k</sup>	.. <sup>k</sup>	.. <sup>k</sup>	350	494	538
Paraguay <sup>m</sup>	218	298	402	974	1 460	1 655
Peru	898	1 152	1 302	5 546	7 269	7 830
Suriname <sup>m</sup>	.. <sup>k</sup>	37	.. <sup>k</sup>	.. <sup>k</sup>	.. <sup>k</sup>	.. <sup>k</sup>
Uruguay <sup>y</sup>	700	748	882	1 366	1 629	1 793
Venezuela	1 604	1 548	3 865	6 975	14 245 <sup>aa</sup>	17 982 <sup>aa</sup>
<b>Other Latin America and the Caribbean</b>	<b>18 470</b>	<b>34 721</b>	<b>47 899</b>	<b>87 131</b>	<b>109 272</b>	<b>130 556</b>
Antigua and Barbuda <sup>y</sup>	23	94	292	437	484	504
Aruba	..	..	131 <sup>ac</sup>	182 <sup>ac</sup>	196 <sup>ac</sup>	82 <sup>ac</sup>
Bahamas <sup>s</sup>	298	294	336	493	791	1 026
Barbados <sup>m</sup>	102	124	169	225	254	270
Belize <sup>m</sup>	12	10	72	147	175	187
Bermuda <sup>m</sup>	5 132	8 052	13 849	24 705	28 505	30 905
Cayman Islands <sup>ad</sup>	223	1 479	1 749	3 320	5 730	9 230
Costa Rica	672	957	1 447	2 791 <sup>ab</sup>	3 701 <sup>ab</sup>	4 252 <sup>ab</sup>
Cuba	.. <sup>u</sup>	.. <sup>u</sup>	3 <sup>u</sup>	45 <sup>u</sup>	70 <sup>u</sup>	100 <sup>u</sup>
Dominica	..	6 <sup>i</sup>	66 <sup>i</sup>	192 <sup>i</sup>	230 <sup>i</sup>	250 <sup>i</sup>

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**Annex table B.3. FDI inward stock, by host region and economy, 1980, 1985, 1990, 1995, 1997 and 1998<sup>a</sup>(continued)**  
(Millions of dollars)

Host region/economy	1980	1985	1990	1995	1997	1 998
Dominican Republic	239	265	572	1 885 <sup>ab</sup>	2 664 <sup>ab</sup>	3 355 <sup>ab</sup>
El Salvador	154	181	212	293	360 <sup>aa</sup>	560 <sup>aa</sup>
Grenada <sup>y</sup>	1	13	70	167	207	227
Guatemala <sup>m</sup>	701	1 050	1 734	2 178	2 328	2 912
Haiti <sup>m</sup>	79	112	141	141	150	156
Honduras <sup>m</sup>	92	172	383	646	863	962
Jamaica <sup>m</sup>	501	458	690	1 321	1 708	2 058
Mexico	8 105 <sup>ae</sup>	18 802 <sup>ae</sup>	22 424	41 130	50 545	60 783
Netherlands Antilles <sup>af</sup>	569	56	206	322	436	587
Nicaragua <sup>m</sup>	109	109	114	283	553	737
Panama	387	533	623 <sup>f</sup>	1 659 <sup>f</sup>	3 264 <sup>f</sup>	4 450 <sup>f</sup>
Saint Kitts and Nevis	1 <sup>u</sup>	32 <sup>u</sup>	160 <sup>u</sup>	243 <sup>u</sup>	285 <sup>u</sup>	310 <sup>u</sup>
Saint Lucia <sup>w</sup>	93	197	315	510	578	618
Saint Vincent and the Grenadines <sup>ag</sup>	1	9	48	181	241	281
Trinidad and Tobago	976	1 719	2 093	3 634 <sup>ab</sup>	4 954 <sup>ab</sup>	5 754 <sup>ab</sup>
Virgin Islands	..	..	..	..	..	..
<b>Developing Europe</b>	<b>297</b>	<b>465</b>	<b>1 131</b>	<b>3 214</b>	<b>5 173</b>	<b>6 461</b>
Bosnia and Herzegovina	..	..	..	..	..	..
Croatia	..	..	..	449 <sup>h</sup>	1 492 <sup>z</sup>	2 365 <sup>z</sup>
Malta <sup>m</sup>	156	286	465	973	1 426	1 556
Slovenia	..	..	666 <sup>ah</sup>	1 760	2 194	2 359
TFYR Macedonia	..	..	..	33 <sup>ai</sup>	62 <sup>ai</sup>	181 <sup>ai</sup>
Yugoslavia (former) <sup>m</sup>	141	179	..	..	..	..
<b>Asia</b>	<b>70 005</b>	<b>135 361</b>	<b>214 002</b>	<b>451 251</b>	<b>631 719</b>	<b>716 596</b>
<b>West Asia</b>	<b>..<sup>k</sup></b>	<b>26 713</b>	<b>29 432</b>	<b>38 017</b>	<b>43 276</b>	<b>47 856</b>
Bahrain	..	306 <sup>aj</sup>	638 <sup>aj</sup>	559 <sup>aj</sup>	632 <sup>aj</sup>	642 <sup>aj</sup>
Cyprus <sup>m</sup>	460	789	1 146	1 613	2 047	2 247
Iran, Islamic Republic <sup>m</sup>	1 106	925	184	5	411	711
Iraq	..	..	..	..	..	..
Jordan <sup>af</sup>	155	493	615	627	1 003	1 226
Kuwait <sup>s</sup>	30	33	26	82	449	439
Lebanon <sup>r</sup>	20	34	53	110	324	554
Oman <sup>ad</sup>	477	1 195	1 717	2 221	2 345	2 395
Qatar <sup>s</sup>	83	77	55	435	525	595
Saudi Arabia <sup>m</sup>	.. <sup>k</sup>	21 828	22 501	22 423	23 870	26 270
Syrian Arab Republic	..	37 <sup>ak</sup>	374 <sup>ak</sup>	1 030 <sup>ak</sup>	1 199 <sup>ak</sup>	1 299 <sup>ak</sup>
Turkey	107	360	1 320	5 103 <sup>ab</sup>	6 630 <sup>ab</sup>	7 437 <sup>ab</sup>
United Arab Emirates <sup>m</sup>	409	482	751	1 769	1 999	2 099
Yemen <sup>r</sup>	68	155	53	2 039	1 841	1 941
<b>Central Asia</b>	<b>-</b>	<b>-</b>	<b>10</b>	<b>3 876</b>	<b>8 924</b>	<b>11 948</b>
Armenia	..	..	10 <sup>al</sup>	67 <sup>al</sup>	136 <sup>al</sup>	368 <sup>al</sup>
Azerbaijan	..	..	..	177 <sup>ai</sup>	1 835 <sup>ai</sup>	2 920 <sup>ai</sup>
Georgia	..	..	..	13 <sup>ai</sup>	169 <sup>ai</sup>	420 <sup>ai</sup>
Kazakhstan	..	..	..	2 995 <sup>am</sup>	5 454 <sup>am</sup>	6 612 <sup>am</sup>
Kyrgyzstan	..	..	..	144 <sup>an</sup>	275 <sup>an</sup>	377 <sup>an</sup>
Tajikistan	..	..	..	25 <sup>ai</sup>	45 <sup>ai</sup>	75 <sup>ai</sup>
Turkmenistan	..	..	..	200 <sup>ai</sup>	416 <sup>ai</sup>	496 <sup>ai</sup>
Uzbekistan	..	..	..	255 <sup>am</sup>	595 <sup>am</sup>	680 <sup>am</sup>
<b>South, East and South-East Asia</b>	<b>73 174</b>	<b>108 648</b>	<b>184 560</b>	<b>409 358</b>	<b>579 518</b>	<b>656 792</b>
Afghanistan <sup>m</sup>	11	12	12	12	13	13
Bangladesh	63	112	147 <sup>ao</sup>	180 <sup>ao</sup>	335 <sup>ao</sup>	652 <sup>ao</sup>
Brunei Darussalam <sup>m</sup>	19	33	30	68	84	88
Cambodia	..	..	..	498	925	1 065
China	57	4 305	18 568 <sup>f</sup>	131 241 <sup>f</sup>	215 657 <sup>f</sup>	261 117 <sup>f</sup>
Hong Kong, China	43 510 <sup>o</sup>	46 389 <sup>o</sup>	56 115 <sup>o</sup>	70 951	94 558	96 158 <sup>e</sup>
India	1 177	1 075	1 179 <sup>ao</sup>	5 196 <sup>ao</sup>	10 973 <sup>ao</sup>	13 231 <sup>ao</sup>
Indonesia	10 274	24 971	38 883	50 601	61 475	61 116

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**Annex table B.3. FDI inward stock, by host region and economy, 1980, 1985, 1990, 1995, 1997 and 1998<sup>a</sup>(continued)**

(Millions of dollars)

Host region/economy	1980	1985	1990	1995	1997	1998
Korea, Democratic People's Republic	..	..	572 <sup>q</sup>	641 <sup>q</sup>	642 <sup>q</sup>	642 <sup>q</sup>
Korea, Republic of	1 140	2 160	5 864	10 478	15 335 <sup>z</sup>	20 478 <sup>z</sup>
Lao People's Democratic Republic	2	2	14	212	426	471
Macau <sup>af</sup>	2	10	11	18	27	27
Malaysia	5 169	7 388	10 318	27 094 <sup>b</sup>	37 278 <sup>b</sup>	41 005 <sup>b</sup>
Maldives <sup>s</sup>	5	3	25	61	76	83
Mongolia	..	..	..	26 <sup>am</sup>	67 <sup>am</sup>	86 <sup>am</sup>
Myanmar <sup>af</sup>	5	5	173	937	1 099	1 139
Nepal <sup>ad</sup>	1	2	12	29	72	81
Pakistan	688	1 079	1 887	5 422	7 725 <sup>z</sup>	8 221 <sup>z</sup>
Philippines	1 225	2 601	3 268 <sup>ap</sup>	6 086 <sup>ap</sup>	8 420 <sup>ap</sup>	10 133 <sup>ap</sup>
Singapore	6 203	13 016	28 564	59 582	78 637 <sup>z</sup>	85 855 <sup>z</sup>
Sri Lanka	231	517	681 <sup>ao</sup>	1 269 <sup>ao</sup>	1 819 <sup>ao</sup>	2 164 <sup>ao</sup>
Taiwan Province of China	2 405	2 930	9 735 <sup>ao</sup>	15 736 <sup>ao</sup>	19 848 <sup>ao</sup>	20 070 <sup>ao</sup>
Thailand	981	1 999	8 209	17 452	13 009	19 978 <sup>e</sup>
Viet Nam <sup>m</sup>	7	38	294	5 569	11 019	12 919
<b>The Pacific</b>	<b>1 167</b>	<b>1 171</b>	<b>3 796</b>	<b>4 822</b>	<b>5 148</b>	<b>5 323</b>
Fiji	358	393	402 <sup>f</sup>	739 <sup>f</sup>	799 <sup>f</sup>	890 <sup>f</sup>
Kiribati	..	.. <sup>ak</sup>	1 <sup>ak</sup>	2 <sup>ak</sup>	4 <sup>ak</sup>	4 <sup>ak</sup>
New Caledonia	..	.. <sup>ak</sup>	40 <sup>ak</sup>	91 <sup>ak</sup>	100 <sup>ak</sup>	105 <sup>ak</sup>
Papua New Guinea	748	683	3 165 <sup>aq</sup>	3 587 <sup>aq</sup>	3 727 <sup>aq</sup>	3 757 <sup>aq</sup>
Samoa <sup>ad</sup>	-	-	8	23	44	54
Solomon Islands <sup>n</sup>	28	32	69	125	153	163
Tonga	..	.. <sup>ar</sup>	.. <sup>ar</sup>	6 <sup>ar</sup>	9 <sup>ar</sup>	10 <sup>ar</sup>
Vanuatu <sup>s</sup>	33	62	110	249	312	339
<b>Central and Eastern Europe</b>	<b>-</b>	<b>-</b>	<b>2 959</b>	<b>37 977</b>	<b>68 613</b>	<b>83 348</b>
Albania	..	..	..	211 <sup>am</sup>	349 <sup>am</sup>	394 <sup>am</sup>
Belarus	..	..	..	50 <sup>am</sup>	322 <sup>am</sup>	466 <sup>am</sup>
Bulgaria	..	..	4 <sup>ac</sup>	337 <sup>ac</sup>	951 <sup>ac</sup>	1 352 <sup>ac</sup>
Czech Republic	..	..	1 360 <sup>as</sup>	7 352	9 234	13 457
Czechoslovakia (former)	..	..	..	..	..	..
Estonia	..	..	70 <sup>at</sup>	731 <sup>at</sup>	1 148	1 822
Hungary	..	..	569	11 919	15 882	18 255
Latvia	..	..	..	616	1 272	1 488
Lithuania	..	..	..	352	1 041	1 625
Moldova, Republic of	..	..	..	92	180	265 <sup>e</sup>
Poland	..	..	109	7 843	16 593	21 722 <sup>e</sup>
Romania	..	..	766	1 150	3 617	4 250
Russian Federation	..	..	..	5 465	14 365	13 389
Slovakia	..	..	81 <sup>as</sup>	950	1 597	2 062 <sup>e</sup>
Ukraine	..	..	..	910	2 064	2 801

*Memorandum:*

**Least developed countries: <sup>au</sup>**

<b>Total</b>	<b>1 921</b>	<b>3 244</b>	<b>6 058</b>	<b>13 392</b>	<b>17 581</b>	<b>20 530</b>
Africa		1 626	2 746	5 294	8 884	12 133
14 369						
Latin America and the Caribbean	79	112	141	141	150	156
Asia and the Pacific	216	387	624	4 367	5 298	6 004
Asia	155	292	436	3 968	4 786	5 444
West Asia	68	155	53	2 039	1 841	1 941
South, East and South-East Asia	88	137	383	1 929	2 945	3 503
The Pacific	61	95	188	399	512	560

**Oil-exporting countries: <sup>av</sup>**

<b>Total</b>	<b>37 619</b>	<b>114 608</b>	<b>150 593</b>	<b>233 874</b>	<b>286 683</b>	<b>319 582</b>
Africa		7 974	16 329	26 457	39 088	46 616
51 146						
North Africa	4 357	8 803	14 547	19 422	22 603	24 829
Other Africa	3 616	7 527	11 910	19 666	24 013	26 318

**Annex table B.3. FDI inward stock, by host region and economy, 1980, 1985, 1990, 1995, 1997 and 1998<sup>a</sup>(continued)**  
(Millions of dollars)

Host region/economy	1980	1985	1990	1995	1997	1998
Latin America and the Caribbean	18 163	41 041	49 033	89 528	110 998	133 074
<i>South America</i>	2 743	3 121	6 199	11 963	21 659	27 099
<i>Other Latin America and the Caribbean</i>	9 081	20 521	24 517	44 764	55 499	66 537
Asia	11 483	57 237	75 102	105 258	129 069	135 362
<i>Central Asia</i>	-	-	-	-	-	1
<i>West Asia</i>	.. <sup>k</sup>	24 845	25 871	27 495	30 232	33 152
<i>South, East and South-East Asia</i>	15 461	32 392	49 231	77 763	98 837	102 209
All developing countries minus China	132 887	232 934	352 076	638 021	839 998	958 154
Asia and the Pacific	71 173	136 532	217 798	456 073	636 867	721 919
Africa including South Africa	30 300	32 455	46 823	69 825	86 050	93 994

Source: UNCTAD, FDI/TNC database.

Note: For data on FDI stock which are calculated as an accumulation of flows, price changes are not taken into account.

- <sup>a</sup> For the countries for which the stock data are estimated by either cumulating FDI flows or adding flows to FDI stock in a particular year, notes are given belows.
- <sup>b</sup> Estimated by adding flows to the stock of 1994.
- <sup>c</sup> 1995 stock is estimated by adding the flow of 1995 to the stock of 1994. Afterwards stocks were estimated by adding flows to the stock of 1996.
- <sup>d</sup> Stock data prior to 1989 are estimated by subtracting flows.
- <sup>e</sup> Estimated by adding flows to the stock of 1997.
- <sup>f</sup> Estimated by adding flows to the stock of 1989.
- <sup>g</sup> Estimated by adding flows to the stock of 1986.
- <sup>h</sup> Stock data prior to 1996 are estimated by subtracting flows.
- <sup>i</sup> Estimated by accumulating flows since 1982.
- <sup>j</sup> Stock data prior to 1988 are estimated by subtracting flows.
- <sup>k</sup> Negative accumulation of flows. However, this value is included in the regional and global total.
- <sup>l</sup> Stock data prior to 1987 are estimated by subtracting flows.
- <sup>m</sup> Estimated by accumulating flows since 1970.
- <sup>n</sup> Estimated by accumulating flows since 1975.
- <sup>o</sup> Stock data prior to 1994 are estimated by subtracting flows.
- <sup>p</sup> Estimated by accumulating flows since 1986.
- <sup>q</sup> Estimated by accumulating flows since 1987.
- <sup>r</sup> Estimated by accumulating flows since 1971.
- <sup>s</sup> Estimated by accumulating flows since 1973.
- <sup>t</sup> Estimated by accumulating flows since 1981.
- <sup>u</sup> Estimated by accumulating flows since 1980.
- <sup>v</sup> Stock data prior to 1990 are estimated by subtracting flows.
- <sup>w</sup> Estimated by accumulating flows since 1976.
- <sup>x</sup> Stock data prior to 1981 are estimated by subtracting flows.
- <sup>y</sup> Estimated by accumulating flows since 1977.
- <sup>z</sup> Estimated by adding flows to the stock of 1996.
- <sup>aa</sup> Estimated by adding flows to the stock of 1995.
- <sup>ab</sup> Estimated by adding flows to the stock of 1990.
- <sup>ac</sup> Estimated by accumulating flows since 1990.
- <sup>ad</sup> Estimated by accumulating flows since 1974.
- <sup>ae</sup> Stocks up to 1989 are estimated by accumulating flows since 1970.
- <sup>af</sup> Estimated by accumulating flows since 1972.
- <sup>ag</sup> Estimated by accumulating flows since 1978.
- <sup>ah</sup> Stock data prior to 1993 are estimated by subtracting flows.
- <sup>ai</sup> Estimated by accumulating flows since 1994.
- <sup>aj</sup> Estimated by accumulating flows since 1983.
- <sup>ak</sup> Estimated by accumulating flows since 1985.
- <sup>al</sup> Estimated by accumulating flows since 1988.
- <sup>am</sup> Estimated by accumulating flows since 1992.
- <sup>an</sup> Estimated by accumulating flows since 1993.
- <sup>ao</sup> Estimated by adding flows to the stock of 1988.
- <sup>ap</sup> Estimated by adding flows to the stock of 1987.
- <sup>aq</sup> Estimated by adding flows to the stock of 1992.
- <sup>ar</sup> Estimated by accumulating flows since 1984.

<sup>as</sup> Stock data prior to 1992 are estimated by subtracting flows.

<sup>at</sup> Stock data prior to 1997 are estimated by subtracting flows.

<sup>au</sup> Least developed countries include: Afghanistan, Angola, Bangladesh, Benin, Burkina Faso, Burundi, Cambodia, Cape Verde, Central African Republic, Chad, Comoros, Democratic Republic of Congo, Djibouti, Equatorial Guinea, Ethiopia, Gambia, Guinea, Guinea-Bissau, Haiti, Kiribati, Lao People's Democratic Republic, Lesotho, Liberia, Madagascar, Malawi, Maldives, Mali, Mauritania, Mozambique, Myanmar, Nepal, Niger, Rwanda, Western Samoa, Sierra Leone, Solomon Islands, Somalia, Sudan, Togo, Uganda, United Republic of Tanzania, Vanuatu, Yemen and Zambia. Not included are Bhutan, Eritrea, Sao Tome and Principe and Tuvalu due to unavailability of data.

<sup>aw</sup> Oil-exporting countries include: Algeria, Angola, Bahrain, Brunei Darussalam, Cameroon, Congo, Ecuador, Egypt, Gabon, Indonesia, Islamic Republic of Iran, Iraq, Kuwait, Libyan Arab Jamahiriya, Malaysia, Mexico, Nigeria, Oman, Qatar, Saudi Arabia, Trinidad and Tobago, Tunisia, United Arab Emirates and Venezuela.

