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UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT

WORLD INVESTMENT REPORT

Transnational Corporations,
Extractive Industries and Development



UNITED NATIONS



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REPORT
2007

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Extractive Industries and Development**



UNITED NATIONS
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PREFACE

Foreign direct investment represents the largest share of external capital flows to developing countries. Just as transnational corporations can bring with them new technology, management know-how and improved market access, foreign direct investment can be a significant force for development. In 2006, developing countries attracted \$380 billion in foreign direct investment — more than ever before. While two thirds of these flows went to rapidly growing markets in Asia, virtually all developing regions participated in the increase. Investments rose particularly fast in many countries that are richly endowed with natural resources.

As highlighted in this year's *World Investment Report*, recent years have seen a revival of foreign direct investment in extractive industries, reflecting higher commodity prices. This commodity boom, partly fuelled by rising Asian demand for various natural resources, should open a window of opportunity for mineral-rich countries to accelerate their development. This is especially important as we reach the midpoint in our efforts to reach the Millennium Development Goals.

The *World Investment Report 2007* focuses on the role of transnational corporations in extractive industries, and documents their presence in many of the world's poorest economies. Transnational corporations can bring in the finance and management skills these economies need to transform their resources into products that can be used locally or exported. The rise of new transnational corporations from the South, not least Asia, has given mineral-rich countries a wider spectrum of potential sources of investment.

But as we know, the extraction of natural resources involves considerable economic, environmental and social challenges. The objective is to ensure it is done in the most efficient and environmentally friendly manner possible, while at the same time contributing to poverty alleviation and accelerated development. For that, we need institutional and regulatory frameworks promoted by accountable Governments, as well as responsible investors. All relevant stakeholders need to join forces in a concerted effort. This year's *World Investment Report* offers useful insights to that end.

New York, July 2007

Ban Ki-moon
Secretary-General of the United Nations

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ABBREVIATIONS

AGOA	African Growth and Opportunity Act
ASEAN	Association of Southeast Asian Nations
bbd	billion barrels per day
BIT	bilateral investment treaty
CIS	Commonwealth of Independent States
DTT	double taxation treaty
DR-CAFTA	Dominican Republic-Central American Free Trade Agreement (with the United States)
ECA	United Nations Economic Commission for Africa
ECB	European Central Bank
ECLAC	United Nations Economic Commission for Latin America and the Caribbean
ECT	Energy Charter Treaty
EITI	Extractive Industries Transparency Initiative
EIU	Economist Intelligence Unit
FDI	foreign direct investment
FTA	free trade agreement
GCC	Gulf Cooperation Council
GDP	gross domestic product
GFCF	gross fixed capital formation
GSI	Geographical Spread Index
ICEM	International Federation of Chemical, Energy, Mine and General Workers' Unions
ICMM	International Council on Mining and Metals
ICSID	International Centre for Settlement of Investment Disputes
ICT	information and communication technology
IEA	International Energy Agency
II	Internationalization Index
IIA	international investment agreement
ILO	International Labour Organization
IMF	International Monetary Fund
IPA	investment promotion agency
IPO	initial public offering
IT	information technology
KPCS	Kimberley Process Certification Scheme
LDC	least developed country
LNG	liquefied natural gas
M&A	merger and acquisition
mbd	million barrels per day
MFA	Multi Fibre Arrangement
NAFTA	North American Free Trade Agreement
NGO	non-governmental organization
OECD	Organisation for Economic Co-operation and Development
OPEC	Organization of the Petroleum Exporting Countries
PGM	platinum group metal
PSA	production-sharing agreement
R&D	research and development
SEE	South-East Europe
SME	small and medium-sized enterprise
SOE	State-owned enterprise
TNC	transnational corporation
TNI	Transnationality Index
UNCTAD	United Nations Conference on Trade and Development
UNCTC	United Nations Centre on Transnational Corporations (1974-1992)
UNDP	United Nations Development Programme
WAIPA	World Association of Investment Promotion Agencies
WTO	World Trade Organization

OVERVIEW

WIDESPREAD GROWTH IN FDI

Global FDI flows approach their 2000 peak level ...

Global FDI inflows soared in 2006 to reach \$1,306 billion – a growth of 38%. This marked the third consecutive year of growth, and approached the record level of \$1,411 billion reached in 2000. It reflected strong economic performance in many parts of the world. Inflows increased in all three groups of economies: developed countries, developing countries and the transition economies of South-East Europe and the Commonwealth of Independent States (CIS).

The rise in global FDI flows was partly driven by increasing corporate profits worldwide and resulting higher stock prices that raised the value of cross-border mergers and acquisitions (M&As). M&As continued to account for a high share of FDI flows, but greenfield investment also increased, especially in developing and transition economies. As a result of higher corporate profits, reinvested earnings have become an important component of inward FDI: they accounted for an estimated 30% of total inflows worldwide in 2006 and for almost 50% in developing countries alone.

While FDI inflows in developed countries rose by 45% – well over the rate of the previous two years – to reach \$857 billion, flows to developing countries and the transition economies attained their highest levels ever: \$379 billion (a 21% increase over those in 2005) and \$69 billion (a 68% increase) respectively. The United States regained its position as the leading host country, followed by the United Kingdom and France. The largest inflows among developing economies went to China, Hong Kong (China) and Singapore, and among the transition economies to the Russian Federation.

Developed-country TNCs remained the leading sources of FDI, accounting

for 84% of global outflows. While there was a rebound of FDI from the United States, almost half of world outflows originated from European Union (EU) countries, notably France, Spain and the United Kingdom in that order. TNCs from developing and transition economies continued their international expansion in 2006, led by Hong Kong (China) in the former group of economies and the Russian Federation in the latter. Total FDI outflows from these groups of economies reached \$193 billion, or 16% of world FDI outflows.

... driven by cross-border M&As with the increasing involvement of private equity funds ...

Increased cross-border M&A activity supports the current rise in global FDI. Such transactions rose significantly in 2006, both in value (by 23%, to reach \$880 billion) and in number (by 14% to 6,974), approaching the previous M&A peak in 2000. This growth was driven by higher stock market valuations, rising corporate profits and favourable financing conditions. In contrast with the M&A boom of the late 1990s, this time transactions have been predominantly financed by cash and debt, rather than through an exchange of shares. As many as 172 mega deals (i.e. deals worth over \$1 billion) were recorded in 2006, accounting for about two thirds of the total value of cross-border M&As.

These transactions were widely spread across regions and sectors. In North America, due to several deals in the mining industry, cross-border M&As almost doubled. In Europe, the United Kingdom was the main target country, while Spanish companies were very active as acquirers. Cross-border acquisitions by Spanish companies (e.g. Telefónica and Ferrovial)



were valued at \$78 billion, a record level for that country. Companies from developing and transition economies have also been increasingly engaged in such transactions, the largest in 2006 being the \$17 billion acquisition of Inco (Canada) by CVRD of Brazil.

Another noticeable trend in global M&A activity has been the growing importance of private equity funds and other collective investment funds. In 2006, they were involved in cross-border M&As valued at \$158 billion, an 18% increase over 2005. A growing appetite for higher yields and ample liquidity in world financial markets helped fuel these acquisitions. Private equity firms are increasingly acquiring large listed companies, in contrast to their former strategy of investing in high-yield, high-risk assets, and they are likely to continue to play a prominent role in M&A transactions. However, this scale of activity may not be sustainable due to a number of factors: competition is intensifying and the asset prices involved in recent acquisitions have increased substantially; there is also a possibility that the favourable fiscal treatment such firms enjoy in some countries may not last. Investments by private equity firms are often more akin to portfolio investment than to FDI, in that they tend to have relatively short time horizons. This has raised some concerns regarding the impact of such investments, in particular as regards the dismantling of the acquired companies and worker layoffs. As cross-border M&As by private equity firms are a relatively recent phenomenon, more research is needed to better understand their impact.

... and resulting in further growth of international production.

The production of goods and services by TNCs outside their home countries grew more rapidly in 2006 than in the previous year. The sales, value added and exports of some 78,000 TNCs and their 780,000 foreign affiliates are estimated to have increased by 18%, 16% and 12% respectively. They accounted for the equivalent of 10% of world GDP and one third of world exports. China continued to host the largest number of foreign affiliates in the world, while the growth rate of the number of TNCs from developing countries and transition economies over the past 15 years has exceeded that of TNCs from developed countries.

Employment in foreign affiliates of TNCs has increased nearly threefold since 1990, although at a slower pace than FDI stock. Foreign affiliates in China had the largest number of employees: 24 million as estimated by the country's Ministry of Commerce. Between 2001 and 2004, employment in foreign affiliates in the United States shrank to 5.1

million, representing a reduction of half a million. In comparison, reflecting the fact that United States firms are by far the largest direct investors abroad, their foreign affiliates created the largest number of jobs (9 million) among foreign-affiliates of all home countries. The employment impact of FDI in host economies varied by region, but for a given amount of inward FDI more jobs were created in developing and transition economies than in developed countries.

As in previous years, services accounted for the bulk of world inward FDI stock in 2005 – nearly two thirds – compared with 49% in 1990. Within services, the share of infrastructure-related industries rose in both absolute and relative terms. Manufacturing was the second largest sector, but its share declined from 41% in 1990 to 30% in 2005, while the share of the primary sector was less than 10% of world inward FDI stock. The share of extractive industries in total FDI increased somewhat between 2000 and 2005, having been on the decline since the Second World War. This rebound was fuelled by new investments in mineral exploration and extraction, as well as by a number of large cross-border M&As (see Part Two).

TNCs from emerging economies continue to expand overseas.

While the universe of TNCs is dominated by developed-country firms, the picture is changing. The number of firms from developing economies in the list of the world's 100 largest non-financial TNCs increased from five in 2004 to seven in 2005 (the most recent year for which data are available), in line with the rise of TNCs from the South. Rankings in the list of the world's top 100 TNCs have remained relatively stable, with General Electric, Vodafone and General Motors having the largest foreign assets. Although the foreign assets of the top 100 TNCs have remained virtually unchanged since 2004, their foreign sales and employment increased by about 10%.

Large TNCs from emerging economies are internationalizing particularly fast. In 2005, the foreign sales and foreign employment of the top 100 TNCs from developing economies increased by 48% and 73% respectively. However, these TNCs are still significantly less transnational in their reach than the world's top 100, with a presence in fewer countries abroad.

Asia dominates the list of the 100 largest developing-country TNCs, with 78 firms, followed by 11 each from Africa and Latin America. These TNCs operate in a broader range of industries than the largest TNCs from developed countries. As in previous years, the single most important industry in 2005 was electrical/electronic equipment, especially for a large number of companies from Asia.

The geographical pattern of FDI is changing, with greater South-South FDI flows.

The geographical pattern of FDI is showing signs of change, with new countries emerging as significant host and home economies. The rise of FDI from developing and transition economies and the growth of South-South FDI are important recent trends. Changes are taking place in the pattern of bilateral flows of FDI as well. In 2005, the largest bilateral outward FDI stock was that of the United Kingdom in the United States – at \$282 billion; 20 years earlier, it was the reverse. Whereas bilateral links between selected economies, such as those between the United States on the one hand and Canada, the Netherlands and the United Kingdom on the other, dominated the global picture of bilateral FDI relationships in 1985, today, the situation is considerably more multifaceted, reflecting the involvement of many more countries in international production.

With strengthening relationships between countries within the same region, and the emergence of many developing countries as sizeable investor economies, geographical proximity is becoming increasingly important in bilateral FDI relations. For example, in the top 50 pairs of countries with the largest bilateral inward stock, 22 were from Europe in 2005, compared to 17 in 1995. FDI relationships between two economies can be further examined on the basis of the intensity of FDI, which compares the actual volume of bilateral FDI stocks with what would be “expected” on the basis of the share of each economy in global inward and outward FDI. Such a measure shows that the United States has a stronger-than-average FDI intensity with Canada, European countries with each other, and Japan with Asian countries. It also shows that South-South relationships have strengthened over the past decade, especially in the Asian region.

Most policy changes continue to favour FDI, though some restrictions have emerged in certain industries.

Governments continue to adopt measures to facilitate FDI. In 2006, 147 policy changes making host-country environments more favourable to FDI were observed. Most of them (74%) were introduced by developing countries. They included in particular measures aimed at lowering corporate income taxes (as in Egypt, Ghana and Singapore) and expanding promotional efforts (as in Brazil and India). Further liberalization of specific industries is under way in various countries, such as that relating to professional services (Italy), telecommunications (Botswana and Cape Verde), banking (the Lao People’s Democratic Republic and Mali) and energy (Albania and Bulgaria).

In some industries, however, new restrictions on foreign ownership or measures to secure a greater government share in revenues were observed. Such steps were the most common in extractive industries and in industries deemed to be of “strategic” importance. For example, in Algeria, State-owned oil and gas enterprises must now hold a minimum of a 51% stake, and in Bolivia, by signing new contracts TNCs have returned ownership of petroleum reserves to the State oil company. In the Russian Federation, foreign investment is to be restricted in “strategic sectors” such as defence and extractive industries, with only minority stakes permitted in the latter. In Venezuela, nationalizations in the “strategic sectors” of energy and telecommunications are in progress.

The perception that these and other changes might trigger renewed protectionism has led to some concern. However, as in 2005, the trend appears to be confined to a relatively small number of countries, and to specific industries.

The number of international investment agreements (IIAs) has continued to grow, reaching a total of almost 5,500 at the end of 2006: 2,573 bilateral investment treaties, 2,651 double taxation treaties and 241 free trade agreements and economic cooperation arrangements containing investment provisions. The number of preferential trade agreements with investment provisions has almost doubled in the past five years. Developing countries are becoming increasingly important participants in international investment rule-making, partly reflecting growing South-South FDI.

FDI in Africa peaked, as its resources attracted increasing FDI.

At \$36 billion in 2006, FDI inflows in Africa were twice their 2004 level. This was due to increased interest in natural resources, improved prospects for corporate profits and a more favourable business climate. The value of cross-border M&A sales reached a record \$18 billion, half of which represented purchases by TNCs from developing Asia. Greenfield projects and investments in expansion also grew significantly. Despite this increase, Africa’s share in global FDI fell to 2.7% in 2006, compared with 3.1% in 2005, much lower than that of other developing regions. FDI outflows from Africa also reached a record \$8 billion in 2006, up from \$2 billion in 2005.

FDI inflows rose in 33 African countries and in all subregions except for Southern Africa. The top 10 host African countries received about 90% of such flows. In eight of them, inflows exceeded \$1 billion each. Large cross-border M&As as well as greenfield investments and expansion projects played an important role in the top host countries,

particularly Egypt and Nigeria. In Egypt, the leading recipient in the region, inflows exceeded \$10 billion, 80% of which were in expansion and greenfield projects in non-oil activities. South Africa witnessed a major decline in inflows due to the sale of a foreign equity stake in a domestic gold-mining company to a local firm, but it generated most of the outflows from Africa. The search for new natural-resource reserves led to increased FDI to African least developed countries (LDCs), amounting to \$8 billion, following two consecutive years of decline. As a result, the LDCs accounted for 23% of the FDI inflows to the region – a significant rise over 2005. Of these LDCs, Burundi, Cape Verde, Djibouti, Ethiopia, Gambia, Guinea-Bissau, Madagascar, Somalia and Sudan saw the largest increases in FDI inflows mainly directed at new oil exploration and mining activities.

In 2006, many African countries adopted measures to attract FDI as well as to improve the impact of FDI on their development. Prospects for FDI inflows into Africa remain positive due to persistently high global commodity prices, though some moderation is expected in 2007.

Inflows to South, East and South-East Asia reached \$200 billion, and outflows soared ...

FDI inflows to South, East and South-East Asia maintained their upward trend in 2006, rising by about 19% to reach a new high of \$200 billion. At the subregional level, South and South-East Asia saw a sustained increase in flows, while their growth in East Asia was slower. However, FDI in the latter subregion is shifting towards more knowledge-intensive and high value-added activities.

China and Hong Kong (China) retained their positions as the largest FDI recipients in the region, followed by Singapore and India. Inflows to China fell in 2006 for the first time in seven years. The modest decline (by 4% to \$69 billion) was due mainly to reduced investments in financial services. Hong Kong (China) attracted \$43 billion in FDI, Singapore \$24 billion (a new high), and India \$17 billion (an amount equivalent to the combined inflows to that country of the preceding three years).

FDI outflows from the region as a whole rose by 60% to \$103 billion, with higher investments from all subregions and major economies. Outflows from Hong Kong (China), the largest source of FDI in the region, rose by 60% to \$43 billion. China consolidated its position as a major investor, and India is rapidly catching up. Their emergence as important sources of FDI is challenging the dominance of the Asian newly industrializing economies (NIEs) in outward FDI from the region. Resource-seeking FDI from China and India continued to increase. In addition,

the efforts of Chinese State-owned enterprises and of Indian privately owned conglomerates to acquire strategic assets abroad, as highlighted by the \$11 billion acquisition by Tata Steel (India) of Corus Group (United Kingdom and the Netherlands), have led to greater FDI flows from these countries to developed economies.

Rapid economic growth in South, East and South-East Asia should continue to fuel growing market-seeking FDI to the region. The region will also become more attractive to efficiency-seeking FDI, as countries such as China, India, Indonesia and Viet Nam plan to significantly improve their infrastructure. During the first half of 2007, the value of cross-border M&A deals in the region increased by nearly 20% over the corresponding period of 2006. Increased FDI outflows from the region are also expected to continue.

...while FDI inflows into West Asia continued to climb to unprecedented heights.

In 2006, FDI inflows to the 14 economies of West Asia rose by 44%, to an unprecedented \$60 billion. Privatization of various services progressed in 2006, and there was an improvement in the general business climate. The region's strong economic growth has encouraged investment, and high oil prices have been attracting increasing amounts of FDI in oil and gas and in related manufacturing industries.

A few mega cross-border M&As and the privatization of financial services made Turkey the largest recipient in West Asia, with inflows of \$20 billion. Saudi Arabia was the second largest with \$18 billion (an increase of 51% over its 2005 levels), followed by the United Arab Emirates, where the free zones attracted a significant share of its FDI inflows. Services remained the dominant sector for FDI in West Asia, a major proportion of which went to financial services as a result of privatization and liberalization policies of a number of countries in the region. There were also several major deals in the telecommunications industries in Jordan and Turkey. Efforts by the Gulf countries to diversify their production activities beyond oil-related activities succeeded in attracting greater FDI flows into the manufacturing sector. During the first half of 2007, the value of cross-border M&A sales increased by nearly 3% over the corresponding period of 2006.

FDI outflows from West Asia rose by 5% to reach a new high of \$14 billion in 2006, as a result of the high oil prices and the current-account surpluses of the oil-producing countries. Kuwait accounted for the lion's share (89%) of the region's total outward FDI, mainly in the telecommunications industry.

The value of cross-border M&As by firms from the region totalled \$32 billion, 67% of which involved firms from the United Arab Emirates, the second largest investor from West Asia.

In 2006, FDI inflows to Oceania amounted to \$339 million, a decline of 11%, and they remained concentrated in the mining industry. Investments also went to onshore fish-processing activities in Papua New Guinea and the Marshall Islands, and to the tourism industry in some economies such as Fiji and Vanuatu.

Greenfield investments and reinvested earnings boosted FDI in Latin America and the Caribbean, and outflows hit new records.

FDI flows to Latin America and the Caribbean increased by 11%, to \$84 billion. If the offshore financial centres are excluded, however, they reached \$70 billion in 2006, which was the same level as in 2005. This is in sharp contrast to the soaring FDI outflows, which jumped by 125% to \$43 billion (or \$49 billion if offshore financial centres are included). Brazil and Mexico remained the leading recipients (with about \$19 billion each), followed by Chile, the British Virgin Island and Colombia. The stagnation of FDI inflows in the region (excluding the offshore financial centres) hides disparities among different countries: in South America, most of the countries registered strongly positive growth in FDI flows, but this was offset by a significant decline in Colombia and Venezuela. Two features characterized the region's FDI inflows: greenfield investments became more important than cross-border M&As, and reinvested earnings became an increasingly important component (the largest component in South America alone).

Manufacturing again received the largest share of inflows, and the services sector's share increased slightly. In services, TNCs continued to withdraw from public utilities, mainly from the electricity industry. The primary sector remained attractive due to persistently high commodity prices.

FDI outflows were mainly targeted at extractive industries, followed by resource-based manufacturing and telecommunications. Brazil's outward FDI was the largest in the region, at \$28 billion – its highest level ever – exceeding for the first time its inward FDI. This was mainly due to the above-mentioned purchase of Inco (Canadian nickel producers) by the mining company CVRD, the largest transaction ever by a developing-country company. Companies from other countries, especially those from Argentina, Chile, Mexico and Venezuela, are also increasingly seeking to internationalize through FDI.

The trend towards greater State intervention continued in 2006, but unlike the previous year when this occurred mainly in the extractive industries, it extended to other industries such as telecommunications and electricity, in particular in Bolivia and Venezuela. In Venezuela, a deal was negotiated with Verizon, AES and CMS (all United States firms) whereby the three firms agreed to divest their assets to the Government, while the Government of Bolivia is planning to take over Empresa Nacional de Telecomunicaciones (Entel), controlled by Telecom Italia. By contrast, the Government of Colombia is proceeding with a programme of FDI promotion and downsizing of the public sector, including in the extractive industries.

FDI inflows into Latin America and the Caribbean, excluding the offshore financial centres, are expected to rise moderately in 2007, increasingly driven by greenfield investments rather than by cross-border M&As.

FDI flows to South-East Europe and the Commonwealth of Independent States increased for the sixth consecutive year...

FDI inflows into South-East Europe and the CIS grew by 68%, to \$69 billion – a significant leap from the inflows of the two previous years. The top five recipient countries (the Russian Federation, Romania, Kazakhstan, Ukraine and Bulgaria in that order) accounted for 82% of the total inflows. Those to the Russian Federation almost doubled to \$28.7 billion, while those to Romania and Bulgaria grew significantly, in anticipation of their accession to the EU on 1 January 2007 and due to a series of privatization deals. FDI outflows from the region increased for the fifth consecutive year, to reach \$18.7 billion. Virtually all of this outward FDI reflected the expansion abroad of Russian TNCs, especially some large resource-based firms seeking to become global players and some banks expanding into other CIS countries.

While the services sector was particularly buoyant because of increased cross-border M&As in the banking industry, the primary sector received higher inflows as a result of soaring demand for natural resources. In some natural-resource-based economies of the CIS, such as the Russian Federation, the State continued to increase its control in strategic industries. In countries of South-East Europe, FDI-related policies continue to be in line with their accession or aspirations to accede to the EU, and with their aim to step up the privatization of State-owned enterprises.

FDI inflows in the region are expected to be particularly buoyant in large economies such as the

Russian Federation and Ukraine, as well as in the two new EU members (Bulgaria and Romania).

... while the surge in FDI to developed countries was widespread.

FDI inflows to developed countries surged to \$857 billion – 45% higher than in the previous year – reflecting another rise in cross-border M&As. In contrast to the upward trend of the previous FDI cycle at the end of the past decade, the current increase was widespread, across all the developed regions. FDI inflows to the United States rebounded strongly to \$175 billion in 2006, with record flows in the chemical industry, while a wave of cross-border M&As in the mining sector caused Canadian inflows to double, to a record of \$69 billion. Inward FDI in the 25 EU countries grew by 9%, to reach \$531 billion. Declines in FDI flows to Ireland, Spain and the United Kingdom were more than compensated for by increases in Belgium, Italy and Luxembourg, while inflows in the 10 new EU members amounted to \$39 billion – their highest level so far. Due to some large sell-offs of foreign affiliates to Japanese companies, FDI inflows to Japan turned negative for the first time since 1989 (-\$6.5 billion). The share of foreign investment from developing countries in the total value of cross-border M&A sales was 9% in 2006 compared to 7% 2005, largely as a result of several mega deals.

FDI outflows from developed countries also grew by 45%, to \$1 trillion. The United States and five EU countries ranked among the 10 largest outward investor economies in the world. France remained the second largest investor worldwide for the second year in a row (\$115 billion), while Spanish companies continued their outward expansion at a rapid pace to reach \$90 billion, the largest ever recorded for Spain. FDI outflows from the Netherlands amounted to \$23 billion, mainly due to the acquisition of Arcelor (Luxembourg) by Mittal Steel (a company registered in the Netherlands) – the largest deal of the year.

While continuous financial deregulation was the main reason for the significant increase in cross-border M&As in financial services, high commodity prices and consolidation efforts spurred such deals in the mining industry. Many developed countries adopted policies that could, directly or indirectly, increase their attractiveness for FDI, although some

protectionist sentiment remains or is again on the rise in certain developed countries.

The prospects for FDI in developed countries remain bright. Strong economic growth, albeit at a more moderate pace than in 2006, high corporate profits and the upward movement of equity prices are expected to further stimulate cross-border M&As; they had already increased by 66% during the first half of 2007 over the same period in 2006.

Overall, prospects for global FDI flows remain positive.

The upward trend in FDI is expected to continue in 2007 and beyond – albeit at a somewhat slower rate than in 2006. This would be in line with global economic growth, which should remain above its longer term trend, although it might slow down moderately. This forecast is confirmed by the rise in global cross-border M&As to \$581 billion in the first half of 2007 – a 54% increase over the corresponding period of 2006 – and by the results of various surveys.

In UNCTAD's *World Investment Prospects Survey*, more than 63% of the responding TNCs expressed optimism that FDI flows would increase over the period 2007-2009. According to the survey, the most attractive FDI destination countries are China and India, while East, South and South-East Asia is considered the most attractive region. This is reinforced by several international organizations and research institutes, as well as by another survey conducted by UNCTAD/WAIPA, in which 76% of the responding CEOs of foreign affiliates expected to continue to increase investments in host economies over the next three years.

However, despite the generally positive prospects, several challenges and risks face the world economy, which may have implications for FDI flows in 2007 and 2008. These include global current-account imbalances causing exchange rate shifts, volatile oil prices, and a potential tightening of financial market conditions. Respondents in the UNCTAD survey also expressed some concerns regarding the possible rise of protectionism and of global threats such as terrorism and war. But they believed that the probability of these types of risks affecting the level of FDI in the short term was relatively low. Nevertheless, these considerations underline the need for caution in assessing future FDI prospects.

TRANSNATIONAL CORPORATIONS, EXTRACTIVE INDUSTRIES AND DEVELOPMENT

High prices of metals, oil and natural gas have led to increased activity of TNCs in extractive industries.

The involvement of TNCs in extractive industries has had a chequered history. In the early twentieth century, these industries accounted for the largest share of FDI, reflecting the international expansion of firms from the colonial powers. With a growing number of former colonies gaining independence after the Second World War, and the creation of the Organization of the Petroleum Exporting Countries (OPEC), the dominance of these TNCs declined, as did the share of extractive industries in global FDI. From the mid-1970s, in particular, the share of oil, gas and metal mining in world FDI fell steadily as other sectors grew much faster. However, as a result of rising mineral prices, the share of extractive industries in global FDI has recently increased, although it is still much lower than those of services and manufacturing. It is therefore an opportune time for the *WIR07* to revisit the role of TNCs in extractive industries and their impact on development.

Global mineral markets are characterized by an uneven geographical distribution of reserves, production and consumption. Some developing and transition economies are among the main producers and net exporters of various minerals, while developed countries and fast-growing emerging economies are the major consumers and importers. These imbalances sometimes create concerns among importing countries over the security of supply, and concerns among exporting countries over market access. The supply of minerals is essential for economic development: no modern economy can function without adequate, affordable and secure access to these raw materials. TNCs can be important for both host and home countries in this context. For countries that lack the necessary indigenous capabilities for transforming their natural resources into commercial goods, TNCs can bring the needed capital, knowledge and access to markets; for home countries, they can serve as vehicles for securing access to foreign supplies. Indeed, some of the world's largest TNCs are active in extractive industries, and a number of new ones have emerged in resource extraction in the past decade, not least from developing and transition economies. The overseas expansion of TNCs from the South is reflected in FDI data. Between 2000 and

2005, the aggregate share of developed countries in global FDI in extractive industries fell from 99% in 2000 to 95% in 2005.

Both government policies and TNCs' investment decisions are influenced by the volatility of mineral markets. The current price boom reflects in part a surge in demand for oil, gas and various metallic minerals, especially from some rapidly growing developing economies, notably China. Although by June 2007, prices of commodities such as aluminium, copper, gold and oil remained close to their highest levels in nominal terms, their future trends are difficult to forecast. However, experts agree that the costs of exploiting new mineral deposits are likely to rise, which might keep prices at relatively high levels in the coming years. The high prices have spurred an investment boom in mineral exploration and extraction. For example, global private investment in non-ferrous metal exploration rose from \$2 billion in 2002 to an estimated \$7 billion in 2006, and drilling for oil and gas doubled over the same period, pushing the rig utilization rate up to about 92%.

The relative importance of foreign affiliates in mineral production varies by economy and mineral...

Developed countries still attract the bulk of FDI in extractive industries, partly explained by significant cross-border M&A activity. However, their share in global inward FDI in these industries fell from about 90% in 1990 to 70% in 2005. The share of developing and transition economies as destinations for TNC investments in extractive industries has increased over the past two decades. Between 1990 and 2000, their estimated combined stock of inward FDI in those industries more than doubled, and between 2000 and 2005, it increased again by half. Following new mineral discoveries, a number of new FDI recipients have emerged, including LDCs such as Chad, Equatorial Guinea and Mali. During this period, the Russian Federation and other CIS members also became important destinations for FDI in extractive industries.

The importance of extractive industries in inward FDI varies by host economy. In all the major country groups, the extractive industries of some countries account for a significant share of the total inward FDI stock: for example, Australia, Canada

and Norway among developed countries; Botswana, Nigeria and South Africa in Africa; Bolivia, Chile, Ecuador and Venezuela in Latin America and the Caribbean; and Kazakhstan in South-East Europe and the CIS. In a number of low-income, mineral-rich countries, extractive industries account for the bulk of inward FDI; many have few other industries that can attract significant FDI, due to their small domestic markets and weak production capabilities.

The relative importance of foreign companies in the production of metallic minerals and diamonds varies considerably by country. Foreign affiliates account for virtually all of the (non-artisanal) production in LDCs such as Guinea, Mali, the United Republic of Tanzania and Zambia, as well as in Argentina, Botswana, Gabon, Ghana, Mongolia, Namibia and Papua New Guinea. In these countries, TNCs generally operate through concessions granted in the form of exploration and mining licences. In another 10 major metal-producing countries, foreign affiliates account for an estimated 50% to 86% of production. By contrast, in the Islamic Republic of Iran, Poland and the Russian Federation their share is negligible.

In *oil and gas*, foreign affiliates generally account for a lower share of production than in metal mining. In 2005, they were responsible for an estimated 22% of global oil and gas production, with the average share being higher in developed countries (36%) than in developing countries (19%) and transition economies (11%). However, there was wide variation among developing countries. In West Asia, foreign affiliates' output amounted to an average of only 3% of production, whereas the corresponding share in sub-Saharan Africa was 57% on average. Foreign companies accounted for more than half of production in Angola, Argentina, Equatorial Guinea, Indonesia, Sudan and the United Kingdom. On the other hand, no production was attributed to foreign affiliates in, for instance, Kuwait, Mexico and Saudi Arabia.

... reflecting a diverse and changing universe of extractive-industry TNCs, with the dominance of privately owned firms in metal mining and of State-owned enterprises in oil and gas.

The relative importance of TNCs in the production of metallic minerals and of oil and gas varies considerably. In *metal* mining, 15 of the 25 leading companies in 2005, ranked by their share in the value of world production, were headquartered in developed countries. Eight others were from developing countries and the two remaining were from the Russian Federation. The top three

were BHP Billiton (Australia), Rio Tinto (United Kingdom) and CVRD (Brazil). Three State-owned companies also featured on the list: Codelco (Chile), Alrosa (Russian Federation) and KGHM Polska Miedz (Poland). Following CVRD's acquisition of Inco (Canada), it was estimated to have become the largest metallic mineral producer in the world in 2006 – the first time that a Latin America-based company will have occupied that position. The level of internationalization of these leading companies varies greatly. In 2005, Rio Tinto had mining operations in the largest number (10) of host countries, followed by Anglo American, AngloGold Ashanti and Glencore International. In contrast, large producers like Codelco, CVRD and Debswana (Botswana) had no overseas mining production.

In *oil and gas*, private companies remain the largest corporations in terms of foreign assets. For example, 10 of them were included among the firms on UNCTAD's list of the world's top 100 TNCs (by foreign assets) in 2005. In terms of production, however, TNCs from developed countries no longer rank among the largest companies in the world. In 2005, the world's three largest oil and gas producers were all State-owned enterprises based in developing or transition economies: Saudi Aramco (Saudi Arabia), Gazprom (Russian Federation) and the National Iranian Oil Company. Saudi Aramco's annual production in 2005 was more than double that of the largest privately owned oil and gas producer, ExxonMobil (United States). More than half of the top 50 producers were majority State-owned, 23 had their headquarters in developing countries, 12 in South-East Europe and the CIS, and the remaining 15 in developed countries.

Although State-owned companies based in developing and transition economies control most of the global production of oil and gas, their degree of internationalization is still modest compared with that of the top privately owned oil TNCs. Indeed, none of the top three State-owned producers had significant foreign production in 2005, whereas foreign locations accounted for 70% of the production of the top three privately owned oil majors. However, some companies from developing and transition economies are expanding their overseas interests, and are fast becoming global players. The combined overseas production of CNOOC, CNPC, Sinopec (all China), Lukoil (Russian Federation), ONGC (India), Petrobras (Brazil) and Petronas (Malaysia) exceeded 528 million barrels of oil equivalent in 2005, up from only 22 million barrels 10 years earlier. China's CNPC, Sinopec and CNOOC, and India's Indian Oil Corporation and ONGC Videsh have invested large sums in oil and gas production deals around the world during the past two years. Both CNPC and Petronas are involved in oil and gas production in

more than 10 foreign countries. A few State-owned oil TNCs from emerging economies have invested in host countries that developed-country TNCs are less likely to operate in, for a variety of reasons, including sanctions.

In metal mining, the top 10 companies account for a growing share of global production. Following a series of cross-border M&As, the 10 largest metal mining companies in 2006 controlled an estimated 33% of the total value of all non-energy minerals produced globally, compared with 26% in 1995. Concentration levels are even higher for individual metals. In the case of copper, for example, the top 10 companies accounted for 58% of world production in 2005. Conversely, in the oil and gas industry, the level of concentration has remained fairly stable over the past decade, with the top 10 producers accounting for about 41% of world production.

Varying motives drive the overseas expansion of different TNCs.

The drivers and determinants of investments by extractive-industry TNCs differ between activities, industries and companies. *Natural-resource-seeking* motives dominate FDI and other forms of TNC involvement in upstream (exploration and extraction) activities. A TNC might seek resources to meet its own needs for its downstream refining or manufacturing activities, to sell the minerals directly in host, home or international markets, or to secure the strategic requirements of its home country (as formulated by the country's government) for energy or other minerals. The latter has been a major driver of the recent overseas expansion of State-owned TNCs from Asia, for instance.

Market-seeking motives figure mainly among the drivers of overseas downstream activities. For example, Russian TNCs in extractive industries have invested abroad to enhance control over distribution channels linked to those activities, and Saudi and Kuwaiti State-owned oil companies have partnered with the Chinese firm Sinopec in two separate refining and petrochemical ventures in China. *Efficiency-seeking* motives apply mainly to investments in the processing or early metal manufacturing stage, where TNCs seek to exploit differences in costs of production between countries. *Strategic asset-seeking* motives can be linked especially to the rise of cross-border M&As in various extractive industries and activities: companies may invest to acquire strategic assets in the form of know-how and technology from other companies or from specialized technology providers, or to speed up their rise to global status by accessing the resources, capabilities and markets of the acquired firms.

Access to financial resources is an advantage over domestic firms in host countries, enjoyed by both traditional and new TNCs. International experience with extractive projects may increase the ability of TNCs to borrow or raise funds through stock markets. Financial strength can also be linked to home-country institutional arrangements. State-owned TNCs from some emerging economies benefit from financial backing by their governments, which may enable them to assume greater risks when investing abroad and to pay more for access to mineral resources.

With some important exceptions, proprietary technology is of relatively limited importance as an ownership-specific advantage for the internationalization of most extractive-industry firms. Technologies used in most metal mining operations and oil and gas extraction are well known today, and can be obtained in the open market. Important exceptions include technologically challenging projects, such as those related to deep offshore drilling, and production of liquefied natural gas and development of unconventional energy sources. However, expertise in managing long-term projects and the associated risks remains critical for successful overseas expansion. Access to markets and to transportation and distribution channels are other potentially important firm-specific advantages, at least in the case of oil and gas.

TNC participation in extractive industries can have significant impacts on host economies...

Mineral endowments provide opportunities for economic development and poverty alleviation in the countries where they are located. Indeed, some of today's developed countries as well as a number of developing countries have successfully leveraged their mineral resources for accelerating their development process. In other cases, however, the impact of extractive activities has been and remains disappointing.

For many mineral-exporting countries, the current commodity price boom has led to improved terms of trade. This applies in particular to many low-income countries, where revenues from mineral exploitation and exports represent a large share of their national income. But natural resource endowments do not translate automatically into development gains for a country, with or without TNC involvement in the extraction process. There are many underlying determinants of the performance of resource-rich countries that are related to the global forces of demand and supply and to policy failures rather than to TNC participation per se. Nevertheless, TNCs can influence the outcome.

They may complement domestic investment and boost production by contributing capital, technology and management skills. Such a package of assets is generally needed the most in low-income countries that lack domestic capabilities. On the other hand, reliance on TNCs may also raise concerns associated with unequal bargaining strengths, ownership and control over non-renewable resources, rent-sharing, transfer pricing practices and various environmental and social costs.

Thus TNC involvement in extractive industries may have both positive and negative economic, environmental, social and political impacts on a host country. Considerable efforts to address these issues are necessary for harnessing the earnings from extractive industries to boost development.

... including various economic impacts ...

The economic challenge for a host country is threefold: how to add value through extractive activities, how to capture that value locally, and how to make the best use of the revenues generated.

In terms of adding value, the benefits of TNC involvement vary by country. Developing countries that possess sufficient financial resources, engineering expertise and technically competent State-owned oil companies have successfully developed their own capabilities to exploit their natural resources. West Asia is a typical example, where much of the oil and gas extraction is undertaken with known technology and little participation by foreign companies. In many other countries that lack the finance and ability to manage capital-intensive, high-risk and sometimes technologically challenging projects, TNC participation has helped boost their output and exports of minerals.

While there are alternatives to TNCs for accessing funds, such sources may not be available to domestic enterprises in all countries. An advantage of involving TNCs in the financing of a mining project is that it does not generate foreign debt for host-country governments, and such financing comes with a bundle of other assets, such as technology and managerial expertise. For some extraction projects, access to technology and management know-how can indeed be a reason for countries to rely on TNCs. But TNC involvement comes at a price. TNCs may claim a significant share of the revenue generated and repatriate a certain proportion of their profits, thereby affecting the sharing of the value created.