Annex table B.4. FDI outward stock, by home region and economy, 1980, 1985, 1990, 1995, 1997 and 1998<sup>a</sup>

(Millions of dollars)

Host region/economy	1980	1985	1990	1995	1997	1998
<b>World</b>	<b>513 105</b>	<b>685 753</b>	<b>1 714 147</b>	<b>2 840 216</b>	<b>3 423 433</b>	<b>4 117 144</b>
<b>Developed countries</b>	<b>499 708</b>	<b>657 632</b>	<b>1 640 720</b>	<b>2 598 620</b>	<b>3 072 277</b>	<b>3 714 890</b>
<b>Western Europe</b>	<b>227 522</b>	<b>301 783</b>	<b>868 318</b>	<b>1 461 655</b>	<b>1 700 699</b>	<b>2 165 840</b>
<b>European Union</b>	<b>205 417</b>	<b>279 288</b>	<b>791 625</b>	<b>1 295 941</b>	<b>1 510 714</b>	<b>1 955 783</b>
Austria	530	1 908	4 273	11 702	12 676	16 808
Belgium and Luxembourg	6 037	9 551	40 636	88 526	105 688	128 799 <sup>b</sup>
Denmark	2 065	1 801	7 342	22 581 <sup>c</sup>	31 813 <sup>c</sup>	35 821 <sup>c</sup>
Finland	743	1 829	11 227	14 993	20 297	32 810
France	17 985 <sup>d</sup>	31 458 <sup>d</sup>	110 126	184 380	189 681	242 347
Germany	43 127	59 909	151 581	268 419	303 499	390 090 <sup>b</sup>
Greece	..	..	853 <sup>e</sup>	865 <sup>e</sup>	850	851 <sup>b</sup>
Ireland	..	202 <sup>f</sup>	2 150 <sup>f</sup>	4 037 <sup>f</sup>	5 772 <sup>f</sup>	6 477 <sup>f</sup>
Italy	7 319	14 514	56 105	97 043	125 074	170 746
Netherlands	42 116	44 772	109 092	179 826	209 614	262 996
Portugal	116 <sup>g</sup>	187 <sup>g</sup>	504 <sup>g</sup>	2 524 <sup>g</sup>	4 588	7 534
Spain	1 226	2 076	15 652	36 530	47 626	68 392
Sweden	3 721 <sup>h</sup>	10 768	49 491	73 143	79 104	93 487
United Kingdom	80 434	100 313	232 593	311 372	374 431	498 624
<b>Other Western Europe</b>	<b>22 105</b>	<b>22 495</b>	<b>76 693</b>	<b>165 715</b>	<b>189 985</b>	<b>210 057</b>
Gibraltar	..	..	..	..	..	..
Iceland	52 <sup>i</sup>	52 <sup>i</sup>	75	182	268	381
Norway	561	1 093	10 888	22 514	30 456 <sup>j</sup>	33 000 <sup>j</sup>
Switzerland	21 491	21 350	65 731	143 019	159 261	176 677 <sup>b</sup>
<b>North America</b>	<b>243 955</b>	<b>294 161</b>	<b>520 048</b>	<b>816 389</b>	<b>1004 671</b>	<b>1150 152</b>
Canada	23 777	43 127	84 829	120 297	143 948	156 600
United States	220 178	251 034	435 219	696 092	860 723	993 552 <sup>b</sup>
<b>Other developed countries</b>	<b>28 232</b>	<b>61 688</b>	<b>252 354</b>	<b>320 576</b>	<b>366 908</b>	<b>398 898</b>
Australia	2 260	6 653	31 415	47 186	56 624	62 160
Israel	248 <sup>k</sup>	731 <sup>k</sup>	1 169	3 937	5 271	6 171
Japan	19 610	43 970	201 440	238 452	271 905	296 056 <sup>b</sup>
New Zealand	392 <sup>l</sup>	1 371 <sup>l</sup>	3 320	7 675	5 647	5 518
South Africa	5 722	8 963	15 010	23 326	27 461	28 992 <sup>b</sup>
<b>Developing countries</b>	<b>13 392</b>	<b>28 096</b>	<b>73 069</b>	<b>236 596</b>	<b>341 552</b>	<b>390 911</b>
<b>Africa</b>	<b>531</b>	<b>6 365</b>	<b>11 855</b>	<b>14 573</b>	<b>15 928</b>	<b>16 409</b>
<b>North Africa</b>	<b>299</b>	<b>448</b>	<b>865</b>	<b>1 239</b>	<b>1 417</b>	<b>1 532</b>
Algeria <sup>m</sup>	98	156	183	233	233	233
Egypt <sup>o</sup>	39	91	163	365	499	545
Libyan Arab Jamahiriya <sup>p</sup>	162	207	517	517	517	567
Morocco	..	..	..	114 <sup>q</sup>	150 <sup>q</sup>	170 <sup>q</sup>
Sudan	..	..	..	..	..	..
Tunisia	..	.. <sup>n, r</sup>	2 <sup>r</sup>	10 <sup>r</sup>	17 <sup>r</sup>	16 <sup>r</sup>
<b>Other Africa</b>	<b>232</b>	<b>5 917</b>	<b>10 990</b>	<b>13 334</b>	<b>14 511</b>	<b>14 877</b>
Angola	..	..	.. <sup>s</sup>	.. <sup>s</sup>	.. <sup>n, s</sup>	.. <sup>n, s</sup>
Benin <sup>t</sup>	-	2	2	2	26	36
Botswana	3 <sup>u</sup>	3 <sup>u</sup>	10 <sup>u</sup>	45	130	131
Burkina Faso <sup>v</sup>	3	3	3	3	5	6
Burundi	..	..	.. <sup>w</sup>	.. <sup>w</sup>	1 <sup>w</sup>	2 <sup>w</sup>
Cameroon <sup>x</sup>	23	53	150	227	243	248
Cape Verde	..	..	1 <sup>w</sup>	4 <sup>w</sup>	5 <sup>w</sup>	5 <sup>w</sup>

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Annex table B.4. FDI outward stock, by home region and economy, 1980, 1985, 1990, 1995, 1997 and 1998<sup>a</sup> (continued)

(Millions of dollars)

Host region/economy	1980	1985	1990	1995	1997	1998
Central African Republic <sup>y</sup>	-	2	18	46	57	62
Chad <sup>z</sup>	-	1	36	84	102	107
Comoros	..	..	1 <sup>s</sup>	1 <sup>s</sup>	1 <sup>s</sup>	1 <sup>s</sup>
Congo	..	..	..	..	..	..
Congo, Democratic Republic of	..	..	..	..	..	..
Côte d'Ivoire	..	..	..	..	..	..
Djibouti	..	..	..	..	..	..
Equatorial Guinea	..	..	.. <sub>w</sub>	.. <sub>w</sub>	.. <sub>w</sub>	.. <sub>w</sub>
Ethiopia	..	..	..	.. <sub>aa</sub>	.. <sub>aa</sub>	.. <sub>aa</sub>
Gabon <sup>v</sup>	77	102	163	205	219	224
Gambia	..	..	..	..	..	..
Ghana	..	..	..	..	..	..
Guinea	..	..	..	..	..	..
Guinea-Bissau	..	..	..	..	..	..
Kenya <sup>y</sup>	18	60	99	99	101	102
Lesotho	..	..	.. <sub>ab</sub>	.. <sub>ab</sub>	.. <sub>ab</sub>	.. <sub>ab</sub>
Liberia <sup>ac</sup>	48	361	453	717	1 315	1 482
Madagascar	..	..	..	..	..	..
Malawi	..	..	..	..	3	8
Mali <sup>y</sup>	22	22	22	22	24	24
Mauritania	..	..	3 <sup>ad</sup>	3 <sup>ad</sup>	3 <sup>ad</sup>	3 <sup>ad</sup>
Mauritius	..	..	1 <sup>ab</sup>	93 <sup>ab</sup>	99 <sup>ab</sup>	113 <sup>ab</sup>
Mozambique	..	..	..	..	..	..
Namibia	..	..	80	20	40	38
Niger <sup>v</sup>	2	8	54	109	120	127
Nigeria <sup>t</sup>	5	5 193	9 653	11 186	11 516	11 630
Rwanda	..	..	..	..	..	..
Senegal <sup>v</sup>	7	43	49	96	98	108
Seychelles <sup>ae</sup>	14	44	61	93	110	113
Sierra Leone	..	..	..	..	..	..
Somalia	..	..	..	..	..	..
Swaziland	9	9	40	137	69	74 <sup>b</sup>
Togo <sup>af</sup>	2	2	2	2	11	14
Uganda	..	..	..	..	..	..
United Republic of Tanzania	..	..	..	..	..	..
Zambia	..	..	..	..	..	..
Zimbabwe	..	10 <sup>ag</sup>	88 <sup>ag</sup>	137 <sup>ag</sup>	216 <sup>ag</sup>	225 <sup>ag</sup>
<b>Latin America and the Caribbean</b>	<b>2 954</b>	<b>7 268</b>	<b>12 716</b>	<b>27 911</b>	<b>43 670</b>	<b>56 238</b>
<b>South America</b>	<b>972</b>	<b>2 310</b>	<b>4 759</b>	<b>15 389</b>	<b>27 884</b>	<b>35 921</b>
Argentina <sup>ac</sup>	70	280	420	2 870	7 616	9 573
Bolivia	-	-	6	16	21 <sup>j</sup>	23 <sup>j</sup>
Brazil	652	1 361	2 397	5 050 <sup>ah</sup>	7 230 <sup>ah</sup>	9 839 <sup>ah</sup>
Chile	42	102	178	2 815 <sup>ai</sup>	5 928 <sup>ai</sup>	8 726 <sup>ai</sup>
Colombia	136	301	402	1 028	1 866	2 395 <sup>b</sup>
Ecuador	..	..	..	..	..	..
Guyana	..	..	..	2 <sup>aa</sup>	1 <sup>aa</sup>	1 <sup>aa</sup>
Paraguay <sup>ae</sup>	30	30	30	30	30	30
Peru	3	38	63	133	239	235 <sup>b</sup>
Suriname	..	..	..	..	..	..
Uruguay	16 <sup>ak</sup>	32 <sup>ak</sup>	42 <sup>aj</sup>	18 <sup>aj</sup>	51 <sup>aj</sup>	56 <sup>aj</sup>
Venezuela	23	165	1 221	3 427	4 903	5 043 <sup>b</sup>
<b>Other Latin America and the Caribbean</b>	<b>1 982</b>	<b>4 958</b>	<b>7 957</b>	<b>12 522</b>	<b>15 786</b>	<b>20 317</b>
Antigua and Barbuda	..	..	..	..	..	..
Aruba	..	..	..	..	..	..
Bahamas <sup>ac</sup>	285	154	1 535	1 184	1 184	1 185
Barbados <sup>m</sup>	5	12	23	32	37	39
Belize	..	..	..	10 <sup>q</sup>	20 <sup>q</sup>	21 <sup>q</sup>
Bermuda <sup>ac</sup>	724	2 002	1 550	2 321	4 439	6 804
Cayman Islands	..	..	..	..	..	..
Costa Rica <sup>z</sup>	6	26	43	66	78	83

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Annex table B.4. FDI outward stock, by home region and economy, 1980, 1985, 1990, 1995, 1997 and 1998<sup>a</sup> (continued)

(Millions of dollars)

Host region/economy	1980	1985	1990	1995	1997	1 998
Cuba	..	..	..	..	..	..
Dominica	..	..	..	..	..	..
Dominican Republic	..	..	..	38 <sup>aa</sup>	52 <sup>aa</sup>	53 <sup>aa</sup>
El Salvador	..	..	..	..	..	..
Grenada	..	..	..	..	..	..
Guatemala	..	..	..	..	..	..
Haiti	..	..	..	..	..	..
Honduras	..	..	..	..	..	..
Jamaica <sup>af</sup>	5	5	5	124	274	356
Mexico	136 <sup>ac</sup>	533 <sup>ac</sup>	575	4 132	5 278	5 825
Netherlands Antilles <sup>af</sup>	9	10	21	23	.. <sup>n</sup>	.. <sup>n</sup>
Nicaragua	..	..	..	..	..	..
Panama <sup>ac</sup>	811	2 204	4 188	4 573	5 834	7 196
Saint Kitts and Nevis	..	..	..	..	..	..
Saint Lucia	..	..	..	..	..	..
Saint Vincent and the Grenadin	..	..	..	..	..	..
Trinidad and Tobago	..	12 <sup>ag</sup>	17 <sup>ag</sup>	20 <sup>ag</sup>	22 <sup>ag</sup>	23 <sup>ag</sup>
Virgin Islands	..	..	..	..	..	..
<b>Developing Europe</b>	<b>-</b>	<b>-</b>	<b>258</b>	<b>984</b>	<b>1 209</b>	<b>1 354</b>
Bosnia and Herzegovina	..	..	..	.. <sup>al</sup>	.. <sup>al</sup>	1 <sup>al</sup>
Croatia	..	..	..	428 <sup>am</sup>	638 <sup>j</sup>	730 <sup>j</sup>
Malta	..	..	..	55 <sup>aa</sup>	145 <sup>aa</sup>	185 <sup>aa</sup>
Slovenia	..	..	258 <sup>an</sup>	500	424	435 <sup>b</sup>
TFYR Macedonia	..	..	..	..	2 <sup>ao</sup>	3 <sup>ao</sup>
Yugoslavia (former)	..	..	..	..	..	..
<b>Asia</b>	<b>9 894</b>	<b>14 426</b>	<b>48 147</b>	<b>192 990</b>	<b>280 584</b>	<b>316 724</b>
<b>West Asia</b>	<b>826</b>	<b>1 489</b>	<b>5 630</b>	<b>4 990</b>	<b>9 126</b>	<b>10 966</b>
Bahrain <sup>ac</sup>	..	10	46	139	429	519
Cyprus	..	.. <sup>ap</sup>	8 <sup>ap</sup>	63 <sup>ap</sup>	453 <sup>ap</sup>	456 <sup>ap</sup>
Iran, Islamic Republic	..	..	..	77 <sup>aq</sup>	138 <sup>aq</sup>	154 <sup>aq</sup>
Iraq	..	..	..	.. <sup>ar</sup>	.. <sup>ar</sup>	.. <sup>ar</sup>
Jordan <sup>p</sup>	23	26	16	.. <sup>n</sup>	.. <sup>n</sup>	.. <sup>n</sup>
Kuwait <sup>z</sup>	568	930	3 660	2 805	5 514	7 387
Lebanon <sup>ac</sup>	1	40	.. <sup>n</sup>	.. <sup>n</sup>	.. <sup>n</sup>	.. <sup>n</sup>
Oman <sup>ac</sup>	1	40	7	5	16	26
Qatar	..	..	..	..	..	..
Saudi Arabia <sup>ac</sup>	228	420	1 811	1 685	2 060	1 588
Syrian Arab Republic	..	..	..	..	..	..
Turkey	..	..	.. <sup>n, as</sup>	261 <sup>as</sup>	622 <sup>as</sup>	929 <sup>as</sup>
United Arab Emirates <sup>ac</sup>	5	19	99	66	44	44
Yemen	..	4 <sup>at</sup>	5 <sup>at</sup>	5 <sup>at</sup>	5 <sup>at</sup>	5 <sup>at</sup>
<b>Central Asia</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
Armenia	..	..	..	..	..	..
Azerbaijan	..	..	..	..	..	..
Georgia	..	..	..	..	..	..
Kazakhstan	..	..	..	..	..	..
Kyrgyzstan	..	..	..	..	..	..
Tajikistan	..	..	..	..	..	..
Turkmenistan	..	..	..	..	..	..
Uzbekistan	..	..	..	..	..	..
<b>South, East and South-East Asia</b>	<b>9 068</b>	<b>12 937</b>	<b>42 518</b>	<b>188 000</b>	<b>271 458</b>	<b>305 759</b>
Afghanistan	..	..	..	..	..	..
Bangladesh	..	..	.. <sup>s</sup>	2 <sup>s</sup>	5 <sup>s</sup>	15 <sup>s</sup>
Brunei Darussalam	..	..	..	..	..	..
Cambodia	..	..	..	..	..	..
China	-	131	2 489 <sup>au</sup>	15 802 <sup>au</sup>	20 479 <sup>au</sup>	22 079 <sup>au</sup>

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**Annex table B.4. FDI outward stock, by home region and economy, 1980, 1985, 1990, 1995, 1997 and 1998<sup>a</sup> (continued)**

(Millions of dollars)

Host region/economy	1980	1985	1990	1995	1997	1998
Hong Kong, China <sup>av</sup>	148	2 345	13 242	85 156	136 094	154 856
India	235 <sup>aw</sup>	250 <sup>aw</sup>	281 <sup>aw</sup>	494 <sup>ax</sup>	846 <sup>ax</sup>	865 <sup>ax</sup>
Indonesia	..	49 <sup>ac</sup>	25 <sup>ac</sup>	1 295	2 073	2 117
Korea, Democratic People's Republic	..	..	..	..	..	..
Korea, Republic of	142	461	2 301	10 231	16 750	21 505 <sup>b</sup>
Lao People's Democratic Repu	..	..	..	..	..	..
Macau	..	..	..	..	..	..
Malaysia	414	1 374	2 671	11 143	12 725	14 645 <sup>b</sup>
Maldives	..	..	..	..	..	..
Mongolia	..	..	..	..	..	..
Myanmar	..	..	..	..	..	..
Nepal	..	..	..	..	..	..
Pakistan	40	126	244	266	239 <sup>j</sup>	244 <sup>j</sup>
Philippines	171	171	155 <sup>ay</sup>	1 209 <sup>ay</sup>	1 527 <sup>ay</sup>	1 687 <sup>ay</sup>
Singapore	7 808 <sup>k</sup>	7 808 <sup>k</sup>	7 808	35 050	44 522 <sup>j</sup>	47 630 <sup>j</sup>
Sri Lanka	..	1 <sup>ap</sup>	8 <sup>ap</sup>	37 <sup>ap</sup>	39 <sup>ap</sup>	40 <sup>ap</sup>
Taiwan Province of China	97	204	12 888 <sup>ay</sup>	25 144 <sup>ay</sup>	34 209 <sup>ay</sup>	38 003 <sup>ay</sup>
Thailand	13	16	404	2 173	1 951	2 073 <sup>b</sup>
Viet Nam	..	..	..	..	..	..
<b>The Pacific</b>	<b>13</b>	<b>37</b>	<b>94</b>	<b>138</b>	<b>161</b>	<b>185</b>
Fiji <sup>af</sup>	2	15	87	132	154	179
Kiribati	..	..	..	.. <sub>ar</sub>	.. <sub>ar</sub>	.. <sub>ar</sub>
New Caledonia	..	..	..	..	..	..
Papua New Guinea	10	22	7 <sup>au</sup>	7 <sup>au</sup>	7 <sup>au</sup>	7 <sup>au</sup>
Samoa	..	..	..	..	..	..
Solomon Islands	..	..	..	..	..	..
Tonga	..	..	..	.. <sub>q</sub>	.. <sub>q</sub>	.. <sub>q</sub>
Vanuatu	..	..	..	..	..	..
<b>Central and Eastern Europe</b>	<b>4</b>	<b>25</b>	<b>358</b>	<b>5 000</b>	<b>9 604</b>	<b>11 343</b>
Albania	..	..	..	48 <sup>aq</sup>	68 <sup>aq</sup>	69 <sup>aq</sup>
Belarus	..	..	..	..	..	..
Bulgaria	..	..	..	8 <sup>al</sup>	35 <sup>al</sup>	35 <sup>al</sup>
Czech Republic	..	..	..	346	548	661
Czechoslovakia (former)	..	..	..	..	..	..
Estonia	..	..	..	39 <sup>e</sup>	215	198
Hungary	..	..	197	489	900	1 286
Latvia	..	..	.. <sub>az</sub>	231	222	290
Lithuania	..	..	..	1	26	17
Moldova, Republic of	..	..	..	18 <sup>al</sup>	19 <sup>al</sup>	18 <sup>al</sup>
Poland	4 <sup>k</sup>	25 <sup>k</sup>	95	539	678	841
Romania	..	..	66	121	114	119
Russian Federation	..	..	.. <sub>ba</sub>	3 015	6 410	7 385
Slovakia	..	..	..	48	234	326 <sup>b</sup>
Ukraine	..	..	..	97 <sup>e</sup>	134	98
<i>Memorandum:</i>						
<b>Least developed countries: <sup>bb</sup></b>						
<b>Total</b>	<b>78</b>	<b>406</b>	<b>602</b>	<b>1 000</b>	<b>1 680</b>	<b>1 892</b>
Africa	..	78	402	596	994	1 670
Latin America and the Caribbean	..	..	..	..	..	..
Asia and the Pacific	..	4	5	6	10	20
Asia	..	4	5	6	10	20
West Asia	..	4	5	5	5	5
South, East and South-East Asia	..	..	..	2	5	15
The Pacific	..	..	..	..	..	..

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Annex table B.4. FDI outward stock, by home region and economy, 1980, 1985, 1990, 1995, 1997 and 1998<sup>a</sup> (concluded)

(Millions of dollars)

Host region/economy	1980	1985	1990	1995	1997	1998
<b>Oil-exporting countries:</b> <sup>bc</sup>						
<b>Total</b>	<b>1 780</b>	<b>9 353</b>	<b>20 979</b>	<b>37 570</b>	<b>46 482</b>	<b>114</b>
Africa		404	5 796	10 830	12 744	13 242
-						
<i>North Africa</i>	<i>299</i>	<i>448</i>	<i>865</i>	<i>1 125</i>	<i>1 267</i>	-
<i>Other Africa</i>	<i>105</i>	<i>5 347</i>	<i>9 966</i>	<i>11 619</i>	<i>11 976</i>	-
Latin America and the Caribbean	160	711	1 819	7 595	10 224	96
<i>South America</i>	<i>24</i>	<i>166</i>	<i>1 227</i>	<i>3 443</i>	<i>4 924</i>	<i>96</i>
<i>Other Latin America and the Caribbean</i>	<i>136</i>	<i>545</i>	<i>592</i>	<i>4 152</i>	<i>5 300</i>	-
Asia 1 216	2 847	8 330	17 230	23 015	18	
<i>Central Asia</i>	-	<i>5</i>	<i>10</i>	<i>15</i>	<i>17</i>	<i>18</i>
<i>West Asia</i>	<i>802</i>	<i>1 419</i>	<i>5 623</i>	<i>4 777</i>	<i>8 201</i>	-
<i>South, East and South-East Asia</i>	<i>414</i>	<i>1 423</i>	<i>2 696</i>	<i>12 438</i>	<i>14 798</i>	-
All developing countries minus China	13 392	27 965	70 580	220 795	321 073	368 833
Asia and the Pacific	9 907	14 463	48 241	193 128	280 745	316 910
Africa including South Africa	6 253	15 328	26 865	37 899	43 389	45 401

Source: UNCTAD, FDI/TNC database.

Note: For data on FDI stock which are calculated as an accumulation of flows, price changes are not taken into account.

a For the countries for which the stock data are estimated by either cumulating FDI flows or adding flows to FDI stock in a particular year, notes are given below.

b Estimated by adding flows to the stock of 1997.

c 1995 stock is estimated by adding the flow of 1995 to the stock of 1994. Afterwards stocks were estimated by adding flows to the stock of 1996.

d Stock data prior to 1987 are estimated by subtracting flows.

e Stock data prior to 1997 are estimated by subtracting flows.

f Estimated by accumulating flows since 1984.

g Stock data prior to 1991 are estimated by accumulating flows since 1972. From 1991 to 1994 stocks were estimated by subtracting flows to the stock of 1995.

h Stock data prior to 1982 are estimated by subtracting flows.

i Stock data prior to 1988 are estimated by subtracting flows.

j Estimated by adding flows to the stock of 1996.

k Stock data prior to 1990 are estimated by subtracting flows.

l Stock data prior to 1990 are estimated by accumulating flows since 1976.

m Estimated by accumulating flows since 1970.

n Negative accumulation of flows. However, this value is included in the regional and global total.

o Estimated by accumulating flows since 1977.

p Estimated by adding flows to the stock of 1972.

q Estimated by accumulating flows since 1991.

r Estimated by accumulating flows since 1981.

s Estimated by accumulating flows since 1990.

t Estimated by accumulating flows since 1979.

u Stock data prior to 1994 are estimated by accumulating flows since 1976.

v Estimated by accumulating flows since 1974.

w Estimated by accumulating flows since 1989.

x Estimated by accumulating flows since 1973.

y Estimated by accumulating flows since 1975.

z Estimated by accumulating flows since 1978.

aa Estimated by accumulating flows since 1993.

ab Estimated by accumulating flows since 1988.

ac Estimated by using the inward stock of the United States as a proxy and accumulating flows since 1994.

ad Estimated by accumulating flows since 1986.

ae Estimated by accumulating flows since 1976.

af Estimated by accumulating flows since 1980.

ag Estimated by accumulating flows since 1983.

ah Estimated by adding flows to the stock of 1990.

ai Estimated by adding flows to the stock of 1992.

aj Estimated by adding flows to the stock of 1987.

ak Stock data prior to 1983 are estimated by subtracting flows.