TNC involvement also affects the second part of the economic challenge: capturing the value locally in the form of employment and wages, local procurement, and government revenue in the form of taxes, royalties or dividends. Large-scale mineral

extraction generally offers limited employment opportunities, and hence has little impact on employment, at least at the macro level. This applies especially to projects involving TNCs, as these companies tend to use more capital-intensive technologies and processes than domestic enterprises. The scope for backward linkages is generally relatively small in extractive industries. In addition, foreign affiliates are more likely to use foreign suppliers of various inputs. In low-income countries, a lack of qualified suppliers and skills shortages can also reduce the scope for local sourcing as well as downstream processing. Thus the potentially most important direct contribution from mineral extraction is the rise in host-country income, much of which takes the form of government revenue.

The amount of net revenue and income generated for the host country from TNC operations in extractive industries depends both on the extent of the overall value created by their participation, and how that value is shared between the TNC on the one hand, and host-country factors of production and the government on the other. In general, the better the capabilities and competitive strengths of a country's domestic enterprises, the more choice that country has for project financing and implementation. In countries with limited domestic capabilities, relying on TNCs may well be the only viable option to transform dormant resources into commercial products.

The sharing of revenue from a project partly reflects the relative bargaining power of host governments vis-à-vis transnational firms, which influences the terms and conditions they can impose for the participation of the latter. The sharing of revenue is also influenced by TNC conduct, including their accounting practices, financial behaviour, the possible use of transfer pricing and the repatriation of a certain proportion of their profits. Various studies of fiscal regimes suggest that the government's take in revenues generated from oil and gas activities over the lifetime of a project vary between 25% and 90%, and in metal mining between 25% and 60%. However, empirical information on TNCs' tax payments on a country-specific basis is scarce, making enhanced transparency important.

There can also be various potential indirect economic impacts from TNC involvement. First, the entry of TNCs can constitute an important channel for knowledge and technology transfer to developing countries. However, the lack of educated and skilled human resources and of absorptive capacity in general can limit the positive effects on low-income countries of such knowledge transfers. Another potential indirect economic effect is linked to investments in infrastructure. TNC activities in extractive industries are often associated with the development of public

utilities (such as electricity and water supplies) and with the building of the transportation infrastructure (roads, railways and ports) needed for extracting, transporting and exporting the minerals and fuels. If the new infrastructure is developed in populated areas, it is likely to provide greater benefits than if developed in more remote areas of a country.

The third part of the economic challenge is not directly linked to TNCs. Ultimately, the overall development impact of the revenue generated is determined by the way in which the revenues generated for the host country are managed, distributed and used by the government, and to what extent they support the development objectives and needs of both current and future generations. By enabling or boosting production, TNCs may influence the overall economic performance of a host country in terms of its macroeconomic stability, growth and income distribution. Whereas most of these impacts relate to extractive activities in general, the income generated through TNC involvement can help overcome initial hindrances to economic growth (such as low levels of savings and investment) and give it a big push. At the same time, a booming extractive industry, with or without TNC participation, can also have distorting effects, commonly referred to as the “Dutch disease”, especially if windfall gains are not managed carefully and in accordance with long-term development strategies. Thus, even if TNC participation contributes to economic growth, for it to generate substantial development gains the benefits obtained need to be wisely used and equitably distributed.

... as well as considerable environmental, social and political impacts.

Extractive activities, regardless of who undertakes them, involve environmental costs. TNCs can play both a negative and a positive role in this context. On the one hand, they may add to environmental degradation in a host country simply by participating in resource extraction where there would otherwise be none. On the other hand, they may reduce adverse environmental consequences by using more advanced technologies in production, and by applying and diffusing higher standards of environmental management than domestic companies, where the latter – including artisanal and small-scale mining – exist. However, the net environmental impact of TNC activities is determined to a significant extent by a host-country’s environmental regulations and its institutional capacity to implement them. In recent years, there has been growing environmental awareness among large, established TNCs in both metal mining and oil and gas extraction. While accidents and bad practices

undoubtedly still occur, their environmental practices have generally improved over the past decade or so, although these vary by company. For example, TNCs originating from home countries where environmental legislation is at a nascent stage may be relatively less well equipped to manage the environmental consequences of their overseas projects than those from countries with more advanced environmental legislation and standards.

More than in other industries, investment in extractive activities can also have far-reaching social and political consequences; the outcome depends largely on the specific host-country situation. Negative social and political impacts have been observed mainly in mineral-rich poor countries with weak institutions. Problems are often associated with particular minerals, poor governance frameworks, and weak institutional capacities of host governments to formulate and implement laws and regulations.

Among various social concerns, health and safety in the extractive industries have consistently posed a challenge, particularly in artisanal mining in developing countries. However, problems also exist in some projects operated by major TNCs. Other concerns may arise from the relationship between TNCs and local communities, the influx of migrants to work in TNC-operated projects and related issues. Political problems may stem from disputes over the distribution of the resource revenues, corruption, and even armed conflict or war among different groups seeking to benefit from the revenues generated. TNC participation can introduce higher standards in dealing with various social issues, but it can also add to problems. By their mere presence, they may – directly, indirectly, or unwittingly – support or strengthen the existing order. When mineral deposits are known to exist in weakly governed or authoritarian States, companies need to consider carefully whether or not to operate in those locations.

Governance systems are important for maximizing development gains from resource extraction...

The quality of government policies and institutions is a determining factor for ensuring sustainable development gains from resource extraction, with or without TNC involvement. The management of a mineral-based economy is complex, and requires a well-developed governance system and well-considered national development objectives. In some mineral-rich developing countries, however, government policy-making may be aimed at short-term gains rather than long-term development objectives. Furthermore, the distribution and use of a host country’s share of mineral revenues may be determined with little attention to development

considerations. In some cases, easy access to revenues from mineral resources can make governments less accountable to their populations, and more inclined to preserve and extend the interests of a small governing elite.

These factors underline the importance of developing a legal system based on the rule of law, as well as an institutional environment in which companies have incentives to invest in productive activities. The quality of the physical infrastructure, education and health care also influences investment decisions. Moreover, proactive policies aimed at using government revenues from extractive industries to achieve development goals are essential for ensuring social cohesion; indeed, large increases in revenues can cause social disruptions and political instability if they are not channelled and managed carefully. Beyond the overall framework, appropriate sectoral institutions and policies are needed, including a legal and administrative framework for the exploration and exploitation of minerals, for health and safety, and for the protection of the environment and the rights of local communities.

In this policy-making process, all relevant stakeholders – governments, civil society, affected communities, indigenous peoples' organizations, labour unions, industry and international organizations – must be given a chance to participate in order to avoid inequitable outcomes. Allocating an acceptable share of the revenues to provincial and other lower levels of government can be a way to mitigate social conflicts in the local areas most directly affected by extractive activities. However, this also requires adequate governance systems and capabilities at the local-government level.

... as are the regulations and contractual forms relating to TNC entry and operations.

The way foreign involvement in extractive industries is governed has changed over time and still varies considerably by country. Approaches range from total prohibition of foreign investment in resource extraction (as in the case of oil in Mexico and Saudi Arabia) to almost complete reliance on TNCs (as in the case of metal mining in Ghana and Mali, or oil and gas extraction in Argentina and Peru). Various national laws, regulations and contracts govern TNC involvement. In addition, many countries have entered into international investment agreements (IIAs) of relevance to the operations and impacts of extractive-industry TNCs.

In the oil and gas industry, TNCs operate under contractual arrangements of various kinds, such as concessions, joint ventures, production-sharing agreements (PSAs) and service contracts. Overall, as

of June 2007, PSAs were the most commonly used form, accounting for more than 50% of all contracts with foreign TNC participation in the main oil- and gas-producing developing economies. They were the main contractual form in countries such as China, Equatorial Guinea, Indonesia, Iraq, the Libyan Arab Jamahiriya, Qatar, Sudan and Viet Nam. Concessions and joint ventures are the next most commonly used contractual forms, and the dominant ones in Algeria, Angola, Brazil, Kazakhstan, the Russian Federation and Venezuela. Service contracts are less common but are important, for example, in the Islamic Republic of Iran and Kuwait.

The effect of a given contract depends on how its contents have been negotiated between the host State and the investor. Royalty and taxation rates are often contractually determined, as are issues related to local content, training, host-government control over key decisions and the extent of participation of a State-owned corporation, where applicable. More recently, contracts have also started to include provisions relating to human rights and environmental issues.

In metal mining, companies obtain concessions in the form of licences, which give them the right to explore for and produce minerals. The conditions for investment are typically set out in a mining code or a mining agreement. Such codes have evolved over time, reflecting changing market conditions and political priorities. Common features of current mining laws include increased security of tenure, open access to historical exploration reports, more streamlined and transparent exploration application procedures, geographically defined exploration areas, provision for dispute resolution and methods for resolving conflict over land use. A number of countries also stipulate conditions related to the employment of domestic and foreign employees in the metal mining industry.

In both the oil and gas and the metal mining industries, the evolving arrangements reflect an ongoing process through which governments seek to find an appropriate balance between the respective rights and obligations of States and firms. As government revenue is among the most important benefits from mineral extraction, it is not surprising that policymakers devote much attention to finding a mechanism that assures the government an appropriate share in the profits from mineral extraction. As the result of higher mineral prices in the past few years, a number of governments have taken steps to increase their share of the profits generated by amending their fiscal regimes or their contractual relations. Recent regulatory changes in developed, developing as well as transition economies suggest that many governments believed their previous

regulations may have been overly generous vis-à-vis foreign investors.

Compared with earlier waves of government policy changes and nationalizations, an added dimension this time is the wider use of IIAs among countries. While such treaties subject these governmental actions to certain international law principles, they cannot ultimately prevent a State from putting an end to a contractual relationship under existing terms. However, IIAs may grant foreign investors the right to claim compensation through international arbitration in case of a dispute. Protection under IIAs therefore mainly becomes relevant in the context of an exit strategy of a foreign investor. The scope of protection granted by such an agreement depends on how the treaty is formulated and its interpretations by arbitration tribunals. Moreover, the outcome of the government policy changes depends partly on the bargaining power of the parties. For those host countries that possess proven and high-value mineral and petroleum deposits, unilateral actions may be a viable approach to capturing a larger share of the benefits from an extractive industry. However, other countries may be in a weaker position to take such actions.

Ensuring greater and more equitable development gains requires shared responsibility among stakeholders, including host and home governments....

In order to derive maximum economic gains from TNC involvement while keeping potential environmental and social costs to a minimum, concerted action by all relevant stakeholders is required, based on a consensus around coherent policies. A number of recommendations to host-country governments, home-country governments, the international community, civil society and TNCs emerge from the analysis in *WIR07*.

Host-country governments bear the main responsibility for ensuring that the exploitation of their extractive industries yields benefits that support development objectives. Each government should formulate a clear vision as to how the country's oil and mineral resources can contribute to sustainable development. In that respect, an overall development strategy, developed within a governance framework based on the rule of law, is essential for coherent policy formulation and implementation. It should consider all relevant stakeholders – both current and future generations. Governments also need to strengthen their ability and capacity to design and implement appropriate policies. Well-informed governments are in a better position not only to design an appropriate regulatory framework, but also to enter into negotiations with TNCs, where necessary.

A clear strategy at both central and subnational levels of government indicating how to manage and use the revenue generated from mineral extraction is essential.

Policymakers need to consider from the outset how to derive long-term and sustainable development gains from the extractive activities of TNCs. It is crucial that the revenue generated from mineral extraction be invested in activities to enhance productive capacities, including human-resource and technology development, with a view to strengthening domestic private sector capabilities. They should also promote backward and forward linkages within the extractive industries and with related industries.

In designing and implementing policies, governments need to bear in mind the cost-benefit relationship, and the fact that mineral markets are volatile. If a country seeks TNC participation in its extractive industries, its business environment should be competitive to attract the desired investments and skills. To reduce the need for unilateral actions by governments, countries may need to develop frameworks that are robust over the different phases of the business cycle, for example by introducing progressive taxation systems for the fiscal treatment of revenues from extractive industries.

Host-country governments should also consider the environmental and social consequences of extraction activities. There have been some encouraging developments in this area in recent years. An increasing number of countries are introducing environmental legislation, often with specific regulations for extractive industries. However, many countries still need to develop the capabilities to implement and enforce their environmental laws. The protection of the interests and rights of the people that might be affected by resource extraction is first and foremost a government obligation. Nonetheless, it is important for the various relevant stakeholders in a host country to be given the opportunity to influence the decision-making process so as to ensure equitable outcomes. An important factor in this context is the need to enhance transparency. In several countries, information about revenue is still treated as confidential, and foreign investors may be required to sign confidentiality or non-disclosure agreements.

Home-country governments can influence the potential impact of their TNCs' investments on host countries. A number of developed and now also developing countries actively support their firms' overseas expansion, sometimes with a view to securing access to strategically important resources. They should promote responsible behaviour on the part of these TNCs. This is equally important if the home State is also the owner of the company.

More home countries can become involved in existing international initiatives related to the extractive industries, such as the Extractive Industry Transparency Initiative, the World Mines Ministers Forum and the Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development. They may also provide the recipient economies with financial and technical assistance for effective policy formulation and for building efficient governance systems.

...the international community, civil society and the TNCs.

The *international community* can also help promote greater development gains from resource extraction. International organizations can facilitate learning opportunities from studying and comparing the positive and negative experiences of different mineral-rich countries. Initiatives at the regional level might be useful. For example, it is worth exploring the scope for regional geological surveys and for establishing regional mining schools in Africa. In addition, the international community can be instrumental in the development of standards and guidelines and in promoting the use and adoption of existing tools to help ensure a more development-friendly outcome of TNC activities in mineral-rich countries, notably in weakly governed or authoritarian States. In very serious instances, the international community may have to explore sanctions as a tool for protecting human rights.

Voluntary initiatives can also be a useful supplement in countries where appropriate legislation or its enforcement is absent. A number of multi-stakeholder initiatives have been established with the aim of reducing the risk of conflict-related resource extraction and setting standards for corporate behaviour in conflict situations. The most notable ones include the Extractive Industries Transparency Initiative, the Kimberley Process Certification Scheme, the Voluntary Principles on Security and Human Rights and the Global Reporting Initiative. Civil society has played an active role in promoting these initiatives. International as well as local NGOs can contribute

expertise on economic and environmental as well as human rights issues; and they can play an important role in monitoring the actions both of governments and companies, drawing attention to any abuse or inappropriate actions. However, it is important for more countries and TNCs in extractive industries to become involved in these initiatives.

When engaging in resource extraction, the role of TNCs should be, first and foremost, to contribute to efficient production while, as a minimum, respecting the laws of the host country. When mineral deposits are located in weakly governed or authoritarian States, foreign companies need to consider the implications of investing there or not. While there are no easy choices in this respect, a number of new tools – such as those for compliance assessment developed by the Danish Institute for Human Rights and for risk and impact assessments and screening produced by International Alert – can provide guidance. However, even among the largest enterprises, the number of extractive TNCs that have signed up to relevant international initiatives is still small. A review of the top mining and oil and gas TNCs shows that very few of them are explicitly committed to these initiatives, particularly companies from developing and transition economies. Until more companies participate in them and abide by their commitments, their impact will be limited.

A concerted effort by all stakeholders is necessary to ensure that the vast mineral resources located in some of the world's poorest countries become a force for development. In low-income, mineral-rich countries, TNCs are likely to play an active role in the mineral extraction. The challenge is therefore to develop frameworks that create the proper incentives for local and foreign firms to produce efficiently while at the same time respecting environmental and social requirements that reflect the interests of local communities and society at large. A win-win situation can result if various minerals are produced efficiently and if host countries, with the support of various other stakeholders, can make the revenues generated work more effectively for sustainable development and poverty alleviation.

PART ONE

WIDESPREAD GROWTH IN FDI



CHAPTER I

GLOBAL TRENDS: SUSTAINED GROWTH IN FDI FLOWS

The upward trend in foreign direct investment (FDI) that began in 2004 accelerated further in 2006. FDI flows increased in all the major country groups – developed countries, developing countries and the transition economies of South-East Europe and the Commonwealth of Independent States (CIS) – but at varying rates. The sustained growth of FDI and related international production primarily reflect the strong economic performance and increasing profits of many countries in the world, further liberalization of their policies, and other specific factors such as currency movements, stock exchange and financial market developments and high commodity prices. Increases in cross-border mergers and acquisitions (M&As), fuelled substantially by private equity funds, also added to FDI growth.

This chapter first examines recent trends in global FDI flows, changes in international production, the comparative position of countries in terms of transnationalization and inward FDI performance and potential, and recent developments in FDI policies (section A). The changing geographic and industrial patterns of FDI are described in section B, while section C presents an analysis of

the world's top transnational corporations (TNCs). Section D concludes with a review of future prospects for FDI, based on UNCTAD surveys of TNCs and their foreign affiliates.

A. FDI and international production

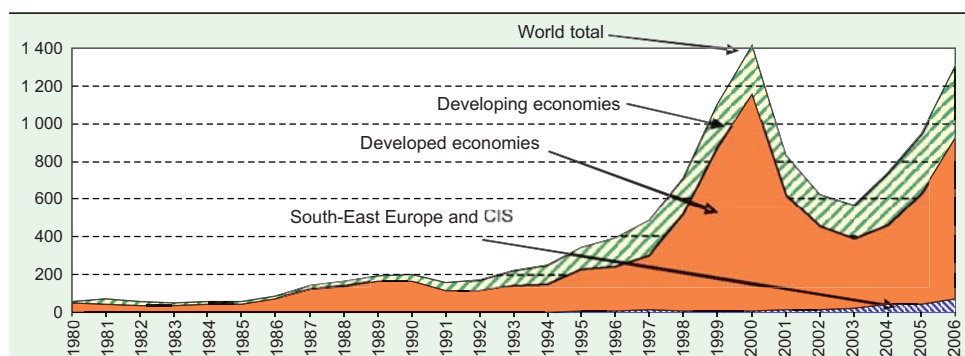
1. Trends in FDI

a. Overall trends

Global FDI inflows grew in 2006 for the third consecutive year to reach \$1,306 billion, the second highest level ever recorded. All three major country groups – developed countries, developing countries and the transition economies of South-East Europe and the CIS – saw continued growth.

FDI inflows in 2006 were 38% higher than in 2005, approaching the peak of \$1,411 billion reached in 2000 (figure I.1). Although FDI flows to all three major country groups rose, they varied greatly among regions and countries (chapter II).

Figure I.1. FDI inflows, global and by group of economies, 1980-2006
(Billions of dollars)



Source: UNCTAD, based on annex table B.1 and FDI/TNC database (www.unctad.org/fdi statistics).

FDI flows to developed countries in 2006 rose by 45%, well over the growth rates of the previous two years, to reach \$857 billion (figure I.1 and annex table B.1). The United States regained its position as the world's leading FDI recipient, overtaking the United Kingdom, which had led in 2005. The European Union (EU) remained the largest host region, with 41% of total FDI inflows. FDI inflows to developing countries and economies in transition rose by 21% and 68%, respectively, to new record levels for them (annex table B.1). Developing Asia retained its strong attraction for investors, accounting for more than two thirds of the total inflows to all developing countries in 2006.

- In *Africa*, FDI inflows exceeded their previous record set in 2005. High prices and buoyant global demand for commodities were again key factors. The oil industry attracted investment from TNCs based in both developed and developing countries (chapter IV). Cross-border M&As in the extractive industries rose fivefold to \$4.8 billion. As in previous years, most of the inflows were concentrated in West, North and Central Africa. However, inflows remained small in low-income economies with few endowments of natural resources.
- Inflows to *Latin America and the Caribbean* increased on average by 11% in 2006. However, if the offshore financial centres are excluded, they remained almost unchanged over the previous year. Mexico was the largest recipient followed by Brazil. While inflows to Mexico were similar to 2005, those to Brazil rose by 25%. In the Andean group of countries, the commodity price boom induced a more restrictive regulatory environment governing TNC participation in the extractive industries (Part Two). The possibility of additional regulatory changes and of their spread to more countries may have raised uncertainty among investors in the primary sector, resulting in lower FDI flows to some countries in the region. In addition, high commodity prices and resulting improvements in current-account balances led to an appreciation of the currencies of some mineral-rich countries in the region, potentially harming the prospects for FDI in other export-oriented activities.
- FDI inflows to *South, East and South-East Asia, and Oceania* maintained their upward trend, reaching a new high in 2006 of \$200 billion, an increase of 19% over the previous year. At the subregional level, the shift in favour of South and South-East Asia continued. China, Hong Kong (China) and Singapore retained their positions as the three largest recipients of FDI in the region. Outward FDI from the region surged, driven by the rapid rise in FDI from all the Asian subregions

and major economies. FDI inflows to Oceania remained small, at less than \$400 million.

- In *West Asia*, FDI flows – both inward and outward – maintained their upward trend in 2006. Turkey and the oil-rich Gulf States continued to attract the most FDI inflows, achieving record levels in 2006 in spite of geopolitical uncertainty in parts of the region. Energy-related manufacturing and services were the most targeted activities. Countries with large financial resources, led by Kuwait, accounted for most of the rise in outward FDI from the region. Cross-border M&As continued to be the main mode of outward FDI, particularly by State-owned enterprises. The region's closer ties with economies in other parts of Asia and Africa support its energy-related FDI.
- FDI inflows to the 19 countries of South-East Europe and the CIS expanded significantly in 2006, for the sixth consecutive year, and they more than doubled in the region's largest host country, the Russian Federation (annex table B.1).

The continued rise in FDI flows across regions largely reflects strong economic growth and performance in many parts of the world.¹ High corporate profits (and stock prices) boosted the value of cross-border M&As, which account for a large share of such flows. The number of greenfield and expansion investment projects increased by 13% to 11,800 projects, notably in developing countries (annex tables A.I.1) and in the services sector (annex table A.I.2). In 2006, FDI inflows accounted for half of all net capital flows to developing countries (World Bank, 2007a: 37).² Thus, as in more recent years, FDI flows continued to be the most important and stable source of external financing for developing countries (chapter II). Mobilizing international resources for development, including FDI, was set out as one of the objectives in the Monterrey Consensus.³

Global FDI flows also rose as a result of a weakening dollar in 2006. The United States attracted large inflows from both the euro area and Japan. Overall, however, the amounts in 2006 (as well as 2005) were not much higher than those of the 1990s. The sharp appreciation of the euro in recent years has not led to as strong an increase in FDI outflows from the euro area into the United States and Japan, possibly suggesting that TNCs from the countries in the euro area are reacting less to exchange rate changes than in the past. This is probably because they have already reached a relatively high degree of internationalization (section C), which makes their profits less vulnerable to exchange rate changes vis-à-vis particular host countries. Moreover, TNC strategies are now

influenced by other secular developments. For example, the creation of the euro area has promoted greater regional integration and concentration of economic activity within the EU and led to increased intra-EU FDI flows to the common currency area as well as to the United Kingdom and the EU accession countries (chapter II, section C).

Increased corporate profits (and consequently higher stock values), also partly explain rising global FDI flows. They have boosted the value of cross-border M&As, which, as mentioned, account for a large share of FDI flows, and contributed to higher reinvested earnings. For example, the profits-to-sales ratio of the United States' top 500 firms in 2006⁴ was the highest for the past two decades, and profits of Japanese firms have continued to rise, setting new records every year since 2003.⁵ Similarly, profits of EU companies have surged: in the United Kingdom, for example, the net rate of return of private non-financial corporations in 2006 rose to an all-time high (United Kingdom, National Statistics Office, 2007). Profits earned abroad or by foreign affiliates were also high. Income on FDI (i.e. repatriated profits and reinvested earnings as recorded in host countries' balance of payments) rose another 29% in 2006, following a 16% rise in 2005.⁶ In the 93 countries for which data on all three components of FDI – equity investments, reinvested earnings and other capital (essentially intra-company loans) – were available, reinvested earnings in 2006

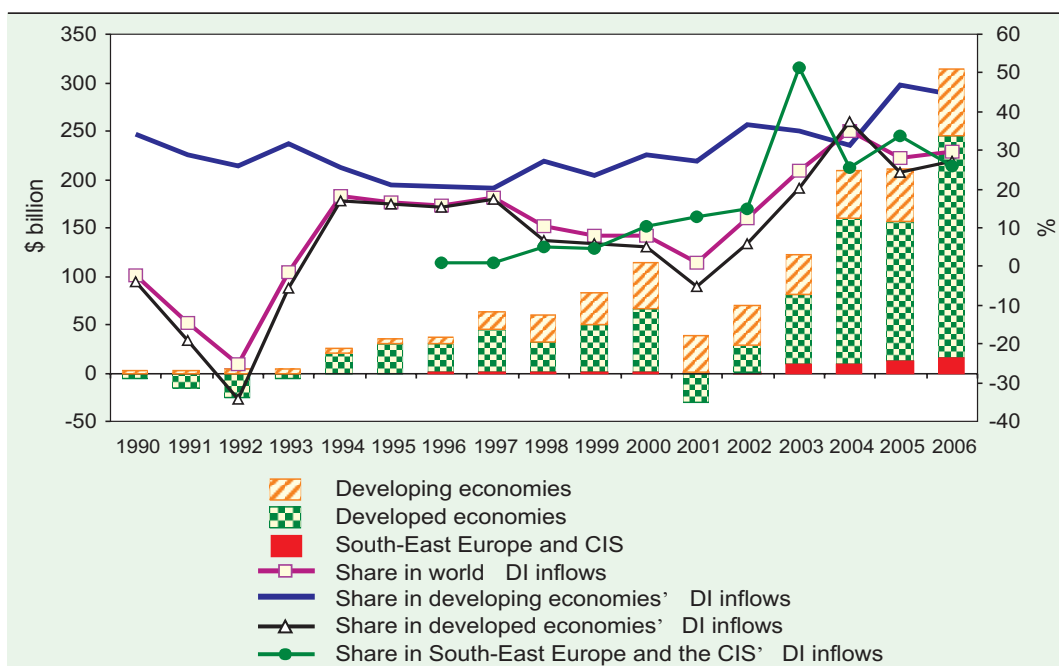
reached a peak. They accounted for 30% of world FDI inflows and for almost half of total inflows to developing countries (figure I.2).

b. Continued rise in cross-border M&As

Cross-border M&As increased by 23% to \$880 billion in 2006, and the number of transactions increased by 14% to 6,974 (figure I.3 and annex tables B.4-B.5), reflecting strong global M&A activity in general. Their value, however, still remained below the peak attained in 2000 (figure I.3). The rise in the value of cross-border M&As was largely fuelled by the growing strength of the stock markets,⁷ and sustained increases in the asset values of enterprises.⁸ In 2006, increases in stock values in emerging markets also played a role: for example, for the first time ever, the combined value of 13 stock markets in developing Asian economies exceeded that of the Tokyo Stock Exchange, now the second largest in the world.

The higher stock prices, increased purchasing power of investors, and the desire of firms to capture a growing market share in global competition led to a further increase in the number of mega deals (i.e. cross-border deals worth over \$1 billion). In 2006, the number of such deals rose to 172, compared to 141 in 2005 and close to the record of 2000 (table I.1). They accounted for two thirds of the total value

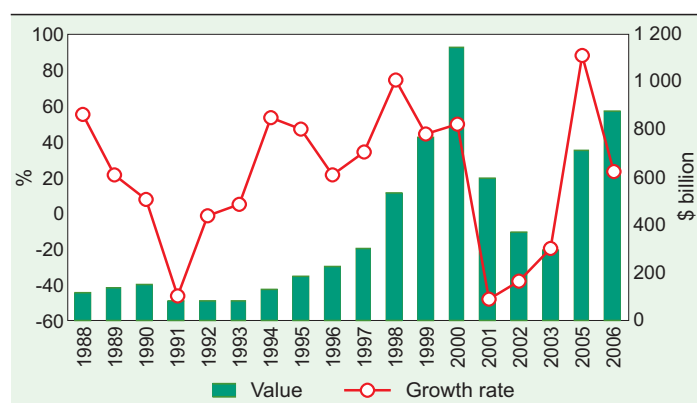
Figure I.2. Reinvested earnings: value and share in total FDI inflows, 1990-2006



Source: UNCTAD.

Note: Only 48-112 countries that reported all three components of FDI inflows already mentioned in the text are covered. They accounted for 74% of global FDI flows between 1990 and 2006.

Figure I.3. Global cross-border M&As, value and growth rate, 1988-2006



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

of global cross-border M&As – a higher share than in 2005, but still below that of 2000.⁹

The current M&A boom is spread across regions and sectors. In North America, the value of cross-border M&A sales nearly doubled in 2006.¹⁰ This is mainly because of a number of mega deals concluded in natural resources in Canada where cross-border M&A deals rose more than 2.5 times in value. Moreover, in 2006, the United States regained its position as the country with the largest cross-border M&A sales in the world. In Europe, M&A activity remained high in terms of both sales and purchases. The large number of M&A deals by European companies reflect the regained strength of European corporations after successful cost-cutting and restructuring efforts. The United Kingdom was the main target country for cross-border M&As by strategic investors from continental Europe. Three of the six largest cross-border M&As worldwide were acquisitions of United Kingdom companies by other EU investors (chapter II and annex table A.I.3).¹¹ These transactions partly reflect the United Kingdom's openness to cross-border M&As. Firms located in the new member States of the EU continued to remain important targets for cross-border M&As, but there were fewer mega deals, and the value of those deals fell considerably, from \$19 billion in 2005 to \$10 billion in 2006.

In 2006, developing countries and economies in transition (South-East Europe and CIS) further

Table I.1. Cross-border M&As valued at over \$1 billion, 1987-2006

Year	Number of deals	Percentage of total	Value (\$ billion)	Percentage of total
1987	14	1.6	30.0	40.3
1988	22	1.5	49.6	42.9
1989	26	1.2	59.5	42.4
1990	33	1.3	60.9	40.4
1991	7	0.2	20.4	25.2
1992	10	0.4	21.3	26.8
1993	14	0.5	23.5	28.3
1994	24	0.7	50.9	40.1
1995	36	0.8	80.4	43.1
1996	43	0.9	94.0	41.4
1997	64	1.3	129.2	42.4
1998	86	1.5	329.7	62.0
1999	114	1.6	522.0	68.1
2000	175	2.2	866.2	75.7
2001	113	1.9	378.1	63.7
2002	81	1.8	213.9	57.8
2003	56	1.2	141.1	47.5
2004	75	1.5	187.6	49.3
2005	141	2.3	454.2	63.4
2006	172	2.5	583.6	66.3

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

increased their role as buyers in the global M&A market. Investors from the fast growing emerging economies of Asia and from Eastern Europe – especially China, India and the Russian Federation – played a prominent role (box I.1). In the oil and gas industry, for example, two of the three largest companies worldwide (measured by market capitalization) – Gazprom (Russian Federation) and Petrochina (China) – have substantially increased their foreign investments through M&As. As several corporations located in the developing world have grown significantly in recent years (section C.2; *WIR06*: 32), they are expected to make larger acquisitions in the future. In some cases, their home-country governments also actively support their overseas expansion (*WIR06*, chapter IV).

Taking a look at cross-border M&A activity across industries, significant M&As were recorded in the consumer goods and service industries (including financial services) and in energy supply and basic materials. In contrast to the M&A boom of the late 1990s and early 2000s, which was largely driven by takeovers in the information and communications technology industries, there were fewer takeovers in telecommunications, media and technology services in 2006 (section B.2).

In 2006, cross-border M&As were largely driven by favourable financing conditions worldwide, reflecting low debt-financing costs and an abundant supply of credit as a result of high corporate profits. Recent cross-border M&A transactions have been carried out primarily through cash and debt financing. In the previous M&A boom, transactions were to a large extent financed by the exchange of shares (table I.2). For example, in large deals, including many in the mining and oil industries, cash is now the standard payment method. Emerging economies awash with petrodollars (West Asia) and foreign exchange (e.g. China) have become very active in cash-based cross-border acquisitions. The increasing role of debt financing can partly be explained by the fact that the cost of equity capital remains significantly higher than the cost of debt financing. This reflects a corporate strategy of not holding excessive equity capital and instead using borrowings and internal funds in

Box I.1. Selected examples of major acquisitions by companies from developing countries and economies in transition

A few cross-border M&As by firms from developing and transition economies took place in the past two years, reflecting their increasing strength. The following are a few examples:

- In China, the largest and most active buyers are in the oil and gas industry. China National Petroleum Corporation acquired PetroKazakhstan for \$4.1 billion in 2005, and Sinopec bought the Russian-United Kingdom joint venture Udmurtneft for \$3.5 billion in 2006.^a
- The main motives for Indian companies to undertake cross-border M&As are to gain access to new technologies and competencies, and to build stronger positions in global markets. The acquisition by Mittal Steel group (a company of Indian origin headquartered in the Netherlands) of the European steel company Arcelor for \$32 billion, was the world's largest cross-border M&A transaction in 2006, and the largest deal ever made by a company with origins in a developing country (annex table A.I.3). In the same year, the Indian Tata Group acquired the Corus Group (United Kingdom/Netherlands) – also in the steel industry – for \$9.5 billion (though the deal was not recorded in 2006, as the payment was not completed).
- The Russian oil and gas giants (Gazprom, Rosneft and Lukoil) have started to expand abroad. Gazprom has made several investments in Germany through M&As in the energy sector in order to reach directly the end-users of its natural resources.^b Gazprom is also planning investments in the oil industry in Algeria, Bolivia and the Libyan Arab Jamahiriya. Some other large cross-border M&As by Russian companies included Russian Aluminium's acquisition of part of Glencore International (Switzerland) for \$2.5 billion, and CTF Holdings' (Alfa Group) purchase of Turkcell Iletisim Hizmetleri, a telecommunications firm in Turkey for \$1.6 billion^c (neither of them was recorded in 2006).
- In the past, companies from West Asia, in particular from the Gulf region, were not very active in cross-border M&As; instead they preferred portfolio investments in foreign companies. But this has changed in recent years. For instance, Saudi Oger acquired Turk Telekom for \$6.6 billion in 2005 and Ports Customs Free-Zone Thunder FZE United Arab Emirates bought Peninsular & Oriental Steam (United Kingdom) for \$6.9 billion in 2006 (annex table A.I.3).

Source: UNCTAD.

^a "Die Käufer des neuen Jahrtausends", *Frankfurter Allgemeine Zeitung*, 22 December 2006: 23.

^b Gazprom holds stakes in Wingas (49.99%), VNG Verbundnetz (5.26%) and Winthershall Erdgas Handelshaus (50%).

^c "Die Käufer des neuen Jahrtausends", *Frankfurter Allgemeine Zeitung*, 22 December 2006: 23.

investment to attain high managerial efficiency (measured, for example, by the return on equity).¹² In financing M&As, bank loans accounted for 36% of total finance during January-September 2006, compared to 29% in 2005.¹³

The continuing strong M&A activity can also be partly explained by the fact that the current M&A boom has produced more corporate value for the acquiring companies than the previous one; the value of the companies created by M&As in the previous boom shrunk continuously as these activities progressed (McKinsey, 2007a).

Table I.2. Cross-border M&As through exchange of shares, 1987-2006

Year	Number of deals	Percentage of total	Value (\$ billion)	Percentage of total
1987	6	0.7	1.5	2.0
1988	14	0.9	1.6	1.4
1989	51	2.3	11.2	8.0
1990	45	1.8	12.6	8.4
1991	22	0.8	2.3	2.9
1992	48	1.8	3.0	3.8
1993	75	2.6	14.3	17.3
1994	71	2.0	5.3	4.2
1995	96	2.3	13.8	7.4
1996	113	2.5	29.8	13.1
1997	112	2.2	32.4	10.6
1998	134	2.4	140.9	26.5
1999	176	2.5	277.7	36.3
2000	271	3.4	507.8	44.4
2001	206	3.4	140.9	23.7
2002	142	3.2	39.9	10.8
2003	123	2.7	32.7	11.0
2004	161	3.1	62.2	16.3
2005	149	2.4	123.7	17.3
2006	171	2.5	96.0	10.9

Source: UNCTAD, cross-border M&A database (www.unctad.org/fdistatistics).

Note: Covers only deals the transaction value of which is known.

c. FDI by private equity funds

Private equity funds¹⁴ and other collective investment funds continued to engage in cross-border M&As in 2006. These, along with mutual and hedge funds, have become increasingly important participants in such transactions (*WIR06:16-21*). In 2006, collective investment funds were involved in 18% of all cross-border M&As, registering a record value of \$158 billion, a value significantly higher than in previous years though slightly lower in terms of their share in the total value of all M&As (table I.3).¹⁵ They accounted for 18% of worldwide M&As (domestic and cross-border) in 2006, compared to 12% in 2005 and 4% in 2000.¹⁶ In 2006, private equity funds raised a record amount of \$432 billion, compared to \$315 billion in 2005 (Private Equity Intelligence, 2007).¹⁷

The funds benefit from the ample liquidity in the global financial markets. In addition, private equity firms have successfully

devised alternative ways of fundraising. Unlike previous practices, these firms, such as Apollo Management (United States), RHJ International (part of Ripplewoods) (United States) and KKR (United States), listed their firms in stock markets in Europe in 2004, 2005 and 2006 respectively, and Blackstone (United States) in the United States in 2007, and collected funds from the general public.¹⁸ Funds of funds (mutual funds that invest in other mutual funds) have become the single most important source of financing investment by private equity funds. It has been estimated that in 2006, \$500 billion or 38% of total private equity assets globally were managed by funds of funds (Private Equity Intelligence, 2007). North America and the United Kingdom are still the most important regions for fundraising and investments by private equity firms but continental Europe and Asia (particularly West Asia) are gaining ground.

In 2006, of the 889 cross-border M&As undertaken by collective investment funds, the largest two – the acquisitions of Philips Semiconductor (Netherlands)¹⁹ for \$9.5 billion and of Altana Pharma (Germany)²⁰ for \$5.8 billion – were done by club deals involving more than two private equity funds (annex tables A.I.3 and A.I.4).²¹ However, the share of single funds in cross-border M&As increased substantially in 2006. Because of the growing size of the funds, private equity investors are now trying to buy larger and also publicly listed companies, such as the two firms mentioned above.²²

A number of factors raise doubts as to the sustainability of this high level of FDI activity by private equity and other collective investment funds.²³ First, the prices that private equity funds pay for their investments (mainly buyouts or acquisitions of firms) have increased substantially in recent years (Standard and Poor's, 2006). This is partly because competition is becoming stronger and partly because they are targeting larger firms. A second, related factor is that private equity funds are increasingly acquiring listed companies, in contrast to their former strategy of investing in high-yield and high-risk assets. Third, the abundance of funds available for private equity markets is

Table I.3. Cross-border M&As by private equity funds and other funds, 1987-2006
(Number of deals and value)

Year	Number of deals		Value	
	Number	Share in total (%)	\$ billion	Share in total (%)
1987	43	5.0	4.6	6.1
1988	59	4.0	5.2	4.5
1989	105	4.8	8.2	5.9
1990	149	6.0	22.1	14.7
1991	225	7.9	10.7	13.2
1992	240	8.8	16.8	21.3
1993	253	8.9	11.7	14.1
1994	330	9.4	12.2	9.6
1995	362	8.5	13.9	7.5
1996	390	8.5	32.4	14.3
1997	415	8.3	37.0	12.1
1998	393	7.0	46.9	8.8
1999	567	8.1	52.7	6.9
2000	636	8.1	58.1	5.1
2001	545	9.0	71.4	12.0
2002	478	10.6	43.8	11.8
2003	649	14.2	52.5	17.7
2004	773	15.1	83.7	22.0
2005	889	14.5	134.6	18.8
2006	889	12.4	158.1	18.0

Source: UNCTAD cross-border M&As database.