- al Estimated by accumulating flows since 1995.
- am Stock data prior to 1996 are estimated by subtracting flows.
- an Stock data prior to 1993 are estimated by subtracting flows.
- ao Estimated by accumulating flows since 1996.
- ap Estimated by accumulating flows since 1985.
- aq Estimated by accumulating flows since 1992.
- ar Estimated by accumulating flows since 1994.
- as Estimated by accumulating flows since 1987.
- at Estimated by accumulating flows since 1982.
- au Estimated by adding flows to the stock of 1989.
- av Estimated by using the inward stock of the United States and China as a proxy and accumulating flows since 1994.
- aw Stock data prior to 1992 are estimated by subtracting flows.
- ax Estimated by accumulating flows since 1992.
- ay Estimated by adding flows to the stock of 1988.
- az Stock data prior to 1995 are estimated by subtracting flows.
- ba Stock data prior to 1994 are estimated by subtracting flows.
- bb Least developed countries include: Afghanistan, Angola, Bangladesh, Benin, Burkina Faso, Burundi, Cambodia, Cape Verde, Central African Republic, Chad, Comoros, Democratic Republic of Congo, Djibouti, Equatorial Guinea, Ethiopia, Gambia, Guinea, Guyana, Haiti, Honduras, India, Indonesia, Jamaica, Jordan, Kenya, Kiribati, Kuwait, Lao PDR, Lesotho, Liberia, Madagascar, Malawi, Malaysia, Mali, Mauritania, Mauritius, Mexico, Mongolia, Morocco, Mozambique, Myanmar, Namibia, Nepal, Niger, Nigeria, Oman, Pakistan, Papua New Guinea, Paraguay, Peru, Philippines, Poland, Portugal, Romania, Rwanda, Saudi Arabia, Senegal, Sierra Leone, Singapore, Solomon Islands, South Africa, South Korea, Sri Lanka, Sudan, Sweden, Switzerland, Taiwan, Tanzania, Thailand, Timor-Leste, Tonga, Trinidad and Tobago, Tunisia, Turkey, Uganda, Ukraine, United Arab Emirates, United Kingdom, United States, Uruguay, Uzbekistan, Vanuatu, Venezuela, Viet Nam, Yemen, Zambia, Zimbabwe.
- bc Oil-exporting countries include: Algeria, Angola, Bahrain, Brunei Darussalam, Cameroon, Congo, Ecuador, Egypt, Gabon, Indonesia, Islamic Republic of Iran, Iraq, Kuwait, Libyan Arab Jamahiriya, Malaysia, Mexico, Nigeria, Oman, Qatar, Saudi Arabia, Trinidad and Tobago, United Arab Emirates, Venezuela.

**Annex table B.5. Inward and outward FDI flows as a percentage of gross fixed capital formation, by region and economy, 1987-1997**

(Percentage)

Region/economy	1987-1992 (Annual average)	1993	1994	1995	1996	1997
<b>World</b>						
<b>inward</b>	<b>4.1</b>	<b>4.3</b>	<b>4.6</b>	<b>5.4</b>	<b>5.8</b>	<b>7.7</b>
<b>outward</b>	<b>4.7</b>	<b>5.0</b>	<b>5.3</b>	<b>6.0</b>	<b>6.3</b>	<b>8.0</b>
<b>Developed countries</b>						
<b>inward</b>	<b>4.2</b>	<b>3.6</b>	<b>3.7</b>	<b>4.7</b>	<b>4.8</b>	<b>6.5</b>
<b>outward</b>	<b>5.7</b>	<b>5.6</b>	<b>6.1</b>	<b>7.0</b>	<b>7.3</b>	<b>9.7</b>
<b>Western Europe</b>						
<b>inward</b>	<b>5.7</b>	<b>5.7</b>	<b>5.8</b>	<b>7.1</b>	<b>6.8</b>	<b>8.6</b>
<b>outward</b>	<b>8.3</b>	<b>7.9</b>	<b>9.3</b>	<b>10.3</b>	<b>12.0</b>	<b>15.4</b>
<b>European Union</b>						
<b>inward</b>	<b>5.8</b>	<b>5.9</b>	<b>5.6</b>	<b>7.2</b>	<b>6.8</b>	<b>8.5</b>
<b>outward</b>	<b>8.3</b>	<b>7.6</b>	<b>8.9</b>	<b>10.0</b>	<b>11.4</b>	<b>14.8</b>
Austria						
inward	2.0	2.9	4.8	3.5	8.1	4.8
outward	3.2	3.0	2.9	2.1	3.5	3.9
Belgium and Luxembourg						
inward	20.3	26.1	19.4	20.7	27.9	26.7
outward	17.4	11.9	3.1	22.4	16.0	16.6
Denmark						
inward	3.7	6.8	18.9	12.4	2.2	8.3
outward	6.2	5.4	15.7	8.9	7.1	12.4
Finland						
inward	1.4	6.9	10.5	5.4	5.5	10.5
outward	5.3	11.2	30.7	7.7	17.9	26.2
France						
inward	5.3	7.1	6.5	8.6	8.2	9.7
outward	9.9	8.5	10.2	5.7	11.3	15.0
Germany						
inward	0.8	-	1.6	2.3	1.1	2.3
outward	5.5	4.1	4.2	7.5	10.3	9.5
Greece						
inward	5.8	5.2	5.3	4.8	4.4	4.0
outward	0.1	a	-	-0.5	0.3	-
Ireland						
inward	8.9	14.9	9.6	13.4	20.6	19.0
outward	5.5	2.9	5.0	7.6	5.7	7.0
Italy						
inward	2.2	2.6	1.3	2.6	1.7	1.9
outward	2.5	5.6	3.3	3.7	2.9	5.4
Netherlands						
inward	13.1	14.2	11.4	15.6	18.9	12.9
outward	22.6	20.2	27.5	25.8	40.5	29.4
Portugal						
inward	9.7	7.9	6.1	2.8	5.3	9.9
outward	1.4	0.8	1.4	2.8	3.0	7.5
Spain						
inward	9.9	10.1	9.8	5.9	5.7	5.9
outward	2.2	3.2	4.1	3.6	4.7	11.5
Sweden						
inward	5.0	14.5	23.4	42.9	13.6	35.0
outward	18.0	5.2	24.7	33.3	12.5	40.6
United Kingdom						
inward	13.5	10.9	6.1	11.9	14.5	18.6
outward	16.1	19.0	22.2	25.9	19.7	32.0
<b>Other Western Europe</b>						
<b>inward</b>	<b>3.5</b>	<b>2.5</b>	<b>8.2</b>	<b>6.2</b>	<b>6.8</b>	<b>10.1</b>
<b>outward</b>	<b>9.0</b>	<b>12.5</b>	<b>15.5</b>	<b>15.6</b>	<b>23.4</b>	<b>25.2</b>

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**Annex table B.5. Inward and outward FDI flows as a percentage of gross fixed capital formation, by region and economy, 1987-1997 (continued)**

(Percentage)

Region/economy	1987-1992 (Annual average)	1993	1994	1995	1996	1997
Gibraltar						
inward	..	..	..	..	..	..
outward	..	..	..	..	..	..
Iceland						
inward	-0.1	-0.1	0.2	1.3	6.3	10.8
outward	0.9	1.5	2.4	2.5	4.8	3.7
Norway						
inward	1.3	4.2	10.8	7.9	9.7	10.3
outward	4.1	3.0	8.5	9.4	17.6	14.2
Switzerland						
inward	4.7	1.8	7.1	5.5	5.2	9.9
outward	11.5	17.2	18.8	18.6	27.2	33.5
<b>North America</b>						
<b>inward</b>	<b>5.9</b>	<b>5.1</b>	<b>5.0</b>	<b>6.1</b>	<b>7.2</b>	<b>9.4</b>
<b>outward</b>	<b>4.0</b>	<b>8.5</b>	<b>7.8</b>	<b>9.4</b>	<b>7.3</b>	<b>10.3</b>
Canada						
inward	5.3	4.8	8.1	9.4	9.1	10.0
outward	5.0	5.7	9.2	11.7	12.4	19.2
United States						
inward	6.0	5.1	4.7	5.8	7.0	9.3
outward	3.9	8.8	7.7	9.1	6.9	9.4
<b>Other developed countries</b>						
<b>inward</b>	<b>0.9</b>	<b>0.5</b>	<b>0.6</b>	<b>1.2</b>	<b>0.7</b>	<b>1.3</b>
<b>outward</b>	<b>3.7</b>	<b>1.4</b>	<b>1.6</b>	<b>1.7</b>	<b>1.9</b>	<b>2.6</b>
Australia						
inward	10.3	6.9	6.6	17.3	6.3	10.3
outward	6.0	4.3	3.6	5.2	7.3	7.1
Israel						
inward	1.8	2.9	2.1	6.4	6.2	6.9
outward	2.0	4.3	3.4	2.8	2.9	2.8
Japan						
inward	-	-	-	-	-	0.3
outward	3.6	1.1	1.4	1.5	1.7	2.2
New Zealand						
inward	21.0	29.4	24.4	29.6	17.6	20.5
outward	9.0	16.0	16.5	-2.7	-13.6	-3.2
South Africa						
inward	-0.1	-	1.7	4.4	3.5	7.6
outward	1.2	1.5	0.7	1.2	0.3	10.5
<b>Developing countries</b>						
<b>inward</b>	<b>3.9</b>	<b>6.4</b>	<b>8.0</b>	<b>7.3</b>	<b>8.4</b>	<b>10.3</b>
<b>outward</b>	<b>1.4</b>	<b>3.2</b>	<b>3.5</b>	<b>3.6</b>	<b>3.8</b>	<b>3.9</b>
<b>Africa</b>						
<b>inward</b>	<b>4.2</b>	<b>5.5</b>	<b>8.3</b>	<b>5.9</b>	<b>7.8</b>	<b>8.3</b>
<b>outward</b>	<b>1.9</b>	<b>1.9</b>	<b>1.2</b>	<b>1.0</b>	<b>-</b>	<b>2.1</b>
<b>North Africa</b>						
<b>inward</b>	<b>2.6</b>	<b>3.9</b>	<b>5.9</b>	<b>2.9</b>	<b>4.4</b>	<b>6.8</b>
<b>outward</b>	<b>0.3</b>	<b>0.1</b>	<b>0.3</b>	<b>0.4</b>	<b>0.1</b>	<b>0.6</b>
Algeria						
inward	-	-0.5	0.2	-0.2	3.6	5.1
outward	0.1	..	..	..	..	..
Egypt						
inward	4.4	5.3	11.9	5.3	5.1	6.1
outward	0.1	-	0.4	0.8	-	0.9

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**Annex table B.5. Inward and outward FDI flows as a percentage of gross fixed capital formation, by region and economy, 1987-1997 (continued)**

(Percentage)

Region/economy	1987-1992 (Annual average)	1993	1994	1995	1996	1997
Libyan Arab Jamahiriya						
inward	1.4	0.8	1.9	0.2	5.7	0.3
outward	2.1	..	..	..	..	..
Morocco						
inward	3.8	8.1	8.8	4.7	5.0	15.6
outward	0.4 <sup>0</sup>	0.4	0.4	0.2	0.4	0.7
Sudan						
inward	-0.3	-	-	-	-	3.8
outward	..	..	..	..	..	..
Tunisia						
inward	5.8	13.7	10.2	6.1	5.3	7.3
outward	-	-	0.1	-0.1	-	0.1
<b>Other Africa</b>						
<b>inward</b>	<b>7.1</b>	<b>8.0</b>	<b>12.3</b>	<b>10.2</b>	<b>12.3</b>	<b>9.7</b>
<b>outward</b>	<b>6.9</b>	<b>4.2</b>	<b>2.4</b>	<b>1.5</b>	<b>-0.2</b>	<b>3.1</b>
Angola						
inward	29.1	48.0	27.2	75.0	28.7	65.6
outward	..	0.3	-0.3	-0.2	-0.2	-0.2
Benin						
inward	1.1	-	-	0.3	6.6	7.2
outward	..	..	..	-	3.1	3.2
Botswana						
inward	5.3	-29.1	-1.4	6.4	6.7	8.8
outward	0.7	1.0	0.9	3.7	-	-0.3
Burkina Faso						
inward	0.3	2.2	0.3	0.3	2.8	2.1
outward	..	..	..	-	0.1	0.2
Burundi						
inward	0.5	0.3	-	1.7	0.3	1.0
outward	-	-	0.1	0.5	0.3	0.4
Cameroon						
inward	0.2	0.3	-0.9	0.6	6.3	4.8
outward	1.0	1.3	-	-	0.5	0.5
Cape Verde						
inward	0.9	2.9	1.7	21.0	22.8	9.3
outward	0.5	0.5	0.3	0.5	0.2	-
Central African Republic						
inward	-0.6	-9.4	3.4	-0.3	2.5	4.0
outward	2.7	5.0	6.8	5.6	5.8	4.7
Chad						
inward	4.8	13.5	24.0	10.7	20.7	33.2
outward	8.3	9.7	0.5	10.6	6.9	8.9
Comoros						
inward	5.5	0.4	0.4	1.8	1.0	1.4
outward	..	..	..	..	..	..
Congo						
inward	3.0	40.4	0.8	-16.1	5.3	-3.7
outward	..	..	..	..	..	..
Congo, Democratic Republic of						
inward	-1.2	2.9	-295.6	-4.1	9.5	-2.7
outward	..	..	..	..	..	..
Côte d'Ivoire						
inward	-0.2	10.7	9.5	16.5	15.3	21.5
outward	..	..	-	-	-0.7	-
Djibouti						
inward	0.5	1.9	2.6	4.5	30.2	40.2
outward	..	..	..	..	..	..
Equatorial Guinea						
inward	27.8	54.0	46.8	330.5	972.3	1.0
outward	..	..	..	..	..	..

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**Annex table B.5. Inward and outward FDI flows as a percentage of gross fixed capital formation, by region and economy, 1987-1997 (continued)**

(Percentage)

Region/economy	1987-1992 (Annual average)	1993	1994	1995	1996	1997
Ethiopia						
inward	0.1	0.5	2.7	3.5	1.2	7.2
outward	..	0.1	-0.1	-	-	-
Gabon						
inward	5.4	-9.6	-8.4	-9.6	26.4	12.2
outward	1.5	0.2	-	-	-	1.3
Gambia						
inward	11.2	19.3	16.5	12.5	20.3	20.8
outward	..	..	..	..	..	..
Ghana						
inward	1.9	14.0	30.2	12.4	13.4	5.0
outward	..	..	..	-	16.8	-
Guinea						
inward	4.4	0.5	-	0.1	4.6	3.4
outward	..	..	..	-	-	-
Guinea-Bissau						
inward	0.3	-	0.3	-	2.0	27.3
outward	..	..	..	..	..	..
Kenya						
inward	1.9	0.2	0.3	1.7	0.7	2.1
outward	0.4	-	-	-	-	0.1
Lesotho						
inward	3.2	2.9	3.1	-	2.4	1.7
outward	..	..	..	..	..	..
Liberia						
inward	192.9	-54.8	17.5	4.7	-134.2	295.3
outward	110.4	58.2	85.7	-97.7	-436.9	1042.5
Madagascar						
inward	3.5	4.0	1.8	2.8	2.2	55.2
outward	..	..	..	-	-	-0.2
Malawi						
inward	4.4	5.2	2.8	12.3	19.6	8.9
outward	..	..	..	-	0.9	0.4
Mali						
inward	-0.3	0.8	3.9	18.5	13.6	6.6
outward	..	..	..	-	0.3	-
Mauritania						
inward	2.1	11.2	1.3	3.8	2.6	0.5
outward	0.3	..	..	..	..	..
Mauritius						
inward	3.7	1.6	1.9	1.9	3.3	5.0
outward	1.5	3.6	-	0.4	0.2	0.3
Mozambique						
inward	1.6	3.5	3.5	4.9	7.7	6.8
outward	..	..	..	..	..	..
Namibia						
inward	11.4	9.3	15.1	21.1	19.0	13.3
outward	0.4 <sup>b</sup>	1.5	-0.9	-0.5	-3.2	-
Niger						
inward	8.2	-25.4	-6.9	4.2	8.1	-4.0
outward	3.7	4.3	-1.1	4.2	4.1	2.4
Nigeria						
inward	28.4	36.5	50.5	20.6	21.3	7.2
outward	25.7	11.8	4.6	6.4	1.8	0.9
Rwanda						
inward	3.6	1.6	-	1.0	1.0	0.9
outward	..	..	..	..	..	..
Senegal						
inward	2.7	-0.1	12.6	4.7	1.2	17.4
outward	1.1	-	3.3	-0.5	0.2	-
Seychelles						
inward	25.8	3.2	12.2	26.6	11.3	23.2
outward	3.2	0.9	10.4	10.2	5.0	2.1

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**Annex table B.5. Inward and outward FDI flows as a percentage of gross fixed capital formation, by region and economy, 1987-1997 (continued)**

(Percentage)

Region/economy	1987-1992 (Annual average)	1993	1994	1995	1996	1997
Sierra Leone						
inward	20.2	-15.7	-4.0	-3.1	32.9	15.7
outward	..	..	..	..	..	..
Somalia						
inward	-0.8	-	-	-	-	-
outward	..	..	..	..	..	..
Swaziland						
inward	37.8	28.3	19.1	12.3	4.7	-2.8
outward	10.2	10.9	19.5	4.9	-1.8	-9.7
Togo						
inward	2.7	-	2.8	0.2	10.9	2.7
outward	..	..	..	-	3.4	1.2
Uganda						
inward	-	10.1	11.7	12.2	12.4	19.2
outward	..	..	..	0.3	-0.1	-0.4
United Republic of Tanzania						
inward	0.3	1.9	4.5	11.6	14.0	13.0
outward	..	..	..	..	..	..
Zambia						
inward	30.8	0.4	5.2	10.4	8.2	14.3
outward	..	..	..	..	..	..
Zimbabwe						
inward	-0.6	2.5	2.7	6.4	4.3	7.8
outward	1.1	0.4	0.9	0.7	2.7	1.6
<b>Latin America and the Caribbean</b>						
<b>inward</b>	<b>5.4</b>	<b>6.0</b>	<b>9.1</b>	<b>9.4</b>	<b>12.5</b>	<b>16.1</b>
<b>outward</b>	<b>0.7</b>	<b>0.9</b>	<b>1.3</b>	<b>1.3</b>	<b>1.5</b>	<b>2.5</b>
<b>South America</b>						
<b>inward</b>	<b>4.0</b>	<b>4.4</b>	<b>6.7</b>	<b>7.2</b>	<b>11.9</b>	<b>15.7</b>
<b>outward</b>	<b>0.5</b>	<b>1.6</b>	<b>1.5</b>	<b>1.5</b>	<b>1.5</b>	<b>2.8</b>
Argentina						
inward	7.6	5.8	6.1	10.5	12.4	12.7
outward	0.8	1.5	1.7	3.0	3.0	5.0
Bolivia						
inward	7.9	12.9	14.7	35.9	39.8	53.8
outward	0.2	0.2	0.2	0.2	0.2	0.2
Brazil						
inward	1.8	1.5	2.3	3.8	7.1	11.9
outward	0.3	0.7	0.5	0.8	0.4	1.1
Chile						
inward	14.4	9.3	21.8	19.1	27.5	27.9
outward	1.4	3.9	7.7	4.9	6.8	10.1
Colombia						
inward	6.8	10.0	10.3	6.1	21.0	38.2
outward	0.5	2.5	1.1	1.6	2.2	5.4
Ecuador						
inward	6.8	16.5	17.0	14.1	14.5	18.5
outward	..	-	-	-	-	-
Guyana						
inward	..	28.7	43.0	26.4	29.7	15.7
outward	..	0.8	-	-	-0.3	-
Paraguay						
inward	4.1	5.0	7.8	7.5	11.3	12.0
outward	..	..	..	..	..	..
Peru						
inward	0.7	9.9	29.4	14.6	23.4	11.1
outward	..	0.3	-	-	-0.1	0.5
Suriname						
inward	-30.9	-3.2	-3.5	-2.1	0.6	1.2
outward	..	..	..	..	..	..