Note: Private equity funds as well as other funds such as hedge funds are included. They are defined here to include funds managed by firms in the following industries: investment advice, investment offices not elsewhere classified, management investment offices and investors not elsewhere classified.

resulting in greater competition between buyers, which makes it increasingly difficult to find profitable target firms for investment. Other factors include rising interest rates, the fact that the favourable tax rates offered to private equity firms are being examined by authorities in some countries,²⁴ and risks associated with the financial behaviour of private equity firms.²⁵

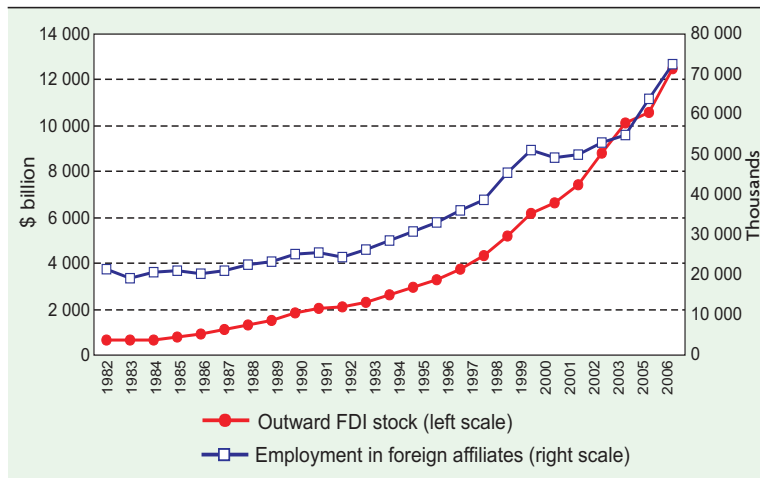
Nevertheless, these firms will continue to play a role in M&As, including cross-border ones. Over time, in general, acquired firms improve performance (Kaplan and Schoar, 2005). This is the case for buyouts, whether by public companies or private equity firms, and the available evidence does not suggest any additional efficacy of the buyouts by the latter. Nevertheless, while private equity firms may not improve the efficiency of buyouts any more than public companies, it is argued that they help raise the overall efficiency of economies by expanding the sheer scale of domestic and cross-border

M&A activity.²⁶ Against this are attendant concerns. Private equity firms have typically shorter time horizons than public companies engaged in buyouts, as they are inclined to look for options that offer quick returns, more akin to those of portfolio investors. This has raised concerns regarding the dismantling of the acquired companies and layoffs of their workers.²⁷ There are also worries about less transparency,²⁸ especially when public companies are taken into private ownership. These concerns notwithstanding, cross-border M&As by private equity firms are still a relatively recent phenomenon that needs further investigation, especially given their rising involvement in developing countries.

2. International production

International production, as measured by indicators of the value adding activities of TNCs outside their home countries, is continuing to grow. In keeping with the large increase in FDI flows worldwide, several indicators rose more rapidly in 2006 than in the previous year (table I.4). The estimated foreign capital stock of TNCs (i.e. the total assets of foreign affiliates) rose by 20% in 2006, while the estimated sales, value added (gross

Figure I.4. Outward FDI stock and employment in foreign affiliates, 1982-2006



Source: UNCTAD, FDI/TNC database.

Note: For the employment estimation method, see footnote g in table I.4.

product) and exports of foreign affiliates increased by 18%, 16% and 12% respectively (table I.4). These affiliates also accounted for an estimated 10% of world GDP, compared to 9% in 2005.²⁹ The expansion of the foreign assets and operations of TNCs, however, is largely due to acquisitions rather than to organic growth. To the extent that additions to FDI take place through M&As rather than greenfield investments, they involve a shift in production control and management from domestic to foreign firms, rather than additions to global production capacity (*WIR06*: 10-13). Such a shift may, nevertheless, lead to sequential FDI through greenfield projects that

Table I.4. Selected indicators of FDI and international production, 1982-2006

Item	Value at current prices (Billions of dollars)				Annual growth rate (Per cent)							
	1982	1990	2005	2006	1986- 1990	1991- 1995	1996- 2000	2003	2004	2005	2006	
FDI inflows	59	202	946	1 306	21.7	22.0	40.0	-9.3	31.6	27.4	38.1	
FDI outflows	28	230	837	1 216	24.6	17.3	36.4	3.6	56.6	-4.6	45.2	
Inward FDI stock	637	1 779	10 048	11 999	16.9	9.4	17.4	20.6	16.9	5.0	19.4	
Outward FDI stock	627	1 815	10 579	12 474	17.7	10.6	17.3	18.1	15.6	4.2	17.9	
Income on inward FDI	47	76	759	881	10.4	29.2	16.3	37.5	33.2	28.9	16.0	
Income on outward FDI	46	120	845	972	18.7	17.4	11.8	38.0	38.4	24.7	15.1	
Cross-border M&As ^a	..	151	716	880	25.9 ^b	24.0	51.5	-19.7	28.2	88.2	22.9	
Sales of foreign affiliates	2 741	6 126	21 394 ^c	25 177 ^c	19.3	8.8	8.4	26.6	15.0	3.0 ^c	17.7 ^c	
Gross product of foreign affiliates	676	1 501	4 184 ^d	4 862 ^d	17.0	6.7	7.3	21.1	15.9	6.3 ^d	16.2 ^d	
Total assets of foreign affiliates	2 206	6 036	42 637 ^e	51 187 ^e	17.7	13.7	19.3	26.0	-1.0	9.3 ^e	20.1 ^e	
Exports of foreign affiliates	688	1 523	4 197 ^f	4 707 ^f	21.7	8.5	3.3	16.1 ^f	20.5 ^f	10.7 ^f	12.2 ^f	
Employment of foreign affiliates (in thousands)	21 524	25 103	63 770 ^g	72 627 ^g	5.3	5.5	11.5	5.7	3.7	16.3 ^g	13.9 ^g	
<i>Memorandum</i>												
GDP (in current prices)	12 002	22 060	44 486	48 293 ^h	9.4	5.9	1.3	12.3	12.4	7.7	8.6	
Gross fixed capital formation	2 611	5 083	9 115	10 307	11.5	5.5	1.0	12.6	15.5	4.8	13.1	
Royalties and licence fee receipts	9	29	123	132	21.1	14.6	8.1	12.4	19.2	9.6	7.2	
Exports of goods and non-factor services	2 124	4 329	12 588	14 120	13.9	8.4	3.7	16.1	20.5	10.7	12.2	

Source: UNCTAD, based on the FDI/TNC database (www.unctad.org/fdi statistics), UNCTAD GlobStat database, and IMF, 2007b.

^a Data are available only from 1987 onwards.

^b 1987-1990 only.

^c Data are based on the following regression result of sales against inward FDI stock (in \$ million) for the period 1980-2004: sales=1,853+1.945* inward FDI stock.

^d Data are based on the following regression result of gross product against inward FDI stock (in \$ million) for the period 1982-2004: gross product=679+0.349* inward FDI stock.

^e Data are based on the following regression result of assets against inward FDI stock (in \$ million) for the period 1980-2004: assets= -1,523+4.395* inward FDI stock.

^f For 1995-1997, data are based on the regression result of exports of foreign affiliates against inward FDI stock (in \$ million) for the period 1982-1994: exports=285+0.628*inward FDI stock. For 1998-2006, the share of exports of foreign affiliates in world exports in 1998 (33.3%) was applied to obtain the values.

^g Based on the following regression result of employment (in thousands) against inward FDI stock (in \$ million) for the period 1980-2004: employment=18,021+4.55* inward FDI stock.

^h Based on data from the IMF, *World Economic Outlook*, April 2007.

Note: Not included in this table are the values of worldwide sales of 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 Austria, Canada, the Czech Republic, Finland, France, Germany, Italy, Japan, Luxembourg, Portugal, Sweden and the United States for sales; those from the Czech Republic, Portugal, Sweden and the United States for gross product; those from Austria, Germany, Japan and the United States for assets; those from Austria, the Czech Republic, Japan, Portugal, Sweden and the United States for exports; and those from Austria, Germany, Japan, Switzerland and the United States for employment, on the basis of the shares of those countries in the worldwide outward FDI stock.

add to the production capacity of countries in subsequent years.

Among the indicators of international production, employment in foreign affiliates is of particular interest to host countries, most of which are concerned about the impact of FDI on employment within their economies.³⁰ The increase in FDI in recent years has led to rising employment in foreign affiliates of TNCs. An estimated 73 million workers were employed in foreign affiliates of TNCs in 2006, nearly three times larger than in 1990 (table I.4), and their total employment accounted for an estimated 3% of the global workforce.

At the global level, changes in the employment of foreign affiliates in comparison to changes in FDI stock or foreign affiliate output may indicate changes in the composition, capital-intensity or technological sophistication of international production. Over the period 1982-2006, employment in foreign affiliates worldwide rose at a lower rate than did FDI stocks (figure I.4)³¹ and the gross product of foreign affiliates (table I.4), suggesting a possible shift by TNCs towards more capital- and knowledge-intensive production.

Global trends in employment by foreign affiliates affect individual countries differently. In countries that are both home and host economies, the direct employment consequences of FDI will also depend upon what happens to employment by foreign affiliates in their economies as well as to employment in their foreign affiliates abroad. For instance, China is the host country with the largest number of employees in foreign affiliates. In 2004, around 24 million workers (3% of total employment in China) were employed in foreign affiliates in that country (table I.5)³² compared to less than 5 million in 1991 (*WIR04*: 187). Employment in foreign affiliates of TNCs in the United States shrank by half a million between 2001 and 2004 to 5 million as the United States economy underwent an economic downturn. FDI inflows to the United States during this period were only two fifths of those in 2000.

The United States has by far the largest stock of outward FDI, and this is reflected in the employment of foreign affiliates of United States-based TNCs: nearly 9 million employees in

majority-owned foreign affiliates in 2004, a larger number of employees abroad than in TNCs from any other home country (table I.5 and annex table B.10). The workforce employed in majority-owned foreign affiliates of United States TNCs increased significantly from the 1950s to the 1980s. In 1985, nearly 5 million employees worked in such affiliates. The growth in their workforce over the subsequent two decades (at an annual average rate of 2.9%) was, however, much lower than that in the foreign affiliates of several other countries' TNCs (figure I.5). In Europe, employment in foreign affiliates of TNCs based in countries like Austria (with an average annual growth rate of foreign-affiliate employment of 13.1%), the Czech Republic (19.5%) and Finland (17.9%), in particular, has expanded much more rapidly. German and Japanese TNCs have the second and third largest number

Table I.5. Employment related to inward and outward FDI and total employment in selected economies, most recent year

(Thousands of employees)

Economy	Year	Host economy employment of foreign affiliates (A)	Foreign employment of home-based TNCs (B)	Difference (A-B)	Total paid employment in the economy (C)	Share of foreign affiliates' employment in total (A/C)
Australia	2002	..	321.9 ^a	..	7 959.8	..
Austria	2004	232.8	370.5	- 137.7	3 266.5	7.1
Belgium	2003	..	209.7	..	3 460.6	..
Canada	2002	..	919.0 ^a	..	12 996.0	..
China	2004	24 000.0	..	..	752 000.0	3.2
Czech Republic	2004	620.4	24.8	595.6	3 890.0	15.9
Finland	2001	176.1 ^a	315.1 ^a	- 139.0	2 060.0	8.5
France	2003	1 880.0 ^b	..	..	13 460.0 ^c	14.0
Germany	2004	2 280.0	4 605.0	- 2 325.0	31 405.0	7.3
Hong Kong, China	2004	543.0 ^a	..	..	2 460.5	22.1
Hungary	2000	606.7	..	..	2 703.2	22.4
Ireland	2004	149.5 ^d	..	..	295.8 ^d	50.6
Italy	1999	560.1 ^e	642.5 ^e	- 82.4	4 075.0 ^e	13.7
Japan	2004	430.9	4 138.6	- 3 707.7	53 550.0	0.8
Luxembourg	2001	72.9	103.3	- 30.4	258.9	28.2
Macao, China	2004	36.7	10.9	25.8	192.3	19.1
Madagascar	2003	193.8 ^f	..	..	8 098.5 ^g	2.4
Mozambique	2004	13.2 ^h	..	..	..	..
Nepal	1999	73.5 ^h	..	..	..	..
Poland	2000	648.3 ^a	..	..	10 546.0	6.1
Portugal	2002	150.4 ^a	23.6 ^a	126.8	3 756.2	4.0
Singapore	2004	157.6 ^e	..	..	335.2 ^e	47.0
Slovenia	2004	64.0	..	..	798.0	8.0
Sri Lanka	2004	415.7 ^h	..	..	7 394.0	5.6
Sweden	2004	544.6 ^a	953.6 ^a	- 409.1	3 796.0	14.3
Switzerland	2004	190.1	1 861.7	- 1 671.6	3 631.6	5.2
United Rep. of Tanzania	2000	80.6	..	..	16 914.8 ⁱ	0.5
United States	2004	5 116.4 ^a	8 617.2 ^a	- 3 500.8	131 367.4	3.9
Vanuatu	2002	0.1	..	..	..	..

Source: UNCTAD, FDI/TNC database (www.unctad.org/fdistatistics), and ILO.

^a Data refer to majority-owned affiliates only.

^b Employees in enterprises under foreign control.

^c Employees in enterprises under foreign control + employees in enterprises under French control.

^d Total permanent full-time employment in the manufacturing and internationally traded services sectors.

^e Data refer only to the manufacturing sector.

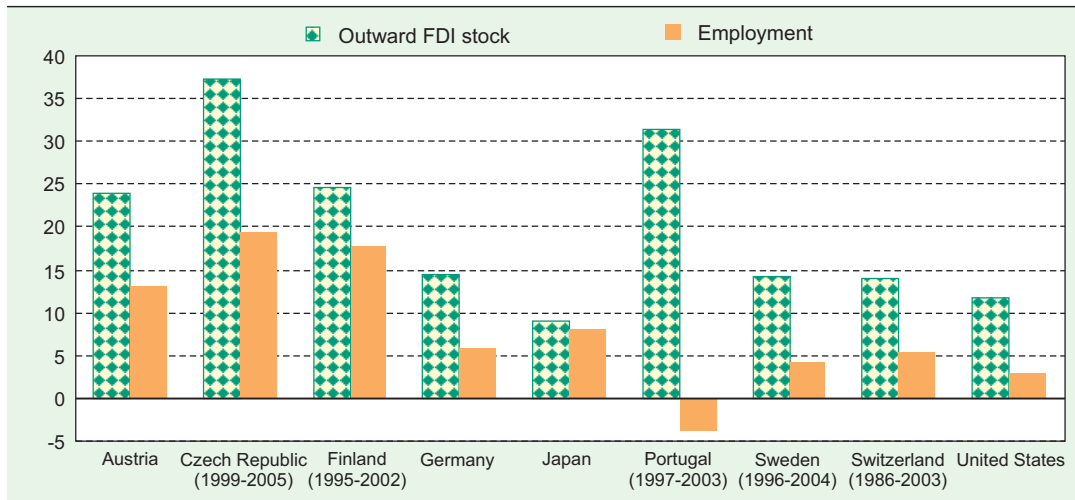
^f 1998.

^g Total labour force in 2003.

^h Approval data.

ⁱ Total employed persons in Tanzania mainland (from the Integrated Labour Force Survey 2000-2001).

Figure I.5. Outward FDI stock and employment in foreign affiliates of selected home countries: average annual growth, 1985-2004
(Per cent)



Source: UNCTAD, FDI/TNC database (www.unctad.org/fdistatistics).

Note: Employment data for Finland, Portugal and Sweden are for majority-owned affiliates only.

of employees in their foreign affiliates worldwide (4.6 million and 4.1 million, respectively, in 2004).

The employment impact of FDI in host economies varies by region and industry. Generally, employment created by a given amount of FDI is larger in developing and transition economies than in developed countries, and in the manufacturing sector than in other sectors. In the case of United States outward FDI, for instance, the largest impact is observed in South-East Europe and the CIS, followed by developing countries (table I.6). Employment creation is smallest in the primary sector, including the mining and oil industry.

The effects of outward FDI on employment in the home countries are often the focus of economic and political debates in those countries. Fears of job losses at home may also induce home governments to introduce policy measures that try to prevent companies from expanding abroad or they may offer them incentives to stay and invest at home. In the United States, for example, public debate about possible job losses through expansion abroad by United States TNCs led to the introduction of the Homeland Investment Act in 2004 to encourage more investment at home (see *WIR06*: 89 for the effects of this Act on United States FDI outflows).³³ In many developed countries, jobs created abroad by their own TNCs (through outward FDI) tend to be larger than those created by foreign companies operating

Table I.6. Employment in United States foreign affiliates abroad and United States outward FDI stock, by sector, 2003

Region/sector	Employees (Thousands)	Outward FDI stock (\$ million)	No. of employees per \$1 million of outward FDI stock
World			
Total	9 657.5	1 769 613	5.5
Primary	199.5	85 473	2.3
Mining, quarrying and petroleum	181.0	85 473	2.1
Manufacturing	4 989.2	371 078	13.4
Services	3 973.4	1 176 957	3.4
Developed countries			
Total	5 983.1	1 266 350	4.7
Primary	56.7	42 876	1.3
Mining, quarrying and petroleum	55.5	42 876	1.3
Manufacturing	2 760.6	280 874	9.8
Services	1 755.8	835 881	2.1
Developing countries			
Total	3 550.4	489 865	7.2
Primary	107.3	37 506	2.9
Mining, quarrying and petroleum	92.1	37 506	2.5
Manufacturing	2 099.9	88 369	23.8
Services	779.6	333 917	2.3
South-East Europe and CIS			
Total	32.1	2 511	12.8
Primary	4.3	1 253	3.4
Mining, quarrying and petroleum	4.3	1 253	3.4
Manufacturing	15.1	266	56.8
Services	4.8	325	14.8

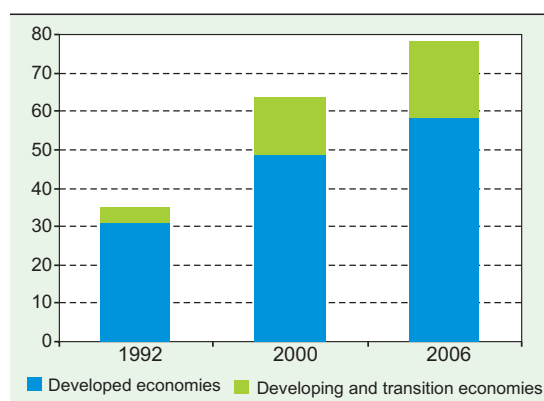
Source: UNCTAD, FDI/TNC database (www.unctad.org/fdistatistics).

in those countries (through inward FDI) (table I.5). This is largely a reflection of their position as net direct investors (with outward FDI stock exceeding inward FDI stock).³⁴ However, some empirical studies for the United States do not support the hypothesis that FDI abroad causes job losses at home (Hanson, Mataloni and Slaughter, 2005; Desai, Foley and Hines, 2005; Mankiw and Swagel, 2005).³⁵ Instead, they suggest that outward FDI has a positive or non-significant effect on employment at home. In the case of Japanese TNCs, according to a recent survey on the likely impact of outward FDI on employment in parent firms, only 6% of the surveyed firms said that they would cut labour at home while 62% said that outward FDI would not create redundant labour at home (Japan, METI, 2007: 58).

There are other instances where outward FDI has led to a reduction of employment in the home country at least in the short run. A study of German and Swedish TNCs, for instance, found that foreign-affiliate employment tends to substitute for employment of the parent firm, with significant positive employment effects for host countries that have a large wage gap with Sweden and Germany, notably the Central and Eastern European countries (Becker et al., 2005). For Italy it was found that FDI has a negative effect on labour intensity of home-country production by TNCs in the case of efficiency-seeking FDI, especially for smaller firms that invested in other developed countries. Positive home-country effects were found for market-seeking FDI in developed countries (Mariotti, Mutinelli and Piscitello, 2003).³⁶

Available data suggest that TNCs responsible for the growth of cross-border production numbered at least some 78,000 parent companies with at least 780,000 foreign affiliates in 2006 (annex table A.I.5). Of these, about 58,000 parent TNCs were

Figure I.6. Number of TNCs from developed, developing and transition economies, 1992, 2000 and 2006
(Thousands)



Source: UNCTAD, based on annex table A.I.5.

based in developed countries and about 20,000 in developing and transition economies (18,500 in developing countries and 1,650 in transition economies). The number of TNCs from developing and transition economies has increased more than those from developed countries over the past 15 years: 4,000 in the former and 31,000 in the latter in 1992 (figure I.6). Regarding foreign affiliates, in 2006 there were 260,000 located in developed countries, 407,000 in developing countries, and 111,000 in the transition economies. China continues to host the largest number of foreign affiliates, accounting for one third of all foreign affiliates of TNCs worldwide. Given its small share in global inward stock (only 2% in 2006), this implies that many foreign affiliates in China are very small, or are joint ventures with domestic enterprises.

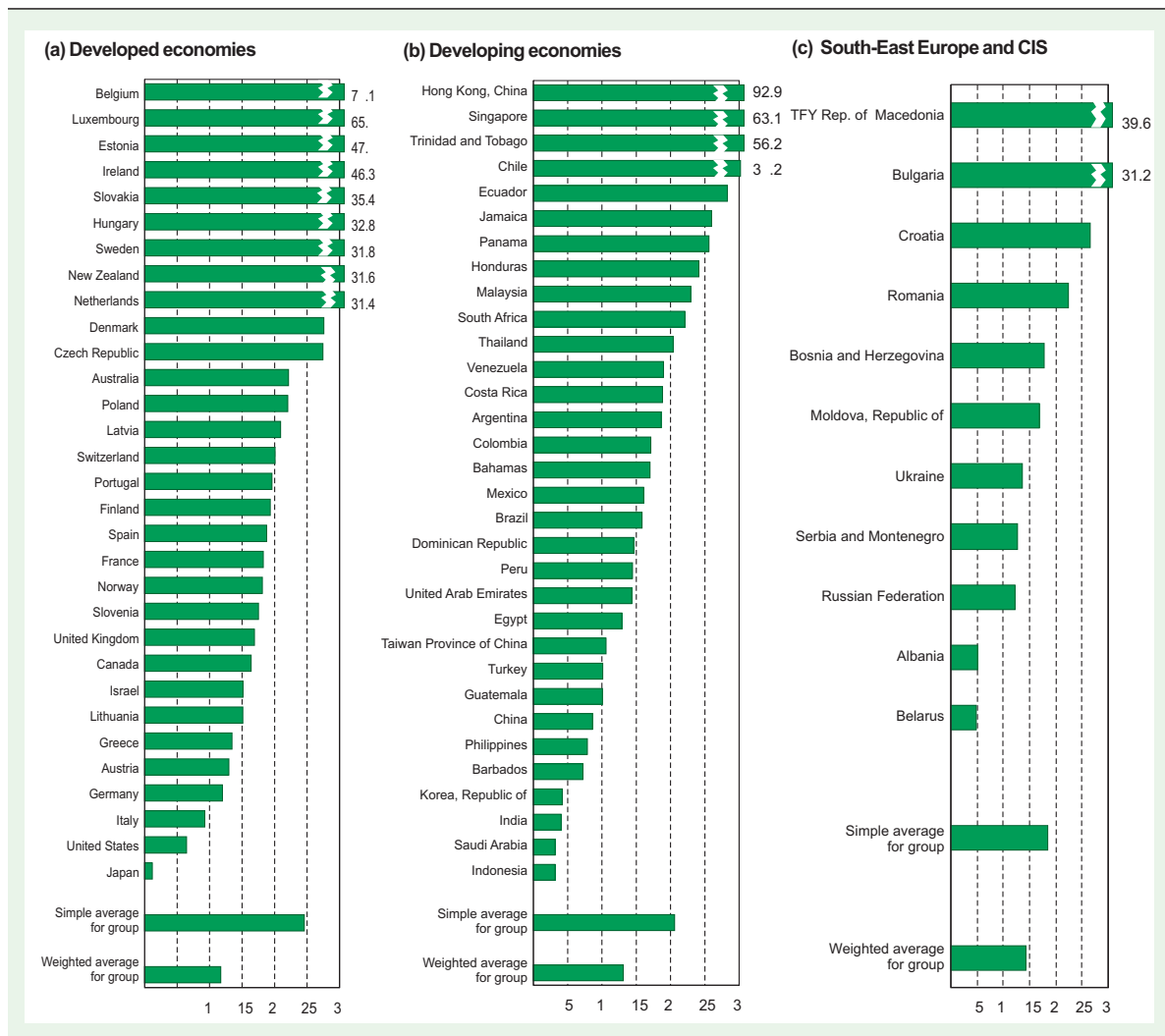
UNCTAD's Transnationality Index³⁷ shows that in 2004 (the latest year for which the index was compiled), the importance of international production rose in most host economies (developed and developing as well as transition), reflecting the rise of FDI flows that year (figure I.7). The transnationalization of the largest TNCs worldwide has also increased (as discussed in section C).

3. Indices of inward FDI performance and potential

The rankings of countries by UNCTAD's Inward FDI Performance³⁸ and Potential Indices,³⁹ as well as the Outward FDI Performance Index⁴⁰ for 2006 show the continuation of a number of previous patterns and some year-to-year changes. Among the top 20 listed in the Performance Index for both inward and outward FDI, some relatively small countries continued to rank high (table I.7; annex table A.I.6). Bahrain and Tajikistan entered the top 20 rankings for inward FDI performance, and Israel and Estonia, entered the top 20 for outward FDI performance. In general, however, there were few major changes in the top rankings.

There were no major changes in the Inward FDI Potential Index rankings; this index essentially reflects the country-specific structural variables affecting inward FDI that do not generally change significantly from year to year. Juxtaposing the Inward FDI Performance Indices of countries with their respective Inward FDI Potential Indices yields a matrix of the following categories: front-runners – countries with high FDI potential and performance; above potential – countries with low FDI potential but strong performance; below potential – countries with high FDI potential but low performance; and underperformers – countries with both low FDI potential and performance (figure I.8). While

Figure I.7. Transnationality Index^a for host economies,^b 2004
(Per cent)



Source: UNCTAD estimates.

^a Average of the four shares: FDI inflows as a percentage of gross fixed capital formation for the past three years 2002-2004; FDI inward stocks as a percentage of GDP in 2004; value added of foreign affiliates as a percentage of GDP in 2004; and employment of foreign affiliates as a percentage of total employment in 2004.

^b Only the above-mentioned economies for which data for all of these four shares are available were selected. Data on value added are available only for Australia (2001), Belarus (2002), China (2003), the Czech Republic, France (2003), Hong Kong (China), Ireland (2001), Japan, Lithuania, the Republic of Moldova, Singapore (manufacturing only), Slovenia, Sweden (2003), and the United States. For Albania, the value added of foreign affiliates was estimated on the basis of the per capita inward FDI stocks and the corresponding ratio refers to 1999. For the other economies, data were estimated by applying the ratio of value added of United States affiliates to United States outward FDI stock to total inward FDI stock of the country. Data on employment are available only for Australia (2001), Austria, China, the Czech Republic, France (2003), Germany, Hong Kong (China), Ireland (2001), Japan, Lithuania, Luxembourg (2003), Poland (2000), the Republic of Moldova, Singapore (manufacturing only), Slovenia, Sweden, Switzerland, and the United States. For Albania, the employment impact of foreign affiliates was estimated on the basis of their per capita inward FDI stocks and the corresponding ratio refers to 1999. For the remaining countries, data were estimated by applying the ratio of employment of Finnish, German, Japanese, Swedish, Swiss and United States affiliates to Finnish, German, Japanese, Swedish, Swiss and United States outward FDI stock to total inward FDI stock of the economy. Data for Ireland, Sweden and the United States refer to majority-owned foreign affiliates only. Value added and employment ratios were taken from Eurostat for the following countries: Austria (value added only), Bulgaria, Estonia, Finland, Hungary, Italy, Latvia, the Netherlands, Portugal, Romania, Slovakia and Spain; the data refer to the year 2003.

there are no notable changes in the 2005 grouping of countries according to this matrix over that of the previous year (*WIR06*), several countries have improved their FDI position in performance or potential, or both, over the past decade. For example, Botswana, Croatia, Lithuania, the United Arab Emirates and Thailand significantly improved their rankings in the Performance Index or both Performance and Potential Indices (figure I.8 and

annex table A.I.6), which reflects increased FDI inflows relative to their incomes as well as improved economic and other conditions for attracting FDI, relative to other countries. On the other hand, countries such as Ghana and Paraguay went into the underperformance category. Only Indonesia has fallen from a front-runner to an underperformer over the past decade.

Table I.7. Top 20 rankings by Inward and Outward Performance Indices, 2005 and 2006^a

Economy ^a	Inward Performance Index ranking ^b		Economy ^a	Outward Performance Index ranking ^c	
	2005	2006		2005	2006
Luxembourg	5	1	Iceland	1	1
Hong Kong, China	4	2	Hong Kong, China	3	2
Suriname	3	3	Luxembourg	2	3
Iceland	12	4	Switzerland	8	4
Singapore	6	5	Belgium	7	5
Malta	10	6	Netherlands	6	6
Bulgaria	8	7	Panama	4	7
Jordan	19	8	Ireland	10	8
Estonia	7	9	Azerbaijan	5	9
Belgium	11	10	Bahrain	9	10
Bahrain	23	11	Kuwait	34	11
Azerbaijan	1	12	Sweden	11	12
Gambia	14	13	Singapore	12	13
Lebanon	9	14	Spain	13	14
Georgia	16	15	Israel	23	15
Tajikistan	33	16	Estonia	21	16
Panama	25	17	France	16	17
Bahamas	21	18	Norway	14	18
Sudan	13	19	United Kingdom	15	19
Guyana	32	20	Cyprus	17	20

Source: UNCTAD, based on annex table A.I.6.

^a Countries are listed in the order of their 2006 rankings.

^b Rankings are based on indices derived using three-year moving averages of data on FDI inflows and GDP for the immediate past three years, including the year in question.

^c Rankings are based on indices derived using three-year moving averages of data on FDI outflows and GDP for the immediate past three years, including the year in question.

4. Developments in FDI policies

a. Developments at the national level

Countries worldwide continue to adopt measures aimed at improving their investment climate. In 2006, according to UNCTAD's annual survey of changes in national laws and regulations relevant to the entry and operations of TNCs, a total of 184 policy changes were identified, 80% of which were in the direction of making the host-country environment more favourable to FDI (table I.8). At the same time, the survey also noted 37 changes in the opposite direction, many of which were related to the extractive industries and were concentrated in a relatively few countries.

Out of 184 identified changes, 109 were adopted in developing countries, with Africa accounting for 57, West Asia for 14, South, East and South-East Asia for 32, and Latin America and the Caribbean for 6. South-East Europe and the CIS adopted 38 of the changes and developed countries 37 (see also chapter II).

Most of the changes involved the introduction of new promotional efforts, including incentives aimed at increasing FDI in certain economic activities. As in 2005, many involved lowering corporate income taxes, a measure that affects

Figure I.8. Matrix of inward FDI performance and potential, 2005

	High FDI performance	Low FDI performance
	Front-runners	Below potential
High FDI potential	Azerbaijan, Bahamas, Bahrain, Belgium, Botswana, Brunei Darussalam, Bulgaria, Chile, China, Croatia, Cyprus, Czech Republic, Dominican Republic, Estonia, Hong Kong (China), Hungary, Iceland, Israel, Jordan, Kazakhstan, Latvia, Lithuania, Luxembourg, Malaysia, Malta, Netherlands, Panama, Poland, Portugal, Qatar, Singapore, Slovakia, Thailand, Trinidad and Tobago, Ukraine, United Arab Emirates and United Kingdom.	Algeria, Argentina, Australia, Austria, Belarus, Brazil, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Islamic Republic of Iran, Italy, Japan, Kuwait, Libyan Arab Jamahiriya, Mexico, New Zealand, Norway, Oman, Republic of Korea, Russian Federation, Saudi Arabia, Slovenia, Spain, Sweden, Switzerland, Taiwan Province of China, Tunisia, Turkey, United States and Venezuela.
	Above potential	Under-performers
Low FDI potential	Albania, Angola, Armenia, Colombia, Congo, Costa Rica, Ecuador, Egypt, Ethiopia, Gabon, Gambia, Georgia, Guyana, Honduras, Jamaica, Kyrgyzstan, Lebanon, Mali, Mongolia, Morocco, Mozambique, Namibia, Nicaragua, Republic of Moldova, Romania, Sierra Leone, Sudan, Suriname, Tajikistan, Uganda, United Republic of Tanzania, Uruguay, Viet Nam and Zambia.	Bangladesh, Benin, Bolivia, Burkina Faso, Cameroon, Democratic Republic of Congo, Côte d'Ivoire, El Salvador, Ghana, Guatemala, Guinea, Haiti, India, Indonesia, Kenya, TFY Rep. of Macedonia, Madagascar, Malawi, Myanmar, Nepal, Niger, Nigeria, Pakistan, Papua New Guinea, Paraguay, Peru, Philippines, Rwanda, Senegal, South Africa, Sri Lanka, Syrian Arab Republic, Togo, Uzbekistan, Yemen and Zimbabwe.

Source: UNCTAD, based on annex table A.I.6.

Table I.8. National regulatory changes, 1992-2006

Item	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Number of countries that introduced changes	43	56	49	63	66	76	60	65	70	71	72	82	103	93	93
Number of regulatory changes	77	100	110	112	114	150	145	139	150	207	246	242	270	205	184
More favorable to FDI	77	99	108	106	98	134	136	130	147	193	234	218	234	164	147
Less favorable to FDI	0	1	2	6	16	16	9	9	3	14	12	24	36	41	37

Source: UNCTAD database on national laws and regulations.

both domestic companies and foreign affiliates. For example, Egypt reduced its corporate tax to a standard rate of 20% (from a basic rate of 40% and from 32% for industrial and export activities).⁴¹ Similar steps were taken by Ghana (which reduced its corporate income tax from 28% to 25%) and Singapore (from 20% to 18%). Other countries, including India, created new special economic zones, many offering tax holidays or other incentives. Brazil decided to implement an “accelerated growth programme” that will provide corporate tax reductions amounting to an estimated \$4.7 billion.

The overall trend to provide more incentives to foreign investors goes hand in hand with the continuing opening up of a number of economic sectors to FDI in various countries. In Italy, for example, a wide ranging liberalization programme was agreed, covering a number of service industries such as professional services, pharmacies, banks and taxi transport. Many of those services have traditionally been protected by licensing regimes. Steps to liberalize the telecommunications industry were taken, for example in Botswana, Cape Verde and Kenya; the banking industry was made more open in Belarus and Mali; and the energy/electricity industry was liberalized to FDI in, for example Albania, Algeria, Bulgaria and Kyrgyzstan. While the overall policy trend in the services sector remains in the direction of greater openness to FDI, the extent to which countries restrict the entry of foreign companies to the sector still varies widely. Outside developed countries, Latin America and the transition economies are the most open to FDI in services (box I.2).

A notable exception to the liberalization trend relates to the extractive industries, where a number of new restrictions on foreign ownership were observed in 2006.⁴² For example, in Algeria, the State-owned oil and gas enterprise must now hold a minimum 51% stake in exploration and production arrangements. In Bolivia, discussions relating to ownership and fiscal arrangements in the oil and gas industry were resolved by the signing of new service contracts; these substantially raise the Government’s revenues from production and return ownership of all reserves to the State oil company (see also chapter VI). In Indonesia, on the other hand, the Government decided to offer subsidies and tariff reductions to extractive-industry investors in the eastern part of the country.

While the proportion of less favourable changes has remained at the peak of 20% reached in 2005, the nature and significance of those changes vary. In 2006, the majority of them concerned tax increases or the introduction of new taxes, such as withholding taxes (e.g. the former Yugoslav

Republic of Macedonia), or solidarity or social taxes (e.g. Hungary, Lithuania). More far-reaching changes were observed in the Russian Federation, where in March 2006 the Government released a preliminary list of 39 “strategic sectors” in which inward FDI would be restricted, including most defence-related activities, aviation and natural resources.⁴³ Foreign companies will only be allowed to own minority stakes in “strategic assets” in the country’s natural resources sector. In China, a similar development aimed at the protection of strategic sectors has been observed. A new policy includes “provisions for increased supervision of sensitive acquisitions” to ensure that what are termed “critical industries and enterprises” remain under Chinese control.⁴⁴ The potential negative effects of such policies stem mainly from the uncertainties relating to the definition of strategic sectors or national security (*WIR06*).

By region, as in 2005, Latin America and the Caribbean had a relatively high proportion of “less favourable” changes, which mainly reflected regulatory amendments related to the extractive industries in Bolivia, Peru and Venezuela, and to the Venezuelan programme to nationalize “strategic sectors” such as energy and telecommunications (figure I.9). FDI policy changes at the regional level are described further in the analysis of regional trends in chapter II.

In sum, while, in general, policy changes are in the direction of more liberalization and deregulation, there are some notable changes that suggest signs of a shift towards restrictions on investments in some industries. As in 2005, restrictions are still confined to a relatively small number of countries, and with notable regional differences. But the perception that such changes might trigger renewed protectionism in certain countries has prompted some concern reflected in policy-related initiatives such as the series of round tables launched in 2006 by the Organisation for Economic Co-operation and Development (OECD) on Freedom of Investment, National Security and “Strategic” Industries. Issues discussed at four such round tables so far include the role of national security considerations in present investment regulations in OECD and non-OECD countries, their treatment in international investment agreements (IIAs); regulatory approaches to foreign State-controlled enterprises, and the challenge of identifying ultimate beneficiary ownership and control in cross-border investments. The view emerging from these round tables was that investment policies should be guided by the principles of regulatory proportionality, predictability and accountability.⁴⁵ It was also suggested that restrictions on investment should not

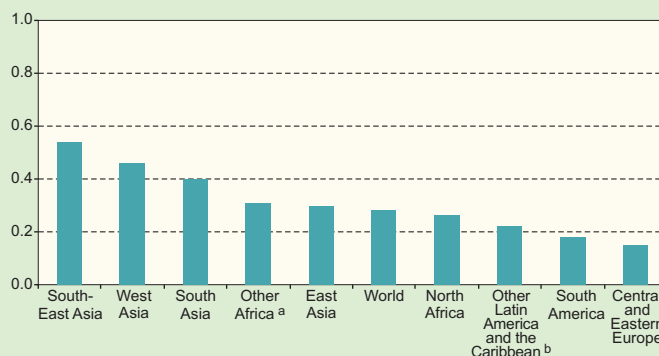
Box I.2. Developing-country openness to FDI in services varies widely

Services account for about two thirds of FDI inflows worldwide and for half of FDI inflows in developing countries (annex table A.I.10). The extent to which countries have opened up to FDI in services varies considerably. Latin America and Central and Eastern Europe are on average more open than countries in Africa and developing Asia (box figure I.2.1), but with significant intraregional variation. A recent UNCTAD study (2006a) found that among developing countries Bolivia and Uganda have the fewest restrictions on FDI in services, whereas Ethiopia, the Philippines and Saudi Arabia are at the other end of the spectrum.