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**Annex table B.5. Inward and outward FDI flows as a percentage of gross fixed capital formation, by region and economy, 1987-1997 (continued)**

(Percentage)

Region/economy	1987-1992 (Annual average)	1993	1994	1995	1996	1997
Uruguay						
inward	1.6	9.0	7.4	7.5	6.1	5.3
outward	-0.2	1.7	-0.3	-1.3	0.5	0.9
Venezuela						
inward	5.5	3.1	7.9	7.9	21.0	34.4
outward	1.6	7.4	6.6	2.4	4.9	3.2
<b>Other Latin America and the Caribbean</b>						
<b>inward</b>	<b>8.9</b>	<b>9.2</b>	<b>15.0</b>	<b>18.6</b>	<b>14.9</b>	<b>17.5</b>
<b>outward</b>	<b>1.1</b>	<b>-0.7</b>	<b>1.0</b>	<b>0.2</b>	<b>1.3</b>	<b>1.7</b>
Antigua and Barbuda						
inward	29.4	10.3	15.3	17.3	8.7	15.0
outward	..	-0.7	-0.6	-1.1	-0.5	-1.1
Aruba						
inward	..	..	..	..	..	..
outward	..	..	..	..	..	..
Bahamas						
inward	1.5	5.1	3.8	15.3	14.3	32.7
outward	-3.3	-	-	-	-	-
Barbados						
inward	3.8	4.5	5.6	5.9	6.2	6.9
outward	0.6	1.2	0.5	1.7	1.7	0.6
Belize						
inward	14.2	5.8	12.7	15.6	12.8	9.1
outward	1.5 <sup>a</sup>	1.3	1.6	1.5	4.4	3.0
Bermuda						
inward	..	..	..	..	..	..
outward	..	..	..	..	..	..
Cayman Islands						
inward	..	..	..	..	..	..
outward	..	..	..	..	..	..
Costa Rica						
inward	13.1	14.1	18.1	22.7	25.7	26.0
outward	0.4	0.1	0.3	0.3	0.3	0.4
Cuba						
inward	..	..	..	..	..	..
outward	..	..	..	..	..	..
Dominica						
inward	25.8	18.4	31.2	75.9	24.8	27.8
outward	..	..	..	..	..	..
Dominican Republic						
inward	7.7	8.9	13.5	15.3	12.1	11.5
outward	..	0.4	0.5	0.6	0.5	-
El Salvador						
inward	1.9	1.3	-	2.1	1.5	2.4
outward	..	..	..	-	0.2	-
Grenada						
inward	22.2	27.6	21.8	23.7	18.9	24.7
outward	..	..	..	..	..	..
Guatemala						
inward	11.6	7.3	3.3	3.3	3.4	3.3
outward	..	..	-1.1	-1.1	-	-
Haiti						
inward	1.2	-2.4	-	2.3	1.0	1.3
outward	-2.0 <sup>b</sup>	-0.9	-	0.3	0.3	-
Honduras						
inward	6.7	5.2	4.3	7.3	9.5	11.5
outward	..	-	-0.3	-0.2	-0.2	-
Jamaica						
inward	8.7	5.8	9.9	8.9	9.8	12.6
outward	..	..	4.0	4.0	4.9	3.5

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**Annex table B.5. Inward and outward FDI flows as a percentage of gross fixed capital formation, by region and economy, 1987-1997 (continued)**

(Percentage)

Region/economy	1987-1992 (Annual average)	1993	1994	1995	1996	1997
Mexico						
inward	9.4	9.0	15.2	20.6	15.5	16.3
outward	0.4	-0.1	1.3	-0.6	-	1.4
Netherlands Antilles						
inward	..	..	..	..	..	..
outward	..	..	..	..	..	..
Nicaragua						
inward	0.3	10.4	10.0	16.6	18.1	24.7
outward	..	..	..	-	-1.7	-
Panama						
inward	-15.5	9.3	22.5	14.0	16.0	49.3
outward	51.8	-29.4	-11.5	16.0	40.3	16.7
Saint Kitts and Nevis						
inward	36.5	15.3	18.2	23.6	26.1	32.0
outward	..	-1.1	-1.2	-2.4	-3.1	-2.6
Saint Lucia						
inward	..	..	..	..	..	..
outward	..	..	..	..	..	..
Saint Vincent and the Grenadines						
inward	16.6	43.2	59.9	35.1	19.5	48.5
outward	..	..	..	..	..	..
Trinidad and Tobago						
inward	16.0	59.3	51.3	36.1	34.9	109.0
outward	-	0.2	-	0.1	0.1	0.1
Virgin Islands						
inward	..	..	..	..	..	..
outward	..	..	..	..	..	..
<b>Developing Europe</b>						
<b>inward</b>	<b>7.4</b>	<b>5.4</b>	<b>7.3</b>	<b>5.5</b>	<b>10.7</b>	<b>9.2</b>
<b>outward</b>	<b>..</b>	<b>-</b>	<b>-0.1</b>	<b>0.8</b>	<b>0.9</b>	<b>2.4</b>
Bosnia and Herzegovina						
inward	..	..	..	..	..	..
outward	..	..	..	..	..	..
Croatia						
inward	..	..	..	3.4	13.3	10.4
outward	..	..	..	0.2	0.6	3.8
Malta						
inward	7.4	7.8	19.1	17.8	34.0	15.0
outward	..	0.1	-0.1	5.5	5.7	4.1
Slovenia						
inward	..	4.7	4.4	4.4	4.4	7.5
outward	..	-	-0.1	0.1	0.2	0.7
TFYR Macedonia						
inward	..	..	5.2	1.8	1.7	3.0
outward	..	..	..	-	0.1	0.2
Yugoslavia (former)						
inward	..	..	..	..	..	..
outward	..	..	..	..	..	..
<b>Asia</b>						
<b>inward</b>	<b>3.3</b>	<b>6.5</b>	<b>7.5</b>	<b>6.6</b>	<b>7.2</b>	<b>8.4</b>
<b>outward</b>	<b>1.6</b>	<b>4.1</b>	<b>4.5</b>	<b>4.6</b>	<b>4.8</b>	<b>4.5</b>
<b>West Asia</b>						
<b>inward</b>	<b>0.9</b>	<b>2.9</b>	<b>1.4</b>	<b>-0.3</b>	<b>0.4</b>	<b>3.3</b>
<b>outward</b>	<b>0.3</b>	<b>0.7</b>	<b>-1.4</b>	<b>-0.8</b>	<b>1.5</b>	<b>1.5</b>
Bahrain						
inward	6.9	-0.4	-2.7	-2.7	6.2	3.4
outward	2.2	12.1	10.5	-	11.9	26.3

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Annex table B.5. Inward and outward FDI flows as a percentage of gross fixed capital formation, by region and economy, 1987-1997 (continued)

(Percentage)

Region/economy	1987-1992 (Annual average)	1993	1994	1995	1996	1997
Cyprus						
inward	6.5	5.6	4.9	7.0	15.0	10.6
outward	0.5	0.8	0.4	0.4	0.5	23.1
Iran, Islamic Republic						
inward	-0.1	-0.3	-	-	-	1.5
outward	..	0.3	-	-	-	0.2
Iraq						
inward	..	..	..	..	..	..
outward	..	..	..	..	..	..
Jordan						
inward	1.8	-1.8	0.1	0.7	0.8	20.3
outward	-	-2.8	-1.2	-1.4	-2.1	0.6
Kuwait						
inward	0.2	0.3	-	0.2	8.4	0.5
outward	16.4	15.9	-37.7	-25.5	42.0	23.7
Lebanon						
inward	0.5	0.4	1.8	1.5	4.3	10.8
outward	0.8	-0.1	-0.2	-0.1	-0.1	-0.2
Oman						
inward	6.8	6.5	3.8	2.2	2.9	1.3
outward	-c	-0.1	0.2	-	-	0.3
Qatar						
inward	0.9	5.4	7.3	5.0	2.1	3.1
outward	..	..	..	1.6	2.4	1.1
Saudi Arabia						
inward	-0.2	5.2	1.6	-8.1	-4.7	11.0
outward	1.1	-0.2	0.4	-	0.7	0.8
Syrian Arab Republic						
inward	1.4	1.8	1.9	0.7	0.6	0.6
outward	..	..	..	..	-	-
Turkey						
inward	2.0	1.3	1.9	2.2	1.6	1.6
outward	-	-	0.2	0.3	0.2	0.5
United Arab Emirates						
inward	0.8	4.1	0.6	3.7	1.2	0.9
outward	0.1	-	-0.4	-	-	-0.1
Yemen						
inward	29.9	27.2	0.2	-9.5	-4.1	-10.5
outward	..	..	..	..	..	..
<b>Central Asia</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>inward</b>	<b>..</b>	<b>-</b>	<b>17.6</b>	<b>23.3</b>	<b>9.6</b>	<b>24.1</b>
<b>outward</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>..</b>
Armenia						
inward	..	-	7.0	11.7	6.8	16.2
outward	..	..	..	..	..	..
Azerbaijan						
inward	..	..	..	..	..	..
outward	..	..	..	..	..	..
Georgia						
inward	..	..	..	..	..	..
outward	..	..	..	..	..	..
Kazakhstan						
inward	..	..	..	..	..	..
outward	..	..	..	..	..	..
Kyrgyzstan						
inward	..	..	27.7	31.2	11.4	34.3
outward	..	..	..	..	..	..
Tajikistan						
inward	..	..	..	..	..	..
outward	..	..	..	..	..	..

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**Annex table B.5. Inward and outward FDI flows as a percentage of gross fixed capital formation, by region and economy, 1987-1997 (continued)**

(Percentage)

Region/economy	1987-1992 (Annual average)	1993	1994	1995	1996	1997
Turkmenistan						
inward	..	..	..	..	..	..
outward	..	..	..	..	..	..
Uzbekistan						
inward	..	..	..	..	..	..
outward	..	..	..	..	..	..
<b>South, East and South-East Asia</b>						
<b>Inward</b>	<b>4.3</b>	<b>7.3</b>	<b>8.5</b>	<b>7.6</b>	<b>8.2</b>	<b>9.1</b>
<b>outward</b>	<b>2.5</b>	<b>4.7</b>	<b>5.3</b>	<b>5.3</b>	<b>5.3</b>	<b>4.9</b>
Afghanistan						
inward	..	..	..	..	..	..
outward	..	..	..	..	..	..
Bangladesh						
inward	-	0.4	0.3	-	0.3	2.9
outward	<i>b</i>	-	-	-	-	-
Brunei Darussalam						
inward	..	..	..	..	..	..
outward	..	..	..	..	..	..
Cambodia						
inward	..	..	..	..	..	..
outward	..	..	..	..	..	..
China						
inward	4.0	12.2	17.3	14.7	14.3	14.3
outward	1.1	2.0	1.0	0.8	0.8	0.8
Hong Kong, China						
inward	9.9	11.5	10.6	7.7	11.5	9.9
outward	18.5	55.9	55.0	58.7	55.1	40.4
India						
inward	-	1.0	1.4	2.6	2.8	4.2
outward	-	-	0.1	0.1	0.3	0.1
Indonesia						
inward	2.7	4.3	3.8	6.7	8.9	7.0
outward	-	0.8	1.1	0.9	0.9	0.3
Korea, Democratic People's Republic						
inward	..	..	..	..	..	..
outward	..	..	..	..	..	..
Korea, Republic of						
inward	1.1	0.5	0.6	1.1	1.3	1.8
outward	1.1	1.1	1.8	2.1	2.6	2.9
Lao People's Democratic Republic						
inward	..	..	..	..	..	..
outward	..	..	..	..	..	..
Macau						
inward	..	..	..	..	..	..
outward	..	..	..	..	..	..
Malaysia						
inward	18.1	20.3	14.9	11.1	12.1	12.2
outward	2.8	5.9	8.9	8.2	9.9	8.2
Maldives						
inward	..	..	..	..	..	..
outward	..	..	..	..	..	..
Mongolia						
inward	..	..	..	..	..	..
outward	..	..	..	..	..	..
Myanmar						
inward	3.3	2.4	1.0	0.8	0.2	0.5
outward	..	..	-	-	-	-
Nepal						
inward	0.3	0.5	0.6	0.5	2.0	2.3
outward	..	..	..	-	0.1	..

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**Annex table B.5. Inward and outward FDI flows as a percentage of gross fixed capital formation, by region and economy, 1987-1997 (continued)**

(Percentage)

Region/economy	1987-1992 (Annual average)	1993	1994	1995	1996	1997
Pakistan						
inward	3.3	3.8	4.6	7.2	9.0	7.0
outward	0.1	-	-	-	-	-0.2
Philippines						
inward	6.0	9.6	10.5	9.0	7.8	6.1
outward	-	2.9	2.0	2.4	0.9	0.7
Singapore						
inward	32.2	23.1	36.1	25.6	23.1	27.3
outward	7.4	10.6	19.3	22.3	18.4	13.3
Sri Lanka						
inward	3.2	7.5	5.3	1.7	3.6	11.7
outward	0.1	0.3	0.3	0.2	-	-
Taiwan Province of China						
inward	3.3	1.7	2.5	2.6	3.3	3.8
outward	10.2	5.0	4.8	5.0	6.7	8.8
Thailand						
inward	5.6	3.6	2.4	2.9	3.1	6.8
outward	0.4	0.5	0.9	1.3	1.2	0.8
Viet Nam						
inward	..	..	..	..	..	..
outward	..	..	..	..	..	..
<b>The Pacific</b>						
<b>inward</b>	<b>18.4</b>	<b>15.2</b>	<b>12.6</b>	<b>44.4</b>	<b>14.2</b>	<b>7.5</b>
<b>outward</b>	<b>1.4</b>	<b>2.6</b>	<b>-</b>	<b>-0.2</b>	<b>-</b>	<b>1.8</b>
Fiji						
inward	24.2	42.4	35.0	29.8	13.4	16.0
outward	8.6	13.4	-0.1	-1.2	0.4	10.2
Kiribati						
inward	..	..	..	..	..	..
outward	..	..	..	..	..	..
New Caledonia						
inward	..	..	..	..	..	..
outward	..	..	..	..	..	..
Papua New Guinea						
inward	16.2	6.8	5.8	48.1	11.8	3.0
outward	-0.1	-	-	-	-	-
Samoa						
inward	..	..	..	..	..	..
outward	..	..	..	..	..	..
Solomon Islands						
inward	..	..	..	..	..	..
outward	..	..	..	..	..	..
Tonga						
inward	..	..	..	..	..	..
outward	..	..	..	..	..	..
Vanuatu						
inward	37.2	52.0	52.4	42.8	54.8	48.0
outward	..	..	..	..	..	-
<b>Central and Eastern Europe</b>						
<b>inward</b>	<b>3.5</b>	<b>7.7</b>	<b>3.3</b>	<b>9.8</b>	<b>7.0</b>	<b>10.5</b>
<b>outward</b>	<b>0.1</b>	<b>0.4</b>	<b>0.2</b>	<b>0.3</b>	<b>0.6</b>	<b>2.0</b>
Albania						
inward	..	..	..	..	..	..
outward	..	..	..	..	..	..
Belarus						
inward	..	1.9	7.1	0.5	2.4	6.0
outward	..	..	..	..	..	-
Bulgaria						
inward	1.4 <sup>b</sup>	2.9	7.9	4.5	8.1	44.0
outward	..	..	..	0.4	2.1	-0.1

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**Annex table B.5. Inward and outward FDI flows as a percentage of gross fixed capital formation, by region and economy, 1987-1997 (continued)**

(Percentage)

Region/economy	1987-1992 (Annual average)	1993	1994	1995	1996	1997
Czech Republic						
inward	..	6.8	7.4	15.4	7.7	8.1
outward	..	0.9	1.0	0.2	0.8	0.2
Czechoslovakia (former)						
inward	..	..	..	..	..	..
outward	..	..	..	..	..	..
Estonia						
inward	..	40.6	34.8	21.8	12.9	21.5
outward	..	1.5	0.4	0.3	3.4	11.0
Hungary						
inward	10.2	32.1	13.7	52.8	20.6	20.5
outward	0.2 <sup>a</sup>	0.2	0.6	0.5	-	4.2
Latvia						
inward	..	..	..	26.8	41.1	48.8
outward	..	..	..	-9.7	0.3	0.6
Lithuania						
inward	..	..	..	..	..	..
outward	..	..	..	..	..	..
Moldova, Republic of						
inward	..	9.0	6.9	15.7	4.2	13.8
outward	..	..	4.4	0.1	-	-
Poland						
inward	1.3	12.6	12.5	18.2	17.6	17.1
outward	-	0.1	0.2	0.2	0.2	0.2
Romania						
inward	1.5 <sup>a</sup>	2.0	0.6	5.5	3.3	18.4
outward	0.2 <sup>b</sup>	0.1	-	-	-	-
Russian Federation						
inward	..	3.4	1.1	2.9	2.8	7.2
outward	..	0.4	0.2	0.5	0.9	3.0
Slovakia						
inward	..	4.3	6.1	4.1	3.6	2.4
outward	..	0.4	0.3	0.2	0.7	1.2
Ukraine						
inward	..	2.5	1.8	3.1	5.6	7.0
outward	..	..	-	0.1	-	0.5
Memorandum:						
<b>Least developed countries: <sup>d</sup></b>						
<b>Total</b>						
inward	<b>4.8</b>	<b>6.0</b>	<b>2.2</b>	<b>3.2</b>	<b>3.1</b>	<b>4.8</b>
outward	<b>4.9</b>	<b>1.4</b>	<b>0.6</b>	<b>-0.2</b>	<b>-1.2</b>	<b>3.1</b>
<b>Africa</b>						
inward	<b>4.8</b>	<b>3.8</b>	<b>4.3</b>	<b>8.9</b>	<b>9.0</b>	<b>13.7</b>
outward	<b>10.7</b>	<b>3.9</b>	<b>4.2</b>	<b>-1.1</b>	<b>-6.0</b>	<b>17.3</b>
<b>Latin America and the Caribbean</b>						
inward	<b>1.2</b>	<b>-2.4</b>	<b>-</b>	<b>2.3</b>	<b>1.0</b>	<b>1.3</b>
outward	<b>-2.9</b>	<b>-0.9</b>	<b>-</b>	<b>0.3</b>	<b>0.3</b>	<b>-</b>
<b>Asia and the Pacific</b>						
inward	<b>4.9</b>	<b>8.0</b>	<b>0.8</b>	<b>-0.3</b>	<b>0.2</b>	<b>0.6</b>
outward	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Asia</b>						
inward	4.7	7.8	0.6	-0.4	-	0.5
outward	-	-	-	-	-	-
<b>West Asia</b>						
inward	29.9	27.2	0.2	-9.5	-4.1	-10.5
outward	..	..	..	..	..	..
<b>South, East and South-East Asia</b>						
inward	1.7	1.6	0.8	0.6	0.3	1.0
outward	-	-	-	-	-	-
<b>The Pacific</b>						
inward	37.2	52.0	52.4	42.8	54.8	48.0
outward	..	..	..	..	..	..

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**Annex table B.5. Inward and outward FDI flows as a percentage of gross fixed capital formation, by region and economy, 1987-1997 (concluded)**

(Percentage)

Region/economy	1987-1992 (Annual average)	1993	1994	1995	1996	1997
<b>Oil-exporting countries: <sup>e</sup></b>						
<b>Total</b>						
<b>inward</b>	<b>3.7</b>	<b>7.5</b>	<b>9.1</b>	<b>7.7</b>	<b>8.8</b>	<b>11.0</b>
<b>outward</b>	<b>1.1</b>	<b>1.6</b>	<b>1.5</b>	<b>1.2</b>	<b>2.5</b>	<b>2.2</b>
<b>Africa</b>						
<b>inward</b>	<b>4.5</b>	<b>7.2</b>	<b>10.1</b>	<b>5.6</b>	<b>8.5</b>	<b>6.7</b>
<b>outward</b>	<b>2.0</b>	<b>2.2</b>	<b>1.1</b>	<b>1.8</b>	<b>0.5</b>	<b>0.8</b>
North Africa						
inward	2.5	3.4	5.8	2.7	4.6	5.3
outward	0.2	-	0.3	0.6	-	0.7
Other Africa						
inward	14.9	22.2	28.8	16.1	19.8	8.6
outward	11.8	6.4	2.7	4.1	1.3	0.8
<b>Latin America and the Caribbean</b>						
<b>inward</b>	<b>8.7</b>	<b>8.8</b>	<b>14.8</b>	<b>18.3</b>	<b>16.8</b>	<b>20.4</b>
<b>outward</b>	<b>0.6</b>	<b>0.9</b>	<b>1.8</b>	<b>-</b>	<b>0.7</b>	<b>1.6</b>
South America						
inward	5.8	6.1	10.3	10.9	21.0	32.7
outward	1.6	5.6	4.7	1.8	3.4	2.4
Other Latin America and the Caribbean						
inward	9.5	9.4	15.6	20.9	15.8	17.4
outward	0.4	-0.1	1.3	-0.6	-	1.4
<b>Asia</b>						
<b>inward</b>	<b>1.9</b>	<b>6.8</b>	<b>4.9</b>	<b>4.3</b>	<b>5.7</b>	<b>7.3</b>
<b>outward</b>	<b>1.0</b>	<b>2.0</b>	<b>1.3</b>	<b>1.6</b>	<b>3.6</b>	<b>2.8</b>
West Asia						
inward	-	3.2	1.0	-2.0	-0.6	4.6
outward	1.2	1.3	-2.4	-1.5	2.6	2.1
South, East and South-East Asia						
inward	6.7	9.8	7.7	8.3	10.1	9.0
outward	0.8	2.6	3.8	3.6	4.2	3.3
<b>All developing countries minus China</b>						
<b>inward</b>	<b>3.8</b>	<b>4.9</b>	<b>6.2</b>	<b>5.7</b>	<b>7.1</b>	<b>9.4</b>
<b>outward</b>	<b>2.0</b>	<b>3.6</b>	<b>4.0</b>	<b>4.3</b>	<b>4.6</b>	<b>4.6</b>
<b>Asia and the Pacific</b>						
<b>inward</b>	<b>3.3</b>	<b>6.5</b>	<b>7.5</b>	<b>6.7</b>	<b>7.2</b>	<b>8.4</b>
<b>outward</b>	<b>2.2</b>	<b>4.1</b>	<b>4.5</b>	<b>4.6</b>	<b>4.8</b>	<b>4.5</b>
<b>Africa including South Africa</b>						
<b>inward</b>	<b>3.3</b>	<b>4.3</b>	<b>6.8</b>	<b>5.5</b>	<b>6.9</b>	<b>8.2</b>
<b>outward</b>	<b>1.9</b>	<b>1.8</b>	<b>1.1</b>	<b>1.0</b>	<b>-</b>	<b>4.2</b>

Source: UNCTAD, FDI/TNC database.

<sup>a</sup> Annual average from 1991 to 1992.

<sup>b</sup> Annual average from 1990 to 1992.

<sup>c</sup> Annual average from 1988 to 1992.

<sup>d</sup> Least developed countries include: Afghanistan, Angola, Bangladesh, Benin, Burkina Faso, Burundi, Cambodia, Cape Verde, Central African Republic, Chad, Comoros, Democratic Republic of Congo, Djibouti, Equatorial Guinea, Ethiopia, Gambia, Guinea, Guinea-Bissau, Haiti, Kiribati, Lao People's Democratic Republic, Lesotho, Liberia, Madagascar, Malawi, Maldives, Mali, Mauritania, Mozambique, Myanmar, Nepal, Niger, Rwanda, Western Samoa, Sierra Leone, Solomon Islands, Somalia, Sudan, Togo, Uganda, United Republic of Tanzania, Vanuatu, Yemen and Zambia. Not included are Bhutan, Eritrea, Sao Tome and Principe and Tuvalu due to unavailability of data.

<sup>e</sup> Oil-exporting countries include: Algeria, Angola, Bahrain, Brunei Darussalam, Cameroon, Congo, Ecuador, Egypt, Gabon, Indonesia, Islamic Republic of Iran, Iraq, Kuwait, Libyan Arab Jamahiriya, Malaysia, Mexico, Nigeria, Oman, Qatar, Saudi Arabia, Trinidad and Tobago, Tunisia, United Arab Emirates and Venezuela.

**Annex table B.6. Inward and outward FDI stocks as a percentage of gross domestic product, by region and economy, 1980, 1985, 1990, 1995 and 1997**

(Percentage)

Region/economy	1980	1985	1990	1995	1997
<b>World</b>					
<b>inward</b>	<b>5.0</b>	<b>6.9</b>	<b>8.7</b>	<b>9.9</b>	<b>11.7</b>
<b>outward</b>	<b>5.3</b>	<b>6.3</b>	<b>8.4</b>	<b>10.2</b>	<b>11.9</b>
<b>Developed countries</b>					
<b>inward</b>	<b>4.8</b>	<b>6.1</b>	<b>8.4</b>	<b>9.0</b>	<b>10.5</b>
<b>outward</b>	<b>6.4</b>	<b>7.4</b>	<b>9.9</b>	<b>11.7</b>	<b>13.9</b>
<b>Western Europe</b>					
<b>inward</b>	<b>5.7</b>	<b>8.7</b>	<b>11.1</b>	<b>12.9</b>	<b>15.4</b>
<b>outward</b>	<b>6.5</b>	<b>10.5</b>	<b>12.3</b>	<b>16.5</b>	<b>20.0</b>
<b>European Union</b>					
<b>inward</b>	<b>5.5</b>	<b>8.6</b>	<b>11.0</b>	<b>12.7</b>	<b>15.2</b>
<b>outward</b>	<b>6.2</b>	<b>10.3</b>	<b>11.8</b>	<b>15.4</b>	<b>18.6</b>
Austria					
inward	4.1	5.8	6.2	7.5	8.6
outward	0.7	2.9	2.7	5.0	6.1
Belgium and Luxembourg					
inward	5.9	22.0	28.9	40.7	55.1
outward	4.9	11.4	20.1	30.9	40.7
Denmark					
inward	6.3	6.2	7.1	12.7	14.8
outward	3.1	3.1	5.7	13.0	18.7
Finland					
inward	1.1	2.5	3.8	6.8	8.0
outward	1.4	3.4	8.3	12.0	16.9
France					
inward	3.4	6.4	7.2	9.3	10.1
outward	2.7	6.0	9.2	12.0	13.6
Germany					
inward	4.5	6.0	6.8	6.9	9.9
outward	5.3	9.7	9.2	11.1	14.4
Greece					
inward	11.3	24.9	17.1	16.9	17.7
outward	..	..	1.0	0.8	0.7
Ireland					
inward	18.5	23.5	12.2	18.2	23.3
outward	..	1.0	4.8	6.3	7.9
Italy					
inward	2.0	4.5	5.3	5.8	7.1
outward	1.6	3.4	5.1	8.9	10.9
Netherlands					
inward	11.1	19.6	25.9	31.3	35.3
outward	24.4	35.0	38.5	45.5	58.1
Portugal					
inward	8.9	14.7	14.0	17.8	17.7
outward	0.4	0.8	0.7	2.6	4.5
Spain					
inward	2.4	5.4	13.4	20.0	19.0
outward	0.6	1.3	3.2	6.5	9.0
Sweden					
inward	2.9	5.0	5.4	13.5	18.6
outward	3.0	10.7	21.5	31.7	34.7
United Kingdom					
inward	11.7	14.0	22.4	19.4	21.5
outward	15.0	21.9	23.8	28.3	29.1
<b>Other Western Europe</b>					
<b>inward</b>	<b>9.3</b>	<b>11.4</b>	<b>13.3</b>	<b>16.7</b>	<b>18.6</b>
<b>outward</b>	<b>13.6</b>	<b>14.6</b>	<b>22.1</b>	<b>36.1</b>	<b>45.7</b>
Gibraltar					
inward	..	..	..	..	..
outward	..	..	..	..	..

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**Annex table B.6. Inward and outward FDI stocks as a percentage of gross domestic product, by region and economy, 1980, 1985, 1990, 1995 and 1997 (continued)**

(Percentage)

Region/economy	1980	1985	1990	1995	1997
Iceland					
inward	-	3.4	2.4	1.8	4.5
outward	1.6	1.8	1.2	2.6	3.6
Norway					
inward	11.4	12.7	10.8	13.4	13.5
outward	1.0	1.9	9.4	15.4	19.9
Switzerland					
inward	8.4	10.8	14.9	18.6	22.1
outward	21.1	23.0	29.1	46.7	62.4
<b>North America</b>					
<b>inward</b>	<b>4.6</b>	<b>5.7</b>	<b>8.4</b>	<b>8.8</b>	<b>9.4</b>
<b>outward</b>	<b>8.2</b>	<b>6.7</b>	<b>8.6</b>	<b>10.9</b>	<b>11.5</b>
Canada					
inward	20.6	18.6	19.9	22.0	22.3
outward	9.0	12.4	14.9	21.5	23.3
United States					
inward	3.1	4.6	7.2	7.7	8.4
outward	8.1	6.2	7.9	10.0	10.6
<b>Other developed countries</b>					
<b>inward</b>	<b>2.7</b>	<b>2.6</b>	<b>3.0</b>	<b>3.1</b>	<b>3.8</b>
<b>outward</b>	<b>2.1</b>	<b>3.8</b>	<b>7.4</b>	<b>5.6</b>	<b>7.5</b>
Australia					
inward	8.8	15.6	25.0	28.8	25.6
outward	1.5	4.2	10.7	13.5	14.4
Israel					
inward	3.2	4.4	3.7	5.2	7.5
outward	1.1	2.8	2.2	4.5	5.4
Japan					
inward	0.3	0.4	0.3	0.7	0.6
outward	1.9	3.3	6.9	4.7	6.5
New Zealand					
inward	10.5	9.0	18.5	43.8	48.5
outward	1.7	6.1	7.6	12.8	8.7
South Africa					
inward	21.3	16.3	8.6	10.9	14.2
outward	7.4	16.2	14.1	17.2	21.3
<b>Developing countries</b>					
<b>inward</b>	<b>5.9</b>	<b>9.8</b>	<b>10.5</b>	<b>14.1</b>	<b>16.6</b>
<b>outward</b>	<b>0.8</b>	<b>1.4</b>	<b>2.3</b>	<b>4.7</b>	<b>5.8</b>
<b>Africa</b>					
<b>inward</b>	<b>4.8</b>	<b>7.3</b>	<b>12.1</b>	<b>17.7</b>	<b>14.7</b>
<b>outward</b>	<b>0.2</b>	<b>2.4</b>	<b>4.9</b>	<b>5.3</b>	<b>3.7</b>
<b>North Africa</b>					
<b>inward</b>	<b>4.9</b>	<b>6.5</b>	<b>10.9</b>	<b>15.9</b>	<b>15.0</b>
<b>outward</b>	<b>0.3</b>	<b>0.3</b>	<b>0.6</b>	<b>0.8</b>	<b>0.7</b>
Algeria					
inward	3.1	2.2	2.2	3.0	5.4
outward	0.2	0.3	0.3	0.6	0.5
Egypt					
inward	10.2	10.9	31.2	29.8	20.7
outward	0.2	0.2	0.5	0.8	0.7
Libyan Arab Jamahiriya					
inward	..	..	..	..	..
outward	0.5	0.7	1.9	2.4	1.7
Morocco					
inward	1.0	3.4	3.6	9.4	13.3
outward	..	..	..	0.4	0.4

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**Annex table B.6. Inward and outward FDI stocks as a percentage of gross domestic product, by region and economy, 1980, 1985, 1990, 1995 and 1997 (continued)**

(Percentage)

Region/economy	1980	1985	1990	1995	1997
Sudan					
inward	..	0.3	-	-	0.9
outward	..	..	..	..	..
Tunisia					
inward	8.9	22.0	17.8	22.8	24.7
outward	..	-	-	-	-
<b>Other Africa</b>					
<b>inward</b>	<b>4.7</b>	<b>8.0</b>	<b>13.2</b>	<b>19.2</b>	<b>14.6</b>
<b>outward</b>	<b>0.2</b>	<b>5.1</b>	<b>10.4</b>	<b>11.8</b>	<b>6.5</b>
Angola					
inward	1.8	13.9	13.2	78.5	64.3
outward	..	..	-	-	-
Benin					
inward	2.2	3.2	2.0	2.4	4.8
outward	-	0.2	-	-	1.2
Botswana					
inward	52.1	66.4	35.2	21.0	19.6
outward	0.3	0.2	0.3	1.0	2.6
Burkina Faso					
inward	1.2	2.0	1.5	2.3	3.8
outward	0.2	0.3	0.1	0.1	0.2
Burundi					
inward	0.7	2.0	2.6	3.1	3.7
outward	..	..	-	-	0.2
Cameroon					
inward	4.9	13.8	9.3	13.4	14.2
outward	0.3	0.6	1.3	2.9	2.8
Cape Verde					
inward	..	..	1.4	11.4	19.6
outward	..	..	0.4	1.3	1.2
Central African Republic					
inward	6.2	11.0	7.3	6.6	7.9
outward	-	0.2	1.4	4.1	5.7
Chad					
inward	16.9	25.6	20.0	29.9	36.9
outward	-	0.2	3.0	8.3	10.3
Comoros					
inward	..	..	6.1	7.6	8.4
outward	..	..	0.5	0.5	0.5
Congo					
inward	18.1	22.2	20.1	31.8	32.1
outward	..	..	..	..	..
Congo, Democratic Republic of					
inward	3.3	4.9	2.5	2.7	6.9
outward	..	..	..	..	..
Côte d'Ivoire					
inward	5.2	10.0	9.9	11.3	16.2
outward	..	..	..	..	..
Djibouti					
inward	1.0	1.0	1.4	2.8	12.1
outward	..	..	..	..	..
Equatorial Guinea					
inward	..	6.8	19.1	145.7	331.0
outward	..	..	0.2	0.2	0.2
Ethiopia					
inward	2.7	2.0	1.4	3.2	4.2
outward	..	..	..	-	-
Gabon					
inward	12.0	22.7	22.1	20.3	28.3
outward	1.8	2.8	3.0	4.4	4.4
Gambia					
inward	9.1	8.7	12.5	22.3	33.8
outward	..	..	..	..	..

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**Annex table B.6. Inward and outward FDI stocks as a percentage of gross domestic product, by region and economy, 1980, 1985, 1990, 1995 and 1997 (continued)**

(Percentage)

Region/economy	1980	1985	1990	1995	1997
Ghana					
inward	5.9	4.3	5.1	13.0	14.9
outward	..	..	..	..	..
Guinea					
inward	0.1	0.2	2.5	3.6	4.7
outward	..	..	..	..	..
Guinea-Bissau					
inward	-	2.4	3.4	6.3	10.0
outward	..	..	..	..	..
Kenya					
inward	4.8	7.1	7.3	7.8	7.2
outward	0.2	1.0	1.2	1.1	1.0
Lesotho					
inward	1.2	8.0	13.0	11.9	18.6
outward	..	..	-	-	-
Liberia					
inward	..	9.5	98.5	59.7	158.1
outward	4.3	33.0	34.4	33.9	146.1
Madagascar					
inward	0.9	1.7	2.7	4.7	11.4
outward	..	..	..	..	..
Malawi					
inward	8.1	9.2	8.3	14.9	11.2
outward	..	..	..	..	0.1
Mali					
inward	0.8	3.3	1.6	6.2	11.2
outward	1.4	2.1	0.9	0.9	1.0
Mauritania					
inward	-	4.8	5.0	8.1	8.9
outward	..	..	0.2	0.2	0.2
Mauritius					
inward	1.8	3.5	6.3	6.3	8.2
outward	..	..	-	2.4	2.4
Mozambique					
inward	0.8	0.7	2.9	13.7	23.2
outward	..	..	..	..	..
Namibia					
inward	96.7	157.0	88.9	56.4	49.0
outward	..	..	3.5	0.7	1.2
Niger					
inward	7.4	14.1	11.5	17.1	20.6
outward	-	0.6	2.2	5.8	7.6
Nigeria					
inward	2.6	5.5	24.9	34.7	12.0
outward	-	6.4	29.8	27.6	8.1
Rwanda					
inward	4.6	7.8	9.2	20.4	12.6
outward	..	..	..	..	..
Senegal					
inward	5.0	7.4	4.9	8.0	12.0
outward	0.2	1.7	0.9	2.0	2.2
Seychelles					
inward	24.9	51.7	50.1	54.1	64.8
outward	9.4	25.9	16.4	18.3	20.5
Sierra Leone					
inward	7.0	5.0	-	-	1.6
outward	..	..	..	..	..
Somalia					
inward	4.8	0.5	-	-	-
outward	..	..	..	..	..
Swaziland					
inward	41.8	28.9	37.9	49.9	34.4
outward	1.5	2.4	4.5	12.8	5.8

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**Annex table B.6. Inward and outward FDI stocks as a percentage of gross domestic product, by region and economy, 1980, 1985, 1990, 1995 and 1997 (continued)**

(Percentage)

Region/economy	1980	1985	1990	1995	1997
Togo					
inward	15.5	27.5	16.1	22.5	21.4
outward	0.2	0.3	0.1	0.2	0.8
Uganda					
inward	0.5	0.3	0.1	4.5	9.6
outward	..	..	..	..	..
United Republic of Tanzania					
inward	0.9	1.3	3.4	8.2	7.8
outward	..	..	..	..	..
Zambia					
inward	0.6	5.3	18.2	27.3	31.7
outward	..	..	..	..	..
Zimbabwe					
inward	-	-	-	2.4	4.8
outward	..	0.2	1.3	2.1	2.8
<b>Latin America and the Caribbean</b>					
<b>inward</b>	<b>6.4</b>	<b>10.5</b>	<b>10.1</b>	<b>15.1</b>	<b>17.2</b>
<b>outward</b>	<b>0.4</b>	<b>1.1</b>	<b>1.2</b>	<b>1.7</b>	<b>2.3</b>
<b>South America</b>					
<b>inward</b>	<b>6.0</b>	<b>9.0</b>	<b>8.3</b>	<b>12.9</b>	<b>15.8</b>
<b>outward</b>	<b>0.2</b>	<b>0.5</b>	<b>0.6</b>	<b>1.2</b>	<b>1.9</b>
Argentina					
inward	6.9	7.4	5.3	9.9	12.3
outward	-	0.3	0.3	1.0	2.4
Bolivia					
inward	8.4	11.6	15.8	25.4	35.7
outward	-	-	0.1	0.3	0.3
Brazil					
inward	7.4	11.5	7.8	14.4	15.9
outward	0.3	0.6	0.5	0.7	0.9
Chile					
inward	3.2	14.1	33.1	23.1	33.3
outward	0.2	0.6	0.6	4.2	7.7
Colombia					
inward	3.2	6.4	8.7	7.9	14.3
outward	0.4	0.9	1.0	1.3	2.4
Ecuador					
inward	6.1	8.1	15.2	19.2	23.4
outward	..	..	..	..	..
Guyana					
inward	-	-	-	58.9	66.5
outward	..	..	..	0.3	0.1
Paraguay					
inward	4.8	9.4	7.6	10.8	16.6
outward	0.7	0.9	0.6	0.3	0.3
Peru					
inward	4.3	6.7	4.2	9.4	11.1
outward	-	0.2	0.2	0.2	0.4
Suriname					
inward	-	3.9	-	-	-
outward	..	..	..	..	..
Uruguay					
inward	6.9	15.9	10.6	7.7	8.2
outward	0.2	0.7	0.5	-	0.3
Venezuela					
inward	2.7	2.6	8.0	9.1	16.3
outward	-	0.3	2.5	4.5	5.6
<b>Other Latin America and the Caribbean</b>					
<b>inward</b>	<b>7.2</b>	<b>13.2</b>	<b>14.8</b>	<b>22.4</b>	<b>21.1</b>
<b>outward</b>	<b>0.9</b>	<b>2.4</b>	<b>2.9</b>	<b>3.7</b>	<b>3.5</b>

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**Annex table B.6. Inward and outward FDI stocks as a percentage of gross domestic product, by region and economy, 1980, 1985, 1990, 1995 and 1997 (continued)**

(Percentage)

Region/economy	1980	1985	1990	1995	1997
Antigua and Barbuda					
inward	20.9	46.5	73.8	88.5	94.5
outward	..	..	..	..	..
Aruba					
inward	..	..	15.4	10.8	12.0
outward	..	..	..	..	..
Bahamas					
inward	22.3	12.7	10.7	14.2	26.0
outward	21.3	6.6	49.0	34.2	39.0
Barbados					
inward	12.2	10.3	9.7	13.0	11.6
outward	0.6	1.0	1.3	1.8	1.7
Belize					
inward	6.4	5.0	17.7	25.0	28.3
outward	..	..	..	1.7	3.2
Bermuda					
inward	837.1	774.2	871.0	1211.0	1402.1
outward	118.1	192.5	97.5	113.8	218.3
Cayman Islands					
inward	..	..	355.5	553.4	955.0
outward	..	..	..	..	..
Costa Rica					
inward	13.9	24.4	25.3	30.9	38.9
outward	0.1	0.7	0.8	0.7	0.8
Cuba					
inward	-	-	-	0.3	0.4
outward	..	..	..	..	..
Dominica					
inward	..	5.7	38.8	84.6	102.8
outward	..	..	..	..	..
Dominican Republic					
inward	3.6	5.9	7.5	16.0	17.7
outward	..	..	..	0.3	0.3
El Salvador					
inward	4.3	3.2	3.9	3.1	3.2
outward	..	..	..	..	..
Grenada					
inward	1.7	10.9	34.7	60.7	74.6
outward	..	..	..	..	..
Guatemala					
inward	8.9	10.8	22.7	15.0	13.1
outward	..	..	..	..	..
Haiti					
inward	5.4	5.6	4.7	6.9	4.8
outward	..	..	..	..	..
Honduras					
inward	3.6	4.7	13.0	16.4	18.5
outward	..	..	..	..	..
Jamaica					
inward	18.7	22.7	16.3	29.9	33.1
outward	0.2	0.2	0.1	2.8	5.3
Mexico					
inward	4.2	10.2	9.2	14.3	12.5
outward	-	0.3	0.2	1.4	1.3
Netherlands Antilles					
inward	65.6	5.1	13.2	18.7	25.3
outward	1.1	0.9	1.3	1.3	-
Nicaragua					
inward	5.1	4.1	7.4	15.0	27.3
outward	..	..	..	..	..
Panama					
inward	10.8	10.8	12.4	22.4	37.5
outward	22.6	44.5	83.6	61.7	67.1

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**Annex table B.6. Inward and outward FDI stocks as a percentage of gross domestic product, by region and economy, 1980, 1985, 1990, 1995 and 1997 (continued)**

(Percentage)

Region/economy	1980	1985	1990	1995	1997
Saint Kitts and Nevis					
inward	2.1	40.5	100.4	108.1	118.3
outward	..	..	..	..	..
Saint Lucia					
inward	70.1	90.7	78.9	91.7	106.4
outward	..	..	..	..	..
Saint Vincent and the Grenadines					
inward	2.0	7.5	24.3	70.8	92.9
outward	..	..	..	..	..
Trinidad and Tobago					
inward	15.7	23.7	41.3	68.2	84.4
outward	..	0.2	0.3	0.4	0.4
Virgin Islands					
inward	..	..	..	..	..
outward	..	..	..	..	..
<b>Developing Europe</b>					
<b>inward</b>	<b>0.4</b>	<b>1.0</b>	<b>5.8</b>	<b>7.1</b>	<b>11.4</b>
<b>outward</b>	<b>..</b>	<b>..</b>	<b>1.5</b>	<b>2.3</b>	<b>2.5</b>
Bosnia and Herzegovina					
inward	..	..	..	..	..
outward	..	..	..	-	-
Croatia					
inward	..	..	..	2.4	7.5
outward	..	..	..	2.3	3.2
Malta					
inward	13.8	28.2	20.1	30.4	42.9
outward	..	..	..	1.7	4.4
Slovenia					
inward	..	..	3.8	9.4	12.1
outward	..	..	1.5	2.7	2.3
TFYR Macedonia					
inward	..	..	..	0.7	1.7
outward	..	..	..	..	-
Yugoslavia (former)					
inward	0.2	0.4	..	..	..
outward	..	..	..	..	..
<b>Asia</b>					
<b>inward</b>	<b>6.0</b>	<b>10.3</b>	<b>10.3</b>	<b>13.3</b>	<b>16.5</b>
<b>outward</b>	<b>1.2</b>	<b>1.3</b>	<b>2.6</b>	<b>6.2</b>	<b>8.1</b>
<b>West Asia</b>					
<b>inward</b>	<b>-</b>	<b>8.0</b>	<b>6.3</b>	<b>6.6</b>	<b>7.1</b>
<b>outward</b>	<b>0.4</b>	<b>0.9</b>	<b>1.6</b>	<b>0.9</b>	<b>1.6</b>
Bahrain					
inward	..	8.3	15.8	11.1	10.4
outward	..	0.3	1.1	2.7	7.0
Cyprus					
inward	21.4	32.6	20.6	18.4	24.5
outward	..	-	0.2	0.7	5.4
Iran, Islamic Republic					
inward	1.2	1.2	0.2	-	0.4
outward	..	..	..	-	0.7
Iraq					
inward	..	..	..	..	..
outward	..	..	..	-	-
Jordan					
inward	4.7	9.9	15.3	9.4	14.2
outward	0.7	0.5	0.4	-	-
Kuwait					
inward	0.1	0.2	0.1	0.3	1.5
outward	2.0	4.3	19.9	10.5	18.2

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**Annex table B.6. Inward and outward FDI stocks as a percentage of gross domestic product, by region and economy, 1980, 1985, 1990, 1995 and 1997 (continued)**

(Percentage)

Region/economy	1980	1985	1990	1995	1997
Lebanon					
inward	0.5	1.5	1.9	1.0	2.9
outward	-	1.8	-	-	-
Oman					
inward	8.0	11.9	16.3	16.2	14.5
outward	-	0.4	-	-	-
Qatar					
inward	1.1	1.2	0.7	5.7	7.1
outward	..	..	..	..	..
Saudi Arabia					
inward	-	25.2	21.5	17.9	18.7
outward	0.1	0.5	1.7	1.3	1.6
Syrian Arab Republic					
inward	-	0.2	1.6	2.1	2.3
outward	..	..	..	..	..
Turkey					
inward	0.2	0.5	0.9	3.0	3.5
outward	..	..	-	0.2	0.3
United Arab Emirates					
inward	1.4	1.8	2.2	4.5	4.9
outward	-	-	0.3	0.2	0.1
Yemen					
inward	1.3	2.5	0.8	42.6	32.1
outward	..	-	-	0.1	-
<b>Central Asia</b>					
<b>inward</b>	-	-	-	-	-
<b>outward</b>	..	..	0.1	9.9	14.7
Armenia					
inward	..	..	0.1	5.4	8.4
outward	..	..	..	..	..
Azerbaijan					
inward	..	..	..	7.3	48.8
outward	..	..	..	..	..
Georgia					
inward	..	..	..	0.5	4.2
outward	..	..	..	..	..
Kazakhstan					
inward	..	..	..	17.4	27.3
outward	..	..	..	..	..
Kyrgyzstan					
inward	..	..	..	9.5	15.7
outward	..	..	..	..	..
Tajikistan					
inward	..	..	..	4.1	2.2
outward	..	..	..	..	..
Turkmenistan					
inward	..	..	..	5.1	9.5
outward	..	..	..	..	..
Uzbekistan					
inward	..	..	..	2.5	2.6
outward	..	..	..	..	..
<b>South, East and South-East Asia</b>					
<b>inward</b>	9.9	11.1	11.6	14.8	18.4
<b>outward</b>	1.4	1.4	2.8	7.3	9.3
Afghanistan					
inward	0.5	0.3	0.1	0.1	0.1
outward	..	..	..	..	..
Bangladesh					
inward	0.5	0.7	0.7	0.6	1.0
outward	..	..	-	-	-

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**Annex table B.6. Inward and outward FDI stocks as a percentage of gross domestic product, by region and economy, 1980, 1985, 1990, 1995 and 1997 (continued)**

(Percentage)