Social services such as health and education are among the industries with the lowest level of explicit restrictions on FDI, followed by business services and the distribution industries. By contrast electricity, telecommunications, transport and financial industries remain highly restricted. Earlier studies (e.g. Warren, 2001; McGuire and Smith, 2001; Kemp, 2001; Kalirajan, 2000; Nguyen-Hong, 2000; and McGuire, 2002), which relied primarily on information contained in the country schedules of the WTO General Agreement of Trade in Services (GATS), tended to underestimate the extent to which countries have opened up their services to FDI. This is partly because countries have been more willing to liberalize unilaterally than multilaterally, for various reasons, including their desire to maintain policy space.

Source: UNCTAD, 2006a.

Box figure I.2.1. Openness to FDI in services in developing and transition economies, by region, 2004



Source: UNCTAD database on national laws and regulations.

^a Excluding North Africa.

^b Excluding South America.

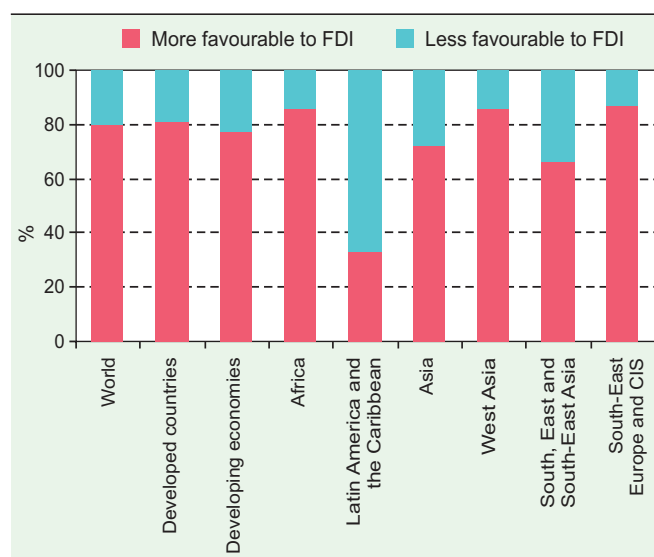
Note: Openness is measured on a scale of 0-1, with 0 representing full openness and 1 a de facto or actual prohibition of FDI. The measurement takes into account rules on ownership, screening and post-entry operational restrictions.

be more costly or more discriminatory than needed to achieve the security objectives, and that they should not duplicate what is, or could be, better dealt with by other regulations. Other guiding principles proposed were that regulatory objectives and practices should be made as transparent as feasible, and that proper mechanisms should be introduced to ensure accountability. The G-8 Heiligendamm Summit Declaration in June 2007 called for a continuation of this work.

b. Developments at the international level

The universe of international investment agreements (IIAs) continues to grow in number and complexity. In 2006, 73 bilateral investment treaties (BITs), 83 double taxation treaties (DTTs), and 18 other international agreements that deal with other economic activities (such as trade) but also contain investment provisions⁴⁶ were concluded. This brought the total number of IIAs to close to 5,500 at the end of 2006:

Figure I.9. More favourable and less favourable regulatory changes in 2006, by region

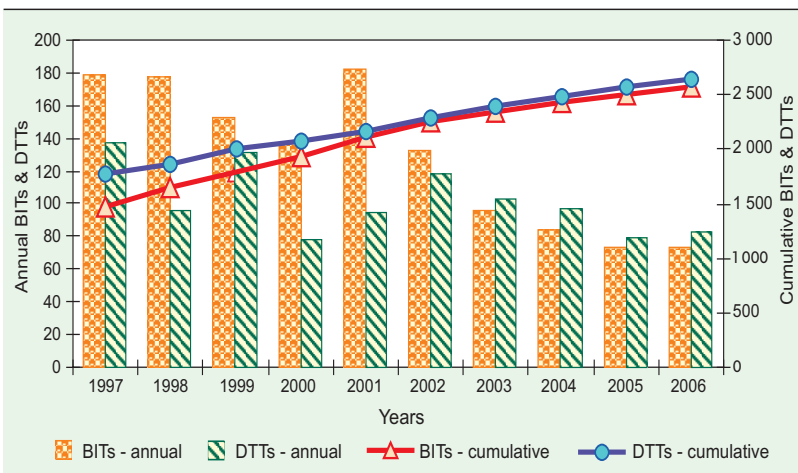


Source: UNCTAD, database on national laws and regulations.

2,573 BITs (figure I.10), 2,651 DTTs (figure I.10), and 241 other agreements (figure I.11).

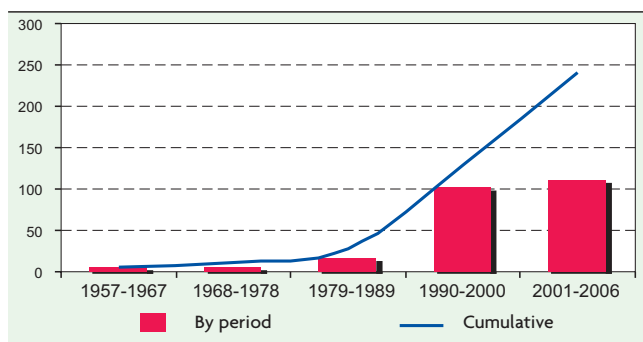
Some recent developments deserve particular attention. First, the IIA universe continues to evolve into an increasingly complex and diverse patchwork.⁴⁷ Among its key characteristics are its universality, in that nearly every country has signed at least one IIA, and its atomization, in that no single authority coordinates the overall structure or the content of the thousands of agreements that constitute the system. Moreover, it is multilayered, with IIAs existing at the bilateral, regional, sectoral, plurilateral and multilateral levels; it is also multifaceted with some IIAs including not only

Figure I.10. Number of BITs and DTTs concluded, cumulative, 1997-2006



Source: UNCTAD (www.unctad.org/iaa).

Figure I.11. Number of other agreements^a concluded, by period, 1957-2006



Source: UNCTAD (www.unctad.org/iaa).

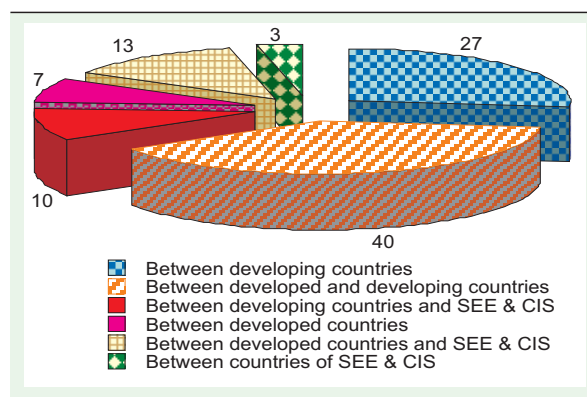
^a International agreements, other than BITs and DTTs, that contain investment provisions.

provisions on investment, but also – and in some cases more extensively – rules on related matters such as trade in goods and/or services, or intellectual property protection.

Secondly, IIAs other than BITs and DTTs have proliferated. While their total number is still small compared with the number of BITs, it has nearly doubled over the past five years (figure I.11). Most of the agreements concluded in 2006 are free trade agreements (FTAs) that establish, inter alia, binding obligations of the contracting parties concerning the admission and protection of foreign investment. The scope of the protection commitments in these FTAs is comparable to those found in BITs, including with regard to dispute settlement. Furthermore, the new Central European Free Trade Agreement (CEFTA) was concluded, which consolidated over 30 bilateral FTAs. In addition, at least 68 such agreements, involving 106 countries, were under negotiation at the end of 2006.⁴⁸

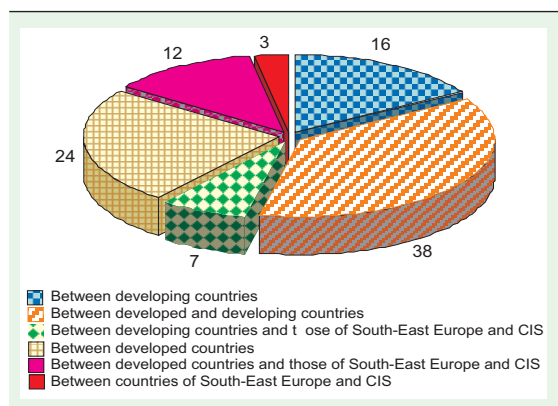
Thirdly, the role of developing countries in international investment rule-making is growing. At the end of 2006, they were party to 76% of all BITs (figure I.12), 61% of all DTTs (figure I.13), and 81% of all other IIAs. For the first time, there are now three developing countries – China, Egypt and the Republic of Korea – among the top 10 signatories of BITs worldwide (figure I.14). Least developed countries (LDCs), while host to less than 1% of global inward FDI stock, had nevertheless concluded 16% of all BITs, 7% of all DTTs and 15% of other IIAs by the end of 2006. There is also a substantial increase in the number of IIAs concluded among developing countries. By December 2006, 680 BITs had been concluded among developing countries, constituting about 27% of all BITs. There were more than 90 South–South IIAs other than BITs and DTTs at the end of 2006.⁴⁹ The

Figure I.12. BITs concluded as of end 2006, by country group (Per cent)



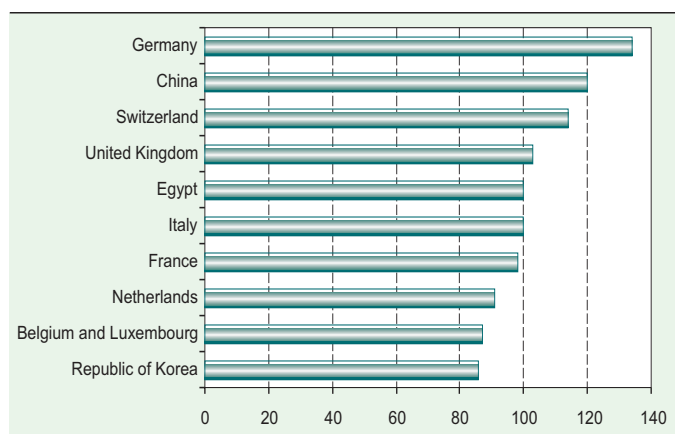
Source: UNCTAD (www.unctad.org/iaa).

Figure I.13. DTTs concluded as of end 2006, by country group (Per cent)



Source: UNCTAD (www.unctad.org/iia).

Figure I.14. Number of BITs concluded by top ten economies, end 2006



Source: UNCTAD (www.unctad.org/iia).

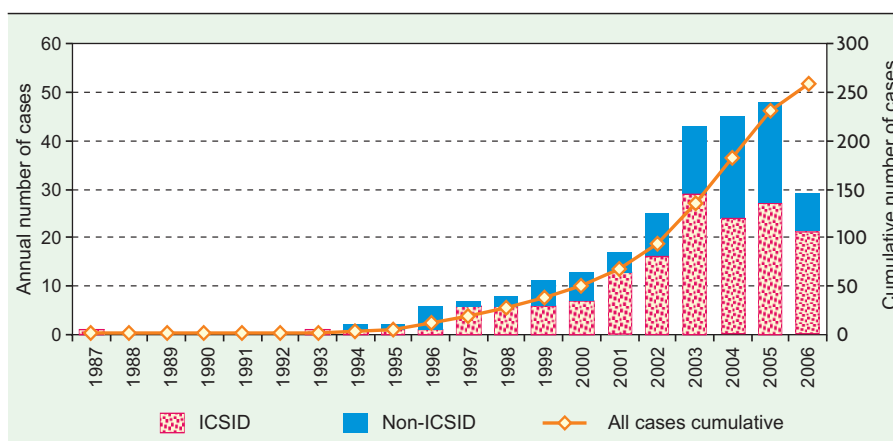
growth of FDI from the South means that a number of developing countries are becoming both host and home economies.

Fourthly, the number of known treaty-based investor-State dispute settlement cases further increased by 29 in 2006, bringing the total number of such cases to 259 (figure I.15).⁵⁰ However, the increase in 2006 was considerably smaller than during 2003-2005. As of end 2006, more than half (161) of all known cases had been filed with the International Centre for Settlement

of Investment Disputes (ICSID). Other disputes were initiated under the Arbitration Rules of the United Nations Commission on International Trade Law (UNCITRAL) (65), the Stockholm Chamber of Commerce (18), the International Chamber of Commerce (4), ad hoc arbitration (4), and the Cairo Regional Centre for International Commercial Arbitration (1). The venues for the remaining six cases are unknown. Most of the cases (42%) involved the services sector (including electricity distribution, telecommunications, debt instruments, water services and waste management), 29% were related to mining and oil and gas exploration activities, and another 29% concerned the manufacturing sector. At least 70 governments – 44 of developing countries, 14 of developed countries and 12 of South-East Europe and the CIS – faced investment treaty arbitration, with Argentina topping the list (42 claims), followed by Mexico (18), the United States and the Czech Republic (11 each).⁵¹ In terms of substance, in 2006 arbitration tribunals rendered significant awards relating to IIA provisions on most-favoured-nation (MFN) treatment, fair and equitable treatment, expropriation, the “umbrella clause”, and a “state of necessity” exception.⁵²

The evolution of the IIA universe, including investment arbitration, poses challenges of capacity and content for many developing countries. Challenges of capacity arise from the fact that many developing countries lack the resources to participate fully and effectively in the development of the IIA network that is increasing in scope, complexity and diversity.⁵³ Challenges of content arise in several respects, three of which are of primary importance: policy

Figure I.15. Known investment treaty arbitrations, cumulative and new cases, 1987 to end 2006



Source: UNCTAD (www.unctad.org/iia).

coherence, balancing private and public interest in IIAs, and strengthening the development dimension of these agreements, as discussed below.

Policy coherence. The increasingly complex universe of IIAs raises concerns related to coherence among different IIAs, with implications for the formulation of effective development policies. Due to capacity constraints and weaker bargaining positions, developing countries may find it more difficult than developed countries to establish coherent development policies that are consistent with IIAs or that conform with the requirements/principles of IIAs and consistently reflect them in IIAs. On the other hand, the possible effects of inconsistency might be mitigated by the MFN clause that is a standard feature in practically all IIAs. It has, in principle, the effect of harmonizing the different degrees of investment protection granted by a country in its IIAs at a level that is the most favourable for the investor, thereby enhancing coherence. Also, international jurisprudence can make an important contribution to harmonizing understanding of the interpretation of core principles of investment protection. However, some recent contradictory awards have created uncertainty as to the circumstances under which the MFN clause actually applies and how far-reaching its effects might be (UNCTAD, 2005a).

Balancing private and public interests in IIAs. The rise in investor-state disputes over the past few years has triggered a discussion on what should be the proper counterweight to investors' rights in IIAs. Three approaches have emerged in recent treaty-making. First, some developed countries have clarified individual IIA provisions to prevent overly broad interpretations. This has occurred, for example, with regard to provisions guaranteeing fair and equitable treatment of investment and the definition of indirect takings.⁵⁴ Secondly, numerous recent IIAs place a stronger emphasis on public policy concerns, for example by including general exceptions to maintain national security, preserve the public order, and protect public health, safety or the environment. These provisions may become particularly relevant for investments in extractive industries (chapter VI). Thirdly, some IIAs have strengthened the public role in investor-State dispute resolution, for example, by allowing individuals or entities not involved in the dispute to make written submissions to a tribunal (UNCTAD, 2007a). Most of the three approaches mentioned above have so far been limited to a small, but growing number of countries.⁵⁵ It remains to be seen whether they will become a more commonly used feature in future IIAs. Finally, in April 2007, three countries in Latin America, Bolivia, Nicaragua and Venezuela, announced plans to withdraw from the World Bank's arbitration court, ICSID. So far, only Bolivia

formally notified its withdrawal to the World Bank (chapter II).

Strengthening the development dimension of IIAs. It might be useful for IIAs to include provisions for strengthening their development dimension. Apart from provisions aimed at allowing regulatory flexibility for host countries (UNCTAD, 2004), they could also include specific investment promotion provisions, such as transparency and exchange of investment-related information, fostering linkages between foreign investors and domestic companies, capacity-building and technical assistance, granting of investment insurance and other incentives, easing informal investment obstacles, joint investment promotion activities, and the setting up of an institutional mechanism for coordination and monitoring purposes (UNCTAD, forthcoming a). The issue of incorporating a development dimension into an IIA also raises the question of what kind of IIA best advances development objectives. This may vary for different countries. The development dimension thus requires not only selecting the type of instrument to be negotiated, but also the drafting of specific provisions for incorporating into the agreement.

B. Changing patterns of FDI

1. Geographic patterns

The geographic pattern of FDI has changed in various ways during the past decade, with new countries having emerged as significant host and home economies. Shifts in the patterns of bilateral FDI relationships have occurred among developed countries, as well as in the relative importance of developed versus developing and transition economies. The rise of FDI from developing and transition economies and the growth of South-South FDI, as discussed in *WIR06*, are examples of recent trends. In order to assess the strength of FDI links between different home and host economies and its development over time, the value of bilateral FDI stocks for 72 countries for which data are available is examined below.

In 2005, the largest bilateral outward FDI stock was that of the United Kingdom in the United States, amounting to \$282 billion (table I.9). In comparison, the stock of FDI of the United States in the United Kingdom was valued at \$234 billion – the third largest bilateral FDI relationship. Twenty years earlier, the situation had been the reverse, with the FDI stock of the United States being larger in the United Kingdom. Whereas the bilateral link between these two economies, together with those of United States-Canada and Netherlands-United States, dominated the global picture in 1985,

Table I.9. Top 50 bilateral FDI relationships, 1985, 1995, 2005
(Billions of dollars)

Rank	Home economy	Host economy	1985 ^a	1995 ^a	2005 ^a
1	United Kingdom	United States	44	116	282
2	Hong Kong, China	China	..	120	242
3	United States	United Kingdom	48	85	234
4	Japan	United States	19	105	190
5	Germany	United States	15	46	184
6	United States	Canada	49	83	177
7	Netherlands	United States	37	65	171
8	China	Hong Kong, China	0.3	28	164
9	British Virgin Islands	Hong Kong, China	..	70	164
10	Canada	United States	17	46	144
11	France	United States	7	36	143
12	Switzerland	United States	11	27	122
13	Luxembourg	United States	0.3	6	117
14	Netherlands	Germany	5	34	111
15	Netherlands	France	10	31	102
16	United Kingdom	France	9	26	96
17	Netherlands	United Kingdom	17	27	93
18	Germany	United Kingdom	3	14	86
19	United States	Netherlands	8	25	84
20	France	United Kingdom	5	13	80
21	United States	Switzerland	..	14	79
22	United States	France	12	36	79
23	Germany	France	6	21	79
24	Netherlands	Ireland	..	..	76
25	Belgium	France	..	17	73
26	United States	Germany	14	41	68
27	United Kingdom	Netherlands	4	18	67
28	France	Germany	2	15	59
29	Germany	Netherlands	2	12	58
30	United States	Australia	..	33	54
31	Belgium	Netherlands	1	11	50
32	United Kingdom	Germany	3	11	49
33	United States	China	..	18	48
34	Japan	China	..	19	47
35	Luxembourg	France	..	2	44
36	Australia	United States	3	10	44
37	United States	Japan	..	15	44
38	Netherlands	Switzerland	..	10	43
39	Netherlands	Hong Kong, China	..	16	42
40	United Kingdom	South Africa	..	..	40
41	Netherlands	Italy	..	6	40
42	Luxembourg	Germany	0.3	3	40
43	Taiwan Province of China	China	..	18	40
44	Switzerland	France	5	19	39
45	United States	Sweden	1	6	39
46	United Kingdom	Australia	..	25	38
47	Virgin Islands	China	..	3	37
48	Belgium and Luxembourg	Ireland	..	..	37
49	Netherlands	Sweden	1	6	36
50	United Kingdom	Sweden	..	2	35

Source: UNCTAD, FDI/TNC database (www.unctad.org/fdistatistics).

^a Or latest year available.

Note: Countries are ranked by the value of inward FDI stock in 2005 as reported by the host economy.

today, the situation is considerably more multifaceted, reflecting the involvement of many more countries in international production.

For example, in 2005, the second strongest relationship was between Hong Kong (China) and China. Other bilateral links that have grown significantly in importance since 1985 include Japan-United States, Germany-United States, China-Hong Kong (China) and the British Virgin Islands-Hong Kong (China) (table I.9). Out of the top 50 home-host economy FDI relations in 2005, 41 were among only developed countries and 9 involved developing economies, and especially China and Hong Kong (China). Reflecting its position as the largest FDI recipient in the world, the United States appears eight times among the 20 destinations with the largest stock of FDI from another country in 2005. Geographical proximity has become more important over time for partners.⁵⁶ For example in Europe in 2005, out of the top 50 pairs of countries with the strongest FDI links in terms of bilateral inward FDI stock, 22 were from Europe, compared to 17 in 1995 (table I.9; annex table A.I.7 ranks the next 50 pairs by inward FDI stock of host partner economy).

The above analysis can be taken a step further by comparing the actual volume of bilateral FDI stocks with what could have been “expected” by considering the respective shares of each economy in global outward and inward FDI.⁵⁷ A comparison of the actual value with the “expected value” of the bilateral FDI stock provides a measure of the intensity of the FDI relationship between a home economy and a host economy (box I.3).

An analysis of the intensity of the FDI relationship of major developed home economies with various host economies produces the following patterns (annex table A.I.8):

- The FDI intensities of the United States with its main traditional developed host-country partners, such as Canada, Japan and the United Kingdom, were all larger than one in 2005. And the intensity of its FDI relationship with some European host countries (e.g. Sweden and Switzerland) has increased. The analysis further shows the growing importance of Asian host economy partners with the United States than would be expected given their shares in global inward FDI: out of 10 economies with a strong relationship, four were in developing Asia. For example, in 1995, the United States-Malaysia FDI stock was only about half of the expected value (an FDI intensity of 0.5), and by 2005, it had increased to 1.3. Conversely, the United States’ actual FDI stock in Latin America has fallen more than expected, given that region’s importance in global inward FDI.
- Reflecting the strong geographical dimension of FDI, Japan’s FDI intensity with respect to

Box I.3. Analysing the intensity of FDI relationships

Similar to the trade intensity index (Srivastava and Green, 1986), it is possible to assess the intensity of the FDI relationship between a home country (i) and a host country (j) by using a ratio that compares the actual value of the stock of country i in country j with what might be expected given the world position of each of them as home and host countries respectively.

$$\text{FDI intensity ratio (R)} = FDI_{ij} / \text{Exp}FDI_{ij}$$

FDI_{ij} = Actual amount of FDI stock from country i to j.

$\text{Exp}FDI_{ij}$ = Expected value of FDI stock from country i to country j

$$= \frac{FDI_{wj}}{FDI_{ww}} * \frac{FDI_{iw}}{FDI_{ww}} * FDI_{ww}$$

where,

FDI_{wj} = Total inward stock in the j country;

FDI_{iw} = Total outward FDI stock of i country in the world; and

FDI_{ww} = Worldwide inward or outward FDI stock.

If the intensity ratio is greater than 1, the FDI relationship is stronger than would be expected based on the relative importance of the two economies as home and host; if it is less than 1 it is weaker than expected.

For example, considering United States FDI in France: in 2004, the United States outward FDI stock accounted for 20% of the world outward stock. France's stock of inward FDI accounted for 7% of the world inward stock. The "expected value" of the United States FDI stock in France would then be 1.4% ($0.2 * 0.07$) of world FDI stock.^a In the case of United States and France, the actual FDI stock in 2004 was \$79 billion and the "expected value" about \$140 billion (1.4% of world FDI stock in 2004). Accordingly, the FDI intensity was $79/140$, or 0.56 – a weaker than expected relationship.

Source: UNCTAD.

^a A similar assessment of FDI intensity, proposed by several researchers (Petri, 1994; Dunning, Fujita and Yakova, 2007) in the context of regional flows, measures the relative importance of a host region for a particular home country by looking at the ratio of the share of the host region in outward FDI stock of that country to the share of the host region in worldwide stock.

Asian developing countries has been not only stronger than with other developing countries, it has also increased over the past decade. The main exception was its bilateral FDI relationships with Hong Kong (China) and Indonesia, which have weakened. The intensity of Japan's FDI in such developed host countries as Australia and the United States have increased over the past decade.

- The intensity of the bilateral FDI relationships of major EU home countries have generally increased with other European countries, suggesting increased regional integration through FDI. For example, the FDI intensity of the United Kingdom as a home country, with Sweden rose from 0.6 to 1.6 between 1995 and 2005, and from 0.4 to 0.9 with Austria. Among non-European countries, its FDI intensity with Panama and Singapore has increased. The FDI intensity of France has increased with Japan and the United States, but fallen with Latin American host countries (e.g. Argentina and Brazil). Germany's FDI intensity has risen with host countries such as France, the United States and the United Kingdom, as well as with some Asian host

countries (notably Malaysia and the Republic of Korea). However, the FDI intensity of Germany and France with new EU member countries as hosts has weakened significantly over the past decade.

Home developing economies have established stronger than expected FDI links with other developing host economies, especially in the regional context of Asia, China, Malaysia and the Republic of Korea (annex table A.I.8). A number of their developing-country partners rank higher than those from developed countries in terms of FDI intensity. Bilateral links are particularly strong with countries within the region, such as China-Hong Kong (China), Malaysia-Cambodia and the Republic of Korea-China. Malaysia is an exception in that its FDI intensity with home developing countries such as China and the Republic of Korea declined between 1995 and 2005, while it increased with home developed countries such as the United States and Japan.

Overall, the analysis suggests that geographical proximity is associated with stronger FDI intensities between certain home and host countries than between others. The geographical

dimension has become more important for Asian home and host countries, especially for Japan as a home country. For the United States, FDI flows have increasingly spread beyond traditional recipients in Canada and Latin America. A similar phenomenon can be observed for the EU, as witnessed by its declining FDI intensity with many of its traditional developing-country partners. A number of home developing countries have developed stronger than expected FDI relationships, especially with other developing countries, highlighting the scope for increasing South-South investments.

2. Sectoral and industrial distribution of FDI

The most important change in the sectoral and industrial pattern of FDI over the past quarter century has been the shift towards services (*WIR04*), accompanied by a decline in the share of FDI in natural resources and manufacturing. Recently, however, FDI in the extractive industries of resource-rich countries has rebounded (Part Two), and its importance in infrastructure services is also rising.

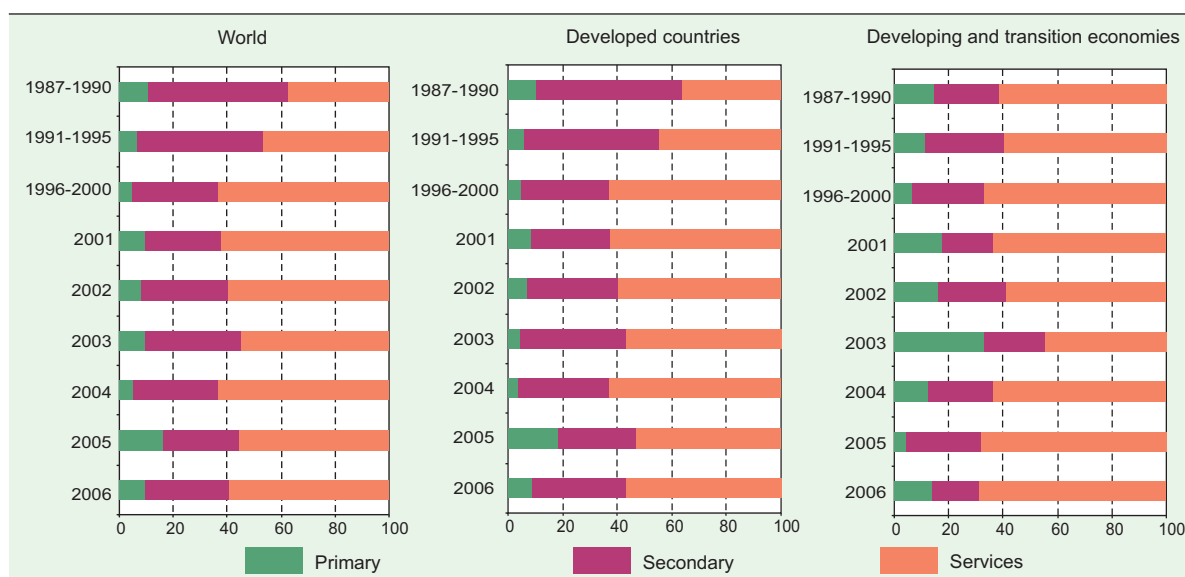
Over the past 25 years, FDI has increased significantly in absolute terms in all three major sectors: primary, manufacturing and services. However, the shares of the primary and manufacturing sectors in world inward FDI stock have declined. In 2005, FDI stock in the primary sector accounted for less than one tenth of total world inward FDI stock, only slightly lower than its share in 1990, while manufacturing accounted for slightly less than a third of total FDI stock (30%),

a noticeable drop from its share of 41% in 1990 (annex tables A.I.9-A.I.12). Services represented nearly two thirds of the global FDI stock (61%) in 2005, up from 49% in 1990. FDI flow data for recent years suggest that the share of the primary sector is partly recovering and could eventually reach its 1990 level, possibly even surpassing it if current trends continue. The sector accounted for 12% of world FDI inflows in 2003-2005, compared with 7% in 1989-1991.

Data on cross-border M&As confirm the growing importance of services. This sector's share in worldwide cross-border M&As rose from 37% in 1987-1990 to 58% in 2002-2006 (figure I.16), while that of the primary sector was halved, from 11% to 5% between 1987-1990 and 1996-2000, but it recovered to 11% in 2002-2006 (figure I.16). The share of manufacturing fell from 52% of global cross-border M&As in 1987-1990 to 31% in 2002-2006.

The estimated share of the primary sector in total inward FDI stock is lower in developed countries than in developing countries and in the transition economies of South-East Europe and the CIS (annex table A.I.9). Its decline in total inward FDI stock during 1990-2005 was largely confined to developed countries. In South-East Europe and the CIS, the primary sector's share has been particularly high. In 2005, it accounted for almost a quarter of their total inward FDI stock. The decline in the share of manufacturing in FDI was slightly larger in developing countries – where it reached 31% in 2005 – than in developed countries where it was 29%. On the other hand, the share of services in total inward stock (annex table A.I.9) in developed

Figure I.16. Sectoral distribution of cross-border M&As, by industry of seller, 1987-2006 (Per cent)



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

and in developing countries rose at a similar rate in the two regions, reaching 62% and 58% of their respective inward FDI stocks in 2005.

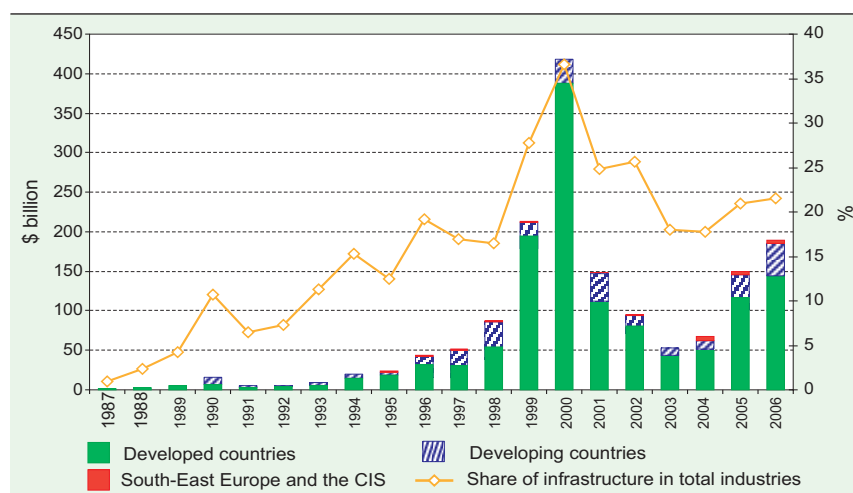
By far the highest share of FDI in the primary industries has been in mining (grouped along with quarrying) and petroleum. While FDI stock and flow estimates are not available for mining and petroleum separately, data on cross-border M&As suggest that both these industries have attracted increasing volumes of investment in recent years. During 2005 and 2006, the value of cross-border M&As in petroleum (representing an annual average of \$63 billion) was nearly twice that in mining. Two of the five largest cross-border M&A deals in 2006 were in the mining sector (annex table A.I.3): one was the acquisition of Falconbridge, a Canadian copper and nickel mining company, by Xstrata of Switzerland for \$17 billion, and the other was the \$17 billion acquisition of Inco, also Canadian, by CVRD of Brazil (see also Part Two, chapter IV).

FDI stock estimates as well as data on cross-border M&As suggest that nearly all manufacturing industry groups have experienced a declining share in FDI over 15 years (annex table A.1.9-A.I.12). That includes industries that have been the largest recipients of FDI in manufactures: chemicals and chemical products, motor vehicles and other transport equipment, food, beverages and tobacco, electrical and electronic equipment, and machinery and equipment.⁵⁸ With the exception of chemicals and chemical products, and motor vehicles and other transport equipment, in developed countries during the period 1990-2005, the share of all manufacturing industry groups in global inward FDI stock declined in both developing and developed countries.

In the services sector, estimated inward FDI stock data for 1990 and 2005 and data on cross-border M&As for 1987-2006 suggest that there has been a relatively steady increase in the shares of electricity, gas and water distribution, and transport, storage and communications in global FDI (annex table B.6). The share of construction has declined, but FDI in infrastructure services as a group has risen in both absolute and relative terms.⁵⁹ As infrastructure development requires vast amounts of financing, it is almost impossible to meet such requirement from public sources alone in particular in developing countries. TNCs have therefore been increasingly involved in infrastructure development through FDI (both greenfield investments and M&As) as well as through non-equity forms of participation (such as build-operate-transfer and other modalities). For example, infrastructure-related industries accounted for 22% of worldwide cross-border M&As in 2006 (figure I.17), and for 30% in the developing and transition economies (figure I.18) – with both sets of shares rising recently. Private equity firms are also entering this market, and accounted for more than half of the worldwide M&A deals (both domestic and cross-border) in infrastructure in 2006, compared with only 2% in 1998.⁶⁰

Regarding financial services, estimates show that its share in global inward FDI stock between 1990 and 2005 appears to have fallen slightly (annex table A.I.9), as also its share in total cross-border M&As over the past decade (annex table B.6 for the last three years).⁶¹ There are noticeable differences between regions with respect to the relative

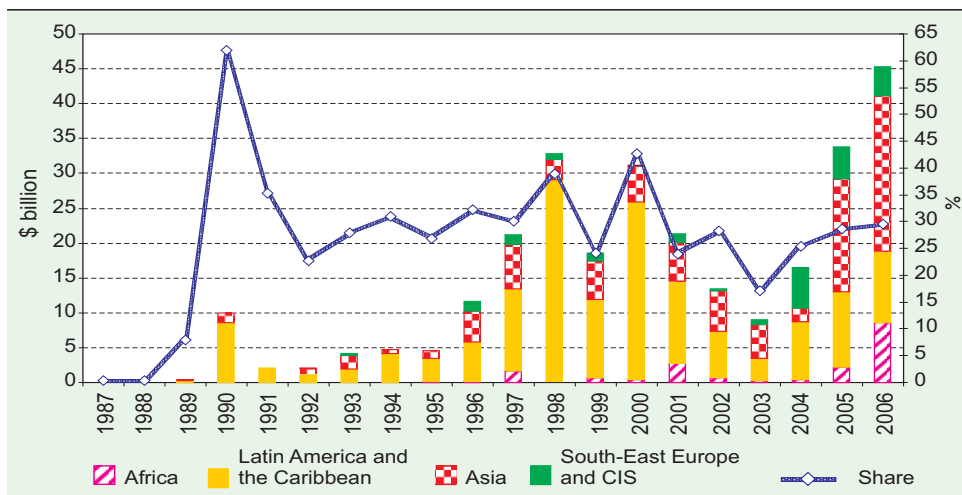
Figure I.17. Cross-border M&As in infrastructure, by value and share in total M&As in all industries, 1987-2006



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

Note: Includes electricity, gas, and water distribution; construction; transport, storage and communications; educational services; and health and social services.

Figure I.18. Cross-border M&As in infrastructure in developing and transition economies, by value and share in total M&As in all industries, 1987-2006



Source: UNCTAD cross-border M&A database.

Note: Includes electricity, gas, and water distribution; construction; transport, storage and communications; educational services; and health and social services.

importance of inward FDI in financial services. This industry accounted for a larger share of the estimated inward FDI stock of developing countries than that of developed countries in 1990 (26% compared to 19%); however, this was reversed in 2005 when it accounted for 20% in developed countries and 15% in developing countries.

The broad sectoral and industrial patterns discussed above conceal changes in the sectoral composition of FDI at the regional, subregional and country levels. A discussion of industrial patterns of FDI and differences in them among the major regions is included in chapter II.

C. The largest TNCs

The composition of the 100 largest TNCs worldwide changed moderately in 2005 (the latest year for which data on the top TNCs are available), as did their foreign activities as measured by sales and employment. The foreign activities of the largest 100 TNCs from developing countries grew more noticeably; however, the importance of foreign operations in their total activities remained relatively stable.

This section looks at developments among the largest TNCs, including the 100 largest non-financial TNCs worldwide and the 100 largest non-financial TNCs from developing economies, ranked by foreign assets. The current UNCTAD lists of largest TNCs, however, exclude many TNCs (such as family-owned and State-owned firms) that are not publicly listed, due to non-availability of comparable information for such companies. If data were available, it is likely that a number of

them would feature in the list.⁶² This section also includes an analysis of the 50 largest financial TNCs ranked by the Geographical Spread Index.

1. The world's 100 largest TNCs

The world's 100 largest TNCs play a major role in international production. In 2005, they accounted for 10%, 17% and 13% respectively of the estimated foreign assets, sales and employment of all TNCs worldwide. Following a slowdown in their rate of expansion in 2000, they have increased their activities significantly since 2002. Overall, the rankings in the first half of the list have remained relatively stable compared to those in 2004, with General Electric, Vodafone and General Motors at the top (annex table A.I.13). The top 10, with about \$1.7 trillion in foreign assets (i.e. almost 36% of the total foreign assets of the top 100), include four TNCs in petroleum and three in automobile production.

There were only 10 new entrants to the list in 2005, originating from seven different countries. By origin, 84 of the companies had their headquarters in the Triad (the EU, Japan and the United States), the United States dominating the list with 24 TNCs. Five countries (the United States, the United Kingdom, France, Germany and Japan) had 72 of the top 100 firms. The most significant change over the past two years has been the increase in the number of firms from developing economies, from five to seven (six of which were from Asia and one from Mexico), in line with the rise of TNCs from several developing countries (*WIR06*). There is a large disparity in size (as measured by foreign assets) between the largest firms and those ranked in the second half

of the list. However, the level of concentration of foreign assets within the largest TNCs has remained relatively stable over the past 10 years.⁶³

Although their foreign assets remained almost the same as in the previous year, the activities of the largest TNCs increased significantly in 2005, with foreign sales and employment increasing faster than those of their domestic counterparts by almost 10% and 9% respectively (table I.10). In addition, the ratio of foreign sales and employment to total sales and employment increased again in 2005.⁶⁴

Of the top 100 TNCs, 58 belonged to six industries: motor vehicles (11), petroleum (10), electrical and electronic equipment (10), pharmaceuticals (9), telecommunications (9), and electricity, gas and water services (9).

If ranking were to be based on foreign sales or foreign employment they would yield different results (UNCTAD, forthcoming b). Ranking by sales would move the petroleum TNCs into the top four positions on the list and another four motor vehicles TNCs into the top 10. The largest TNC in terms of foreign sales (ExxonMobil) is 10 times larger than the firm ranked 55 in the list. Ranking the companies by foreign employment would present yet another picture, placing three retail TNCs in the top positions. On average, the largest TNCs had affiliates in 39 foreign countries. Deutsche Post (Germany) was the leader in this regard, with value-added activities in 103 host economies,⁶⁵ followed by Royal Dutch/Shell (United Kingdom/Netherlands) with 96. (annex table A.I.16).

2. The 100 largest TNCs from developing economies⁶⁶

In 2005, the foreign assets of the 100 largest TNCs from developing economies amounted to \$471 billion. The five largest TNCs accounted for

Table I.10. Snapshot of the world's 100 largest TNCs, 2004, 2005
(Billions of dollars, thousands of employees and per cent)

Variable	2004	2005	% change
Assets			
Foreign	4 728	4 732	0.1
Total	8 852	8 683	-1.9
Share of foreign in total (%)	53.4	54.5	1.1 ^a
Sales			
Foreign	3 407	3 742	9.8
Total	6 102	6 623	8.5
Share of foreign in total (%)	55.8	56.5	0.7 ^a
Employment			
Foreign	7 379	8 025	8.8
Total	14 850	15 107	1.7
Share of foreign in total (%)	49.7	53.1	3.4 ^a

Source: UNCTAD/ Erasmus University database.

^a In percentage points.

Table I.11. Snapshot of the world's 100 largest TNCs from developing economies, 2004, 2005
(Billions of dollars, thousands of employees and per cent)

Variable	2004	2005	% change
Assets			
Foreign	336.9	471	39.8
Total	1 073.2	1 441	34.3
Share of foreign in total (%)	31.4	32.7	1.3 ^a
Sales			
Foreign	323.0	477	47.6
Total	738.2	1 102	49.3
Share of foreign in total (%)	43.8	43.2	-0.5 ^a
Employment			
Foreign	1 109	1 920	73.2
Total	3 364	4 884	45.2
Share of foreign in total (%)	33.0	39.3	6.4 ^a

Source: UNCTAD/ Erasmus University database.

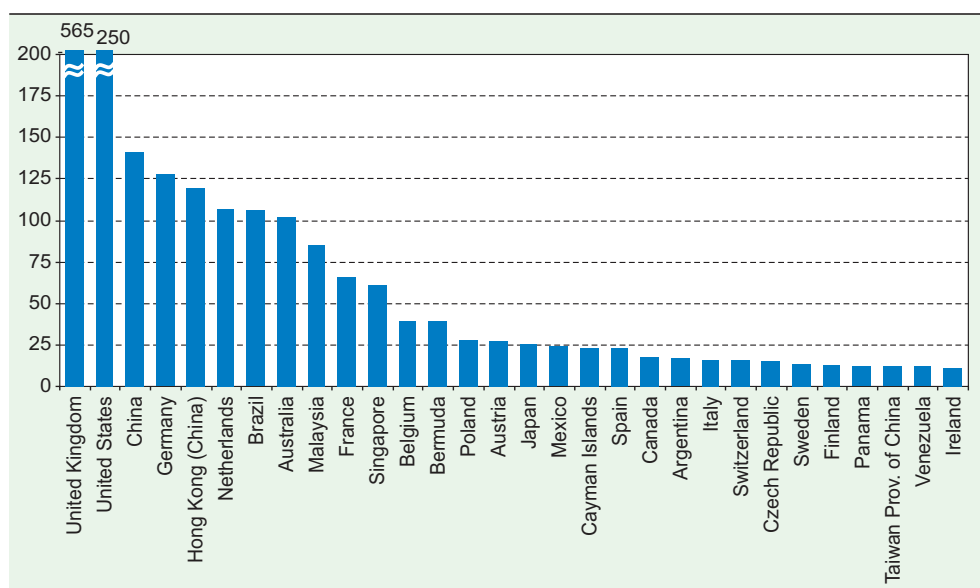
^a In percentage points.

one third of the foreign assets of the top 100. With foreign assets of \$62 billion, Hutchison Whampoa (Hong Kong, China) remained the leader, accounting for as much as one eighth of all foreign assets of the top 100 developing-country TNCs. Petronas (Malaysia), Cemex (Mexico), Singtel (Singapore) and Samsung Electronics (the Republic of Korea) remained in the next four positions (annex table A.I.14).

The regions and countries of origin of the top 100 developing-country TNCs have changed little over the past 10 years, and 78 of them originate in South, East and South-East Asia. Other companies are headquartered in Latin America (11) and Africa (11). By home economy, Hong Kong (China) and Taiwan Province of China dominate with 25 and 18 TNCs respectively of the top 100. China has gained in importance with 10 companies listed. Other important home developing countries of TNCs in the top 100 are Singapore with 11, South Africa with 10, Mexico with 7 and Malaysia with 6. In 2005, their foreign assets and foreign sales increased significantly over the previous year, by 40% and 48% respectively (table I.11). But their foreign operations, as reflected in the ratio of foreign to total assets and foreign to total sales, remained relatively stable compared with 2004. By contrast, foreign employment increased more than domestic employment and the ratio of foreign to total employment rose by 6%.

The top 100 TNCs from developing economies operate in a broader range of industries than do the world's largest TNCs. In 2005, apart from the large number of diversified groups, the single most important industry for the top firms remained electrical/electronic equipment and computers, with a large number of companies from Asia. This was followed by petroleum, which gained in importance in 2005, accounting for 10 companies on the list. Other relatively well-represented industries in the top 100 were food and beverages (8), transportation and storage (7), telecommunications (6), and metal and metal products (5).

Figure I.19. The top 30 locations for foreign affiliates of the 100 largest TNCs from developing economies, 2005
(Number of foreign affiliates)



Source: UNCTAD, based on Dun & Bradstreet, *Who Owns Whom Database*.

With respect to the geographical spread of foreign operations and the number of host countries for foreign affiliates, compared to the average of 39 host countries for the 100 largest TNCs worldwide, the largest ones from developing economies each had affiliates in 28 foreign countries on average. The preferred locations for their foreign affiliates were the United Kingdom and the United States (figure I.19), followed by China, Germany, Hong Kong (China), the Netherlands and Brazil.

3. Transnationality of the largest TNCs

The Transnationality Index (TNI), a composite of three ratios – foreign assets/total assets, foreign sales/total sales and foreign employment/total employment – is higher for the 100 largest TNCs worldwide than for the 100 largest TNCs from developing economies. Another measure of transnationality, the Internationalization Index (II), which is the ratio of a TNC's foreign to

total affiliates, also shows that, on average, 69% of the affiliates of the world's largest TNCs are located abroad, a much higher percentage than that for TNCs from developing economies (55%) (table I.12). However, the picture is more nuanced by industry (table I.12).

In addition to the TNI and II, *WIR06* introduced the Geographical Spread Index (GSI)⁶⁷ which seeks to capture both the number of foreign affiliates and the number of host countries in which a company has established its affiliates. Since TNCs from developing and transition economies have foreign affiliates in fewer host countries than their counterparts from developed countries, the GSI indicates much lower levels of internationalization by developing-country TNCs (annex table A.I.16) in keeping with their relatively recent expansion internationally.

4. The world's 50 largest financial TNCs

Large TNCs that have grown mainly through M&As dominate world financial services, not only in terms of their total assets but also the number of countries in which they operate. The 50 largest financial TNCs are ranked in this Report by the GSI (annex table A.I.15) and not, as in the case of the largest non-financial TNCs by foreign assets,

Table I.12. Comparison of II and TNI values for the top 100 TNCs^a, by industry, 2005

Industry	Largest TNCs		TNCs from developing countries	
	II	TNI	II	TNI
Motor vehicles	62.1	55.5	71.3	24.7
Electrical/electronics	76.2	53.9	67.1	53.6
Petroleum	60.5	55.5	21.0	24.6
Pharmaceuticals	81.9	60.2	..	..
Telecommunications	71.6	61.6	52.2	35.8
Utilities	53.1	52.3	31.4	41.0
Metals and metal products	77.7	62.0	35.9	41.5
Food and beverages	77.8	73.3	38.3	59.2
Transport and storage	62.9	50.6	56.5	60.7
Computer and related activities	..	..	68.5	50.9
All industries	69.5	59.9	54.5	50.6

Source: UNCTAD/Erasmus University database.

^a Annex tables A.I.13 and A.I.16.

as data on foreign assets as well as on foreign sales and foreign employment of financial TNCs are not available. The GSI is significantly higher for the largest financial groups, and for financial firms from Switzerland due to that country's small home market. The top 50 financial TNCs have, on average, affiliates in 28 host countries, whereas the five largest have affiliates in 51 host countries, on average.

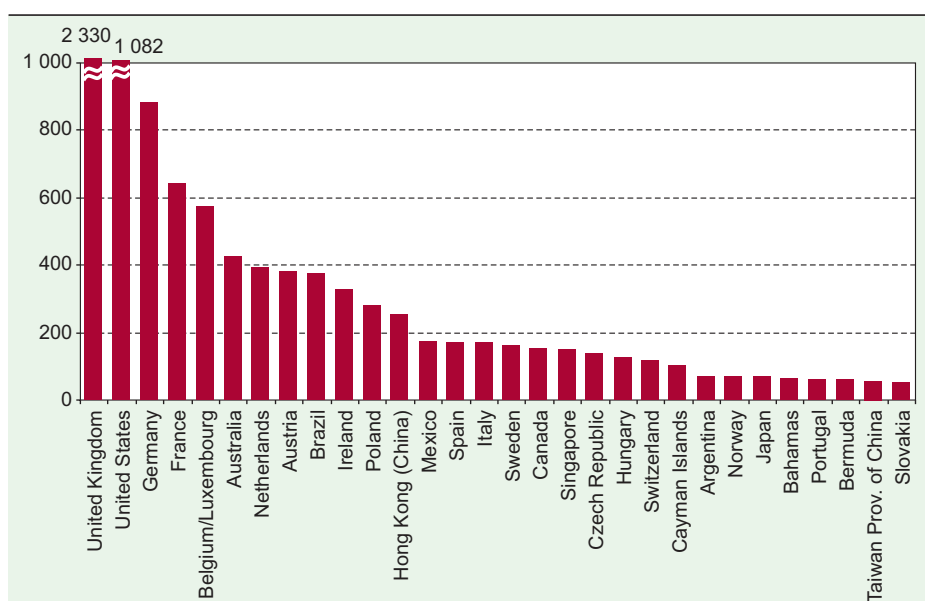
Information on the location of foreign affiliates suggests that the most favoured host country for the largest financial TNCs is the United Kingdom followed by the United States and Germany (figure I.20). Among developing economies, Brazil hosts the largest number of affiliates of the world's largest financial TNCs, followed by Hong Kong (China) and Mexico. It is noteworthy that tax havens such as the Cayman

Islands, Bermuda and the Bahamas are also favoured as locations.

The rise in the value of assets of TNCs in the insurance industry, including reinsurance (box I.4), may be attributed to growth through M&As. At the end of the 1990s, many European life insurance companies had established a presence in the United States by acquiring United States companies. The fact that nearly all the acquisitions were by European companies was no coincidence, as European insurers are larger than their United States counterparts: ING (Netherlands), AXA (France), Allianz (Germany) and Fortis (Belgium) were ranked 13th to 18th in the *Fortune Global 500* in 2006.

These companies have been looking for growth opportunities in the United States market and their presence there enables them to become global players. Two thirds of the world's retirement assets

Figure I.20. The 30 most favoured locations for foreign affiliates of the top 50 financial TNCs, 2005
(Number of foreign affiliates)



Source: UNCTAD, based on Dun & Bradstreet, *Who Owns Whom Database*.

Box I.4. Globalization in the reinsurance market

Globalization and consolidation are changing the composition of the largest reinsurance TNCs. Although three countries (Germany, Switzerland and the United States) have dominated the reinsurance business worldwide over the past 10 years, with more than 60% of total reinsurance premiums, Bermuda has in recent years emerged as a major reinsurance centre. At the same time, the consolidation of the reinsurance market in the 1990s has significantly increased the market share of the largest companies. In 2005, the three largest groups wrote 54% of all net reinsurance premiums for the 20 largest companies in this industry. In 2006 Swiss Re completed its acquisition of GE Insurance Solutions in a deal estimated at \$7.5 billion (including \$1.7 billion of debt), to become the world's largest reinsurance group.

In 1985, 8 of the 20 largest reinsurance groups in the world were from the United States, five were German and three were Japanese, and the others were from other European countries. Twenty years later, according to Standard & Poor's, five were from the United States, only two were German, another two were from Japan, but four were companies established in Bermuda for tax reasons and they have grown rapidly over

/...

Box I.4. Globalization in the reinsurance market (concluded)

the past decade. Compared with the largest financial companies, reinsurance firms are still small in terms of assets and employment, but the average number of host countries in which they operate (14 to date) is on the rise due to the globalization of the reinsurance business. In terms of the GSI, more than half of the firms would rank among the 50 largest financial TNCs (box table I.4.1).

Box table I.4.1. The world's largest reinsurance groups, ranked by the Geographical Spread Index, 2005
(Millions of dollars and number of employees)

Rank 2005	GSI	TNC	Home country	Assets		Employees		Affiliates	
				Total	Net premiums	Total	Number of host countries	Foreign	Total
1	47.9	Swiss Re ^a	Switzerland	166 552	21 204	8 882	24	179	187
2	41.4	Munich Re	Germany	259 087	22 603	37 953	37	138	298
3	40.3	ACE Tempest Re	Bermuda	61 126	1 546	10 061	20	82	101
4	38.4	Mapfre Re	Spain	29 540	1 082	..	29	86	169
5	30.5	SCOR Re	France	4 440	2 692	994	14	20	30
6	30.3	QBE Insurance Group	Australia	13 929	1 190	7 800	13	36	51
7	30.1	XL Re	Bermuda	58 137	5 013	3 600	13	62	89
8	29.5	Hannover Re (Talank)	Germany	39 624	9 191	1 989	21	53	128
9	27.3	White Mountains Re	Bermuda	8 458	1 304	..	8	27	29
10	26.8	Berkshire Hathaway	United States	198 325	10 041	..	23	148	473
11	25.8	PartnerRe	Bermuda	13 744	3 616	943	10	8	12
12	23.9	Mitsui Sumitomo Insurance Co.	Japan	69 203	1 713	16 432	9	26	41
13	23.1	Millea (Tokio Marine&Fire)	Japan	108 430	2 789	..	10	23	43
14	22.7	Odyssey Re	United States	8 620	2 302	592	8	9	14
15	22.0	Transatlantic Holdings Inc. (AIG)	United States	4 242	3 466	485	12	141	349
16	19.8	Reinsurance Group of America	United States	16 140	3 863	..	14	22	78
17	16.9	Axis Capital Holdings	Bermuda	11 926	1 491	441	4	5	7
18	15.8	Sompo Japan Insurance Group	Japan	54 913	1 804	14 705	5	10	20
19	15.8	Aioi Insurance Co.	Japan	25 265	1 152	9 085	5	8	16
20	13.4	Converium Re	Switzerland	10 983	1 816	579	3	3	5

Source: UNCTAD, based on Standard & Poor's, Global Reinsurance Highlights; companies' websites; Dun & Bradstreet, *Who Owns Whom* database; and Thomson Financial database.

^a In June 2006, Swiss Re completed its acquisition of GE Insurance Solutions, a process which started in Nov. 2005, with a deal estimated at \$7.4 billion.

Note: The Geographical Spread Index (GSI), is calculated as the square root of the Internationalization Index multiplied by the number of host countries. The internationalization Index (II), is calculated as the number of foreign affiliates divided by the number of all affiliates (majority-owned affiliates only).

From an operating performance perspective, and given the high degree of volatility inherent in the reinsurance business, out of the past 18 years, global reinsurers only managed to achieve underwriting profitability in 2003 and 2004. The operating difficulties encountered in this market have reduced the number of reinsurers, and only large diversified reinsurers such as Munich Re and Swiss Re managed to close 2005 with operating profits. In contrast with this picture, most United States-based and Bermuda-based reinsurers reported significantly weaker results for 2005.

Source: UNCTAD.

are in the United States, and the annuity market is expected to double over the next decade (KPMG, 2006). There are likely to be more M&As due to the fragmented nature of the United States market. Driving this activity are the ever-increasing capital demands by rating agencies and regulators on these companies. However, the lack of attractive targets and excessive price expectations are factors that could work in the opposite direction (KPMG, 2006).

In the banking industry, over the past three years, the largest cross-border deals (over \$10 billion each) were concluded among European banks. In 2004, Santander (Spain) acquired Abbey National (United Kingdom) for \$15.8 billion. In 2005, one of the largest deals was the acquisition by Unicredito

(Italy) of the German Bayerische Hypo Bank and the Bank of Austria Creditanstalt for a total of \$21.6 billion. In 2006, this trend continued with the acquisition of Banca Nazionale del Lavoro (Italy) by BNP (France) for about \$11 billion. European banks are also expanding rapidly in South-East Europe.

D. Prospects

Various surveys point to continued growth of FDI flows in 2007 and beyond, although the increase in global flows in 2007 is likely to be at a slower rate than in 2006. Inflows in 2007 are forecast to reach \$1,400–\$1,500 billion, which would imply a new record level. Many factors that

drive FDI activity have developed favourably during the course of 2007, but there could also be some hindrances responsible for the slower rate.

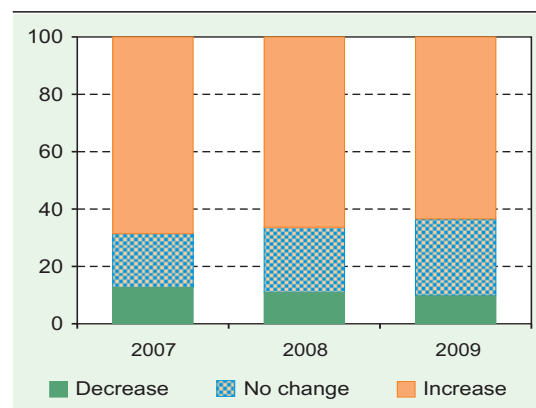
Global economic growth in 2007 is projected to slow down moderately, but to remain robust nonetheless, and above its long-term trend (IMF, 2007a; World Bank, 2007b; and OECD, 2007).

- World trade is expected to be robust.
- The continuing expansion of the world economy – now into its fifth year – should stimulate FDI.
- Corporate profits and external financing conditions are likely to remain positive in 2007.
- M&A activity is forecast to continue its upward trend in 2007, boosted by ample global liquidity, strong growth, low inflation and high corporate profitability. In the first half of 2007, cross-border M&As had increased by 54% over the same period in 2006, to reach \$581 billion.
- Private equity and hedge funds, many in collaboration with minority shareholders, were responsible for several high-value M&As in the first half of 2007.⁶⁸

UNCTAD's *World Investment Prospects Survey* for 2007-2009 provides strong support for the projection that FDI flows are set to increase in 2007 and beyond (UNCTAD, 2007b).⁶⁹ An average of 63% of the companies surveyed expressed optimism regarding FDI prospects for the period 2007-2009 (figure I.21), and 66% expect an increase in FDI flows in 2007. These results are also broadly supported by the worldwide survey of foreign affiliates of TNCs conducted jointly by UNCTAD and the World Association of Investment Promotion Agencies (WAIPA).⁷⁰ Some 76% of the responding CEOs of foreign affiliates expected their investment in host economies to increase over the next three years (figure I.22). Several international organizations and research institutes (IMF, 2007a; IIF, 2007; World Bank, 2007a) also predict higher FDI in 2007.⁷¹

In terms of preferred regions and country groups for FDI location, East, South and South-East Asia remains the most favourable region, followed by North America, the EU-15, and the new EU-12 (countries that joined the EU in 2005 and 2007) (UNCTAD, 2007b). China is the most preferred investment location, according to the UNCTAD survey responses, followed by India and the United States (table I.13), and then the

Figure I.21. Prospects for global FDI flows for 2007-2009
(Per cent of survey responses)

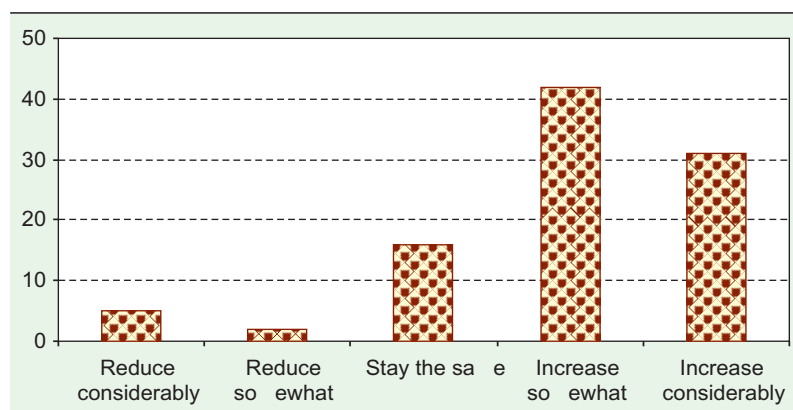


Source: UNCTAD, 2007b.

Russian Federation and Brazil. Viet Nam is ranked higher than the United Kingdom and Germany as an attractive location. Many other recent assessments and surveys concur with these broad results of preferred regions and countries for TNC location (Ernst & Young, 2007; IIF, 2007; JBIC, 2007; JETRO, 2007; McKinsey, 2007b; World Bank, 2007a). FDI prospects by region are discussed in more detail in chapter II.

These preferences are undoubtedly swayed by the specific strategies of TNCs. For example, in contrast to the UNCTAD survey, a recent survey of CEOs on M&A trends suggests that developed countries continue to be the favourite M&A destination: 43% prefer Western Europe for M&As, followed by Asia (31%) and North America (25%), with the majority of CEOs targeting countries in their own region or traditional trading partners (PricewaterhouseCoopers, 2007a).

Figure I.22. FDI plans by foreign affiliates in host countries for 2007-2009
(Per cent of survey responses)



Source: UNCTAD-WAIPA Worldwide Survey of Foreign Affiliates, 2007.

The UNCTAD survey did not cover prospects by industry in detail, but the general consensus is that current trends will continue, with large-scale M&As already occurring or in the offing in the *primary sector*,⁷² and especially in chemicals and automotive industries in the *manufacturing sector*.⁷³ Further growth⁷⁴ and liberalization⁷⁵ in the *services sector* is likely to help maintain the momentum of FDI flows to this sector in the largest host developed and developing regions. In banking and other financial services the upward trend in M&A activity continued in the first half of 2007.⁷⁶

Despite the generally positive prospects, several challenges and risks face the world economy that may have implications for FDI flows in 2007 and 2008. Global current-account imbalances have grown dramatically in some developed countries. This could cause exchange-rate shifts, which may affect FDI negatively. High and volatile oil prices have caused inflationary pressures, so that a

Table I.13. The most attractive locations for FDI for 2007-2009

Economies	Percentage of respondents
China	52
India	41
United States	36
Russian Federation	22
Brazil	12
Viet Nam	11
United Kingdom	10
Poland	7
Germany	7
Australia	6

Source: UNCTAD, 2007b.

stronger-than-expected tightening of financial market conditions cannot be excluded. Increased risk exposure on financial markets, caused for example by the activities of hedge funds and carry trades,⁷⁷ as well as spillovers from the United States housing market, pose the risk of stronger corrections of highly valued stock and real estate markets. Some concerns about FDI prospects have been expressed by respondents to the UNCTAD survey, based on the possible rise of protectionism: more than four fifths of them believe there could be a significant risk of changes that are unfavourable to FDI in the

short term (UNCTAD, 2007b). Many respondents also recognize that global threats such as terrorism and war are not negligible, but they consider that the probability that this type of risks might affect the level of FDI in the short term is relatively low (UNCTAD, 2007b). These considerations, nevertheless, emphasize the need for caution in assessing future FDI prospects.

Notes

- 1 Real world GDP rose by 4.9% in 2005 and 5.4% in 2006 and is projected to grow by 4.9% in 2007 (IMF, 2007a).
- 2 In the period 2000–2006, FDI inflows accounted for 56% of all net capital flows into developing countries, whereas the shares of portfolio, other capital transactions (e.g. bank loans) and official flows were 16%, 19% and 10% respectively (World Bank, 2007a).
- 3 The Monterrey Consensus was adopted by the International Conference on Financing for Development, a summit level meeting sponsored by the United Nations to address key financial and related issues pertaining to global development, held on 21–22 March 2002, in Monterrey, Mexico. It calls, among other things, for mobilizing and increasing the effective use of financial resources needed to fulfil internationally agreed development goals in the context of a holistic approach to the challenges of financing for development (United Nations, 2002).
- 4 See *Fortune* 500, 15 April 2007.
- 5 Current profits of listed firms have been rising already for four years in a row, the longest period since 1980. The current profit ratio in fiscal year 2006 was 6.5% for all listed firms (*Nikkei*, 10 February 2007).
- 6 Data collected by UNCTAD, based on inward FDI, are limited to 132 countries for 2006.
- 7 Several stock market indices in 2006 exceeded their previous records reached in 2000 (e.g. the Dow Jones in September 2006). In 2006, the blue chip indices in 48 out of 51 of the world's most important stock exchanges rose, 40 with a double-digit percentage increase and 4 with a triple-digit increase (World Federation of Exchanges, 2007: 113).
- 8 Market capitalization in 49 of 51 major stock exchanges increased in 2006; 41 stock exchanges recorded double-digit growth rates and 3 triple-digit growth rates (World Federation of Exchanges, 2007: 66).
- 9 In 2000, cross-border M&As of over \$1 billion accounted for more than three quarters of the value of total cross-border

M&As. This was due to several very large deals like the Vodafone-Mannesmann deal which alone accounted for 18% of the value of cross-border M&As in that year.

- 10 The observations in this and subsequent paragraphs on the changes in M&A values in various countries/regions are based on data from UNCTAD's cross-border M&A database.
- 11 O2 (telecoms) and BAA (airport services) were bought by the Spanish companies Telefónica and Ferrovial, respectively for \$32 billion and \$22 billion. BOC, an industrial gas company, was acquired by its German competitor Linde for \$14 billion (annex table A.I.3).
- 12 In an environment of low interest rates and ample funds, many firms have increased their proportion of debt to capital to optimize their capital structure (IMF, 2007c: 11).
- 13 *Nikkei*, 18 October 2006.
- 14 These are funds controlled and managed by private equity firms (i.e. firms that collect funds from private investors (asset holders that are not publicly listed) and buy majority or entire ownership stakes in companies and/or business units with a view to restructuring the management and organization, and thereby raising the stock value of the latter for resale. Acquired firms are usually delisted (unless already unlisted), held privately and restructured over a certain period of years, and then resold to other parties or again listed through an initial public offering (IPO).
- 15 Because of data constraints and given the dominance of private equity funds, the analysis concentrates on the activities of private equity funds, which are the most active in cross-border M&As. But different kinds of funds increasingly act together, and the boundaries between private equity funds, hedge funds, other collective investment funds and even investment banks are fading away.
- 16 According to Dealogic, quoted in "M&A in 2006 beats tech boom", *Financial Times*, 21 December 2006; and *Nikkei*, 18 November 2006.

- 17 Several private equity firms raised an impressive amount of funds in 2006. For example, Blackstone Group (United States) raised \$15.6 billion, 2.4 times larger than its previous highest raising of \$6.5 billion in 2002. Apollo Management (United States) raised \$10.1 billion, Permira (United Kingdom) \$14 billion and Texas Pacific Group (United States) \$15 billion “Blackstone quickens pace with \$15.6 bn fund”, *Financial Times*, 12 July 2006; and *Nikkei*, 13 July 2006. Investment banks or commercial banks (such as Morgan Stanley, Citigroup, Deutsche Bank, Credit Suisse and Royal Bank of Scotland) have also entered the private equity market by establishing or strengthening their investment arms, and are now heavily engaged in private equity buyouts (complete acquisition of firms through private equity funds).
- 18 For example, KKR raised \$5 billion with its IPO in Euronext (Amsterdam) in 2006.
- 19 KKR, Bain Capital, Silver Lake Partners, Apax and AlInvest Partners NV were involved in this acquisition. The new company has been named NXP.
- 20 This firm, a pharmaceutical arm of Altana AG (Germany) with its stock listed in Frankfurt, was acquired by Nycomed (Denmark) with the involvement of the private equity firm Avista Capital Partners (United States) and others.
- 21 However, on an announcement basis, the acquisition of VNU (Netherlands) by six private equity firms for \$11.3 billion was the largest deal in 2006.
- 22 In addition to Philips Semiconductor and Altana Pharma, a number of publicly quoted companies are currently being pursued by private equity firms, including, for example, Adidas (Germany), Alliance Boots (United Kingdom), Altria (Italy), Iberia (Spain), Sapporo Holdings (Japan), Valeo (France).
- 23 For example, see “The trouble with private equity” and “The business of making money”, *The Economist*, 7 July 2007, “Les fonds LBO risquent une bonne correction”, *Challenge*, 19 July 2007: 34.
- 24 For example, see “Private equity growth hitting tax revenues”, *Financial Times*, 13 October 2006 and “Blackstone’s blues”, *The Economist*, 15 June 2007.
- 25 The significantly increased credit-financed share of deals can be interpreted as a sign of growing risk for the financial system as a whole. Even if banks are less exposed and less involved, because these risks are ultimately taken by other parties, especially hedge funds, the rest of the financial sector also bears a higher risk (IMF, 2007c: 11f). For acquired firms, there is also the possibility that corporate balance sheets could come under strain owing to the excess of debt financing in takeover activity (ECB, 2006a).
- 26 *Financial Times*, 24 April 2007, Special Report on Private Equity Funds.
- 27 However, it is not certain whether job cuts have been larger than job creation. According to an FT/Harris poll undertaken in five EU countries (France, Germany, Italy, Spain and the United Kingdom) in March/April 2007, out of a total of 6,587 adults surveyed, about one third of respondents (34%) believed that the industry created jobs, but almost the same percentage (32%) believed it destroyed them (“Public lacks awareness of private equity, says survey”, *Financial Times*, 24 April 2007). In a separate survey on 400 managed buyouts (MBOs) and managed buyins (MBIs) conducted during 1999-2004 in the United Kingdom by the Centre for Management Buyout Research of Nottingham University, employment levels typically fell 2%-3% in the year of the MBOs, but then they rose significantly, by an average of 26% five years after the MBOs. In the case of MBIs, employment levels were lower even after five years. Overall, this survey shows a positive growth of employment (“Buyouts good for jobs, says study”, in Fund Management, *Financial Times*, 26 February 2007).
- 28 For instance, the private equity firm Lone Star (United States) bought Korea Exchange Bank in 2003 for \$1.3 billion, and was trying to sell its 50% stake to Kookmin (Republic of Korea) to make almost \$4 billion in profits, according to press accounts (source: “S. Korea rebuffs Lone Star reproach”, *Financial Times*, 25 May 2006; “Lone Star close to scuppering \$7.3bn deal”, *Financial Times*, 22 November 2006). The Government of the Republic of Korea charged Lone Star with stock manipulation and illegal profits. This case was still pending in June 2007.
- 29 Based on data on the estimated gross product of foreign affiliates and on world GDP in table I.4.
- 30 Starting with this report, *WIR* plans to analyse periodically one important variable indicating an aspect of international production or activities of foreign affiliates. This begins with *WIR07* focusing on the employment variable.
- 31 It should be noted that FDI stock is measured in nominal terms (current value), while employment is measured in real terms (number of employees). For a strict comparison, FDI data should be deflated by an appropriate price indicator.
- 32 Source: Ministry of Commerce, China. According to the data from National Bureau of Statistics of China (*China Statistical Yearbook*), employment in affiliates with independent accounting systems in China’s urban areas was only 6.7 million in 2001. No employment data have been available from this source for subsequent years.
- 33 In the United Kingdom and the United States, two traditional home countries of large TNCs, the issue of export of jobs has been widely discussed. In these countries, the immediate loss of jobs at home was generally compensated by an increase in employment as a result of enhanced competitiveness of the investors (Dunning, 1993). In France and other European countries, debates surfaced in the early 1990s over the issue of *delocalization*, or the shifting of manufacturing production to other countries, and its employment consequences. This issue continues to be of concern (for a discussion, see *WIR94*, chapter IV).
- 34 However, in some countries, such as Australia, Belgium, Greece, Ireland, Israel, Luxembourg and New Zealand, inward FDI stock is larger than outward stock.
- 35 Some earlier studies rejected this hypothesis (see *WIR94*).
- 36 In considering home-country effects, it is important to consider the counterfactual, that is whether a company would have had a given level of employment or not in the home country if it had not been able to invest abroad.
- 37 The index is calculated as the average of four shares for a country: FDI inflows as a percentage of gross fixed capital formation, 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.
- 38 The UNCTAD Inward FDI Performance Index is a measure of the extent to which a host country receives inward FDI relative to its economic size. It is calculated as the ratio of a country’s share in global FDI inflows to its share in global GDP. For the detailed methodology, see *WIR02*.
- 39 The UNCTAD Inward FDI Potential Index is based on 12 economic and structural variables measured by their respective scores on a range of 0-1 (raw data available on: www.unctad.org/wir). It is the unweighted average of scores on the following: GDP per capita, the rate of growth of real GDP, the share of exports in GDP, telecoms infrastructure (the average no. of telephone lines per 1,000 inhabitants, and mobile phones per 1,000 inhabitants), commercial energy use per capita, share of R&D expenditures in gross national income, share of tertiary level students in the population, country risk, exports of natural resources as a percentage of the world total, imports of parts and components of electronics and automobiles as a percentage of the world total, exports of services as a percentage of the world total, and inward FDI stock as a percentage of the world total. For the methodology for building the index, see *WIR02*: 34-36.
- 40 The UNCTAD Outward FDI Performance index is calculated in the same way as the Inward FDI Performance Index: it is the share of a country’s outward FDI in global FDI outflows as a ratio of its share in world GDP.
- 41 Oil companies, however, will continue to pay a 40.5% rate.
- 42 A total of five policy changes relating to the extractive industries were identified in UNCTAD’s annual survey of policy changes – in Algeria, Bolivia, Peru, the Russian Federation and Venezuela.
- 43 In addition, it has compiled a list of more than 1,000 “strategic enterprises” that cannot be privatized. Apart from defence-

- related enterprises, the list includes Transneft, the pipeline monopoly; Svyazinvest, a telecoms company; Alrosa, a diamond producer; and the world's largest gas producer, Gazprom (Liuhto, 2007).
- 44 *OECD Investment Newsletter*, February 2007.
- 45 Information from the OECD secretariat.
- 46 In the discussion here, such agreements with investment provisions are categorised as IIAs.
- 47 The UNCTAD secretariat is currently preparing a study on the evolution of the IIA system over the last 60 years, and its development implications (UNCTAD, forthcoming a). Various investment-related aspects of international economic agreements other than BITs and DTTs are also discussed in UNCTAD, 2006c.
- 48 These included FTAs signed by the United States with Colombia, Oman, Panama and Peru, and the Economic Partnership Agreement between Japan and Malaysia, and between Japan and the Philippines.
- 49 Recent examples of such agreements include the ASEAN agreements for the establishment of free trade and investment areas with China (2002), India (2003) and the Republic of Korea (2005), the FTA between Panama and Singapore (2006), and the FTA between China and Pakistan (2006).
- 50 This number does not include cases where a party signalled its intention to submit a claim to arbitration but had not yet commenced arbitration (notice of intent).
- 51 UNCTAD, "Latest developments in investor-state dispute settlement", *IIA Monitor*, No. 4, 2006.
- 52 *Idem*.
- 53 In this context, see UNCTAD, 2006b.
- 54 For instance, the 2004 United States Model BIT clarifies that the concept of fair and equitable treatment does "not require treatment in addition to or beyond that which is required" by the customary international law minimum standard of treatment of aliens, and that, "except in rare circumstances, non-discriminatory regulatory actions that are designed and applied to protect legitimate public welfare objectives, such as public health, safety, and the environment, do not constitute indirect expropriations."
- 55 These are primarily Canada and the United States, but also Colombia, Japan and the Republic of Korea.
- 56 Empirical evidence suggests that the worldwide sales and investments of TNCs are heavily concentrated in their home country or one other major region (e.g. Rugman and Verbeke, 2004; Dunning, Fujita and Yakova, 2007).
- 57 Assuming that world outward FDI equals world inward FDI (as it should in principle), this implies that the share of the host country's total inward FDI that comes from the home country is the same as its share in total world inward FDI that comes from that home country.
- 58 The one exception may be metals and metal products: although estimated FDI stock data show a slight decline in their share in total world inward FDI during 1990-2005, data on cross-border M&As worldwide indicate a modest rise of their share in total sales through much of the period 1987-2006.
- 59 Infrastructure has been defined as social overhead capital, including public utilities (e.g. power, telecommunications, sewage and sanitation), public works (e.g. roads, dams), transportation (e.g. railways, postal systems and airports) and social services such as education and health (World Bank, 1994).
- 60 "Infrastructure deals soar to \$145 bn", *Financial Times*, 13 October 2006.
- 61 For time-series data, see UNCTAD's FDI/TNC database (www.unctad.org/fdistatistics).
- 62 For example, the two largest private industrial corporations in the United States, Koch Industries and Cargill Inc., Boehringer-Ingelheim (one of the world's largest pharmaceutical firms) and Bertelsmann (media) in Germany, and Japan's Shiseido (the largest Japanese cosmetics TNC) and Suntory (the largest in cosmetics and alcoholic beverages), are not included in UNCTAD's lists.
- 63 The relative importance of the 5, 10 and 20 largest TNCs among the world's top 100 has remained relatively stable over time (UNCTAD, forthcoming b).
- 64 The ratio of foreign assets to total assets also rose in 2005, but this was mainly due to the decline in total assets.
- 65 Its wide geographical coverage is partly explained by its control of DHL.
- 66 If there were a combined list of the top 100 TNCs from developing and transition economies, two Russian firms would be included: Lukoil and Norilsk Nickel.
- 67 It is defined as the square root of the II multiplied by the number of host countries, and was termed simply the Spread Index (SI) in *WIR06*. In this report, it is termed the Geographical Spread Index (GSI).
- 68 For example in April 2007, the private equity fund KKR (United States) acquired the pharmaceutical company Alliance Boots (United Kingdom) for \$22 billion, the biggest ever leveraged buyout made by a private equity fund ("Le private equity pulvérise ses records", *Le Temps*, 16 May 2007).
- 69 The UNCTAD survey on FDI prospects by large TNCs is conducted worldwide on an annual basis. It was undertaken during March-June 2007 on a sample of 1,500 companies, chosen from among the 5,000 TNCs. A total of 191 responses were received, representing a 13% response rate. Simultaneously, an ad hoc group of international location experts has been set up to provide a more qualitative and global analysis on medium-term business opportunities, risks and uncertainties affecting international investment. The results of its analysis are included in a separate survey report (UNCTAD, 2007b).
- 70 The UNCTAD/WAIPA Worldwide Survey of Foreign Affiliates of TNCs conducted in February-April 2007 aimed at obtaining the views of foreign affiliates of companies worldwide with regard to investment prospects and local business environments in their respective host economies. The survey questionnaire was sent to chief executive officers (CEOs) of 850 foreign affiliates. A total of 96 foreign affiliates in 42 host countries completed the questionnaire, yielding a response rate of 11%.
- 71 The IMF's *World Economic Outlook* has estimated an increase in net FDI inflows (the balance between FDI inflows and FDI outflows) in emerging market economies to an estimated \$284 billion, from \$266 billion in 2006 (IMF, 2007a). Estimates of net FDI inflows for 2007 by the Institute of International Finance for 30 emerging economies are \$194 billion in 2007, compared with \$167 billion in 2006 (IIF, 2007). The World Bank projects a rise in FDI inflows to developing countries (including Central and Eastern Europe) from \$325 billion in 2006 to \$377-\$420 billion in 2009, depending on the world economic growth rate (World Bank, 2007a).
- 72 For example, Rio Tinto (United Kingdom) offered a \$38 billion bid for the acquisition of Alcoa (United States) in July 2007.
- 73 For example, 82% of Japanese companies in manufacturing plan to strengthen or expand overseas business operations over the next three years (JBIC, 2007). Eastern Europe is set to continue to receive FDI inflows in the automotive industry. Several car makers are also building plants in the Russian Federation ("Suzuki announces plan to build car plant in Russia with Itochu", *Japan Today*, 9 June, 2007; www.japantoday.com/).
- 74 For example, in the United States, the Institute for Supply Management's Index, which includes new orders, inventories, exports and employment by non-manufacturing businesses, including banks, builders and retailers, rose to 59.7, the highest since April 2006. ("U.S. May ISM services index rises to the highest of year", *Bloomberg*, 5 June 2007).
- 75 For example, agreements on the EU's Services Directive in 2006 and commitments by ASEAN member States to liberalize FDI in 70 out of 83 service industries by 2015 are likely to boost FDI.
- 76 For example, three major deals took place in the first half of 2007: Danske Bank (Denmark) acquired Sampo Bank (Finland) and Crédit Agricole (France) purchased Cassa di Risparmio di Parma (Italy), each for \$5 billion, while Citibank (United States) acquired Akbank (Turkey) for \$3 billion.
- 77 Transactions in which investors borrow low-yielding currencies in countries with low interest rates and lend them in other countries with high exchange rates (for a further discussion on carry trade, see UNCTAD's *Trade and Development Report 2007*).