Region/economy	1980	1985	1990	1995	1997
Brunei Darussalam					
inward	0.4	1.1	0.8	1.4	1.7
outward	..	..	..	..	..
Cambodia					
inward	..	..	..	18.0	32.8
outward	..	..	..	..	..
China					
inward	-	1.5	5.2	18.8	23.5
outward	-	-	0.7	2.3	2.2
Hong Kong, China					
inward	158.6	138.4	75.0	50.6	54.6
outward	0.5	7.0	17.7	60.7	78.6
India					
inward	0.7	0.5	0.4	1.6	3.3
outward	0.1	0.1	-	0.2	0.3
Indonesia					
inward	14.2	28.6	36.6	25.6	28.6
outward	..	-	-	0.7	1.0
Korea, Democratic People's Republic					
inward	..	..	2.6	2.3	2.3
outward	..	..	..	..	..
Korea, Republic of					
inward	1.8	2.3	2.3	2.3	3.5
outward	0.2	0.5	0.9	2.2	3.8
Lao People's Democratic Republic					
inward	0.4	-	1.6	12.0	24.3
outward	..	..	..	..	..
Macau					
inward	..	..	..	0.2	0.4
outward	..	..	..	..	..
Malaysia					
inward	21.1	23.7	24.1	31.8	38.1
outward	1.7	4.4	6.2	13.1	13.0
Maldives					
inward	11.3	3.8	20.2	22.4	27.9
outward	..	..	..	..	..
Mongolia					
inward	..	..	..	2.8	7.7
outward	..	..	..	..	..
Myanmar					
inward	-	-	0.7	0.9	0.6
outward	..	..	..	..	..
Nepal					
inward	-	-	0.3	0.7	1.5
outward	..	..	..	..	..
Pakistan					
inward	2.9	3.5	4.7	9.2	12.7
outward	0.2	0.4	0.6	0.5	0.4
Philippines					
inward	3.8	8.5	7.4	8.2	10.2
outward	0.5	0.6	0.4	1.6	1.9
Singapore					
inward	52.9	73.6	78.2	71.2	81.6
outward	66.6	44.1	21.4	41.9	46.2
Sri Lanka					
inward	5.7	8.5	8.4	9.8	12.1
outward	..	-	-	0.3	0.3
Taiwan Province of China					
inward	5.8	4.7	6.1	6.0	7.0
outward	0.2	0.3	8.0	9.7	12.1
Thailand					
inward	3.0	5.1	9.6	10.5	8.5
outward	-	-	0.5	1.3	1.3

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**Annex table B.6. Inward and outward FDI stocks as a percentage of gross domestic product, by region and economy, 1980, 1985, 1990, 1995 and 1997 (continued)**

(Percentage)

Region/economy	1980	1985	1990	1995	1997
Viet Nam					
inward	0.1	0.6	4.5	27.3	55.8
outward	..	..	..	..	..
<b>The Pacific</b>					
<b>inward</b>	<b>28.5</b>	<b>24.0</b>	<b>48.8</b>	<b>42.7</b>	<b>44.0</b>
<b>outward</b>	<b>0.3</b>	<b>1.0</b>	<b>2.0</b>	<b>1.9</b>	<b>2.1</b>
Fiji					
inward	29.7	34.4	29.1	35.7	37.2
outward	0.2	1.3	6.3	6.4	7.2
Kiribati					
inward	..	1.0	4.0	4.8	8.3
outward	..	..	..	-	-
New Caledonia					
inward	..	-	1.6	2.7	3.0
outward	..	..	..	..	..
Papua New Guinea					
inward	29.4	28.2	98.3	73.2	71.1
outward	0.4	0.9	0.2	0.1	0.1
Samoa					
inward	0.4	0.8	5.4	16.7	28.3
outward	..	..	..	..	..
Solomon Islands					
inward	23.8	20.0	32.8	35.1	44.4
outward	..	..	..	..	..
Tonga					
inward	..	0.2	0.7	3.6	5.5
outward	..	..	..	-	-
Vanuatu					
inward	29.0	52.3	71.3	104.5	140.0
outward	..	..	..	..	..
<b>Central and Eastern Europe</b>					
<b>inward</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>outward</b>	<b>..</b>	<b>..</b>	<b>1.5</b>	<b>5.5</b>	<b>8.3</b>
<b>outward</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.7</b>	<b>1.2</b>
Albania					
inward	..	..	..	9.6	14.7
outward	..	..	..	2.2	2.9
Belarus					
inward	..	..	..	0.5	2.4
outward	..	..	..	..	..
Bulgaria					
inward	..	..	-	2.7	9.4
outward	..	..	..	-	0.3
Czech Republic					
inward	..	..	4.3	16.4	22.8
outward	..	..	..	0.8	1.4
Czechoslovakia (former)					
inward	..	..	..	..	..
outward	..	..	..	..	..
Estonia					
inward	..	..	5.2	20.2	24.5
outward	..	..	..	1.1	4.6
Hungary					
inward	..	..	1.7	26.7	34.7
outward	..	..	0.6	1.1	2.0
Latvia					
inward	..	..	..	13.8	23.0
outward	..	..	-	5.2	4.0
Lithuania					
inward	..	..	..	5.9	10.9
outward	..	..	..	-	0.3

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**Annex table B.6. Inward and outward FDI stocks as a percentage of gross domestic product, by region and economy, 1980, 1985, 1990, 1995 and 1997 (continued)**

(Percentage)

Region/economy	1980	1985	1990	1995	1997
Moldova, Republic of					
inward	..	..	..	5.3	9.6
outward	..	..	..	1.1	1.0
Poland					
inward	..	..	0.2	6.2	11.6
outward	-	-	0.2	0.4	0.5
Romania					
inward	..	..	2.0	3.2	10.4
outward	..	..	0.2	0.3	0.3
Russian Federation					
inward	..	..	..	1.6	3.2
outward	..	..	-	0.9	1.4
Slovakia					
inward	..	..	0.6	5.5	8.2
outward	..	..	..	0.3	1.2
Ukraine					
inward	..	..	..	2.5	4.2
outward	..	..	..	0.3	0.3
Memorandum:					
<b>Least developed countries: a</b>					
<b>Total</b>					
inward	<b>2.2</b>	<b>3.2</b>	<b>4.1</b>	<b>5.9</b>	<b>5.7</b>
outward	<b>0.7</b>	<b>2.8</b>	<b>1.1</b>	<b>1.6</b>	<b>2.5</b>
<b>Africa</b>					
inward	<b>2.9</b>	<b>4.4</b>	<b>6.7</b>	<b>13.5</b>	<b>16.0</b>
outward	<b>0.7</b>	<b>5.0</b>	<b>2.3</b>	<b>3.6</b>	<b>5.5</b>
<b>Latin America and the Caribbean</b>					
inward	<b>5.4</b>	<b>5.6</b>	<b>4.7</b>	<b>6.9</b>	<b>4.8</b>
outward	..	..	..	..	..
<b>Asia and the Pacific</b>					
inward	<b>0.7</b>	<b>1.0</b>	<b>0.9</b>	<b>2.7</b>	<b>2.3</b>
outward	..	-	-	-	-
Asia					
inward	0.5	0.8	0.7	2.5	2.1
outward	..	-	-	-	-
West Asia					
inward	1.3	2.5	0.8	42.6	32.1
outward	..	-	-	0.1	-
South, East and South-East Asia					
inward	0.4	0.4	0.6	1.2	1.3
outward	..	..	-	-	-
The Pacific					
inward	17.9	24.4	34.7	51.5	66.7
outward	..	..	..	-	-
<b>Oil-exporting countries: b</b>					
<b>Total</b>					
inward	<b>3.5</b>	<b>11.5</b>	<b>14.5</b>	<b>17.1</b>	<b>17.1</b>
outward	<b>0.2</b>	<b>1.2</b>	<b>2.6</b>	<b>3.2</b>	<b>3.1</b>
<b>Africa</b>					
inward	<b>4.1</b>	<b>7.1</b>	<b>15.1</b>	<b>23.0</b>	<b>15.0</b>
outward	<b>0.2</b>	<b>2.4</b>	<b>5.6</b>	<b>6.8</b>	<b>3.9</b>
North Africa					
inward	6.0	7.4	13.5	18.2	16.4
outward	0.3	0.3	0.6	0.9	0.8
Other Africa					
inward	2.8	6.7	17.9	31.7	13.8
outward	-	5.7	17.2	20.1	7.3
<b>Latin America and the Caribbean</b>					
inward	<b>4.3</b>	<b>8.8</b>	<b>9.8</b>	<b>14.5</b>	<b>14.7</b>
outward	-	<b>0.3</b>	<b>0.6</b>	<b>2.0</b>	<b>2.0</b>

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**Annex table B.6. Inward and outward FDI stocks as a percentage of gross domestic product, by region and economy, 1980, 1985, 1990, 1995 and 1997 (concluded)**

(Percentage)

Region/economy	1980	1985	1990	1995	1997
South America	-	-	-	-	-
inward	3.6	4.0	9.7	11.9	18.8
outward	-	0.3	2.3	4.2	5.2
Other Latin America and the Caribbean					
inward	4.5	10.7	9.8	15.3	13.6
outward	-	0.3	0.2	1.4	1.3
<b>Asia</b>					
<b>inward</b>	<b>2.7</b>	<b>16.2</b>	<b>17.7</b>	<b>17.2</b>	<b>19.9</b>
<b>outward</b>	<b>0.5</b>	<b>1.1</b>	<b>2.6</b>	<b>2.8</b>	<b>3.5</b>
West Asia					
inward	-	10.8	9.5	8.5	9.1
outward	0.4	1.0	3.3	1.4	2.4
South, East and South-East Asia					
inward	15.2	26.6	32.3	27.0	31.1
outward	1.7	1.2	1.8	4.4	4.7
<b>All developing countries minus China</b>					
<b>inward</b>	<b>6.4</b>	<b>11.0</b>	<b>11.1</b>	<b>13.4</b>	<b>15.5</b>
<b>outward</b>	<b>0.9</b>	<b>1.6</b>	<b>2.5</b>	<b>5.0</b>	<b>6.5</b>
<b>Asia and the Pacific</b>					
<b>inward</b>	<b>6.1</b>	<b>10.4</b>	<b>10.5</b>	<b>13.4</b>	<b>16.6</b>
<b>outward</b>	<b>1.2</b>	<b>1.3</b>	<b>2.6</b>	<b>6.2</b>	<b>8.1</b>
<b>Africa including South Africa</b>					
<b>inward</b>	<b>8.3</b>	<b>8.7</b>	<b>11.2</b>	<b>15.7</b>	<b>14.6</b>
<b>outward</b>	<b>2.1</b>	<b>4.8</b>	<b>7.7</b>	<b>9.2</b>	<b>7.8</b>

Source: UNCTAD, FDI/TNC database.

<sup>a</sup> Least developed countries include: Afghanistan, Angola, Bangladesh, Benin, Burkina Faso, Burundi, Cambodia, Cape Verde, Central African Republic, Chad, Comoros, Democratic Republic of Congo, Djibouti, Equatorial Guinea, Ethiopia, Gambia, Guinea, Guinea-Bissau, Haiti, Kiribati, Lao People's Democratic Republic, Lesotho, Liberia, Madagascar, Malawi, Maldives, Mali, Mauritania, Mozambique, Myanmar, Nepal, Niger, Rwanda, Western Samoa, Sierra Leone, Solomon Islands, Somalia, Sudan, Togo, Uganda, United Republic of Tanzania, Vanuatu, Yemen and Zambia. Not included are Bhutan, Eritrea, Sao Tome and Principe and Tuvalu due to unavailability of data.

<sup>b</sup> Oil-exporting countries include: Algeria, Angola, Bahrain, Brunei Darussalam, Cameroon, Congo, Ecuador, Egypt, Gabon, Indonesia, Islamic Republic of Iran, Iraq, Kuwait, Libyan Arab Jamahiriya, Malaysia, Mexico, Nigeria, Oman, Qatar, Saudi Arabia, Trinidad and Tobago, Tunisia, United Arab Emirates and Venezuela.

**Annex table B.7. Cross-border M&A sales, by region/economy of seller, 1991-1998**  
(Millions of dollars)

Region/economy	1991		1992		1993		1994		1995		1996		1997		1998	
	Majority	Total	Majority	Total	Majority	Total	Majority	Total	Majority	Total	Majority	Total	Majority	Total	Majority	Total
<b>World</b>	<b>49 062</b>	<b>85 279</b>	<b>73 769</b>	<b>121 894</b>	<b>66 812</b>	<b>162 344</b>	<b>109 356</b>	<b>196 367</b>	<b>140 813</b>	<b>237 184</b>	<b>162 686</b>	<b>274 611</b>	<b>236 216</b>	<b>341 653</b>	<b>410 704</b>	<b>544 311</b>
<b>Developed economies</b>	<b>46 544</b>	<b>71 439</b>	<b>61 611</b>	<b>83 712</b>	<b>54 956</b>	<b>97 832</b>	<b>96 669</b>	<b>129 123</b>	<b>127 880</b>	<b>168 420</b>	<b>142 292</b>	<b>186 411</b>	<b>190 983</b>	<b>233 768</b>	<b>363 236</b>	<b>467 758</b>
<b>Western Europe</b>	<b>25 266</b>	<b>39 753</b>	<b>44 379</b>	<b>59 248</b>	<b>28 531</b>	<b>52 420</b>	<b>41 290</b>	<b>60 932</b>	<b>53 787</b>	<b>76 295</b>	<b>60 221</b>	<b>81 822</b>	<b>112 116</b>	<b>138 313</b>	<b>166 294</b>	<b>229 393</b>
<b>European Union</b>	<b>24 523</b>	<b>38 678</b>	<b>42 637</b>	<b>56 906</b>	<b>27 911</b>	<b>51 740</b>	<b>38 885</b>	<b>58 368</b>	<b>52 594</b>	<b>74 812</b>	<b>56 195</b>	<b>76 772</b>	<b>108 038</b>	<b>133 621</b>	<b>158 039</b>	<b>221 005</b>
Austria	317	355	34	549	223	242	249	728	595	1 287	909	949	169	1 316	2 947	3 093
Belgium and Luxembourg	1 189	1 882	270	1 246	375	3 823	898	2 154	1 616	5 313	1 800	2 068	6 528	7 251	23 001	29 005
Denmark	94	130	245	258	599	732	1 860	1 860	260	260	257	417	535	4 452	489	495
Finland	489	526	160	179	436	551	35	203	256	340	1 090	1 151	352	410	237	5 337
France	2 618	4 965	6 678	8 772	3 756	5 042	8 859	12 491	10 208	12 751	5 673	11 414	12 582	14 518	17 477	23 132
Germany	2 666	4 992	5 269	7 651	1 541	5 930	5 987	9 871	5 336	6 212	5 408	6 550	16 663	19 262	16 714	36 726
Greece	40	40	739	739	-	34	-	96	153	555	47	49	309	464	-	-
Ireland	144	264	230	230	1 431	1 588	73	275	522	1 154	260	587	1 489	1 600	969	1 165
Italy	1 227	1 971	3 146	4 635	2 802	3 212	3 259	5 311	2 480	3 441	2 871	5 206	4 499	9 173	2 246	5 586
Netherlands	1 331	2 462	5 129	5 994	4 253	10 813	1 242	2 346	2 381	2 542	2 970	3 647	8 536	8 837	16 104	18 299
Portugal	99	232	519	833	196	414	243	856	408	551	683	748	4	912	111	190
Spain	3 362	6 371	3 575	4 390	1 028	2 775	2 854	5 153	1 340	1 996	823	1 786	2 130	6 213	1 558	5 730
Sweden	1 026	1 499	1 566	2 684	3 388	3 771	2 331	2 468	1 600	2 074	1 558	2 630	3 116	3 803	2 241	6 135
United Kingdom	8 987	12 057	15 078	18 747	7 100	12 029	10 901	14 460	25 439	36 337	31 502	39 226	51 126	55 411	73 944	86 113
Unspecified	933	933	-	-	783	783	94	94	-	-	344	344	-	-	-	-
<b>Other Western Europe</b>	<b>744</b>	<b>1 075</b>	<b>1 742</b>	<b>2 341</b>	<b>620</b>	<b>680</b>	<b>2 404</b>	<b>2 564</b>	<b>1 193</b>	<b>1 483</b>	<b>4 026</b>	<b>5 050</b>	<b>4 078</b>	<b>4 692</b>	<b>8 255</b>	<b>8 388</b>
Gibraltar	-	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iceland	-	-	-	-	-	-	-	-	-	-	3	3	-	18	-	-
Liechtenstein	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	9
Monaco	-	-	-	-	-	-	10	11	-	-	-	-	2	2	-	-
Norway	65	358	1 622	1 931	144	182	422	422	349	458	480	493	963	1 407	1 898	2 031
Switzerland	679	707	120	411	454	475	1 973	2 131	844	1 025	3 375	4 386	2 946	3 098	6 348	6 348
Unspecified	-	-	-	-	22	22	-	-	-	-	167	167	167	167	-	-
<b>North America</b>	<b>19 604</b>	<b>26 092</b>	<b>14 023</b>	<b>19 183</b>	<b>23 103</b>	<b>40 277</b>	<b>52 165</b>	<b>62 866</b>	<b>60 625</b>	<b>74 019</b>	<b>70 465</b>	<b>81 358</b>	<b>66 517</b>	<b>77 167</b>	<b>181 030</b>	<b>216 488</b>
Canada	1 753	2 277	3 561	5 246	3 311	5 550	5 609	6 494	9 680	11 115	9 512	10 437	8 351	12 016	14 247	15 307
United States	17 851	23 815	10 463	13 938	19 792	34 727	46 556	56 372	50 944	62 903	60 953	70 921	58 166	65 151	166 783	201 181
<b>Other developed economies</b>	<b>1 673</b>	<b>5 595</b>	<b>3 209</b>	<b>5 281</b>	<b>3 322</b>	<b>5 135</b>	<b>3 216</b>	<b>5 325</b>	<b>13 468</b>	<b>18 106</b>	<b>11 605</b>	<b>23 231</b>	<b>12 350</b>	<b>18 288</b>	<b>15 912</b>	<b>21 877</b>
Australia	1 003	2 921	1 016	2 098	2 026	3 182	1 462	2 628	10 304	12 349	3 935	10 043	10 013	12 693	6 590	7 431
Israel	-	-	40	257	9	101	60	85	381	1 321	1 376	1 711	149	1 108	1 851	2 256
Japan	84	1 399	309	775	81	279	1 302	1 690	681	1 573	2 163	4 780	342	1 053	3 683	6 909
New Zealand	577	1 265	1 844	2 141	1 183	1 459	322	696	1 404	1 821	1 527	3 519	923	983	2 339	3 373
South Africa	9	9	1	10	23	115	70	226	279	622	2 604	3 179	923	2 452	1 449	1 908
Unspecified	1	1	-	-	-	-	-	-	420	420	-	-	-	-	-	-

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Annex table B.7. Cross-border M&amp;A sales, by region/economy of seller, 1991-1998 (continued)

(Millions of dollars)

Region/economy	1991			1992			1993			1994			1995			1996			1997			1998		
	Majority	Total	Majority	Majority	Total	Majority	Total	Majority	Total	Majority	Total	Majority	Majority	Total	Majority	Total	Majority	Total	Majority	Total	Majority	Total	Majority	Total
<b>Developing economies</b>	1 425	10 659	8 460	32 174	48 670	9 648	60 983	9 297	60 983	9 297	60 983	9 166	52 746	18 443	83 396	41 029	95 620	45 635	67 760					
<b>Africa</b>	73	129	290	422	1 446	701	2 014	447	2 014	447	2 014	75	2 475	543	2 784	1 813	2 117	1 235	1 267					
<b>North Africa</b>	-	56	221	298	239	185	1 926	398	1 926	398	1 926	18	1 937	154	1 926	1 106	1 253	1 163	1 163					
Algeria	-	-	-	66	23	-	1 300	-	1 300	-	1 300	-	1 750	-	254	-	-	-	-					
Egypt	-	56	125	133	211	180	124	9	124	9	124	18	162	84	1 288	78	89	648	648					
Morocco	-	-	-	2	5	5	502	390	502	390	502	-	25	70	84	1 009	1 144	-	-					
Sudan	-	-	8	8	-	-	-	-	-	-	-	-	-	-	300	-	-	-	-					
Tunisia	-	-	88	88	-	-	-	-	-	-	-	-	-	-	-	19	19	515	515					
<b>Other Africa</b>	73	74	69	125	1 207	516	88	49	88	49	88	58	537	389	858	707	864	72	103					
Angola	-	-	-	-	-	-	9	-	9	-	9	-	-	-	-	-	5	-	-					
Botswana	-	-	8	8	-	-	5	5	5	5	5	-	-	-	-	-	-	-	-					
Central African Republic	-	-	-	-	4	4	-	-	-	-	-	-	-	-	-	-	-	-	-					
Congo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	14	-	-	-					
Congo, Democratic Rep. of	-	-	8	8	-	-	-	-	-	-	-	-	-	-	247	247	-	-	-					
Côte d'Ivoire	-	-	21	21	-	-	-	1	-	1	-	1	1	2	2	193	193	49	49					
Gabon	-	-	-	-	-	-	-	-	-	-	-	-	139	-	-	-	-	-	-					
Ghana	-	-	-	4	-	-	30	-	30	-	30	-	-	-	47	124	124	-	20					
Guinea	-	-	-	-	-	-	-	-	-	-	-	-	39	-	25	3	3	-	-					
Kenya	73	73	8	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
Lesotho	-	-	-	-	-	-	5	5	5	5	5	-	-	-	-	-	-	-	-					
Madagascar	-	-	-	-	-	-	-	-	-	-	-	-	-	-	58	58	-	-	-					
Malawi	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
Mali	-	-	-	-	160	-	-	-	-	-	-	-	-	-	53	53	-	-	10					
Mozambique	-	-	-	-	1	-	20	20	20	20	20	14	14	2	2	-	-	8	8					
Namibia	-	-	-	-	-	-	5	5	5	5	5	-	-	-	4	-	-	-	-					
Nigeria	-	-	-	4	285	-	-	-	-	-	-	-	95	-	252	-	-	-	-					
Senegal	-	-	-	3	-	34	-	-	-	-	-	-	-	-	137	-	109	4	12					
Sierra Leone	-	-	-	-	-	-	8	8	8	8	8	-	-	-	-	-	-	-	4					
Swaziland	-	-	-	-	-	-	5	5	5	5	5	-	136	-	-	-	-	-	-					
Uganda	-	-	8	53	-	-	-	-	-	-	-	-	-	-	-	-	11	-	-					
United Republic of Tanzania	-	-	-	-	-	-	2	2	2	2	2	-	56	13	13	-	-	1	1					
Zambia	-	-	8	8	34	1	-	-	-	-	-	-	15	-	-	-	7	-	-					
Zimbabwe	-	-	8	8	212	1	-	-	-	-	-	43	43	1	4	16	16	-	-					
Unspecified	-	-	-	-	477	477	-	-	-	-	-	-	-	-	-	371	371	-	-					
<b>Latin America and the Caribbean</b>	953	3 898	6 146	10 372	13 659	3 806	14 831	3 126	14 831	3 126	14 831	6 034	11 374	11 162	22 257	25 579	43 809	31 208	39 873					
<b>South America</b>	646	2 850	4 648	8 238	8 419	3 225	10 648	2 452	10 648	2 452	10 648	4 877	7 894	9 998	18 359	17 541	31 280	25 680	31 981					
Argentina	110	280	3 917	4 843	2 050	1 097	2 177	699	2 177	699	2 177	1 505	2 346	2 399	3 907	2 612	5 900	1 544	3 056					
Bolivia	-	-	-	14	6	-	2 551	-	2 551	-	2 551	704	802	-	571	104	104	180	180					
Brazil	67	68	392	470	1 226	1 084	1 351	8	1 351	8	1 351	1 458	2 557	3 112	4 675	10 381	12 568	21 282	24 611					
Chile	131	283	10	2 295	275	81	1 377	817	1 377	817	1 377	183	1 036	1 116	2 135	1 263	2 253	1 011	1 511					