CHAPTER II

REGIONAL TRENDS

INTRODUCTION

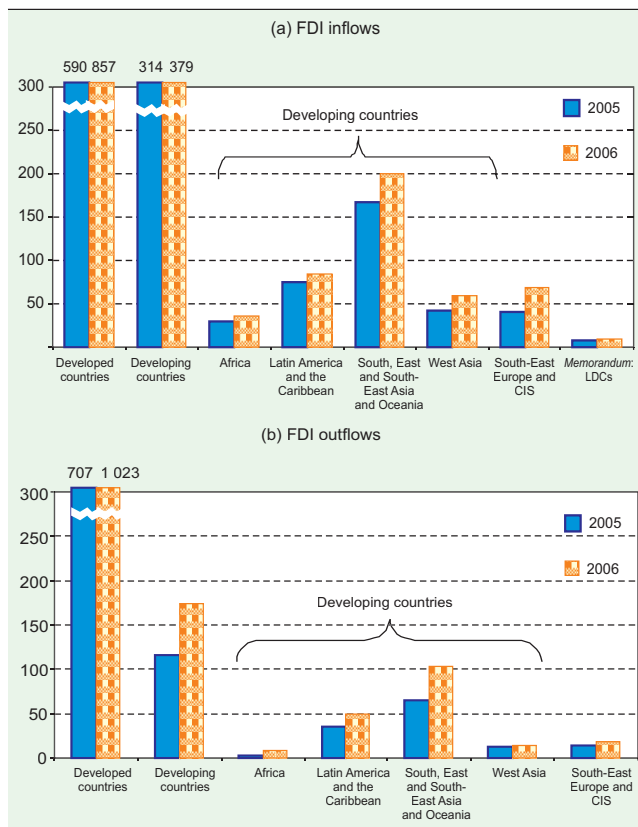
Inward FDI flows in 2006 rose in all regions (figure II.1), though their rates of growth differed and some new trends emerged. FDI inflows to developing countries grew at a slower rate than those to developed countries, but all developing regions except Latin America and the Caribbean registered record flows. FDI inflows to the transition economies of South-East Europe and the Commonwealth

of Independent States (CIS) also reached record levels. Flows to all developing and transition economies remained at more than one third of the world total, but their share in global FDI inflows fell somewhat in 2006 due to higher rates of increase in flows to developed countries. At the same time, the share of developing and transition economies in global FDI outflows has risen continuously since 2003, and reached nearly 16% in 2006. Compared to other types of capital flows to developing economies, FDI inflows have been the

largest component of total resource flows since 1994, and their share in 2006 was 51% (figure II.2; chapter I).¹

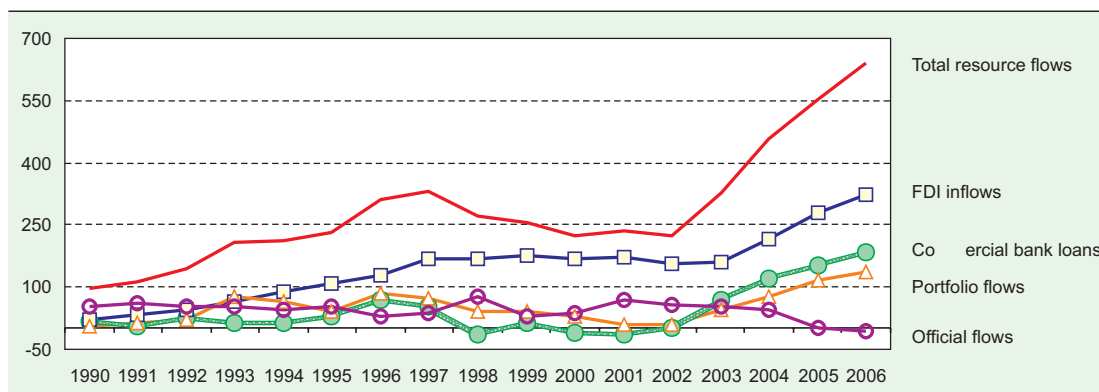
In terms of sectoral distribution, judging from data on cross-border M&As (as data on FDI flows by sector for 2006 were not available at the time of writing this Report), FDI in the services sector grew in all economies in 2006, while the primary and manufacturing sectors experienced uneven patterns of growth, which also differed by region (table II.1). The pattern confirms not only the increasing importance of services in FDI (*WIR04*) over the past several years, but also the recent re-emergence of the primary sector in developing and transition economies due to a significant rise in FDI in mining, quarrying and petroleum – extractive industries that are the focus of Part Two of this *WIR*.

Figure II.1. FDI flows by region, 2005 and 2006
(Billions of dollars)



Source: UNCTAD, based on annex table B.1 and FDI/TNC database (www.unctad.org/fdistatistics).

Figure II.2. Total net resource flows^a to developing countries,^b by type of flow, 1990-2006
(Billions of dollars)



Source: UNCTAD, based on World Bank, 2007a.

^a Defined as net liability transactions or original maturity of more than one year.

^b The World Bank's classification of developing countries is used here. It differs from UNCTAD's classification in that it includes new EU member States from Central and Eastern Europe, and excludes high-income countries such as the Republic of Korea and Singapore under developing countries.

Table II.1. Cross-border M&A sales, by sector and by group of economies, 2005-2006
(Millions of dollars)

Group of economies	2005				2006			
	All industries	Primary	Manufacturing	Services	All industries	Primary	Manufacturing	Services
World	716 302	115 420	203 730	397 152	880 457	86 133	274 406	519 918
Developed economies	604 882	110 474	171 020	323 388	727 955	65 119	247 233	415 602
Developing economies	94 101	2 858	25 963	65 280	127 372	16 639	22 603	88 130
Transition economies	17 318	2 088	6 747	8 483	25 130	4 374	4 570	16 185

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

This chapter examines the trends and patterns of FDI in 2006 by major regions. The discussion in the following sections focuses on recent trends in FDI flows to and from each region, as well as their subregions and countries, and provides a picture of the changing geographical, sectoral and industrial patterns of FDI flows by region. Policy developments underlining these patterns, and prospects for FDI flows to and from each region are also analysed.

A. Developing countries

1. Africa

FDI to Africa amounted to \$36 billion in 2006 – a new record level. The surge was in large part related to investments in extractive industries, but FDI also rose in various service industries. As a result, inflows as a percentage of the region's gross fixed capital formation increased to 20% in 2006, from 18% in 2005 (figure II.3). As in other years, there were wide variations among the different African countries. FDI inflows rose in 33 countries

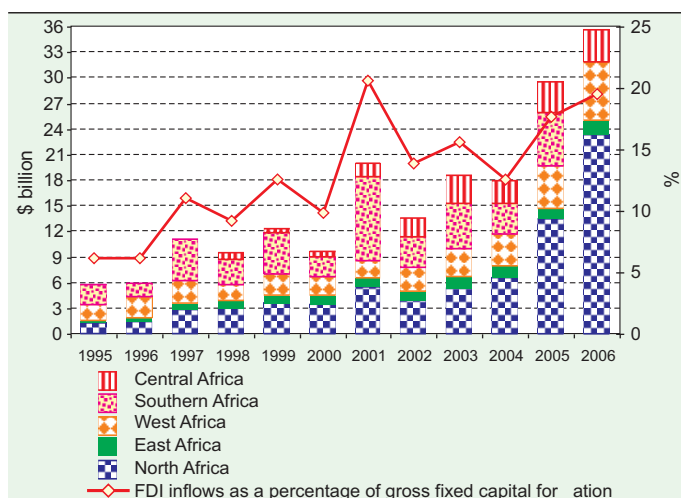
and fell in 21. Some Asian developing countries have become major sources of cross-border M&As and other forms of FDI in Africa. Outward FDI from Africa also reached a record level in 2006, largely driven by TNCs from South Africa. Policy developments indicate a further opening up to foreign investment, although some countries have also made changes in their regulatory frameworks with a view to securing greater benefits from inward FDI.

a. Geographical trends

(i) Inward FDI: natural resources drove the surge

In 2006, FDI inflows to Africa rose by 20% to \$36 billion (figure II.3), twice their 2004 level. Following substantial increases in commodity prices, many TNCs, particularly those from developed countries already operating in the region, significantly expanded their activities in oil, gas and mining industries. TNCs from Asia expanded even more rapidly, through both greenfield investments and cross-border M&As (table II.2). At the same

Figure II.3. Africa: FDI inflows and their share in gross fixed capital formation, 1995-2006



Source: UNCTAD, FDI/TNC database (www.unctad.org/fdistatistics) and annex tables B.1 and B.3.

time, the services sector continued to attract considerable FDI, in particular in transport, storage and communications. An estimated 442 greenfield investments were undertaken in Africa in 2006, 258 by developed-country TNCs, particularly Europe (161), 175 by developing economies (134 from Asia and the remaining from within Africa), and a few from South-East Europe and the CIS.² The value of cross-border acquisitions of African enterprises reached a record level (\$18 billion) in 2006, almost half of this in the form of M&As by Asian TNCs, which represents a huge expansion of activity since the start of the decade (table II.2), particularly in oil, gas and mining activities. Despite the increased FDI inflows, however, Africa's share in global inflows fell, from 3.1% in 2005 to 2.7% in 2006.

FDI inflows contributed to a strengthening of the balance of payments in several African countries. In 2006, foreign reserves in the region as a whole grew by some 30%, and by even more in some major oil-exporting countries such as Nigeria and the Libyan Arab Jamahiriya.³ Income on inward

FDI grew by 14%, which was more than in Asia and Oceania (9%) but much less than in Latin America and the Caribbean (36%) (section A.3).⁴

The extractive industries accounted for most of the increase in inflows to Africa in 2006.⁵ While such investments can help boost exports and government revenues, concerns have arisen in several mineral-rich countries about the impact on exchange rates and the prospects for other export-oriented activities (EIU, 2007a). In Zambia, for instance, a tenfold increase in copper exports since 2000 to \$2.7 billion in 2006 led to an appreciation of the real exchange rate.⁶ As a consequence, Zambia's attractiveness for FDI suffered in export-oriented clothing and horticulture, as well as in those products that are entitled to preferences under the African Growth and Opportunity Act (AGOA)⁷ and the Euro-Mediterranean Partnership. Similar concerns have been raised for Algeria, the Libyan Arab Jamahiriya, Mauritania, Nigeria, South Africa, Swaziland and Uganda. Moreover, the appreciation of the real exchange rate exacerbated the situation even further in countries with already high costs of production, capacity shortage or low competitiveness. This may have led to the closure of some foreign-owned production facilities in garments and other manufactures, for example in Kenya, Lesotho, Mauritius and Swaziland.⁸ These disinvestments were partly offset in some cases by higher inflows into new natural resource exploration activities, particularly in some least developed countries (LDCs) (box II.1).

The top 10 FDI recipients in Africa accounted for \$32 billion (or nearly 90%) of the region's inflows in 2006, up from \$20 billion in 2005 (annex table B.1). Eight of them attracted FDI in excess of \$1 billion in 2006, the same as the previous year; and in four of them such flows were higher than \$3 billion: Egypt, Nigeria, Sudan and Tunisia

Table II.2. Distribution of cross-border M&A purchases in Africa by home region, 1999-2006

(Millions of dollars)

Acquiring regions	1999	2000	2001	2002	2003	2004	2005	2006
World	3 117	3 199	15 524	4 684	6 427	4 595	10 509	17 569
Developed economies	2 534	2 380	14 964	3 668	3 156	2 571	9 564	7 173
Developing economies	583	819	559	1 016	3 270	2 024	476	9 721
Africa	52	769	520	809	569	1 849	360	746
Latin America and the Caribbean	373	-	-	67	166	-	-	125
Asia	158	50	39	141	2 536	175	116	8 850

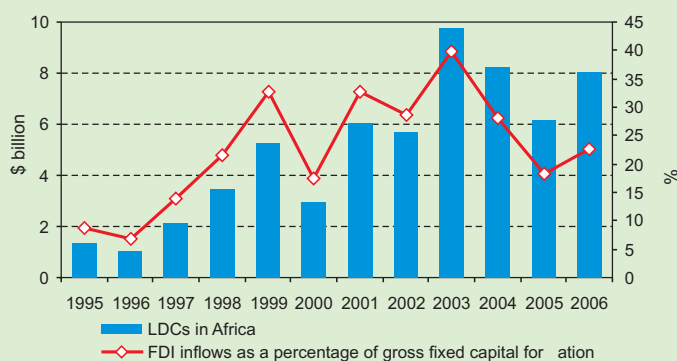
Source: UNCTAD cross-border M&A database.

Box II.1. FDI flows to African LDCs^a rise, led by investment in extractive industries

FDI flows to African LDCs increased from \$6 billion in 2005 to \$8 billion in 2006 (box figure II.1.1) following two consecutive years of decline. The increase was driven by investors seeking new mining locations in response to rising global demand and high commodities prices. As a result, the share of LDCs in FDI to Africa rose from 21% in 2005 to 23% in 2006, and, as with many other African host economies, such investment was mainly from developed countries and Asian developing countries. TNCs in telecommunications activities have also started to invest in African LDCs, especially those LDCs that were previously considered risky due largely to conflicts, leading to a small but positive improvement in inflows to these countries.^b

The 10 major recipients of FDI among African LDCs in 2006 were (in declining order): Sudan, Equatorial Guinea, Chad, the United Republic of Tanzania, Ethiopia, Zambia, Uganda, Burundi, Madagascar and Mali. FDI grew particularly fast (by 50% or more) in Burundi, Djibouti, Guinea-Bissau, Somalia, Madagascar, Ethiopia, Cape Verde, Gambia and Sudan. CNOOC (China), Ophir Energy (South Africa), Soma Petroleum (Canada), Range Resources and Woodside (both Australia) were among the TNCs that contributed to FDI in natural resource exploration in these countries.

Box figure II.1.1. African LDCs: FDI inflows and their share in gross fixed capital formation, 1995–2006



Source: UNCTAD, FDI/TNC database (www.unctad.org/fdistatistics) and annex tables B.1 and B.3.

Source: UNCTAD.

^a The 34 African LDCs are: Angola, Benin, Burkina Faso, Burundi, Cape Verde, the Central African Republic, Chad, Comoros, the Democratic Republic of the Congo, Djibouti, Equatorial Guinea, Eritrea, Ethiopia, Gambia, Guinea, Guinea-Bissau, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mozambique, Niger, Rwanda, Sao Tome and Principe, Senegal, Sierra Leone, Somalia, Sudan, Togo, Uganda, the United Republic of Tanzania and Zambia.

^b Examples include MTN of South Africa in Guinea-Bissau and Liberia, Maroc Télécom in Burkina Faso and Burundi, Telsom Mobile of the United Kingdom in Somalia, Portugal Telecom in Angola and MTC Kuwait in Sudan.

In contrast, Angola and Liberia registered negative FDI inflows in 2005 and 2006. In Angola, this was because of acquisitions by the State-owned oil company, Sonangol, of ongoing oil exploitation and refinery projects owned by foreign TNCs. In Liberia, while the negative inflows of \$82 million in 2006 were reduced from the previous year's negative level of \$479 million, investor confidence is recovering at a slow pace following the end of a series of civil wars and the establishment of a democratically elected government in that country. Inflows stagnated in Lesotho, mainly due to a slowdown in the textile industry and the withdrawal of a number of TNCs involved in that industry.

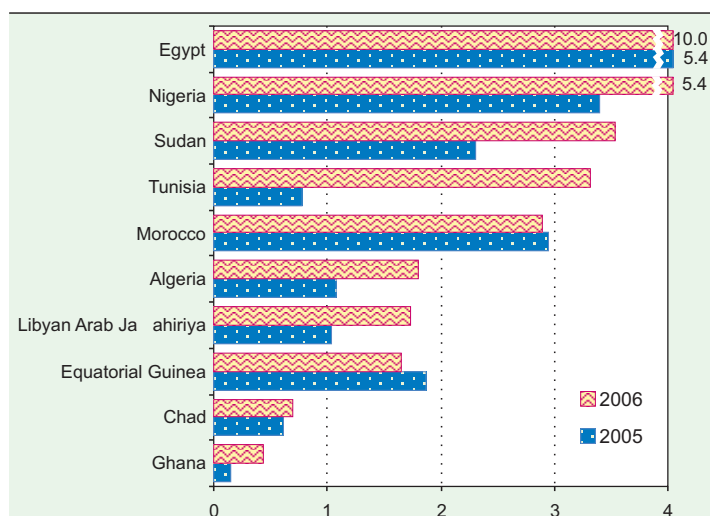
(figure II.4, table II.3). Both cross-border M&As and greenfield investments contributed to increased inflows to several of the top host countries, particularly Egypt, Nigeria, Sudan, Tunisia and Morocco.⁹ While most of the FDI to the region as a whole went to extractive industries, in Egypt – the top FDI recipient in 2006 – 80% of the more than \$10 billion of its inflows were in non-oil activities such as agriculture, manufacturing, banking and tourism.

FDI inflows to the five subregions of Africa in 2006 were uneven, reflecting the influence of different factors, particularly the availability of natural resources, as discussed below.

*North Africa.*¹⁰ North African countries received record FDI inflows (partly from Asian

TNCs) that were fairly diversified. All countries in the subregion, except Morocco (where flows remained relatively large), received increased inflows, most of which were concentrated in agriculture, communications, construction, manufacturing¹¹ and tourism; they were driven partly by investments for expansion and privatizations. As a result, FDI flows to the subregion surged to a record level of \$23 billion in 2006, accounting for 66% of inflows to Africa. Egypt attracted an exceptional level of inflows, amounting to 43% of the total to the subregion,¹² but the share of investments in oil and gas activities, though still large, declined from 60% in 2005 to 21% in 2006. In the Libyan Arab Jamahiriya, FDI inflows rose by 67% over those of 2005, to reach \$1.7 billion, the highest level since the end of international sanctions imposed on that

Figure II.4. Africa: top 10 recipients of FDI,^a 2005-2006
(Billions of dollars)



Source: UNCTAD, FDI/TNC database (www.unctad.org/fdistatistics) and annex table B.1.

^a Ranking based on FDI inflows in 2006.

country. In Tunisia, inflows more than quadrupled, mainly as a result of privatizations in the telecommunications industry.¹³ Algeria, Sudan and Tunisia also received more FDI in the petroleum and telecommunication industries, mainly from China, India, Kuwait and Malaysia. In contrast to other North African countries, FDI inflows to Morocco declined due to fewer privatization sales.

*West Africa.*¹⁴ FDI inflows to West Africa rose to \$7 billion in 2006, following larger investments in all sectors by European and Asian TNCs. The subregion's share in FDI inflows to Africa rose to 19% from 17% in 2005. Nigeria was the main destination in West Africa, accounting

for 80% of the FDI to the subregion, dominated by FDI in its oil industry, mostly from China. In Ghana, inflows tripled to \$435 million, largely as a result of investment by two United States firms: Newmont Gold Company and Alcoa (in an aluminium company, Valco). Most of the other inflows into the subregion went to the services sector. Cape Verde saw a major disinvestment, with the Government re-acquiring a majority stake in the country's electricity and water utility, Empresa Pública de Electricidade e Água de Cabo Verde, thereby reversing a controversial privatization. On the other hand, FDI in tourism in the country experienced strong growth.¹⁵

*Central Africa.*¹⁶ In Central Africa, Asian TNCs made significant investments in many sectors, nudging FDI inflows up to \$4 billion in 2006. The subregion accounted for 11% of Africa's

total inflows, most of it going to the primary and services sectors, including infrastructure. Equatorial Guinea, Chad, Congo and Cameroon (in that order) were the destinations. A large part of the increase in investment to the subregion reflected greater spending by TNCs on oil and mining exploration. In Cameroon, investments by Total (France) and Pecten Cameroon were the major cause of the surge in its FDI inflows.¹⁷

*East Africa.*¹⁸ East African countries recovered from a decline in their FDI inflows as a result of new oil exploration activities in non-traditional producer countries and privatizations. FDI inflows to the subregion rose to about \$2 billion

Table II.3. Africa: distribution of FDI flows among economies, by range, 2006

Range	Inflows	Outflows
Over \$3.0 billion	Egypt, Nigeria, Sudan and Tunisia	South Africa
\$2-2.9 billion	Morocco	..
\$1-1.9 billion	Algeria, Libyan Arab Jamahiriya and Equatorial Guinea	..
\$0.5- 0.9 billion	Chad	..
\$0.2-0.4 billion	Ghana, United Republic of Tanzania, Ethiopia, Zambia, Congo, Namibia, Cameroon, Uganda, Burundi, Botswana, Gabon, Côte d' Ivoire and Madagascar	Morocco, Liberia and Nigeria
Less than \$0.1 billion	Mali, Democratic Republic of the Congo, Mozambique, Seychelles, Cape Verde, Djibouti, Guinea, Mauritius, Somalia, Gambia, Benin, Senegal, Lesotho, Togo, Kenya, Sierra Leone, Guinea-Bissau, Zimbabwe, Swaziland, Malawi, Burkina Faso, Central African Republic, Niger, Rwanda, Eritrea, Comoros, São Tomé and Príncipe, Mauritania, Liberia, South Africa and Angola	Egypt, Libyan Arab Jamahiriya, Angola, Algeria, Tunisia, Kenya, Botswana, Mauritius, Sudan, Seychelles, Senegal, Congo, Sierra Leone, Swaziland, Niger, Malawi, Mali, Mozambique, Cape Verde, Zimbabwe, United Republic of Tanzania, Benin, Burkina Faso, Guinea-Bissau, Côte d' Ivoire, Namibia, Togo and Gabon

Source: UNCTAD, FDI/TNC database (www.unctad.org/fdistatistics) and annex table B.1.

^a Countries are listed according to the magnitude of FDI.

in 2006 compared with \$1 billion the previous year. However, this subregion still ranks low in FDI inflows to Africa. Four countries (Djibouti, Ethiopia, Kenya and Madagascar) that had registered a decline in their inward FDI in 2005 saw increased inflows in 2006. The United Republic of Tanzania had the highest inflows in the subregion, amounting to \$377 million in 2006 (most of it due to investment for expansion in the mining industry). FDI into Uganda rose by 19%, partly as a result of investments from Australia (e.g. by Hardman Resources) in the oil industry and from Egypt, India, Kenya, South Africa and the United States in services and agro-processing. In Kenya, FDI increased due to large privatization sales in the telecommunications industry and investments in railways. The recovery of FDI to Ethiopia in 2006 was a result of increased oil exploration activities in the Ogaden region.

*Southern Africa.*¹⁹ A significant decline in FDI inflows, particularly to the two principal host countries (Angola and South Africa) in the subregion led to negative inflows amounting to \$195 million in 2006. This contrasted with the high growth experienced in 2005 when inflows reached \$6 billion. Although South Africa experienced negative FDI inflows, caused by the sale of a foreign equity stake in a domestic gold-mining company to a local firm, there were a number of cross-border M&A deals in the country. For instance, Vodafone (United Kingdom) paid \$2.9 billion to raise its stake in Vodacom of South Africa, Tata (India) bought a 26% stake in InfraCo (a telecommunications company), valued at \$60 million, and some other Asian TNCs (such as Istithmar, the investment arm of the Government of Dubai) bought V&A Waterfront (South Africa) for more than \$1 billion.²⁰ In Angola, Sonangol's takeover of major oil-related projects from foreign companies, such as the Lobito oil refinery, also resulted in an overall negative FDI inflow, though some foreign investments took place in banking, telecommunications and mining.

(ii) *Outward FDI hit new heights*

FDI outflows from Africa hit record levels in 2006, to reach \$8 billion, nearly four times those of 2005, and more than twice the previous peak in 1997 (annex table B.1).²¹ Investors from South Africa accounted for four fifths of these. Other source countries, including Morocco, Liberia, Nigeria, Egypt and the Libyan Arab Jamahiriya, in that order, recorded their highest level of outflows. A large proportion of FDI by South African TNCs in 2006 was in natural resource exploration and exploitation. For example, AngloGold Ashanti invested in a gold-mining expansion project in Brazil (in Cuiaba) and in underground gold extraction development in Australia (at Sunrise Dam); and Ophir Energy

invested in offshore oil exploration in the United Republic of Tanzania. AngloGold also established an alliance worth \$58 million with Trans-Siberian Gold of the Russian Federation.²²

A number of African TNCs in services (many of them from South Africa) also expanded abroad, including into Europe. Outward FDI in telecommunications involved, for example, Orascom (Egypt), MTN (South Africa), Maroc Telecom (Morocco), Naguib Sawiris (Egypt) and Telkom (South Africa).²³ Significant cross-border acquisitions by African firms took place in industries as diverse as health-care services, printing and media, and construction.

b. Sectoral trends: primary sector's share rose

There was a surge of FDI flows to Africa in the primary sector, mainly in oil and gas (table II.4). In addition, the growing services sector, particularly transport, storage and communications, continued to attract FDI, as reflected by the data on cross-border M&As in 2006. However, it grew at a lower rate than the primary sector.

Inflows into the manufacturing sector continued to grow in North African countries at a slow but stable rate, while in sub-Saharan Africa, no significant manufacturing FDI took place. Conversely, disinvestments occurred in textile processing. Limited production capabilities continue to be a major factor behind the relatively low FDI inflows in manufacturing and the difficulties faced by African countries in seizing the opportunities offered by preferential market access initiatives such as AGOA, Everything but Arms (EBA) and the Cotonou Agreement between the European Commission (EC) and the African Caribbean and Pacific group of countries.

c. Policy developments

The rapid growth of inflows to Africa partly reflects the steps taken by countries of this region to open up their economies to foreign investment. UNCTAD's annual survey on changes to national laws and regulations shows that in 2006, 40 African countries introduced 57 new measures affecting FDI, of which 49 encouraged inward FDI.

Of these measures, 14 were related to sectoral liberalization, more specifically:

- Botswana, Burkina Faso, Burundi, Cape Verde, Ghana, Kenya and Namibia allowed partial or full foreign ownership of their telecommunications industries;
- Congo, Egypt and Nigeria wholly or partially opened up their banking industries;

Table II.4. Africa: distribution of cross-border M&As, by sector and main industry, 2005-2006
(Millions of dollars)

Sector/industry	Sales		Purchases	
	2005	2006	2005	2006
Total industry	10 509	17 569	15 505	11 208
Primary	908	4 788	249	356
Mining, quarrying and petroleum	908	4 788	249	356
Mining and quarrying	873	524	237	335
Petroleum	34	4 265	12	21
Secondary	1 676	2 017	35	159
Food, beverages and tobacco	17	1 136	3	-
Chemicals and chemical products	12	3	-	120
Stone, clay, glass, and concrete products	967	-	29	-
Metals and metal products	12	783	3	-
Machinery	545	-	-	39
Electrical and electronic equipment	-	8	-	-
Motor vehicles and other transport equipment	3	13	-	-
Services	7 925	10 763	15 221	10 693
Electricity, gas, and water distribution	58	307	-	-
Hotels and restaurants	32	10	-	-
Trade	312	1 001	47	87
Transport, storage and communications	1 534	8 321	1 307	698
Finance	5 398	1 086	13 787	9 315
Health and social services	587	-	-	-

Source: UNCTAD cross-border M&A database.

- Ethiopia approved foreign concessions to its railway company and Mauritius opened its legal professional services industry to FDI;
- Morocco permitted foreigners to own vast areas of land; and
- Swaziland opened up to FDI in insurance.

A number of African countries introduced measures aimed at improving the admission and/or establishment processes applied to foreign investors. For example, Burkina Faso created a one-stop shop for new businesses; Kenya strengthened its investment promotion agency (IPA); several countries eased or improved registration and fiscal procedures for various business start-ups.²⁴ For example, Nigeria cut the average property registration time from 274 to 80 days.

Many countries introduced various other measures to promote foreign investment. These mainly involved tax reductions (Algeria, Egypt, Ghana, Lesotho, Mozambique, Tunisia, Uganda and the United Republic of Tanzania), the establishment of specialized investment zones or parks (Botswana, Eritrea, Morocco, the United Republic of Tanzania and Zambia), or the setting up of advisory councils for investment promotion (Ethiopia).

In some countries, however, governments adopted policies that were less favourable to foreign investment. For example, in Algeria, Egypt, Equatorial Guinea and Zambia, Governments raised various taxes or royalties that may affect foreign investment. Algeria ended majority

foreign ownership in its oil and gas industries; Lesotho extended State monopoly over its fixed-line telephone services for a further 12 months; Swaziland closed its retail sector to foreign investors, and Zimbabwe prohibited money transfer operations by foreign or domestic agencies and main banking institutions. In the Libyan Arab Jamahiriya, new measures were adopted, requiring foreign investors to give priority to Libyan nationals in the manufacturing and agricultural sectors, and in construction, electricity, transport and communications in the services sector, as well as to provide training to locals, and ensure equal payments between Libyan and foreign staff.

At the international level, the region's development partners under the umbrella of the fourth Africa-Asia Business Forum (AABF) and the Tokyo International Conference for Africa's Development (TICAD) implemented measures to boost the region's FDI inflows. The Forum sought to boost the expansion of investments by Asian firms, including small and medium-sized enterprises (SMEs), in Africa (box II.2).

However, changing regulatory frameworks and improving the business climate may not be enough to attract greater FDI into manufacturing and to benefit from such investments. In countries with small domestic markets, FDI in manufacturing depends particularly on export markets and on the international competitiveness of African products in terms of unit factor costs relative to other countries (Golub and Edwards, 2003). Natural resources are attractive assets for export-oriented production, but they may not provide a sufficient basis for sustainable economic growth (Part Two). Moreover, natural resources provide rents only for as long as the resources last and are in demand; without technological and skills upgrading and development of downstream industries resource-exporting countries may eventually face stagnant prices and the risk of specializing in products that may become outdated (Nwokeabia, 2007). Accordingly, it is important for host countries to adopt policies that help improve their local capacities, and in particular their labour skills and technological capabilities.

d. Prospects: moderate growth expected in 2007

Prospects for FDI inflows into Africa in 2007 and beyond are expected to remain positive – albeit moderately – due to high commodity prices, particularly of oil. UNCTAD's *World Investment Prospects Survey* (UNCTAD, 2007b)²⁵ shows that only 20% of the investors interviewed planned to increase investment in Africa between 2007 and 2009, with no significant differences by subregion

Box II.2. A renewed push for Asian FDI in Africa

In 2006, TNCs from developing Asia accounted for over half of the cross-border M&As to Africa, worth close to \$9 billion, up from \$0.1 billion in 2005 (table II.2). This followed previous but slower growth in Asian FDI to Africa, which averaged \$1.2 billion annually during the period 2002-2004. Singapore, India and Malaysia are the top Asian sources of FDI to the region, with a combined investment stock estimated at \$3.5 billion (i.e. of cumulative approved flows from 1996 to 2004), followed by China, the Republic of Korea and Taiwan Province of China. Malaysia's FDI was the most diversified, by country and by industry, while about 3% of China's total outward FDI stock was spread over some 500 FDI projects in 48 African countries. Moreover, FDI from China to Africa has been increasing rapidly in recent years (UNCTAD, 2007d).

As part of efforts by the Government of Japan to boost trade and investment flows between the two regions, the fourth Africa-Asia Business Forum (AABF IV) took place in Dar es Salaam, United Republic of Tanzania in February 2007. The forum aims at increasing trade opportunities available to Asian TNCs in Africa taking into account the various trade agreements in place, such as AGOA and various new economic programmes for Africa's development (e.g. the New Partnership for Africa's Development (NEPAD)). It also aims to encourage the transcontinental exchange of knowledge and expertise and foster stable and sustainable economic growth and development between the regions within a South-South framework. The sectors targeted by AABF IV are: agro-industry and food processing, building materials, construction and engineering, information and communication technologies, medical equipment and pharmaceuticals, and textiles, garments and leather products.

Participation in AABF IV was open to businesses from African and Asian countries.

Source: UNCTAD, based on information from AABF IV.

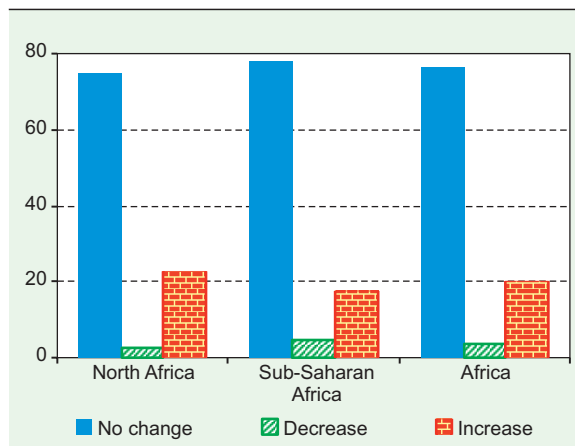
(figure II.5). Returns on capital in the region are expected to remain strong. While FDI in oil and gas and other minerals is likely to remain robust in the medium term, in manufacturing it is likely to fall further, due to tough international competition in garment exports and to the removal of trade preferences. But in the long-term it should revive as new initiatives, such as the African Investment Incentive Act (AIIA) by the United States Government, are implemented.²⁶

FDI inflows into Africa in 2007 are likely to remain unevenly distributed by sector/industry and subregion and country, especially because most new investments will be in oil, gas and natural resources

which are geographically concentrated. In *North Africa*, prospects for the region as a whole are bright under initiatives being negotiated or concluded with the EU (box II.3), with significant new investments expected in Algeria and the Libyan Arab Jamahiriya. In *West Africa*, *Central Africa* and *Southern Africa* FDI inflows will also be concentrated in a few countries, for example, in oil exploration in Nigeria, in mining and associated activities in South Africa, and in oil and related infrastructure development in Equatorial Guinea. FDI inflows into countries with few natural resources are likely to remain slow, including in almost the entire *East African* subregion, though even here there will be relatively higher flows to countries such as Mauritius because of privatizations and other M&A activity.

Prospects are also good for larger FDI outflows from Egypt, Morocco, Nigeria and South Africa, as TNCs from these countries (in particular in mining and services) are set to continue expanding abroad.

Figure II.5. FDI prospects in Africa, 2007-2009, by subregion: responses to UNCTAD survey
(Per cent of respondents)



Source: UNCTAD, 2007b.

2. Asia and Oceania

FDI inflows to Asia and Oceania reached a record of \$260 billion, marking the fourth consecutive year of growth and representing more than two thirds of inflows to developing countries. Outward flows from this region grew by 50%, to \$117 billion. Six out of the seven developing-country TNCs listed in the world's top 100 non-financial TNCs are from this region. This section examines South, East and South-East Asia, West Asia and Oceania.

Box II.3. North Africa: EU initiatives aimed at boosting FDI inflows and industrial growth

The North Africa subregion is a vital trade and investment partner of the EU, and the flow of FDI is in both directions: TNCs from the EU have purchased significant assets, particularly in Morocco and Egypt, in the context of privatizations that started in the 1980s, while more recently North African investors have begun to acquire EU firms. In 2005, for instance, Orascom Telecom (Egypt) acquired Wind Telecomunicazioni (Italy) for \$12.8 billion (*WIR06*). FDI flows between North African countries and the EU are set to grow further as a result of the conclusion or negotiation of some recent free trade agreements between the EU and countries in the region. These agreements include the outcomes of the Barcelona Process^a and a network of association agreements such as the Euro-Mediterranean Partnership and the Euro-Mediterranean Free-Trade Area.^b The Euro-Mediterranean Partnership specifically aims at constructing a zone of shared prosperity through the gradual establishment of a free-trade area. The funding priorities of the MEDA programme of the Euro-Mediterranean Association Agreement focus on support for SMEs, privatization and trade facilitation.

The agreement on the Euro-Mediterranean Free Trade Area aims at assisting private sector development including improvement of the business environment, facilitating privatization, support for SMEs, promotion of investment and industrial cooperation. It can thereby assist in attracting FDI to stimulate industrial and commercial competitiveness in the North African region.

Source: UNCTAD, based on information from Euromed (europa.eu.int/comm./external/reactions) and other sources.

^a The Barcelona Process is the result of the Euro-Mediterranean Conference of Ministers of Foreign Affairs, held in Barcelona on 27-28 November 1995. It marked the starting point of the Euro-Mediterranean Partnership, a wide framework of political, economic and social relations between the Member States of the European Union and 10 country partners of the Southern Mediterranean.

^b The Mediterranean Partnership and Euro-Mediterranean Free Trade area include four North African countries: Algeria, Egypt, Morocco and Tunisia, with the Libyan Arab Jamahiriya as an observer.

a. South, East and South-East Asia

FDI inflows into South, East and South-East Asia maintained an upward trend in 2006. The bulk of these flows went to East Asia, with growth particularly pronounced in the inflows to South and South-East Asia. In East Asia, FDI flows are shifting towards more knowledge-intensive and high value-added activities, reflecting an increasing emphasis on the quality of FDI in investment promotion. Outward FDI from the region also soared. China has consolidated its position as an important source of investment, and India is rapidly catching on. Resource-seeking FDI from the two countries continued to increase, as did large acquisitions by their firms in developed countries.

(i) Geographical trends

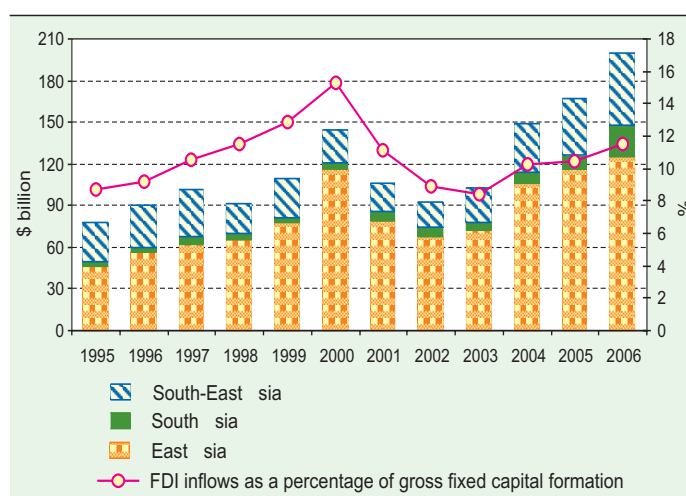
(a) Inward FDI: continued shift in favour of South and South-East Asia

FDI inflows to South, East and South-East Asia rose by 19% to \$200 billion. At the subregional level, FDI continued to grow at a faster rate in South and South-East Asia than in East Asia (figure II.6). Nevertheless, the East Asian economies of China and Hong Kong (China) remained the largest FDI recipients among all developing economies, attracting \$69 billion and \$43 billion in

2006 respectively. Singapore was the third largest destination in the region with \$24 billion worth of inflows, followed by India, which registered a substantial increase in FDI, amounting to \$17 billion (figure II.7).

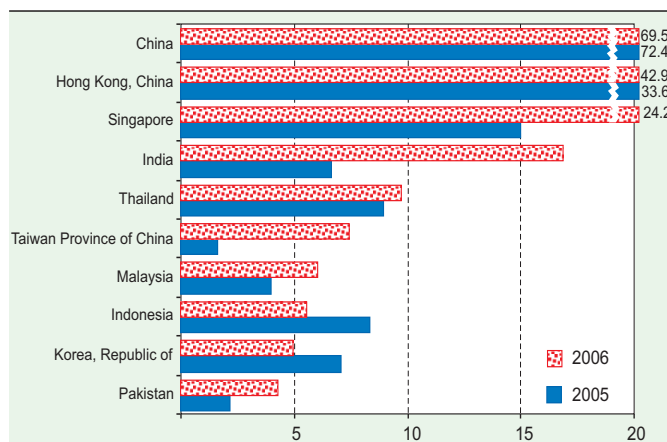
The value of cross-border M&As in the region rose by 19%, to \$54 billion (annex table B.4), driven partly by large intraregional deals. In 2006, 47% of cross-border M&As in South, East and South-East Asia were intraregional, compared to 43% in 2005 and 32% in 2004. Meanwhile, the number of recorded greenfield projects climbed by

Figure II.6. South, East and South-East Asia: FDI inflows and their share in gross fixed capital formation, 1995-2006



Source: UNCTAD, FDI/TNC database (www.unctad.org/fdistatistics) and annex tables B.1 and B.3.

Figure II.7. South, East and South-East Asia: top 10 recipients of FDI inflows, 2005-2006
(Billions of dollars)



Source: UNCTAD, FDI/TNC database (www.unctad.org/fdistatistics) and annex table B.1.

^a Ranked on the basis of the magnitude of FDI inflows in 2006.

19%, reaching a peak of 3,515 projects (annex table A.I.1).

East Asia

FDI inflows to East Asia²⁷ rose by 8% in 2006. Despite slower investment growth over the past two years, this subregion still accounted for about two thirds of total FDI flows to South, East and South-East Asia. China was East Asia's largest FDI recipient, followed by Hong Kong (China), Taiwan Province of China and the Republic of Korea.

Inward FDI flows to *China* declined for the first time in seven years. The modest decline (by 4% to \$69 billion) was due mainly to reduced flows to financial services.²⁸ Rising production costs and labour shortages in China's coastal regions,²⁹ as well as policy measures for promoting the development of the inner areas, have begun to influence the geographic distribution of FDI. Some provinces in the middle and western regions of the country received higher FDI inflows than in previous years, while in the more advanced areas, such as the Pearl River and Yangtze River Deltas, investments have been shifting towards higher value-added activities such as computer peripherals, telecom equipment and semiconductors.

FDI flows to *Hong Kong (China)* rose to \$43 billion, its second highest level ever. *Taiwan Province of China* saw the highest growth rate of FDI in the subregion in 2006, with inflows jumping by about 360% to \$7 billion. FDI increases recorded for both economies were driven by rising cross-border M&As. In Taiwan Province of China, private equity firms from the United States, such as Carlyle Group and Newbridge, were involved in some of

the largest M&As, including the acquisitions of Eastern Multimedia for \$1.5 billion and of some banks.

Inflows to the *Republic of Korea* declined considerably in 2006, due mainly to a significant fall in the value of cross-border M&As (annex table B.4) and divestment by foreign investors. There were a number of large divestments from the country by foreign investors, particularly retailers such as Carrefour of France (about \$1.6 billion) and Wal-Mart of the United States (about \$900 million). New flows were nevertheless directed into high value-added activities in fields such as parts and materials, research and development (R&D) centres and distribution centres. For example, FDI in the parts and materials industry rose by 50% to \$3.2 billion (on a notification basis).³⁰

South-East Asia

FDI inflows into South-East Asia (comprising the 10 ASEAN member States³¹ and Timor-Leste) registered a 25% increase in 2006, to reach their highest ever level of \$51 billion. In particular, FDI flows to *Singapore* rose by 61%, representing a new high of \$24 billion. As a distribution hub and financial centre in the subregion, the country accounts for almost half of total inflows to South-East Asia and continues to receive most of its FDI in services (mainly trade and finance). FDI inflows to *Thailand* continued to rise, by 9% in 2006, reaching a record \$10 billion and consolidating the country's position as the second largest FDI recipient in South-East Asia. Large intraregional M&A deals, particularly the acquisition of Shin Corp. by Temasek Holdings (Singapore), accounted for a large part of the total inflows. Inflows to *Malaysia* and *the Philippines* rose substantially: by 53% in the former, to its highest level since the Asian financial crisis (\$6 billion), and by 26% in the latter to its highest level ever (\$2.3 billion). The Philippines' potential to attract FDI has been highlighted by the decision of Texas Instruments (United States) to invest around \$1 billion in the country over 10 years in a new testing and assembly facility.³² *Indonesia* saw a substantial decline (33%) in FDI inflows, thus breaking the positive trend from 2005.

The performance of other ASEAN member countries in attracting FDI in 2006 was generally good. The *Lao People's Democratic Republic* witnessed a sixfold growth, the highest among countries in the subregion, while inflows to *Cambodia* also rose. In *Viet Nam* they rose by 15% to reach \$2.3 billion, and the country is increasingly considered an attractive location for efficiency-seeking FDI and some view it as an alternative

destination to countries such as China.³³ With its accession to the World Trade Organization (WTO) in 2007, market-seeking FDI is likely to increase.

South Asia

FDI inflows to South Asia³⁴ surged by 126%, amounting to \$22 billion in 2006, mainly due to investments in *India*. The country received more FDI than ever before (\$17 billion, or 153% more than in 2005), equivalent to the total inflows to the country during the period 2003-2005. Rapid economic growth has led to improved investor confidence in the country. According to the Government of India, the country's economy is expected to grow by 9.2% in the 2006/07 fiscal year. The sustained growth in income has made the country increasingly attractive to market-seeking FDI. Indeed, foreign retailers such as Wal-Mart have started to enter the Indian market. At the same time, a number of United States TNCs, such as General Motors and IBM, are rapidly expanding their presence in the country, as are several large Japanese TNCs, such as Toyota and Nissan. Private equity firms are also playing a role. For instance, Kohlberg Kravis Roberts & Co. (United States) acquired a controlling stake (85%) of Flextronics Software Sys Ltd. with an investment of \$900 million.

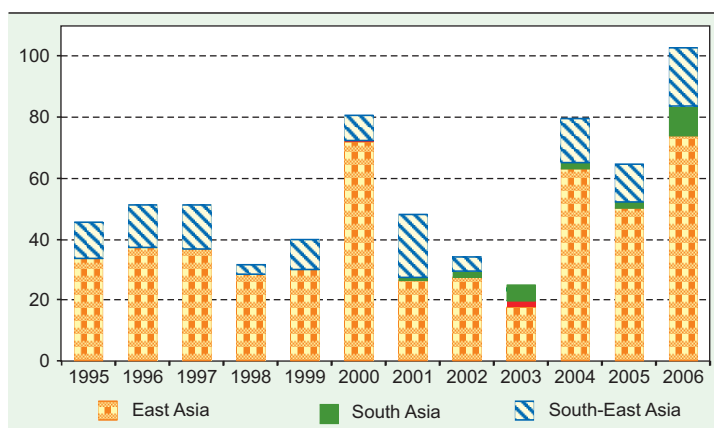
Other important recipients of FDI in the subregion include Pakistan, Bangladesh and Sri Lanka. The performance of *Pakistan* in attracting FDI (\$4.3 billion in 2006) has been promising. Strong economic growth and an aggressive privatization programme have led to booming FDI inflows during 2004-2006. In terms of sources of FDI, there has been a shift from developed countries to West Asian countries, particularly the United Arab Emirates and Saudi Arabia. After playing a leading role in a number of large M&A deals in Pakistan's privatization process, West Asian companies announced a series of large greenfield projects in the country.³⁵ Inflows to *Sri Lanka* rose significantly, reaching a record high of \$480 million. However, *Bangladesh* has not yet realized its potential: the country is still categorized as an underperformer according to UNCTAD's *Inward FDI Potential and Performance Indices* (figure I.8), with FDI inflows of \$625 million in 2006 (10% less than in 2005). Despite liberalization in some sectors (such as telecommunications) and recent efforts in establishing itself as an

attractive location for FDI in South Asia, political uncertainty, poor infrastructure and a weak business environment tend to deter investors (World Bank, 2006).

(b) Outward FDI increased substantially from all subregions

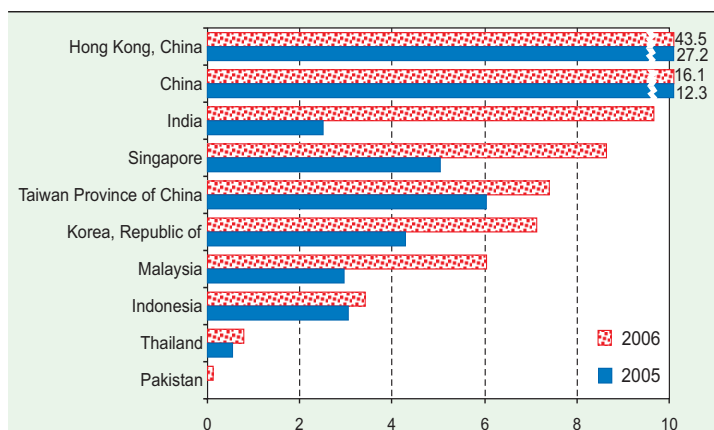
Outward FDI from South, East and South-East Asia soared by 60% to \$103 billion, increasing from all three subregions (figure II.8), and particularly from Hong Kong (China), China, India, Singapore and the Republic of Korea (figure II.9). The total value of cross-border M&As undertaken by TNCs based in the region rose to \$47 billion. Outflows from *Hong Kong (China)*, the largest FDI source in the region, rose by 60%, to \$43 billion. The rebound in outflows from *Singapore* was

Figure II.8. South, East and South-East Asia: FDI outflows, 1995-2006
(Billions of dollars)



Source: UNCTAD, FDI/TNC database (www.unctad.org/fdistatistics) and annex tables B.1 and B.3.

Figure II.9. South, East and South-East Asia: top 10 sources of FDI outflows, 2005-2006
(Billions of dollars)



Source: UNCTAD, FDI/TNC database (www.unctad.org/fdistatistics) and annex table B.1.

^a Ranked by magnitude of FDI outflows in 2006.

driven by large M&As within the region as well as in developed countries,³⁶ while increased outward FDI from the *Republic of Korea* was driven more by greenfield investments, prompting some concerns of a hollowing out.³⁷ FDI outflows from the region are targeting mainly offshore financial centres, but investments in developed countries as well as intraregional investments are also on the rise.

Rising outflows from China and India

China and India are beginning to challenge the dominance of the Asian newly industrializing economies (NIEs) – Hong Kong (China), the Republic of Korea, Singapore and Taiwan Province of China – as the main sources of FDI in developing Asia. Since 2004, their share of the total outflows from the Asian region as a whole has risen from 10% to 25%.

China's outflows increased by 32% to \$16 billion in 2006, and its outward FDI stock reached \$73 billion, the 6th largest in the developing world. Part of this overseas expansion involves considerable investment in other developing and transition economies. For example, China is establishing the first group of eight overseas economic and trade cooperation zones³⁸ in the following countries: in Nigeria, Mauritius and Zambia in Africa, in Mongolia, Pakistan and Thailand in Asia and in Kazakhstan and the Russian Federation in South-East Europe and the CIS. With a total investment of \$250 million, for example, the zone in Pakistan is a joint venture between Haier (China) and Ruba Group (Pakistan). According to China's Ministry of Commerce, 50 similar zones will be established over the next few years, facilitating more FDI from China into other developing and transition economies.

In addition, China established in 2007 a government investment company to manage a \$200 billion fund drawn from the country's huge foreign currency reserves.³⁹ This follows the example of the proactive approach to reserves management implemented in countries such as the Republic of Korea and Singapore. Although the investment strategy and policy of this company has not yet been clarified, it is expected to invest in foreign companies, partly through direct investment. In May 2007, for example, the company, though not yet formally established, invested \$3 billion for a 9.9% stake in the private-equity firm Blackstone (United States).

India's outflows were almost four times higher than those of 2005. Compared to China, where FDI outflows are driven by the international expansion of State-owned enterprises encouraged by proactive government policies, booming outflows from India have been dominated by privately owned conglomerates, such as the Tata Group. With a total

investment of \$11 billion, for example, Tata Steel acquired Corus Group (United Kingdom and the Netherlands) in early 2007, creating Tata-Corus, the world's fifth largest steel maker (by revenue). It is one of a series of large cross-border M&As undertaken by Tata Steel and other members of the Tata Group in the past two years,⁴⁰ and by far the second largest deal ever made by a company from a developing country, the largest being the CVRD (Brazil)-Inco (Canada) deal in 2006 (section A.3).

The emergence of China and India as important sources of FDI, coupled with active M&A activities by investors based in the Asian NIEs (particularly Singapore), has led to increased FDI flows from Asia to developed countries. Asian investors have become a driving force in the M&A boom in Europe, in particular, in 2006. According to Think London (the local IPA of London in the United Kingdom), FDI in the city from Asia, particularly India, has risen significantly in recent years.⁴¹

Intraregional FDI

Intraregional FDI flows are important for many economies in the region, and a few of the bilateral FDI stocks are among the largest in the world (table II.5). The past two years have seen a rise in intraregional flows, as highlighted by data on cross-border M&As: in 2005 and 2006, about 55% of cross-border M&As undertaken by TNCs based in the region were intraregional, as compared to 40% in 2004.

Intraregional FDI flows take place both within and between subregions. Within subregions, two clusters stand out: intra-Greater-China FDI – flows among China, Hong Kong (China), Taiwan Province of China and Macao (China) – and intra-ASEAN FDI. Within the former cluster, bilateral FDI stocks between Hong Kong (China) and China are the second largest in the world (table II.5), after those between the United Kingdom and the United States (chapter I). Mutual flows between the two economies have grown significantly since the mid-1990s, but round-tripping FDI as well as trans-shipping FDI account for a large share of these flows (*WIR06*:12-13). FDI flows from Taiwan Province of China into China have increased since the early 2000s. Accordingly, a number of affiliates established by electronics companies based in Taiwan Province of China now rank among the largest foreign affiliates in China.⁴² Within the intra-ASEAN cluster, Singapore is the leading investor (table II.5), while Malaysia has also become an important source of FDI. Further economic integration driven by the common objective of achieving an ASEAN Investment Area by 2015 has been stimulating stronger intra-ASEAN FDI flows.

Table II.5. Intra-regional FDI in South, East and South-East Asia: largest bilateral flows and stocks, 2005, ranked by FDI flows

Rank	Home country - host country	FDI flows in 2005			FDI stock in 2005 ^e	
		Amount (\$ million) ^a	Share in home economy outflows ^b (%)	Share in host economy inflows ^a (%)	Amount (\$ million) ^d	Rank in the world
1	Hong Kong (China) - China	17 949	61.6	24.8	241 573	2
2	China - Hong Kong (China)	9 373	27.9	27.9	164 063	8
3	Republic of Korea - China	5 168	46.0	7.1	25 936	63
4	Thailand - Hong Kong (China)	3 613	..	10.7	4 282	^e
5	Singapore - China	2 204	43.8 ^f	3.0	25 539	65
6	Taiwan Province of China - China	2 152	35.7 ^f	3.0	39 604	43
7	Singapore - Hong Kong (China)	1 414	28.1 ^f	4.2	10 874	123
8	Hong Kong (China) - Singapore	771 ^b	2.8	5.1 ^g	5 160	^e
9	Malaysia - Singapore	627	2.2	3.1	4 046	^e
10	Macao (China) - China	600	8.0	0.8	6 337	^e
11	Singapore - Malaysia	575	11.4 ^f	14.5	7 623	159
12	Malaysia - China	361	3.6	0.5	3 833	^e
13	Singapore - Thailand	301	6.0 ^f	7.5	6 150	194
14	India - Singapore	289	11.6 ^f	1.4	1 101	^e
15	Hong Kong (China) - Thailand	238	1.2	5.9	2 737	^e

Source: UNCTAD, FDI/TNC database (www.unctad.org/fdistatistics).

^a Based on data on FDI inflows as reported by the host economy.

^b Based on data on FDI outflows as reported by the home economy.

^c Or latest year available.

^d Based on data on inward FDI stock as reported by the host economy.

^e >200.

^f Estimated share, based on data on inward flows from the home economy to the reporting host economy (numerator) and total outward flows of the reporting home economy (denominator).

^g Estimated share, based on data on outward flows from the reporting home economy to the host economy (numerator) and total inward flows of the reporting host economy (denominator).

Chinese FDI in ASEAN is also rising fast, complementing the traditionally large investors from Hong Kong (China) and Taiwan Province of China. Chinese companies have focused on energy, infrastructure and related services in a number of ASEAN member States.⁴³ Rising inflows to low-income countries such as Cambodia and the Lao People's Democratic Republic have also been driven mainly by FDI from China, which has become the largest source of FDI inflows to those countries.

(ii) Sectoral trends

(a) Inward FDI increased in primary and services sectors

Judging by the data on cross-border M&A sales, in 2006, the primary and services sectors in South, East and South-East Asia received significantly higher FDI inflows in 2006, while M&A sales in manufacturing dropped (table II.6).

Extractive industries. In comparison with Africa and Latin America, extractive industries and related activities account for a relatively small share of total FDI to South, East and South-East Asia, but

they nevertheless continue to be resilient in attracting FDI. For example, high oil prices have been encouraging investment by TNCs in large projects in coal mining and processing in China.⁴⁴ In the region as a whole, the value of cross-border M&As in extractive industries rose nearly fivefold to \$1.7 billion in 2006, and the number of recorded greenfield projects in the sector also increased significantly.

Manufacturing. In 2006, cross-border M&As in the region soared in textiles and clothing, machinery and chemicals, but declined considerably in food, beverages and tobacco, electrical and electronic equipment and motor vehicles and other transport equipment (table II.6). Greenfield investments also rose significantly in textiles and clothing. China remains the region's top recipient of FDI in manufacturing, and it is climbing up the value chain.⁴⁵ An increasing number of TNCs have established regional headquarters in Chinese cities such as Beijing and Shanghai. IBM has even relocated its global procurement headquarters to Shenzhen. India is gaining strength in attracting FDI in traditional manufacturing industries such as steel and petrochemicals. Its FDI inflows in manufacturing rose from \$11 billion in the 2004/05 fiscal year to \$17 billion in the 2006/07.⁴⁶ POSCO (Republic of Korea)

announced in 2006 that it would invest \$12 billion in a steel plant in India. Automobile manufacturing TNCs have been rapidly expanding their presence in India's automotive industry (box II.4).

Services. The shift towards services (*WIR04*) continues in the region, particularly on account of investments in communications, real estate, retailing and financial services. Intra-regional M&A deals in service industries such as telecommunications and transportation (annex table A.I.3 for large deals) have been one of the driving forces behind this shift, and the growth of FDI in financial services has been particularly significant in recent years. In the banking industry, a new wave of liberalization in economies such as China, India, Pakistan, Taiwan Province of China and Viet Nam – often linked to WTO commitments – has resulted in significant flows of FDI. Investors are from Asian countries with existing thriving banking industries (e.g. the Overseas Union Bank of Singapore, which recently expanded into Viet Nam) as well as from outside the region (e.g. the Standard Chartered Bank of the United Kingdom, which acquired a bank in Taiwan Province of China; and Dubai Islamic Group of the

Table II.6. Sector/industry breakdown of cross-border M&As in South, East and South-East Asia, 2005-2006
(Millions of dollars)

Sector/industry	2005	2006	Growth rate (%)
Primary	469	1753	273.5
Agriculture, forestry and fisheries	120	89	-25.7
Mining, quarrying and petroleum	350	1664	376.0
Mining and quarrying	3	63	1926.8
Petroleum	347	1601	362.1
Secondary	13 300	12 906	-3.0
Food, beverages and tobacco	6 256	3 099	-50.5
Textiles, clothing and leather	100	1720	1624.8
Woods and wood products	997	419	-57.9
Chemicals and chemical products	659	970	47.1
Stone, clay, glass and concrete products	401	734	83.0
Metals and metal products	812	856	5.4
Machinery	432	2 640	510.9
Electrical and electronic equipment	2 368	1 462	-38.2
Motor vehicles and other transport equipment	1 047	275	-73.8
Services	31 363	39 063	24.6
Electricity, gas and water distribution	932	161	-82.7
Construction firms	108	58	-45.9
Hotels and restaurants	1 845	1 387	-24.8
Trade	1 863	786	-57.8
Transport, storage and communications	6 604	16 139	144.4
Finance	14 529	11 645	-19.9
Business activities	4 804	5 048	5.1
Health and social services	294	140	-52.5
Community, social and personal service activities	371	3172	754.0
Total	45 132	53 723	19.0

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

United Arab Emirates, which is expanding into Pakistan). Private equity firms from the United States, such as Carlyle Group and Newbridge, are also actively investing in the banking industry in the region. In the retailing industry, China and India have large potential to attract both equity and non-equity investments from TNCs. In India the retail market has begun to open up to foreign retailers.⁴⁷ In China, this industry has already become an important FDI recipient, with accumulated flows of \$5 billion. Based on a first-mover strategy, Carrefour (France) has become the fifth largest retailer in China, while Wal-Mart (United States), which ranked the 14th largest, recently expanded its presence in China through the acquisition of Trust-Mart.⁴⁸ In contrast to their expansion in China and India, as noted, Carrefour and Wal-Mart divested from the Republic of Korea.⁴⁹

(b) Outward FDI: resource-seeking FDI continued to rise

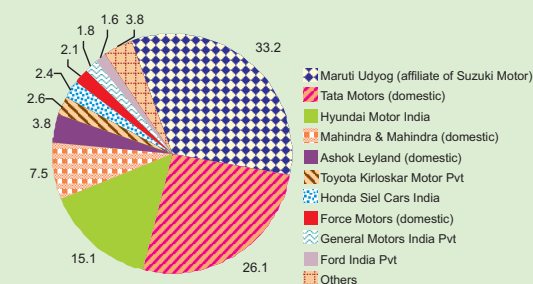
Resource-seeking FDI from South, East and South-East Asia rose again in 2006, driven by large M&As involving oil and gas companies from China and India (annex table A.I.3 for large deals). Chinese and Indian oil companies have jointly acquired companies in several countries,

Box II.4. Market-seeking FDI in India's automotive industry is booming

Production of motor vehicles by India's automotive industry reached 1.7 million vehicles in 2005/06. Suzuki Motor (Japan) was the leading investor in India in this industry, ranking first in market share, followed by the domestic firm Tata Motors and then Hyundai Motor (Republic of Korea) (box figure II.4.1). Other significant foreign players in India's automotive industry include Toyota Motor (Japan), Honda Motor (Japan), General Motors (United States) and Ford Motor (United States). Driven by market-seeking motives, these car-manufacturing TNCs have started or are planning large-scale investment projects in India. Accordingly, the landscape of the country's automotive industry is likely to witness a dramatic change in the next few years.

- To strengthen its leading position, Suzuki Motor has announced an expansion plan of \$1.65 billion, which will help to increase its annual production capacity to a million vehicles by 2010.
- General Motors is investing \$300 million in a car-assembly plant in Maharashtra. The plant will start production in the fourth quarter of 2008, producing 100,000 compact cars annually. The capacity of General Motors' factory in neighbouring Gujarat is also being expanded.
- Cooperating with Mahindra & Mahindra, an Indian jeep and tractor producer, Nissan (Japan) and Renault (France) are planning to invest \$908 million in a car-assembly plant in Chennai. With an annual capacity of 400,000 vehicles, the plant will start production in 2009.
- In order to double its market share to 10% in four or five years, Toyota Motor is preparing to invest \$500 million in quadrupling the capacity of its plant in Bangalore (from 50,000 vehicles in 2006 to 200,000 by 2010).

Box figure II.4.1. Market shares^a of automobile producers in India, 2005/06
(Per cent)



Source: UNCTAD, based on the Automotive Component Manufacturers Association of India.

^a Calculated based on production.

Source: UNCTAD, based on various newspaper accounts.

such as Colombia, Sudan and the Syrian Arab Republic. By actively investing abroad, these State-owned companies are spearheading their Governments' drive to secure overseas energy sources (chapter IV).

In manufacturing, FDI from South, East and South-East Asia has been largely driven by the international expansion of firms in their bid to acquire created assets such as brands and technologies, which has become an important motive for their FDI. Aggressive acquisitions have placed some of these Chinese and Indian companies onto a fast track of internationalization. However, the experience of some Chinese companies highlights the risks inherent in this approach towards international expansion.⁵⁰

In the services sector, Chinese banks have started to take serious steps in recent years to go global, through both cross-border M&As and greenfield investments. Despite policy restrictions in some host countries such as the United States,⁵¹ the total foreign assets of China's State-owned banks had reached \$28.4 billion by the end of 2006 and are expected to grow rapidly in the coming years.

(iii) Policy developments

A number of policy measures favourable to FDI were introduced in South, East and South-East Asia in 2006. For example, Mongolia introduced a package of tax reforms that may help improve the investment climate by reducing the corporate tax rate. In India, new legislation on special economic zones came into force. Companies that choose to invest in those zones are offered tax concessions such as a 15-year direct tax holiday and full exemption of import duties. In 2007, the Indonesian Government is in the process of promulgating a new law on energy under which foreign firms in oil and gas and coal mining will be provided incentives for investment (chapter VI). A number of countries also took steps to liberalize inward FDI in services. For example, the Lao People's Democratic Republic introduced a new banking law, and Viet Nam deregulated its banking industry to allow FDI in that industry.

Some policy measures have been adopted with a view to prioritizing various objectives related to FDI. For instance, the Chinese Government is increasingly emphasizing the quality rather than the quantity of FDI as a policy objective.⁵² In addition, it has unified two income tax systems for foreign affiliates and domestic enterprises, respectively, which will take effect in 2008.⁵³ New policy measures have also been introduced to address various concerns related to inward FDI. For example, potential FDI in such industries as

telecommunications has given rise to national security concerns for the Government of India, leading to more restrictive measures.⁵⁴ The Chinese Government has implemented new policy measures on M&As by foreign firms and on the foreign purchase of real estate,⁵⁵ and has formulated a list of industries over which the State will maintain control.⁵⁶

Some countries have adopted new measures to encourage the internationalization of their enterprises. The Chinese Government has abolished quotas on the purchase of foreign exchange for overseas investment since 1 July 2006 and has strengthened its support for overseas investments by Chinese enterprises. The Republic of Korea also plans to relax foreign exchange regulations, including a complete removal of the investment ceiling for outward FDI by individuals (currently \$10 million). In recent years, dependence on imported oil has increased significantly in some countries in the region. Therefore, energy security concerns have played an increasingly important role in their policies concerning outward FDI in extractive industries (chapter IV). In the Republic of Korea, for example, it was announced that investment in large overseas resource development projects would be backed by increased financial support by the Export-Import Bank of Korea.

Countries in South, East and South-East Asia concluded 31 new BITs and 39 new DTTs in 2006. Among the most important developments in international agreements in 2006 were the conclusion of free trade agreements between the Republic of Korea and the United States and between China and Pakistan; as well as the Trade and Investment Framework Agreement between the United States and ASEAN, and the Economic Partnership Agreements between Japan and the Philippines and between Japan and Malaysia (chapter I).

(iv) Prospects: most-favoured region for FDI

Rapid economic growth in South, East and South-East Asia is likely to continue, underpinned by the strong performance of China and India (ADB, 2006; IMF, 2007a). Growth in market-seeking FDI to the region should keep pace with rapid economic growth in the next few years. In addition, the region may become more attractive to efficiency-seeking FDI, owing to the plans of several countries such as China, India, Indonesia and Viet Nam to develop their infrastructure.⁵⁷ During the first half of 2007, the value of cross-border M&As increased by nearly 20% over the corresponding period in 2006. FDI outflows from the region are also expected

to keep growing, with the internationalization efforts of some Chinese State-owned enterprises and Indian privately owned conglomerates set to continue.

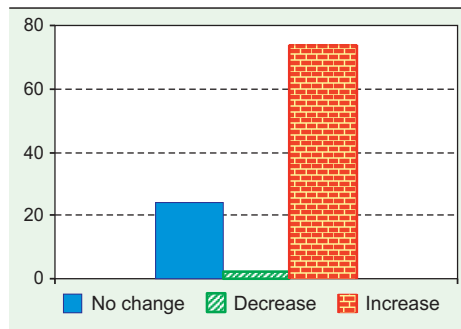
According to UNCTAD's *World Investment Prospects Survey*, South, East and South-East Asia is the region most favoured by TNCs, followed by North America and the EU (UNCTAD, 2007b). Of the TNCs interviewed in the survey, 65% already have FDI stocks in the region, and over 74% of respondents anticipate increasing investments to it (figure II.10). In terms of the investment locations, China (52% of respondents) and India (41%) rank numbers one and two, respectively, among the five most attractive sites (table I.14). The respondents who mentioned the two countries are mainly attracted by the size and growth of their domestic markets and the availability of cheap labour. Viet Nam was considered an attractive location for FDI by 11% of the respondents and is ranked number six globally.

China will remain a magnet for FDI, but is becoming more selective with respect to the quality of FDI it seeks. India has shown huge potential for market-seeking FDI, but faces a number of disadvantages that could impede progress in attaining its goal of raising annual FDI to \$50 billion by 2010.⁵⁸ Viet Nam appears to be poised to become an important site for manufacturing FDI, while Thailand appears to attract high-value-added FDI. According to a 2006 survey, these four countries are also among the top five in which Japanese manufacturing TNCs expect to invest the most (JBIC, 2007). Meanwhile, investors from West Asia may continue to drive FDI to South Asian countries such as Pakistan to new heights.

b. West Asia

FDI flows to West Asia⁵⁹ continued their upward trend in 2006. High rates of economic growth, diversification strategies, ongoing reforms and privatizations contributed to the increase. While the services sector was by far the largest recipient of FDI in

Figure II.10. FDI prospects in South, East and South-East Asia, 2007-2009: responses to UNCTAD survey
(Per cent of respondents)



Source: UNCTAD, 2007b.

the region, inward FDI in manufacturing, especially in industries related to oil and gas, increased significantly. Outward FDI flows, driven partly by rising revenues from natural resources, remained high. Developed countries accounted for the lion's share of FDI flows to and from West Asia, but flows to and from other developing Asian countries have also been on the rise. Despite the geopolitical uncertainties that are likely to persist in the region, both

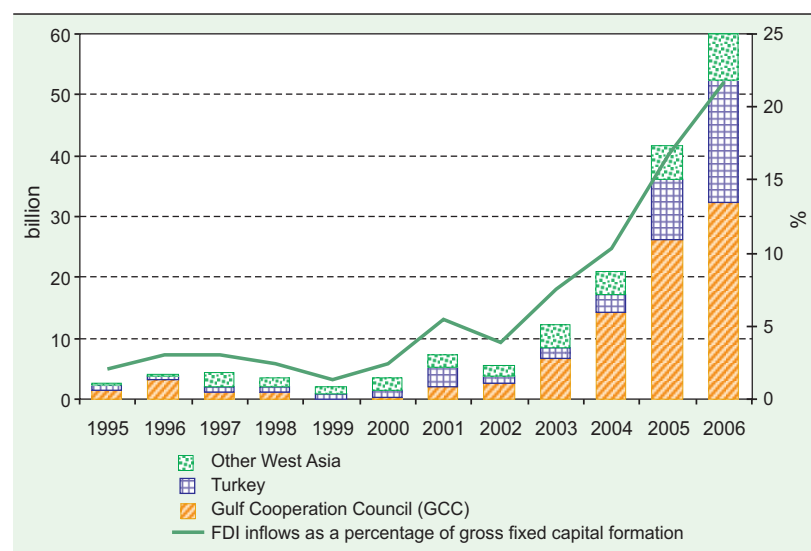
inward and outward FDI can be expected to rise in 2007, judging from the record number of investor commitments. This is confirmed by UNCTAD's *World Investment Prospects Survey*, in which about one third of the respondents indicated that they would increase FDI in the region in 2007-2009.

(i) Geographical trends

(a) Inward FDI maintained its upward trend

In 2006, FDI inflows into West Asia increased by 44%, to \$60 billion (figure II.11). The region's share in total FDI flows to developing countries rose from 13% in 2005 to 16% in 2006. FDI inflows as a percentage of gross fixed capital formation remained higher than in other subregions in Asia, at 22%. Inflows, as previously,

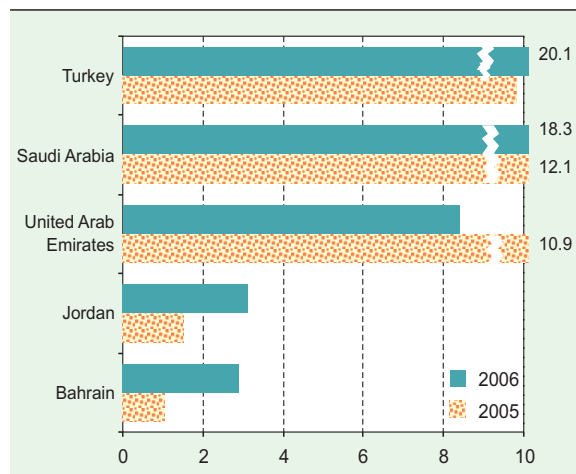
Figure II.11. West Asia: FDI inflows and their share in gross fixed capital formation, 1995-2006



Source: UNCTAD, FDI/TNC database (www.unctad.org/fdistatistics) and annex tables B.1 and B.3.

were concentrated in three countries: Turkey, Saudi Arabia and the United Arab Emirates, which together accounted for 78% of the total (figure II.12).

Figure II.12. West Asia: top five recipients of FDI inflows, 2005-2006^a
(Billions of dollars)



Source: UNCTAD, FDI/TNC database (www.unctad.org/fdistatistics) and annex table B.1.

^a Ranked by magnitude of FDI inflows in 2006.

Several factors explain this upward trend in recent years. First, regulatory frameworks for FDI are becoming more relaxed in several countries of the region, particularly in services such as finance, real estate and telecommunications (see section on policy developments below). Privatizations of these services have also attracted more investments by TNCs. Second, the business climate in several West Asian economies has improved (World Bank, 2006), and economic growth has been robust, at an average rate of 5.6% in 2005–2006 (IMF, 2007a). Third, high oil prices encouraged more FDI in oil and gas-related manufacturing and services in 2006. Greenfield investments as well as cross-border M&As were attracted by booming local economies and prospects for continuing high prices of oil and gas.

A few mega cross-border M&As (including through privatization), particularly in financial services contributed to *Turkey* becoming the top recipient country in the region, with FDI inflows more than twice the amount registered in 2005 (\$20 billion).⁶⁰

The *Gulf Cooperation Council (GCC) member countries* – Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates – attracted 54% of total FDI inflows to the subregion in 2006. Saudi Arabia was the second largest recipient in West Asia, with inflows of \$18 billion, 50% more than in 2005.⁶¹ The United Arab Emirates

was the third largest, with FDI inflows going mainly to the country's 15 free trade zones. There were several cross-border M&A deals and a noticeable increase in greenfield FDI projects in the country (annex table A.I.1).

FDI inflows to the *other West Asian economies*⁶² amounted to \$7.3 billion. Inflows to Jordan doubled to \$3.1 billion, partly owing to the acquisition of Umniah Telecom and Technologies by Batelco (Bahrain) (IMF, 2007d). However, the Islamic Republic of Iran, Iraq, the Palestinian Territory and Lebanon attracted limited FDI (table II.7), due largely to geopolitical problems.