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Annex table B.7. Cross-border M&amp;A sales, by region/economy of seller, 1991-1998 (continued)

(Millions of dollars)

Region/economy	1991		1992		1993		1994		1995		1996		1997		1998	
	Majority	Total	Majority	Total	Majority	Total	Majority	Total	Majority	Total	Majority	Total	Majority	Total	Majority	Total
Colombia	22	22	-	-	1	1	23	85	50	152	1 672	1 672	1 411	3 110	1 084	1 832
Ecuador	-	-	-	-	-	-	80	80	22	60	-	-	28	28	47	47
Guyana	-	-	-	45	-	-	-	-	-	-	-	-	-	-	-	-
Peru	-	-	324	324	584	903	445	2 628	668	688	1 042	1 225	544	582	158	238
Uruguay	-	-	-	-	5	5	55	55	20	20	14	14	1	1	29	91
Venezuela	192	2 197	-	247	16	3 953	325	344	120	234	635	4 161	1 197	6 734	345	415
Unspecified	125	-	5	-	358	-	-	-	147	-	7	-	-	-	-	-
<b>Other Latin America and the Caribbean</b>	<b>307</b>	<b>1 048</b>	<b>1 499</b>	<b>2 133</b>	<b>581</b>	<b>5 240</b>	<b>674</b>	<b>4 183</b>	<b>1 157</b>	<b>3 480</b>	<b>1 164</b>	<b>3 898</b>	<b>8 038</b>	<b>12 530</b>	<b>5 528</b>	<b>7 892</b>
Aruba	23	23	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bahamas	-	-	915	915	135	214	-	80	-	-	70	70	35	35	-	-
Barbados	-	-	-	-	4	4	-	-	-	8	64	64	153	153	-	-
Belize	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bermuda	10	10	55	180	-	139	47	52	241	1 028	-	447	1 068	1 368	2 915	2 920
Cayman Islands	-	-	-	-	-	-	-	-	10	10	-	100	46	46	-	-
Costa Rica	-	-	-	-	-	-	16	16	75	93	22	68	1	1	-	-
Cuba	-	-	-	-	-	20	-	1 100	10	15	40	43	3	1 297	-	13
Dominican Republic	-	-	-	-	-	-	-	6	-	-	47	62	-	-	6	6
El Salvador	-	-	-	-	-	-	-	-	40	40	-	-	24	24	426	576
Grenada	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Guatemala	-	-	-	-	-	-	-	-	2	2	26	26	-	-	582	582
Guyana	-	100	-	-	-	-	-	-	-	-	-	-	-	23	-	-
Haiti	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2
Honduras	122	122	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jamaica	-	-	-	-	63	63	22	196	-	-	6	12	-	1	9	9
Martinique	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mexico	297	813	529	797	183	3 947	295	2 326	503	1 435	791	2 847	5 821	8 034	392	1 386
Netherlands Antilles	-	-	-	-	-	-	216	216	-	-	-	-	-	-	-	368
Nicaragua	-	-	-	-	1	1	6	6	-	-	18	18	122	122	-	-
Panama	-	-	-	-	-	-	71	71	259	260	-	-	3	655	520	729
Puerto Rico	-	-	-	-	-	-	-	-	-	-	-	-	-	-	676	676
Saint Kitts and Nevis	-	-	-	-	-	-	-	-	-	-	78	78	-	-	-	-
Trinidad and Tobago	-	-	-	238	175	475	-	112	-	125	-	-	205	205	-	-
Virgin Islands	-	-	-	-	-	-	-	-	17	17	2	57	412	421	-	625
Unspecified	-	125	127	5	20	378	1	1	447	227	-	7	-	-	-	-
<b>Developing Europe</b>	<b>-</b>	<b>-</b>	<b>127</b>	<b>127</b>	<b>1</b>	<b>1</b>	<b>9</b>	<b>69</b>	<b>89</b>	<b>227</b>	<b>-</b>	<b>-</b>	<b>191</b>	<b>1 144</b>	<b>161</b>	<b>180</b>
Croatia	-	-	-	-	-	-	-	60	55	187	-	-	57	91	11	30
Slovenia	-	-	127	127	1	1	9	9	34	34	-	-	120	120	-	-
Yugoslavia	-	-	-	-	-	-	-	-	-	6	-	-	14	934	150	150

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Annex table B.7. Cross-border M&amp;A sales, by region/economy of seller, 1991-1998 (continued)

(Millions of dollars)

Region/economy	1991		1992		1993		1994		1995		1996		1997		1998	
	Majority	Total	Majority	Total	Majority	Total	Majority	Total	Majority	Total	Majority	Total	Majority	Total	Majority	Total
<b>Asia</b>	<b>321</b>	<b>6 437</b>	<b>1 879</b>	<b>21 235</b>	<b>5 136</b>	<b>33 542</b>	<b>5 657</b>	<b>44 011</b>	<b>2 958</b>	<b>38 610</b>	<b>3 921</b>	<b>55 538</b>	<b>13 374</b>	<b>48 377</b>	<b>12 624</b>	<b>26 024</b>
<b>West Asia</b>	<b>18</b>	<b>198</b>	<b>184</b>	<b>4 251</b>	<b>29</b>	<b>1 289</b>	-	<b>1 395</b>	<b>273</b>	<b>2 400</b>	<b>31</b>	<b>5 528</b>	<b>54</b>	<b>4 870</b>	<b>113</b>	<b>433</b>
Bahrain	-	309	-	-	-	-	-	-	-	-	31	1 431	-	-	41	41
Cyprus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iran, Islamic Republic	-	-	-	520	-	5	-	-	-	-	-	180	-	1	-	-
Jordan	-	-	-	216	-	-	-	-	-	-	-	152	-	-	-	160
Kuwait	-	51	-	-	-	-	-	1 100	-	-	-	42	-	-	-	-
Lebanon	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-	12
Oman	-	-	5	3 019	-	15	-	-	-	1	-	1 875	-	-	-	92
Qatar	-	-	-	1	-	300	-	281	-	-	-	-	-	-	-	368
Saudi Arabia	-	100	24	24	-	8	-	-	8	34	-	1 100	-	-	-	75
Syria	-	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Turkey	18	47	93	402	29	961	-	13	265	265	-	542	15	1 028	72	220
United Arab Emirates	-	-	-	1	-	-	-	-	-	-	-	207	39	437	-	-
Yemen	-	-	-	-	-	-	-	-	-	2 100	-	-	-	2 549	-	-
Unspecified	-	-	63	63	-	-	-	-	-	-	-	-	-	-	-	-
<b>Central Asia</b>	<b>-</b>	<b>40</b>	<b>-</b>	<b>45</b>	<b>510</b>	<b>1 547</b>	<b>300</b>	<b>685</b>	<b>450</b>	<b>859</b>	<b>512</b>	<b>7 051</b>	<b>3 556</b>	<b>5 865</b>	<b>30</b>	<b>30</b>
Armenia	143	143	30	30	-	-	-	-	-	-	-	-	-	-	-	-
Azerbaijan	-	-	-	30	-	713	-	300	-	-	-	5 330	-	245	-	-
Kazakhstan	-	40	-	-	510	510	100	185	450	859	512	1 551	3 163	5 033	-	-
Tajikistan	-	-	-	-	-	-	-	-	-	-	-	-	150	150	-	-
Turkmenistan	-	-	-	-	-	70	-	-	-	-	-	50	-	-	-	-
Uzbekistan	-	-	-	15	-	254	200	200	-	-	-	120	100	294	-	-
<b>South, East and South-East Asia</b>	<b>304</b>	<b>6 198</b>	<b>1 695</b>	<b>16 939</b>	<b>4 598</b>	<b>30 707</b>	<b>5 357</b>	<b>41 932</b>	<b>2 234</b>	<b>35 352</b>	<b>3 378</b>	<b>42 959</b>	<b>9 764</b>	<b>37 643</b>	<b>12 481</b>	<b>25 561</b>
Bangladesh	-	-	-	-	-	-	-	-	-	17	-	-	-	15	33	33
Brunei Darussalam	-	-	-	-	-	-	-	-	-	-	-	-	-	667	-	-
Cambodia	-	-	-	-	-	-	-	30	25	667	-	63	-	-	-	-
China	16	2 988	94	5 197	639	13 458	976	20 126	636	11 993	602	15 533	960	11 011	546	4 955
Hong Kong, China	90	371	1 252	3 225	2 882	7 372	891	1 769	458	880	637	2 886	2 031	6 160	1 057	2 270
India	52	213	13	262	105	1 854	327	2 880	148	3 311	45	3 768	194	2 855	782	1 954
Indonesia	13	275	42	2 287	286	1 421	199	6 507	126	4 125	118	2 654	2 328	4 312	876	1 705
Democratic People's Republic of Korea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Republic of Korea	14	712	31	122	34	59	-	827	102	270	122	716	724	1 387	4 522	6 298
Lao People's Democratic Republic	-	-	-	-	10	10	-	-	-	-	-	2	-	-	-	-
Macau	-	-	-	-	-	-	-	38	-	-	-	-	-	-	-	-
Malaysia	57	1 004	14	1 197	139	541	215	393	16	821	40	4 497	198	2 361	1 083	1 693
Mongolia	-	-	-	-	-	-	-	1	-	5	-	-	3	3	-	-
Myanmar	-	5	-	-	10	15	10	104	-	632	-	134	-	6	-	-
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**Annex table B.7. Cross-border M&A sales, by region/economy of seller, 1991-1998 (concluded)**  
(Millions of dollars)

Region/economy	1991		1992		1993		1994		1995		1996		1997		1998	
	Majority	Total	Majority	Total	Majority	Total	Majority	Total	Majority	Total	Majority	Total	Majority	Total	Majority	Total
Nepal	-	-	-	-	-	-	-	-	-	12	-	-	-	-	-	-
Pakistan	-	-	-	8	5	-	1 730	2 146	-	15	151	2 501	39	243	-	390
Philippines	55	123	89	576	30	679	577	1 824	177	2 966	956	2 708	2 059	2 835	1 790	2 238
Singapore	4	127	149	450	403	2 071	306	1 145	323	597	659	1 692	95	1 208	295	548
Sri Lanka	-	-	-	1	12	24	59	61	43	2 873	19	19	35	267	28	28
Taiwan Province of China	4	145	-	822	22	165	32	581	-	860	21	2 410	724	1 108	584	1 541
Thailand	-	152	-	2 556	20	330	36	605	171	2 963	5	2 063	317	1 405	815	1 820
Viet Nam	-	49	11	227	-	2 329	-	2 894	10	1 975	5	1 300	57	901	70	88
Unspecified	-	33	-	7	-	374	-	-	-	371	-	13	-	900	-	-
<b>The Pacific</b>	<b>28</b>	<b>37</b>	<b>18</b>	<b>18</b>	<b>4</b>	<b>22</b>	<b>58</b>	<b>58</b>	<b>10</b>	<b>60</b>	<b>2 817</b>	<b>2 817</b>	<b>72</b>	<b>173</b>	<b>408</b>	<b>416</b>
Borneo	-	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fiji	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Papua New Guinea	28	28	18	18	2	20	58	58	10	60	117	117	-	72	8	16
Solomon Islands	-	-	-	-	2	2	-	-	-	-	-	-	-	45	400	400
Vanuatu	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Unspecified	-	-	-	-	-	-	-	-	-	-	-	-	-	56	-	-
<b>Central and Eastern Europe</b>	<b>949</b>	<b>3 038</b>	<b>3 692</b>	<b>6 008</b>	<b>1 850</b>	<b>15 843</b>	<b>2 045</b>	<b>4 904</b>	<b>3 459</b>	<b>16 018</b>	<b>1 579</b>	<b>4 147</b>	<b>4 069</b>	<b>9 883</b>	<b>1 675</b>	<b>8 636</b>
Albania	-	-	-	-	-	-	-	70	-	-	-	-	-	27	-	-
Belarus	-	-	-	-	-	7	-	-	-	-	-	-	-	10	-	-
Bulgaria	-	2	-	25	18	38	194	272	18	18	203	203	168	174	14	52
Czech Republic	-	-	-	-	21	160	740	1 009	112	2 330	61	157	492	781	219	748
Czechoslovakia (former)	387	969	750	1 222	-	-	-	-	-	-	-	-	-	-	-	-
Estonia	-	-	-	42	-	10	9	9	41	41	-	13	10	10	-	163
Hungary	147	534	369	902	299	1 509	54	247	1 578	1 770	448	607	1 016	1 162	1	163
Latvia	-	-	2	2	25	25	2	162	-	25	-	10	-	75	-	53
Lithuania	-	-	-	2	56	56	-	2	-	2	-	-	7	7	-	808
Macedonia, Republic of	-	-	-	-	-	-	-	-	-	-	2	2	-	18	-	39
Moldova, Republic of	-	-	-	-	-	-	-	-	-	10	-	-	-	-	-	650
Poland	398	748	2 545	3 017	728	1 112	851	1 167	1 518	2 037	788	1 167	513	2 108	563	1 705
Romania	14	51	-	53	650	720	21	209	24	86	18	117	414	421	621	1 296
Russian Federation	-	1	-	272	50	12 155	174	1 698	140	9 480	-	1 686	1 449	4 077	242	2 294
Slovakia	-	-	-	-	3	27	-	39	3	62	59	59	-	-	-	-
Former Soviet Union <sup>b</sup>	3	733	26	452	-	-	-	-	-	-	-	-	-	-	-	-
Ukraine	-	-	-	18	-	23	-	20	25	157	-	88	-	150	15	665
Unspecified CEE	-	-	-	-	-	-	-	-	-	-	-	-	-	900	-	-
<b>Dual nationality</b>	<b>3</b>	<b>3</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Multinational<sup>a</sup></b>	<b>140</b>	<b>140</b>	-	-	-	-	-	-	-	-	<b>1</b>	<b>1</b>	<b>135</b>	<b>1 626</b>	-	-
<b>Unknown</b>	<b>50</b>	<b>158</b>	-	-	<b>358</b>	-	<b>1 344</b>	<b>1 357</b>	<b>308</b>	-	<b>124</b>	<b>656</b>	-	<b>19</b>	<b>158</b>	<b>158</b>

Source: UNCTAD, based on data provided by KPMG Corporate Finance.

<sup>a</sup> Involving sellers in more than two economies.

<sup>b</sup> Unspecified former Soviet Union only.

Note: "Majority" refers to business combinations of which the foreign investor acquires more than 50 per cent voting securities of the resulting business.

Annex table B.8. Cross-border M&A purchases, by region/economy of purchaser, 1991-1998  
(Millions of dollars)

Region/economy	1991		1992		1993		1994		1995		1996		1997		1998	
	Majority	Total	Majority	Total	Majority	Total	Majority	Total	Majority	Total	Majority	Total	Majority	Total	Majority	Total
<b>World</b>	<b>49 062</b>	<b>85 279</b>	<b>73 769</b>	<b>121 894</b>	<b>66 812</b>	<b>162 344</b>	<b>109 356</b>	<b>196 367</b>	<b>140 813</b>	<b>237 184</b>	<b>162 686</b>	<b>274 611</b>	<b>236 216</b>	<b>341 653</b>	<b>410 704</b>	<b>544 311</b>
<b>Developed economies</b>	<b>47 351</b>	<b>79 900</b>	<b>58 824</b>	<b>99 168</b>	<b>59 292</b>	<b>134 895</b>	<b>100 223</b>	<b>163 010</b>	<b>132 344</b>	<b>212 084</b>	<b>152 224</b>	<b>239 139</b>	<b>217 251</b>	<b>299 173</b>	<b>401 738</b>	<b>526 713</b>
<b>Western Europe</b>	<b>34 071</b>	<b>53 820</b>	<b>35 089</b>	<b>55 197</b>	<b>36 584</b>	<b>77 047</b>	<b>65 368</b>	<b>92 644</b>	<b>70 235</b>	<b>108 130</b>	<b>81 688</b>	<b>129 846</b>	<b>127 148</b>	<b>168 316</b>	<b>256 777</b>	<b>340 881</b>
<b>European Union</b>	<b>31 577</b>	<b>50 537</b>	<b>30 960</b>	<b>50 017</b>	<b>35 531</b>	<b>74 770</b>	<b>51 879</b>	<b>75 333</b>	<b>64 161</b>	<b>98 725</b>	<b>72 339</b>	<b>114 316</b>	<b>89 677</b>	<b>127 787</b>	<b>245 965</b>	<b>328 039</b>
Austria	128	198	167	197	17	94	-	44	238	448	2	51	208	798	381	546
Belgium and Luxembourg	1 061	1 572	1 387	1 794	1 899	2 626	1 754	1 929	4 297	8 720	725	1 430	2 493	4 564	1 614	2 958
Denmark	354	1 090	797	1 064	429	613	221	706	376	1 263	3 405	3 846	1 238	1 319	1 280	1 295
Finland	349	700	19	287	348	572	476	496	1 133	1 419	305	402	1 584	1 956	1 909	6 032
France	11 174	15 904	8 858	14 204	6 818	10 684	6 140	11 497	8 079	13 318	7 921	11 514	12 495	21 620	26 143	40 452
Germany	4 680	7 501	4 106	6 508	3 264	6 731	8 523	13 191	15 536	22 616	12 111	27 380	10 191	16 047	34 092	60 935
Greece	-	5	7	7	661	679	67	68	-	-	2	12	143	545	78	772
Ireland	484	602	427	527	576	591	2 311	2 431	1 189	1 695	3 682	3 869	3 318	3 709	3 895	4 067
Italy	2 119	4 799	6 034	7 642	571	5 902	1 184	2 378	2 983	3 805	1 236	3 046	939	4 041	12 728	15 235
Netherlands	3 754	6 672	1 397	6 038	4 696	12 004	2 484	4 584	5 970	9 620	16 113	19 987	18 224	20 748	32 356	38 698
Portugal	165	165	309	309	11	162	218	242	227	247	180	222	442	442	3 700	3 714
Spain	354	690	676	1 159	247	1 392	455	2 346	1 298	1 944	3 283	6 273	7 055	13 162	9 839	11 622
Sweden	840	2 310	691	1 091	1 703	3 385	1 033	2 067	3 020	6 619	959	1 455	4 677	6 219	7 858	13 997
United Kingdom	5 901	8 087	6 085	9 183	14 258	29 146	27 013	33 355	19 816	26 958	22 415	34 822	26 672	32 615	110 093	127 718
Unspecified	215	240	1	9	33	189	-	53	-	53	-	9	-	-	-	-
<b>Other Western Europe</b>	<b>2 494</b>	<b>3 283</b>	<b>4 130</b>	<b>5 180</b>	<b>1 053</b>	<b>2 277</b>	<b>13 489</b>	<b>17 311</b>	<b>6 074</b>	<b>9 404</b>	<b>9 349</b>	<b>15 531</b>	<b>37 471</b>	<b>40 530</b>	<b>10 812</b>	<b>12 842</b>
Liechtenstein	53	53	-	-	-	1	-	14	2	82	317	317	-	-	-	-
Norway	85	228	320	1 140	214	377	482	1 026	1 431	3 535	3 044	4 937	748	1 793	506	716
Switzerland	2 356	3 002	3 810	4 040	839	1 900	13 007	16 271	4 641	5 788	5 988	10 277	36 723	38 737	10 306	12 126
<b>North America</b>	<b>8 446</b>	<b>15 690</b>	<b>16 065</b>	<b>26 361</b>	<b>19 763</b>	<b>44 655</b>	<b>28 921</b>	<b>52 042</b>	<b>52 223</b>	<b>80 386</b>	<b>60 967</b>	<b>87 496</b>	<b>77 356</b>	<b>106 149</b>	<b>130 450</b>	<b>165 467</b>
Canada	1 349	2 498	1 680	3 562	4 465	6 849	4 185	8 570	12 652	14 806	18 757	22 150	21 301	24 707	38 617	40 707
United States	7 096	13 192	14 385	22 798	15 298	37 806	24 736	43 472	39 571	65 580	42 210	65 346	56 055	81 442	91 832	124 760
<b>Other developed economies</b>	<b>4 835</b>	<b>10 390</b>	<b>7 670</b>	<b>17 610</b>	<b>2 946</b>	<b>13 194</b>	<b>5 934</b>	<b>18 324</b>	<b>9 887</b>	<b>23 568</b>	<b>9 569</b>	<b>21 797</b>	<b>12 747</b>	<b>24 708</b>	<b>14 511</b>	<b>20 365</b>
Australia	819	1 039	1 595	2 733	1 171	2 966	1 400	3 856	4 870	5 569	4 290	5 437	6 691	9 914	5 620	7 493
Israel	4	24	35	35	357	357	127	141	85	102	376	1 236	171	682	429	434
Japan	3 675	8 959	4 188	12 525	437	7 194	1 143	10 467	4 113	16 963	4 096	12 573	4 123	11 710	3 835	7 239
New Zealand	128	141	429	603	329	808	-	78	440	481	232	1 060	223	375	310	310
South Africa	208	226	1 423	1 713	652	1 870	3 264	3 783	378	453	575	1 491	1 538	2 027	4 317	4 889
Unspecified	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Developing economies</b>	<b>1 605</b>	<b>5 199</b>	<b>14 546</b>	<b>22 319</b>	<b>7 378</b>	<b>26 858</b>	<b>9 183</b>	<b>32 365</b>	<b>8 463</b>	<b>24 464</b>	<b>10 264</b>	<b>32 827</b>	<b>18 414</b>	<b>40 853</b>	<b>8 666</b>	<b>16 635</b>
<b>Africa</b>	<b>104</b>	<b>156</b>	-	<b>306</b>	<b>41</b>	<b>56</b>	<b>74</b>	<b>74</b>	-	<b>78</b>	<b>708</b>	<b>708</b>	-	<b>110</b>	<b>112</b>	<b>274</b>
<b>North Africa</b>	-	<b>52</b>	-	<b>306</b>	<b>41</b>	<b>56</b>	<b>49</b>	<b>49</b>	-	-	<b>645</b>	<b>645</b>	-	<b>60</b>	-	<b>162</b>
Egypt	-	51	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Libyan Arab Jamahiriya	-	1	-	306	5	5	-	-	-	-	-	-	-	-	-	162
Morocco	-	-	-	-	36	51	-	-	-	-	-	-	-	-	-	-

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**Annex table B.8. Cross-border M&A purchases, by region/economy of purchaser, 1991-1998 (continued)**  
(Millions of dollars)

Region/economy	1991		1992		1993		1994		1995		1996		1997		1998	
	Majority	Total	Majority	Total	Majority	Total	Majority	Total	Majority	Total	Majority	Total	Majority	Total	Majority	Total
<b>Other Africa</b>	104	104	-	-	-	-	25	25	-	78	63	63	-	50	112	112
Cameroon	-	-	-	-	-	-	25	25	-	-	-	-	-	-	-	-
Central African Republic	-	-	-	-	-	-	-	-	-	-	63	63	-	-	-	-
Gabon	-	104	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gambia	104	-	-	-	-	-	-	-	-	78	-	-	-	-	-	-
Ghana	-	-	-	-	-	-	-	-	-	-	519	519	-	112	112	-
Mauritius	-	-	-	-	-	-	-	-	-	-	-	-	-	50	-	-
<b>Latin America and the Caribbean</b>	129	728	4 542	5 092	2 222	3 380	2 495	8 538	2 113	2 794	4 200	5 204	4 293	7 221	5 274	6 657
<b>South America</b>	17	187	184	533	1 105	1 345	582	5 001	1 720	2 111	2 849	3 126	1 717	4 022	661	1 976
Argentina	-	-	-	-	57	57	42	96	837	902	404	414	333	1 103	76	111
Bolivia	-	-	-	-	-	-	-	1 200	-	-	-	-	-	-	-	-
Brazil	17	17	2	30	433	447	105	3 032	167	275	14	14	-	120	427	427
Chile	-	170	182	435	609	609	16	249	658	763	2 172	2 210	1 201	2 615	158	158
Colombia	-	-	-	-	-	-	-	-	53	83	-	100	83	83	-	-
Peru	-	-	-	-	-	-	-	-	5	5	-	-	-	-	-	-
Surinam	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-
Uruguay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Venezuela	-	-	-	68	5	229	420	420	-	8	259	388	100	100	-	1 281
<b>Other Latin America and the Caribbean</b>	112	541	4 358	4 559	1 117	2 035	1 913	3 538	393	683	1 351	2 078	2 576	3 199	4 613	4 680
Bahamas	-	-	-	-	-	-	-	-	-	31	1	701	40	40	-	-
Barbados	-	-	-	-	-	-	-	8	-	-	-	-	-	-	-	-
Belize	-	-	-	-	-	-	14	14	-	18	-	-	-	-	-	-
Bermuda	107	107	1 500	1 500	697	922	6	182	299	414	424	434	1 131	1 136	2 515	2 565
Cayman Islands	-	-	-	-	31	52	-	140	-	-	-	-	2	33	738	738
Cuba	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Dominican Republic	-	-	-	-	-	-	100	100	-	-	-	-	-	-	-	-
Grenada	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-
Mexico	-	79	2 828	2 999	357	587	1 784	3 063	94	169	717	733	290	743	910	925
Netherlands Antilles	-	-	-	30	32	474	-	14	-	-	-	-	12	12	2	2
Panama	5	355	30	30	-	-	-	-	-	-	14	14	1 100	1 200	8	8
Saint Kitts and Nevis	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-
Trinidad and Tobago	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-
Virgin Islands	-	-	-	-	-	-	9	9	-	51	195	195	-	35	440	440
<b>Developing Europe</b>	-	-	-	-	5	5	-	-	-	-	-	-	-	-	-	-
Malta	-	-	-	-	5	5	-	-	-	-	-	-	-	-	-	-
<b>Asia</b>	1 372	4 315	10 003	16 921	5 110	23 417	6 614	23 753	6 350	21 591	5 356	26 915	14 120	33 522	3 280	9 705
<b>West Asia</b>	563	1 832	509	853	942	2 814	1 897	3 781	825	2 114	1 096	4 729	1 922	5 742	953	1 755
Bahrain	-	-	403	403	746	746	585	585	-	1	347	347	879	879	386	386
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	/...

**Annex table B.8. Cross-border M&A purchases, by region/economy of purchaser, 1991-1998 (continued)**

(Millions of dollars)

Region/economy	1991		1992		1993		1994		1995		1996		1997		1998	
	Majority	Total	Majority	Total	Majority	Total	Majority	Total	Majority	Total	Majority	Total	Majority	Total	Majority	Total
Cyprus	34	34	-	13	-	10	-	-	1	-	-	-	-	1 880	-	-
Iran, Islamic Republic	-	-	-	-	-	-	-	659	-	-	-	2 750	-	-	-	-
Kuwait	500	549	-	-	-	-	-	-	-	500	515	162	-	4	-	-
Lebanon	-	-	-	-	20	20	-	-	-	-	-	-	-	-	-	-
Oman	-	-	-	-	-	-	-	-	-	-	-	-	105	-	67	67
Saudi Arabia	-	1 190	32	32	177	1 321	-	1 258	325	1 535	175	585	1 004	2 314	-	212
Turkey	29	58	75	181	-	719	-	-	-	7	262	622	-	250	500	503
United Arab Emirates	-	-	-	225	-	-	54	479	-	56	151	158	39	416	-	587
Central Asia	-	-	-	-	-	715	-	-	-	6	-	285	-	-	-	-
Azerbaijan	-	-	-	-	-	700	-	-	-	-	-	-	-	-	-	-
Kazakhstan	-	-	-	-	-	6	-	-	-	-	-	285	-	-	-	-
Kyrgyzstan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Uzbekistan	-	-	-	-	-	9	-	-	-	3	-	-	-	-	-	-
South, East and South- East Asia	809	2 484	9 494	16 068	4 168	19 887	4 717	19 972	5 525	19 471	4 260	21 901	12 198	27 779	2 327	7 950
Bangladesh	-	-	-	-	-	-	-	-	12	-	-	-	-	-	-	-
Brunei Darussalam	-	4	-	-	202	202	-	1	60	82	58	182	-	-	-	-
Cambodia	-	-	-	-	-	-	-	8	-	-	-	-	-	-	-	-
China	-	103	786	1 688	1 083	5 450	183	1 636	53	200	332	1 416	950	4 641	189	1 001
Hong Kong, China	427	852	7 885	9 559	2 023	8 388	719	3 414	1 255	3 921	1 062	3 642	2 451	5 635	1 174	2 268
India	270	270	-	422	-	-	16	619	159	201	-	-	3	8	8	146
Indonesia	58	58	32	106	173	247	390	519	141	615	504	614	2 321	2 416	-	-
Korea, Democratic People's Republic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Korea, Republic of	14	375	156	779	47	847	606	3 555	2 095	6 012	186	3 158	917	6 744	105	2 197
Laos	-	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Macau	-	-	-	-	-	-	-	10	-	-	-	-	-	-	-	-
Malaysia	-	235	74	143	301	1 220	1 737	7 021	391	1 253	1 128	5 413	1 349	2 490	267	466
Myanmar	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
Nepal	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-
Pakistan	-	-	-	107	-	-	-	-	-	-	1	1	-	-	-	-
Philippines	12	18	44	51	-	-	-	433	-	11	-	2	30	66	-	125
Singapore	29	417	203	554	230	2 117	820	1 811	977	2 765	290	4 006	3 955	4 841	442	1 013
Sri Lanka	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Taiwan Province of China	-	137	234	1 001	-	882	169	760	211	821	687	2 116	222	884	143	728
Thailand	-	15	80	1 638	110	533	77	181	182	3 577	12	1 346	-	15	-	5
Viet Nam	-	-	-	20	-	-	-	4	-	2	-	-	-	-	-	-
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**Annex table B.8. Cross-border M&A purchases, by region/economy of purchaser, 1991-1998 (concluded)**  
(Millions of dollars)

Region/economy	1991		1992		1993		1994		1995		1996		1997		1998	
	Majority	Total	Majority	Total	Majority	Total	Majority	Total	Majority	Total	Majority	Total	Majority	Total	Majority	Total
<b>Central and Eastern Europe</b>	-	53	207	207	31	297	-	916	5	551	30	1 579	552	1 627	300	964
Czech Republic	-	-	-	-	-	-	-	-	-	-	-	700	39	969	-	-
Estonia	-	-	-	-	-	-	-	512	512	-	-	-	-	-	-	-
Hungary	-	-	-	-	-	-	-	-	-	66	-	43	1	3	-	14
Latvia	-	-	-	-	18	18	-	-	-	-	-	-	-	-	-	-
Romania	-	-	-	-	-	266	-	916	-	435	-	836	-	-	-	-
Russian Federation	-	53	-	-	-	14	-	-	5	-	30	-	-	144	300	950
Slovakia	-	-	-	-	14	-	-	-	-	-	-	-	-	-	-	-
Former Soviet Union <sup>a</sup>	-	-	207	207	-	-	-	-	-	-	-	-	-	-	-	-
Ukraine	-	-	-	-	-	-	-	-	-	50	-	-	-	-	-	-
<b>Dual nationality</b>	105	105	-	-	-	-	-	-	-	-	90	90	-	-	-	-
<b>Multinational<sup>b</sup></b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Unknown</b>	-	22	192	200	110	294	-	76	1	85	86	976	-	-	-	-

Source: UNCTAD, based on data provided by KPMG Corporate Finance.

<sup>a</sup> Unspecified former Soviet Union.

<sup>b</sup> Involving purchasers from more than two economies.

Note: "Majority" refers to business combinations of which the investor acquires more than 50 per cent voting securities of the resulting business.

Annex table B.9. Cross-border M&amp;As, by sector and industry, 1991-1998

(Millions of dollars)

Region/economy	1991		1992		1993		1994		1995		1996		1997		1998	
	Majority	Total	Majority	Total	Majority	Total	Majority	Total	Majority	Total	Majority	Total	Majority	Total	Majority	Total
<b>All industries</b>	<b>49 062</b>	<b>85 279</b>	<b>73 769</b>	<b>121 894</b>	<b>66 812</b>	<b>162 344</b>	<b>109 356</b>	<b>196 367</b>	<b>140 813</b>	<b>237 184</b>	<b>162 686</b>	<b>274 611</b>	<b>236 216</b>	<b>341 653</b>	<b>410 704</b>	<b>544 311</b>
<b>Primary sector</b>	<b>1 628</b>	<b>2 994</b>	<b>803</b>	<b>3 246</b>	<b>1 568</b>	<b>24 308</b>	<b>3 762</b>	<b>9 588</b>	<b>3 477</b>	<b>22 215</b>	<b>6 577</b>	<b>23 408</b>	<b>13 673</b>	<b>23 812</b>	<b>70 363</b>	<b>77 828</b>
Agriculture, forestry and fishing	47	302	67	266	213	294	1 906	1 920	410	796	396	471	789	989	1 530	1 572
Agiculture and horticulture	-	1	56	56	83	109	1 742	1 756	372	522	283	358	393	534	1 530	1 572
Forestry	47	301	11	166	130	185	164	164	-	8	113	113	300	356	-	-
Fishing	-	-	-	44	-	-	-	-	38	266	-	-	96	99	-	-
Mining and Petroleum	1 581	2 692	736	2 981	1 355	24 014	1 856	7 668	3 067	21 419	6 181	22 937	12 884	22 823	68 833	76 256
Extraction of mineral oil and natural gas	1 169	2 267	582	2 763	1 239	23 763	1 760	7 525	2 339	20 413	5 317	22 064	12 649	22 425	68 551	75 973
Extraction of minerals not elsewhere specified	412	425	154	218	116	251	96	143	728	1 006	864	873	235	398	282	282
<b>Secondary sector</b>	<b>29 813</b>	<b>47 011</b>	<b>43 766</b>	<b>64 026</b>	<b>36 739</b>	<b>63 758</b>	<b>66 667</b>	<b>109 164</b>	<b>68 465</b>	<b>105 664</b>	<b>59 515</b>	<b>96 128</b>	<b>87 755</b>	<b>117 786</b>	<b>120 803</b>	<b>189 298</b>
Food, beverages and tobacco	3 626	5 157	12 358	13 561	6 552	9 548	11 376	16 092	13 865	16 363	6 505	10 151	15 636	17 954	16 325	18 314
Textile, leather and clothing	1 817	2 091	510	612	901	1 410	983	1 748	570	1 141	326	486	1 570	1 632	1 098	1 193
Textile industry	577	717	179	193	573	674	289	944	315	589	74	156	903	930	440	445
Manufacture of leather and leather good	128	128	3	3	187	205	164	165	4	84	146	166	226	226	34	34
Footwear and clothing industries	1 112	1 246	328	416	141	531	530	639	251	468	106	164	441	476	624	713
Timber and wooden furniture industries	43	248	461	477	54	449	715	1 215	366	434	537	666	277	312	920	920
Manufacture of paper and paper products; printing and publishing	2 981	6 227	2 366	4 185	1 893	3 480	7 610	10 861	7 548	8 603	8 100	11 272	7 358	7 911	29 077	40 926
Coke, petroleum products and nuclear fuel	1 044	5 880	912	4 187	1 888	5 048	2 381	9 191	217	1 212	754	5 015	1 118	2 280	4 063	6 870
Mineral oil processing	1 044	4 898	747	3 872	70	1 862	1 744	8 554	21	1 013	687	4 783	1 057	1 930	430	3 218
Coal extraction and manufacture of solid fuel	-	982	165	315	1 818	3 186	637	637	196	199	67	232	60	350	3 633	3 653
Chemicals and chemical products	5 942	7 873	5 288	7 893	11 619	21 240	18 282	23 631	17 655	26 388	16 795	21 182	16 767	22 838	22 766	24 298
Chemical industry	5 934	7 561	5 284	7 789	11 616	21 038	18 159	23 464	17 563	26 157	16 795	20 422	16 767	22 766	22 699	24 232
Production of man-made fibres	8	312	4	104	3	202	123	167	92	231	-	760	-	72	67	67
Processing of rubber and plastics	1 306	1 403	655	888	595	816	2 203	3 226	2 470	3 059	2 303	2 915	1 157	1 328	1 129	1 289
Manufacture of non-metallic products	967	1 453	5 613	6 393	912	2 251	2 224	9 235	2 925	5 706	2 582	3 555	5 127	5 642	6 700	7 399
Basic metals and metal products	2 635	3 275	2 783	7 195	3 910	6 928	5 681	10 711	10 101	14 328	4 568	8 773	5 924	14 492	5 426	9 670
Extraction and preparation of metalliferous	124	418	509	3 016	2 816	3 586	3 217	3 889	744	2 194	2 751	4 068	2 477	4 869	2 184	3 140
Metal manufacturing	1 125	1 437	1 805	3 308	758	2 887	2 007	6 081	3 698	6 132	670	3 518	2 765	7 943	2 200	5 122
Manufacture of metal goods not elsewhere specified	1 386	1 420	469	871	336	455	457	741	5 659	6 002	1 147	1 187	682	1 680	1 042	1 408

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**Annex table B.9. Cross-border M&As, by sector and industry, 1991-1998 (continued)**  
(Millions of dollars)

Region/economy	1991		1992		1993		1994		1995		1996		1997		1998	
	Majority	Total	Majority	Total	Majority	Total	Majority	Total	Majority	Total	Majority	Total	Majority	Total	Majority	Total
Machinery and equipment	1 114	1 422	1 578	2 514	2 623	2 934	4 028	4 602	2 998	5 520	2 955	5 848	4 499	5 078	3 953	4 067
Mechanical engineering	1 114	1 422	1 566	2 502	2 623	2 934	4 028	4 602	2 998	5 508	2 955	5 848	4 499	5 078	3 953	4 067
Coke ovens	-	-	12	12	-	-	-	-	-	12	-	-	-	-	-	-
Office machinery and data processing equipment	851	1 001	156	635	538	805	623	826	1 425	2 328	940	1 613	2 075	2 652	2 328	3 346
Electrical and electronic engineering	4 970	7 302	7 153	9 872	3 979	6 110	5 782	9 407	4 929	11 595	6 137	10 186	8 016	11 486	6 722	9 378
Instrument engineering	734	1 074	449	506	324	347	1 619	1 749	1 322	1 472	1 707	1 859	12 518	12 605	6 977	7 015
Motor vehicles and other transport equipment	1 778	2 790	3 135	4 879	785	2 610	2 994	6 972	2 349	7 810	5 732	13 058	3 673	9 515	11 739	52 941
Manufacture of motor vehicles and parts	527	1 050	2 459	3 771	258	1 512	2 291	4 238	2 016	6 506	3 952	10 998	2 568	7 806	10 191	50 849
Manufacture of other transport equipment	1 251	1 740	676	1 108	527	1 098	703	2 734	333	1 304	1 780	2 060	1 105	1 709	1 548	2 093
Other manufacturing industries	49	64	810	840	221	232	882	911	90	139	109	215	2 041	2 061	1 580	1 670
<b>Tertiary sector</b>	<b>17 620</b>	<b>35 273</b>	<b>29 199</b>	<b>54 486</b>	<b>28 504</b>	<b>74 279</b>	<b>38 927</b>	<b>77 615</b>	<b>68 871</b>	<b>109 305</b>	<b>96 564</b>	<b>155 075</b>	<b>134 788</b>	<b>200 055</b>	<b>219 533</b>	<b>277 181</b>
Electricity and water distribution	-	350	3 727	8 848	2 487	10 320	2 342	10 541	13 108	17 490	14 211	25 419	15 307	32 337	35 596	42 497
Production and distribution of electricity, gas and other forms of energy	-	212	3 726	8 823	2 452	9 482	2 342	10 506	11 760	16 039	13 904	24 203	15 296	32 103	32 776	39 474
Water supply industry	-	138	1	25	35	838	-	35	1 348	1 451	307	1 216	11	234	2 819	3 023
Construction	186	503	259	4 720	155	1 122	511	2 854	662	2 084	1 713	7 189	1 319	4 881	278	2 168
Wholesale distribution (except dealing in scrap and waste materials)	1 395	1 675	1 791	1 895	1 587	2 260	4 433	5 335	4 469	4 996	6 324	6 563	5 955	9 023	6 513	6 554
Retail distribution	1 334	1 729	2 389	2 666	2 809	3 052	3 422	4 036	1 195	1 948	6 972	8 638	10 206	12 138	8 676	17 968
Hotels and catering	617	1 223	1 195	2 910	1 923	2 999	2 519	3 811	4 515	5 228	3 463	4 401	4 670	5 954	4 047	4 244
Transport and storage	1 481	2 332	972	4 317	1 426	4 146	2 194	7 888	1 185	4 571	3 265	10 540	4 984	6 732	5 270	6 837
Railways	-	-	-	-	-	716	25	45	-	-	-	700	-	-	5	5
Sea transport	56	242	74	222	715	739	288	289	281	511	43	693	2 554	2 920	105	130
Air transport	243	435	2	1 748	78	406	178	416	8	346	494	1 937	-	200	74	579
Other inland transport	123	142	101	101	12	24	227	3 994	269	719	1 916	4 664	495	571	762	1 214
Supporting services to transport	174	298	113	1 113	41	1 563	180	1 323	334	961	199	1 150	318	1 017	1 879	2 148
Miscellaneous transport services & storage not elsewhere specified	885	1 215	682	1 133	580	698	1 296	1 821	293	2 034	613	1 396	1 618	2 025	2 445	2 761
Postal services and telecom-munications	338	3 400	210	2 572	194	17 062	386	8 958	2 497	17 921	3 475	15 529	3 426	20 154	30 184	50 384
Banking and finance	2 965	6 073	11 435	13 432	5 651	10 134	5 032	6 961	14 478	16 805	14 296	21 303	28 136	33 676	41 098	50 677

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Annex table B.9. Cross-border M&amp;As, by sector and industry, 1991-1998 (concluded)

(Millions of dollars)

Region/economy	1991		1992		1993		1994		1995		1996		1997		1998	
	Majority	Total	Majority	Total	Majority	Total	Majority	Total	Majority	Total	Majority	Total	Majority	Total	Majority	Total
Insurance, except for compulsory social security	4 863	10 024	810	3 525	4 412	5 851	8 589	9 958	2 308	3 025	12 339	13 128	23 752	24 730	35 425	37 029
Owning and dealing in real estate	526	1 005	1 908	3 166	2 224	8 181	2 350	4 596	3 250	6 438	9 035	11 579	6 927	9 646	6 404	6 803
Renting of movables	481	566	194	296	1 611	1 621	825	834	181	190	1 130	1 141	2 111	2 199	2 389	2 389
Business services	1 973	3 353	1 337	1 914	1 677	2 454	3 927	4 895	11 268	13 185	12 131	14 914	15 888	18 339	34 853	39 427
Business services	1 973	3 349	1 231	1 802	1 677	2 415	3 905	4 673	10 867	12 627	11 433	14 112	15 017	17 433	33 164	37 635
Research and development	-	4	106	112	-	39	22	222	401	558	698	802	871	906	1 690	1 793
Public Administration	344	401	539	664	304	1 177	253	306	233	242	392	396	1 040	1 149	307	307
Sanitary services	311	368	119	189	290	1 162	253	283	14	23	222	222	950	1 059	109	109
Education	33	33	420	475	14	15	-	13	-	-	170	174	78	78	173	173
Public administration, national defence and compulsory social security	-	-	-	-	-	-	-	10	219	219	-	-	12	12	26	26
Medical and other health services: veterinary services	92	92	14	16	173	173	60	261	884	1 188	1 092	5 083	2 605	2 605	407	415
Other services	980	2300	1960	3069	1817	3279	1371	5167	8273	13560	6221	8586	8 462	16 490	8 090	9 488
Recreational services and other cultural services	797	2 106	1 803	2 889	1 708	3 163	1 020	4 724	7 577	12 766	5 808	8 104	5 981	13 483	4 672	5 933
Personal services	146	157	16	29	99	99	326	349	684	686	122	171	464	468	53	190
Commission agents	-	-	-	-	-	-	-	-	-	12	263	264	43	43	-	-
Repair of consumer goods and vehicles	10	10	-	-	-	7	8	9	7	7	3	8	54	69	286	286
Dealing in scrap and waste materials	27	27	91	101	10	10	17	82	5	89	25	29	1 920	2 370	2 329	2 329
Other services provided to the general public	-	-	50	50	-	-	-	3	-	-	-	10	-	56	750	750

Source: UNCTAD, based on data provided by KPMG Corporate Finance.

Note: "Majority" refers to business combinations of which the foreign investor acquires more than 50 per cent voting securities of the resulting business.

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