The value of cross-border M&As in West Asia in 2006 rose by 26% over the previous year (table II.8). M&A by TNCs from developed countries jumped considerably from \$3 billion to \$15 billion (table II.8): Greece, the United Kingdom and Belgium, followed by the United States, were the main home countries of those TNCs, in that order, accounting for over 75% of total M&As. The value of cross-border M&As by firms from developing countries fell markedly to \$3 billion from \$9 billion in 2005. In consequence, developing countries' share of total M&A sales was 15% (of which 11% represented cross-border M&As within West Asia), significantly lower than in the previous year (66%).

Table II.7. West Asia: distribution of FDI flows among economies,^a by range, 2006

Range	Inflows	Outflows
Over \$5 billion	Turkey, Saudi Arabia, United Arab Emirates	Kuwait
\$3-4.9 billion	Jordan	..
\$1-2.9 billion	Bahrain, Lebanon and Qatar	United Arab Emirates
\$0.5-0.9 billion	Oman, Islamic Republic of Iran and Syrian Arab Republic	Bahrain, Turkey and Saudi Arabia
\$0.1-0.4 billion	Iraq and Kuwait	Islamic Republic of Iran, Qatar and Oman
Less than \$0.1 billion	Palestinian Territory and Yemen	Lebanon, Syrian Arab Republic, Yemen, Palestinian Territory and Jordan

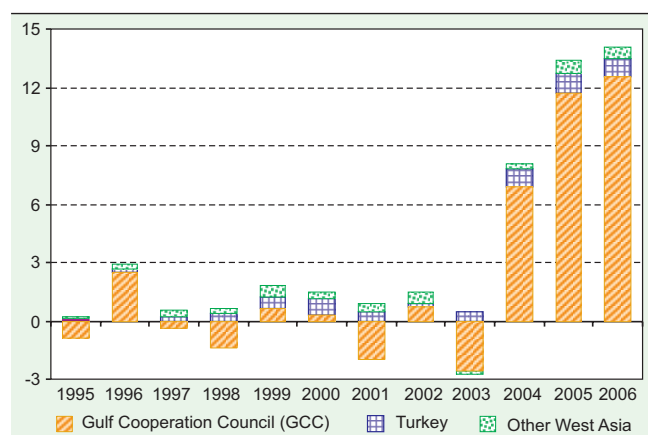
Source: UNCTAD, FDI/TNC database (www.unctad.org/fdistatistics) and annex table B.1.

^a Economies are listed according to the magnitude of FDI.

(b) Outward FDI increased slightly

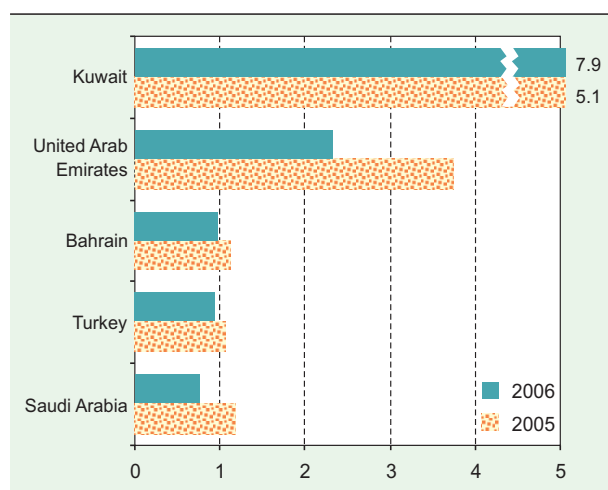
FDI flows from West Asia totalled \$14 billion, a modest rise of 5% over the 2005 level (figure II.13). The GCC countries led by Kuwait accounted for 89% of this outward FDI, with about \$13 billion worth of flows (figure II.14). The value of cross-border M&As by investor firms from West Asia as a whole amounted to \$32 billion,⁶³ which corresponded to a 78% increase over that in 2005.

Figure II.13. West Asia: FDI outflows, 1995-2006
(Billions of dollars)



Source: UNCTAD, FDI/TNC database (www.unctad.org/fdistatistics) and annex table B.1.

Figure II.14. West Asia: top five sources of FDI outflows, 2005-2006^a



Source: UNCTAD, FDI/TNC database (www.unctad.org/fdistatistics) and annex table B.1.

^a Ranked by the magnitude of FDI outflows in 2006.

The United Arab Emirates was by far the largest acquirer (annex table B.4). Acquisitions were largely targeted at developed countries, that accounted for 66% of the value of cross-border M&As by firms from West Asia (table II.8), and in particular the United Kingdom (35% by value), Canada (11%) and the United States (9%). With 8% of the value of such purchases, companies in Pakistan were also important targets in 2006.

FDI from West Asia was mainly concentrated in oil and gas and related industries, tourism, telecommunications and financial services (annex table A.I.3 for mega deals). MTC, one of Kuwait's mobile telephone companies is expanding its presence in 14 sub-Saharan countries, investing

in greenfield projects in Saudi Arabia and bidding for another licence for mobile telecommunications in Qatar. The National Bank of Kuwait is engaged in deals in Jordan, Qatar and Turkey.⁶⁴

In the case of greenfield FDI, the United Arab Emirates was also the most active investor, with more than 200 announced projects undertaken by its investors abroad out of a total of 429 by all the countries of the subregion in 2006 (annex table A.I.1). Around 40% of the outward greenfield investments from the United Arab Emirates were in the property/tourism and leisure industries, both within the region and in countries such as China, India, Morocco and Pakistan. The projects in real estate vary from offices and hotels, to marina and hub developments. Companies from the United Arab Emirates are also investing in logistical and distribution facilities mainly in the region. Saudi Arabian outward greenfield investments are concentrated in the chemical, plastic and rubber industries, including in Australia, New Zealand and Viet Nam.

Table II.8. West Asia: Cross-border M&As, by home/host region, 2005-2006
(Millions of dollars)

Home/host region	Sales		Purchases	
	2005	2006	2005	2006
World	14 134	17 857	18 221	32 426
Developed countries	3 265	15 112	8 856	21 540
Europe	1 574	13 864	7 539	15 064
European Union-25	1 574	13 864	7 539	13 769
United Kingdom	97	4 811	1 564	11 407
United States	1 557	1 130	1 222	2 835
Developing countries and territories	9 276	2 723	9 363	10 590
Africa	..	55	5	4 581
Latin America and the Caribbean	..	..	50	..
Caribbean and other America	..	..	50	..
Asia and Oceania	9 276	2 669	9 358	6 009
Asia	9 276	2 669	9 358	6 009
West Asia	9 208	1 971	9 208	1 971
South, East and South-east Asia	68	697	150	4 038
South-East Europe and CIS	1 593	22	2	297

Source: UNCTAD cross-border M&A database.

(ii) Sectoral trends: all sectors attracted higher flows

Data on cross-border M&As in the region suggest that all three sectors – primary, manufacturing and services – received higher FDI inflows than in 2005 (table II.9). While West Asia's inward and outward FDI flows are highly concentrated in the services sector, the shares of primary and manufacturing sectors in cross-border M&As increased. Jordan and the United Arab

Emirates provide examples of successful cases of attracting FDI into free zones as part of efforts by their Governments to diversify FDI into the manufacturing sector (box II.5).

Few West Asian countries permit FDI in oil and gas exploration and extraction (Part Two), which explains the low levels of FDI in the region's *primary sector*. Nevertheless, the sector's share in cross-border M&As rose markedly in 2006 (table II.9). Initiatives by some countries of the region, including Qatar and Saudi Arabia, to develop their natural gas industries and to open them to foreign investment may explain part of this increase.⁶⁵

In the *secondary sector*, manufacturing FDI in the region has been concentrated primarily in energy-related industries, including oil refining and

petrochemicals.⁶⁶ FDI also continues to flow into Turkey's automotive sector, which has been a major beneficiary of outsourcing by the European motor vehicle industry over the past two decades.⁶⁷ In the United Arab Emirates following that country's economic diversification drive aimed at promoting the non-oil sector, manufacturing now accounts for about one fifth of GDP. This has been achieved mainly through the provision of incentives to attract investors to special economic zones of various kinds (box II.5). In 2006, 95% of total FDI inflows to Jordan were directed to the country's manufacturing sector.⁶⁸

Services have remained the dominant sector for FDI in the region, often through cross-border M&As and privatizations. Continued liberalization

Box II.5. Free industrial zones in the United Arab Emirates and Jordan

As part of its diversification initiatives aimed at developing the manufacturing sector, the Government of the United Arab Emirates has been setting up free trade and industrial zones in which investors are offered special incentives and facilities for setting up industrial establishments.^a In order to encourage foreign participation, 100% foreign ownership is allowed in the free zones. At present, there are 15 free zones in operation in the country, the largest of which is Dubai's Jebel Ali Free Zone (JAFZ), with more than 5,000 business entities from over 100 countries (box table II.5.1). In general, all of the zones are used mainly to locate warehousing and distribution facilities for local and international business operations.^b Transnational manufacturing and distribution companies with investments in JAFZ include Black & Decker, Daewoo, Honda, Johnson & Johnson, Nestlé, Nissan, Philips, Samsung, Sony, Nokia, Daimler Chrysler and Toshiba. Another free zone, the Ras al Khaimah Free Trade Zone has attracted 2,400 companies, many of which are foreign, with \$27.2 billion in total investments (including foreign and domestic). Out of the foreign entities, 623 companies are owned by Indian investors. Manufacturing companies in the zone make up about 25% of the total.^c

Box table II.5.1. Number of foreign firms operating in Jebel Ali Free Zone, by nationality, 2005-2006

Economy	Number		Growth rate (%)
	2005 ^a	2006 ^b	
Iraq	673	954	41.8
United Arab Emirates	609	856	40.6
India	530	627	18.3
Islamic Rep. of Iran	412	452	9.7
United Kingdom	367	389	6.0
United States	195	230	17.9
Germany	139	170	22.3
Pakistan	104	115	10.6
Japan	85	98	15.3
British Virgin Islands	84	96	14.3
Others	1 380	1 601	16.0
Total	4 578	5 588	22.1

Source: JETRO, 2006: 358.

^a As of 24 May.

^b As of 31 May.

Source: UNCTAD.

^a "JAFZA milestones", *Gulf Industry*, at: www.gulfindustryonline.com/bkArticlesF.asp?IssueID=244&Section=840&Article=5077, 2006.

^b "Welcome Message", Jebel Ali Free Zone, at: <http://www.jafza.co.ae/jafza/content/section1.asp>, 2006.

^c "Global Investment House KSCC", *Ras Al Khaimah Economic and Strategic Outlook, February 2007*.

^d State of Israel, Ministry of Industry, Trade and Labour, "QIZ – Qualified Industrial Zones", at: www.moit.gov.

^e Jordan and the United States concluded an FTA in 2000, the first between an Arab State and the United States. This FTA will eliminate all tariff and non-tariff barriers to bilateral trade in virtually all industrial goods and agricultural products within 10 years (source: Office of the United States Trade Representative, at: www.ustr.gov).

^f "Incentives make Jordanian port a haven for investors", *Financial Times*, 21/22 October 2006.

The objective of Jordan's Qualified Industrial Zones (QIZs) is to attract investment, strengthen economic integration in the region and provide incentives for economic cooperation between Jordan and Israel.^d They operate on joint rules of origin between Jordan and Israel, whereby products produced in the zone can be exported duty-free and quota-free to the United States.^e These rules and incentives have been particularly helpful in attracting foreign investors wishing to benefit from the exemption of quota restrictions on textile exports to United States markets. Firms from other West Asian countries are also investing in the QIZs in Jordan. Many Turkish companies have plans to invest there to benefit from Jordan's preferential trade agreements with both the United States and Europe and the lower labour costs that prevail. By 2004, Jordan's QIZs had attracted \$379 million in foreign investment, helping to create more than 40,000 jobs in 79 projects. Approximately 88% of the capital invested is classified as non-Arab (Kardoosh, 2004). In addition to QIZs, the Aqaba Special Economic Zone had already attracted more than \$6 billion on an approval basis by the end of 2006.^f

Table II.9. West Asia: cross-border M&As, by sector/industry, 2005-2006
(Millions of dollars)

Sector/industry	Sales		Purchases	
	2005	2006	2005	2006
Total industry	14 134	17 857	18 221	32 426
Primary	111	1 274	45	1 043
Mining, quarrying and petroleum	111	1 270	45	1 043
Mining and quarrying	-	112	-	-
Petroleum	111	1 158	45	1 043
Secondary	55	2 499	19	1 078
Food, beverages and tobacco	-	925	-	18
Oil and gas; petroleum refining	-	1 054	-	-
Chemicals and chemical products	-	90	-	893
Stone, clay, glass, and concrete products	-	291	-	167
Motor vehicles and other transport equipment	55	131	-	-
Services	13 968	14 084	18 157	30 305
Transport, storage and communications	8 146	5 687	11 231	13 084
Telecommunications	8 143	5 687	9 950	5 868
Finance	5 513	7 934	6 690	15 664

Source: UNCTAD cross-border M&A database.

has spurred inward FDI into real estate and financial services. In GCC countries, the latter has received the major share of the FDI in services. There are signs that FDI in Islamic finance by enterprises from within and outside the subregion is growing.⁶⁹ In the telecommunications industry, significant M&A deals have taken place, particularly in Jordan and Turkey.⁷⁰

(iii) Policy developments

Most policy measures introduced in West Asia in 2006 were favourable to foreign investors: out of 14 regulatory changes related to FDI, 12 aimed at making the investment environment more favourable to FDI.⁷¹ Several countries continued to liberalize sectors, but generally not the extractive industries.

For instance, the trend towards liberalization in financial services continued in 2006. In Bahrain, measures taken by the Central Bank of Bahrain and the Bahrain Monetary Agency (BMA) enable offshore banks to do business onshore for the first time. Saudi Arabia announced a plan to construct a financial district in Riyadh by 2010 at a cost of 250 billion Saudi Arabian riyal (\$6.7 billion) to accommodate growing financial activities. The Qatar Financial Centre Regulatory Authority signed a memorandum of understanding with the BMA to enable the two agencies to cooperate in the supervision of financial institutions operating in both the Qatar Financial Centre (QFC) and Bahrain.⁷² In Turkey, new legislation on insurance was adopted in 2007.

There are examples of liberalization in other industries as well. Oman, for example, has allowed foreign ownership of real estate, which should encourage FDI in tourism.⁷³ In the extractive

industries, Qatar has announced several changes in contractual and tender conditions, which will facilitate the process of bidding for and securing contracts managed by Qatar Petroleum. These changes, when implemented, could have a positive impact on FDI inflows, especially in the context of Qatar's gas initiative.⁷⁴ Broader measures affecting the investment climate have also been adopted, or are being considered. For instance, Turkey in June 2006 lowered the corporate income tax rate from 30% to 20%,⁷⁵ and the Kuwaiti Government has announced plans to reduce the corporate income tax rate from 55% to 25% in order to attract more FDI into non-oil industries. Legislation to that effect is expected to be passed in 2007.

In general, the need for FDI reform in West Asia is being acknowledged and addressed (World Bank, 2006). Iraq and Jordan, for example, have either revised or are revising their investment laws. In December 2006, the United Arab Emirates decided to draft a foreign investment law aimed at improving its investment climate. However, in order to promote local employment, the Labour Ministry issued a decree in June 2006 that requires all firms – domestic and foreign – to replace within 18 months all expatriate secretaries and human resource managers with United Arab Emirates nationals.⁷⁶

At the international level, while the FTA between Oman and the United States was the only international agreement signed in the region in 2006, several others are being negotiated. These include an FTA between Jordan and the GCC, which is set to include all commercial services and agricultural products, as well as the free movement of individuals working in construction, insurance and banking institutions. An FTA is also being negotiated between the GCC countries and India that may encourage investment from the Gulf into India, particularly in financial services; another one between the GCC and Japan is expected to be concluded in 2007. In February 2007, the EU Trade Commissioner called on members of the GCC to work on creating an FTA between the GCC and the EU.⁷⁷

(iv) Prospects: upward trend should continue

In light of the region's high GDP growth, ongoing economic reforms, high oil prices and the conclusion of investment agreements, the upward trend in inward FDI flows to West Asia is likely to be maintained, especially in services such as finance, telecommunications and health care,⁷⁸ oil and gas (in some countries)⁷⁹ and related industries. In the first half of 2007, cross-border M&As in West Asia increased by 3% over the same period of 2006.

Nearly 66% of the respondents to UNCTAD's *World Investment Prospects Survey* expected their FDI in 2007-2009 to remain at the same level as in 2006, and about one third expected it to increase (figure II.15).

The geographical distribution of FDI in this subregion is likely to remain uneven, mainly due to geopolitical uncertainty in some areas. Liberalization of policies and deregulation should progress and strengthen prospects for increased inward FDI, although overregulation and trade barriers are still viewed as significant deterrents to FDI and internationalization in general (PricewaterhouseCoopers, 2007a). Moreover, continuing global external imbalances and sharp exchange-rate fluctuations, as well as political tensions and even open conflict in some parts of West Asia, pose risks that may discourage FDI inflows. Outward FDI from West Asia is likely to expand further, particularly in services, with petrodollars remaining one of the major sources of finance.

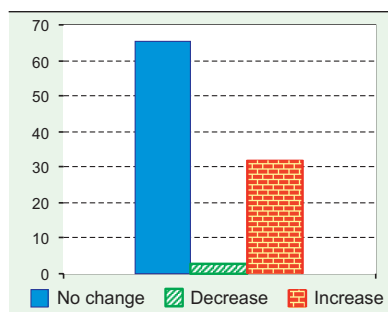
c. Oceania⁸⁰

In 2006, FDI inflows to Oceania declined by 11%, to \$339 million. Inflows remained concentrated in Fiji, New Caledonia, Vanuatu and Papua New Guinea, which together accounted for 82% of the total. Fiji was the major recipient, with \$103 million in FDI inflows. Relative to their economic size, however, Fiji and Papua New Guinea have performed less well than several other economies in the region in recent years.⁸¹

FDI flows were mainly concentrated in the *primary sector*, in particular in nickel (in Papua New Guinea)⁸² gold mining (in Fiji and Papua New Guinea), and in logging activities (in Papua New Guinea and the Solomon Islands). In *manufacturing*, FDI has been primarily in onshore fish-processing activities, while in the *services sector*, tourism remains very important. While China is increasingly becoming a significant investor in the region, in particular in mining, traditional investors such as Australia, France and New Zealand have retained a strong presence. Malaysia is a significant investor in the forestry industry of the Solomon Islands.

In Oceania, mining and tourism potential as well as the implementation of the China-Pacific Island Countries Economic Development and Cooperation Guiding Framework⁸³ are all factors

Figure II.15. FDI prospects in West Asia, 2007-2009: responses to UNCTAD survey
(Per cent of respondents)



Source: UNCTAD, 2007b.

favourable to FDI. However, in light of recent political turmoil in some countries of Oceania that are regular recipients of FDI,⁸⁴ prospects for FDI in the region seem bleak, at least in the short-term. In Papua New Guinea, on the other hand, despite persistent political uncertainty and the suspension of the project by Oil Search⁸⁵ to establish a pipeline between Papua New Guinea and Queensland, the prospects for FDI inflows in 2007 remain bright. This is mainly because of the economy's potential in the production of liquefied natural gas (LNG). Following the initial backlash from the decline in the tourism sector in Fiji, the neighbouring islands, such as Vanuatu, Samoa and Cook Islands, are now seeking to further develop their tourism industry by attracting FDI inflows.

3. Latin America and the Caribbean⁸⁶

FDI flows to Latin America and the Caribbean rose by 11% in 2006, to reach \$84 billion. However, the increase was entirely attributable to investment in the region's offshore financial centres. Excluding these centres, FDI inflows remained unchanged at \$70 billion. Important changes have occurred in the mode of entry of FDI and in its components. Reinvested earnings are becoming a major component of inward FDI in South America, the result of large increases in profits. Moreover, greenfield investments have replaced cross-border M&As as the main mode of FDI. Manufacturing has overtaken services as the most important recipient sector during the past three years. Although FDI inflows to the services sector increased slightly in 2006, TNCs continued to withdraw from public utilities, especially electricity distribution. The primary sector remained attractive for foreign investors due to the high commodity prices, although regulatory changes dampened their enthusiasm in some countries and inflows in 2006 actually fell somewhat. FDI outflows from Latin American and Caribbean countries soared, reflecting the increasing capacity of local companies to internationalize their production. On the policy front, the trend towards less FDI-friendly measures continued in some countries. These policy changes – concentrated mainly in the extractive industries – are extending to other industries considered “strategic”.

a. Geographical trends

(i) Inward FDI remained stable

FDI inflows to South and Central America and the Caribbean (excluding offshore financial centres) remained more or less stable, at \$45 billion and \$25 billion respectively. In contrast, FDI into offshore financial centres soared from \$6 billion to \$14 billion, reversing the decline in 2005 following the adoption of the Homeland Investment Act in the United States.⁸⁷ Mexico and Brazil, with inflows of \$19 billion each, remained the region's leading FDI recipients, followed by Chile, the British Virgin Islands and Colombia (figure II.16). FDI inflows as a percentage of gross fixed capital formation fell from 16% in 2005 to 15% in 2006 (figure II.17).

Important changes have occurred in the mode of entry of FDI and in its components. First, there have been fewer M&As: the ratio of cross-border M&As to total FDI inflows was 47% in 1997-2001 and 34% in 2002-2006.⁸⁸ The 37% increase in cross-border M&As in 2006 (table II.10) was largely due to acquisitions by foreign firms of local assets owned by other foreign affiliates rather than to the acquisition of local assets owned by nationals.⁸⁹ The decline in FDI entry through cross-border M&As occurred throughout the region (excluding financial centres).

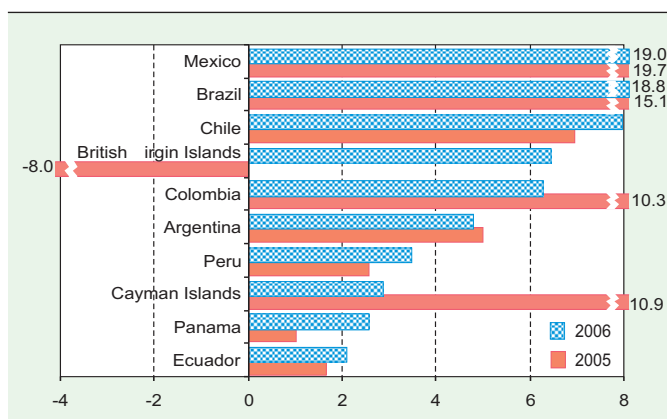
Second, in South America, income on inward FDI has grown steadily since 2003 (figure II.18). In 2006, it increased by 49% to reach \$59 billion, thus exceeding total FDI inflows (\$45 billion) for the first time since economic liberalization began in the 1990s (figure II.18). Income on FDI was particularly high in Brazil and Chile, at \$14 billion and \$20 billion respectively. The reinvested earnings – part of such income⁹⁰ – also surged, its share in total FDI inflows in South American countries for which data are available⁹¹ soaring from 44% in 2005 to 61% in 2006, compared to a mere 10% in 2000-2003.

In South America, the stability of FDI inflows in 2006 masks variations among countries. Most of the countries (e.g. Bolivia, Brazil, Chile, Ecuador, Paraguay, Peru and Uruguay) registered high FDI growth rates, but these were offset by significant decreases in two countries: Colombia and Venezuela. Argentina was the only country where FDI inflows remained relatively stable.

The reasons for increases in FDI inflows are diverse. In Brazil, the rise was mainly in manufacturing and, within this sector, in resource-based activities (pulp and paper, and basic metallurgy). In addition, the \$2.6 billion acquisition of Banco Pactual by UBS (Switzerland) in 2006 reversed the negative FDI flows registered in the financial services industry. In Chile, the main reason was the 14% increase in reinvested earnings, supported by high profits in the mining industry. Some cross-border M&A transactions also contributed to the growth in FDI. Mining-related FDI accounted for most of the increase in inflows to Ecuador and Peru, while in Uruguay it was the pulp and paper sector.

In Colombia, FDI inflows fell after an exceptional wave of cross-border M&As in 2005 (*WIR06*); still, it remained relatively high (\$6.3 billion) due to the resumption of the privatization

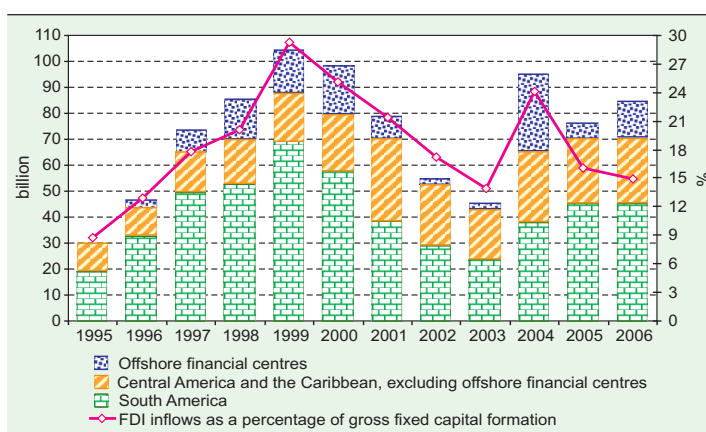
Figure II.16. Latin America and the Caribbean: top 10 recipients of FDI inflows,^a 2005-2006 (Billions of dollars)



Source: UNCTAD, FDI/TNC database (www.unctad.org/fdistatistics) and annex table B.1.

^a Ranked by magnitude of FDI inflows in 2006.

Figure II.17. Latin America and the Caribbean: FDI inflows and their share in gross fixed capital formation, 1995-2006



Source: UNCTAD (www.unctad.org/fdistatistics) and annex tables B.1 and B.3.

Table II.10. Latin America and the Caribbean^a: distribution of cross-border M&As by sector/industry, 2005-2006
(Millions of dollars)

Sector / industry	Sales		Purchases	
	2005	2006	2005	2006
Total industry	22 532	30 824	10 179	31 350
Primary	814	8 201	881	17 679
Mining, quarrying and petroleum	814	8 201	881	17 679
Secondary	10 793	5 152	5 492	5 605
Food, beverages and tobacco	5 710	2 157	127	1 436
Metals and metal products	3 129	480	3 306	3 327
Services	10 926	17 471	3 806	8 067
Electricity, gas and water distribution	125	3 917	101	1 618
Transport, storage and communications	4 164	4 803	2 532	4 499
Finance	1 077	5 125	1 107	1 437

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

^a Excludes offshore financial centres such as Belize, Panama, and the Caribbean countries other than Cuba, Dominican Republic, Haiti, Jamaica and Trinidad and Tobago.

programme (see section c below). In contrast, the large decline in FDI inflows to Venezuela, from \$2.6 billion in 2005 to -\$540 million in 2006, was due to negative inflows to the oil industry – mostly attributable to financial transactions between foreign oil TNCs and the State-owned oil company PDVSA, while FDI to non-oil activities remained stable.

In Central America and the Caribbean (excluding offshore financial centres) overall FDI inflows were unchanged. While Mexico saw a slight decline (nevertheless still accounting for 77% of all

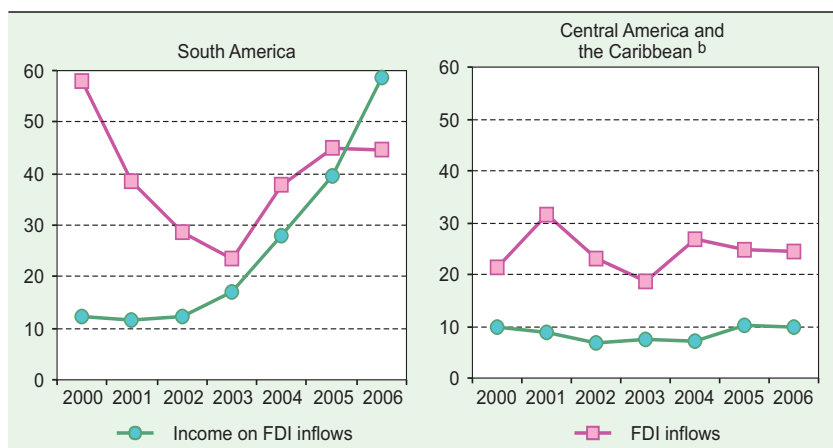
FDI into this subregion) in 2006, other countries compensated for this with increases. In Costa Rica, for example, inward FDI increased by 71%, partly due to a large sale in the financial sector and partly to rising FDI in tourism. In the Dominican Republic, flows increased especially in telecommunications.⁹² Other countries of the subregion received less than \$1 billion in FDI inflows (table II.11).

(ii) Outward FDI soared

FDI outflows from Latin America and the Caribbean, excluding offshore financial centres, surged by 125% to \$43 billion (figure II.19).⁹³ The primary sector was the main target of the outward FDI, followed by resource-based manufacturing and telecommunications. Brazil was the region's principal source country, with \$28 billion in FDI outflows (figure II.20), the country's highest level ever and, for the first time its outflows were higher than its inflows. The \$17 billion purchase of Inco (a Canadian nickel producer) by the country's mining company, CVRD, was responsible for a significant share of the increase (see also chapter IV). It was the largest acquisition ever undertaken by a Latin American company, and reflects CVRD's strategy of diversification away from Brazil and iron ore. In addition, a series of other acquisitions and investments by Brazilian companies, such as Itaú (banking), Petrobras (oil and gas), Votorantim (cement, pulp and paper, steel and mining), Gerdau (steel), Odebrecht (construction services,

petrochemicals) Camargo Corrêa (cement), Weg (motors and generators) and Marcopolo (buses), also contributed to the country's outward FDI (ECLAC, 2007). It suggests an increasing tendency for large Brazilian companies to pursue a strategy of internationalization through FDI (box II.6). Brazilian FDI has traditionally flowed mainly to offshore financial centres, which, in 2005, hosted 57% of Brazilian outward FDI stock (*WIR05*). However, in recent years, its FDI has mainly targeted developed countries other than financial centres: their share in Brazil's total outward FDI stock jumped from 13% in 2001 to 35% in 2005, while that of developing and transition

Figure II.18. FDI inflows and income on FDI inflows in countries in South America and Central America and the Caribbean,^a 2000-2006
(Billions of dollars)



Source: UNCTAD, based on the balance of payments data from the central banks of the respective countries.

^a The countries covered are those for which income on inward FDI data were available for 2006. In South America they are: Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Guyana, Paraguay, Peru, Uruguay and Venezuela. Their share in total FDI inflows to South America in 2006 was 99%. In Central America and the Caribbean they are: Costa Rica, the Dominican Republic, El Salvador, Guatemala, Honduras, Jamaica, Mexico, Nicaragua, and Trinidad and Tobago. Their share in total FDI inflows to Central America and the Caribbean (excluding offshore financial centres) in 2006 was 99%.

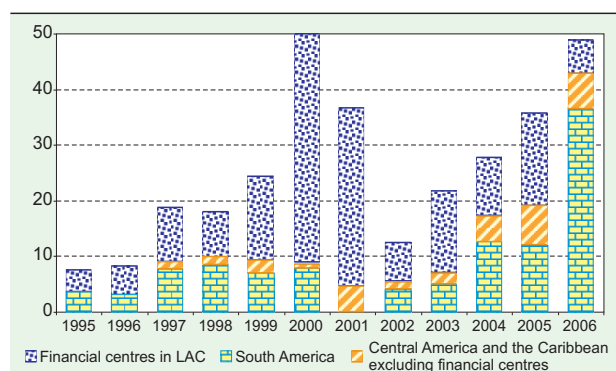
^b Excludes offshore financial centres such as Belize, Panama, and the Caribbean countries other than Cuba, the Dominican Republic, Haiti, Jamaica and Trinidad and Tobago.

Table II.11. Latin America and the Caribbean: country distribution of FDI flows, by range ^a, 2006

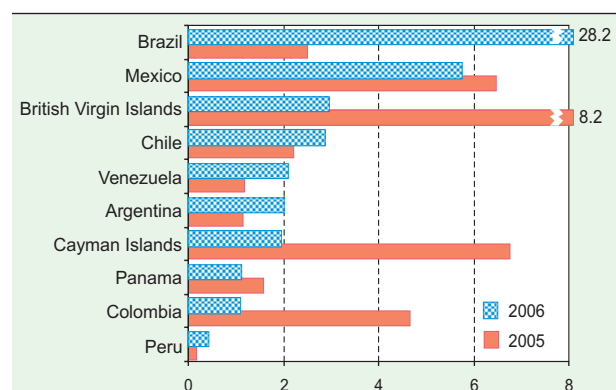
Range	Inflows	Outflows
Over \$10 billion	Mexico and Brazil	Brazil
\$5.0 to 9.9 billion	Chile, British Virgin Islands and Colombia	Mexico
\$1.0 to 4.9 billion	Argentina, Peru, Cayman Islands, Panama, Ecuador, Costa Rica, Uruguay and Dominican Republic	British Virgin Islands, Chile, Venezuela, Argentina, Cayman Islands, Panama and Colombia
\$0.1 to 0.9 billion	Jamaica, Trinidad and Tobago, Bahamas, Honduras, Guatemala, Aruba, Suriname, Nicaragua, Bolivia, Antigua and Barbuda, El Salvador, Saint Kitts and Nevis, Haiti, Paraguay, Grenada, Saint Lucia, Anguilla and Guyana	Peru, Trinidad and Tobago, and Jamaica
Less than \$ 0.1 billion	Saint Vincent and the Grenadines, Belize, Netherlands Antilles, Barbados, Turks and Caicos Islands, Dominica, Montserrat, Falkland Islands (Malvinas), Cuba and Venezuela	Costa Rica, Netherlands Antilles, Honduras, Paraguay, Guatemala, Barbados, Bolivia, Nicaragua, Ecuador, Belize, Dominican Republic, Cuba, Aruba, Uruguay and El Salvador

Source: UNCTAD, FDI/TNC database (www.unctad.org/fdistatistics) and annex table B.1.

^a Countries are ordered according to their magnitude of FDI.

Figure II.19. Latin America and the Caribbean: FDI outflows, 1995-2006 (Billions of dollars)

Source: UNCTAD (www.unctad.org/fdistatistics) and annex table B.1.

Figure II.20. Latin America and the Caribbean: top 10 sources of FDI outflows, ^a 2005-2006 (Billions of dollars)

Source: UNCTAD, FDI/TNC database (www.unctad.org/fdistatistics) and annex table B.1.

^a Ranked by magnitude of FDI outflows in 2006.

economies other than financial centres fell from 13% to 8%.⁹⁴

The second largest source of FDI from the region was Mexico with outflows of \$5.8 billion, 11% lower than in 2005. Mexican investments abroad were concentrated in telecommunications, but they were also undertaken in other industries such as banking, cement, and food and beverage, and were mainly directed to other Latin American and Caribbean countries. Chile, Venezuela and Argentina were also important and dynamic investors, with outflows increasing by 30%, 77% and 74%, respectively, and surpassing \$2 billion each in 2006 (figure II.20). The main target industries for Chile were mining and retailing, for Venezuela, it was petroleum (ECLAC, 2007), and for Argentina, petroleum and steel pipes and tubes.

b. Sectoral trends

In 2006, the manufacturing sector continued to receive the largest share of FDI inflows in Latin America and the Caribbean (excluding offshore financial centres), almost the same as in 2005 at 41%. The share of the services sector increased slightly, from 35% to 37%, while that of the primary sector fell marginally, from 23% to 21%. FDI flows to the services sector increased by an estimated 8%, and those to the primary sector fell by 7% (figure II.21).

(i) Primary sector: modest decline in inflows but foreign investors' interest remains strong

The decline in FDI to the region's primary sector in 2006 was mainly the consequence of agreements between Venezuela's State-owned oil company PDVSA, and foreign TNCs that resulted in significant negative FDI inflows being recorded in that country's oil and gas sector, as noted above. Nevertheless, foreign investors remain interested in the country's vast oil and gas potential, in spite of regulatory changes designed to maximize fiscal revenue and increase State control of the industry (*WIR06*, and section c below). The Government signed new contracts with Chevron (United States), Statoil (Norway), Total (France) and BP (United Kingdom), while ConocoPhillips, ExxonMobil (both United States) and PetroCanada (Canada) opted to end their operations in the country. Many other TNCs are also interested in entering Venezuela, especially the very promising Orinoco Belt. Although large, privately owned foreign companies are still important partners for PDVSA, it is showing an increasing preference for working with other

Box II.6. Brazilian enterprises expanded abroad and consolidated at home

Investments abroad by Brazilian companies soared to a record \$28 billion in 2006, exceeding the amount of inward FDI (\$19 billion) for the first time. A large part of the outward FDI was attributed to the \$17 billion acquisition of Inco (Canada) by CVRD, which has been seeking to expand its non-ferrous metal division and raise its international profile. With this acquisition, CVRD may have become the world's top metal mining company in 2006 in terms of production value (see chapter IV). The company is set to continue its diversification and expansion strategy with an agreement to purchase 100% of the coal mining company AMCI (Australia) for \$661 million. The steel company Companhia Siderúrgica Nacional (CSN) had similar ambitions in its attempt to acquire Corus (United Kingdom/Netherlands), but it lost the bid to rival Tata Steel (India), which won for \$11 billion. The steel maker Gerdau has also been actively acquiring foreign assets, but at a more modest level: it acquired enterprises in Argentina and Colombia at the end of 2005, and in Peru, the United States and Spain in 2006, while in 2007, it agreed to buy the Mexican steel mill Siderúrgica Tultitlán (Sidertul).

Brazilian companies have begun to invest abroad following years of record exports. In some cases, Brazilian suppliers sought to move closer to their customers, as in the automotive industry: Sabó now has plants in Europe, and Marcopolo (specialized in bus manufacturing) is producing in China. The strong currency, the real, has favoured such moves. Sluggish economic growth at home has been another motivating factor behind some groups' decisions to expand abroad.

Outward investments by Brazilian firms are to some extent part of an expansion and consolidation process that is taking place at home as well as abroad. Brazilian businesses are seeking to consolidate some industries, such as steel and mining, by buying foreign competitors so as not to lose market shares or become a takeover target themselves. Within Brazil itself, domestic buyers were involved in 58% of the 560 M&A deals in 2006 (including both domestic and cross-border), which reached record highs both in volume and value terms. There has been increased consolidation among Brazilian companies themselves, as well as through a large number of Brazilian companies buying foreign-owned assets in Brazil. Examples of the latter included the \$2.2 billion purchase of the Brazilian affiliate of BankBoston (United States) by Itaú (Brazil), and Bradesco's (Brazil) purchase of American Express's (United States) assets in Brazil. Some foreign companies that were involved in utilities industries sold their assets to local investors. For example, in the electricity industry, EDF (France) and four United States companies (Alliant Energy, El Paso, Public Service Enterprise Corporation Global and AES) divested their assets to local investors in 2006, and CMS Energy (United States) announced in 2007 that it would do the same.

Source: "Brazil outward bound", *Business Latin America*, 12 February 2007, 12 March 2007 and 24 April 2007 (London, EIU); Gerdau press release, 28 June 2006 and 5 May 2006 (<http://www.gerdauaza.com/ing/pressroom/index.asp>); and American Express press release, 20 March 2006 (http://home3.americanexpress.com/corp/pc/2006/bradesco_brazil.asp).

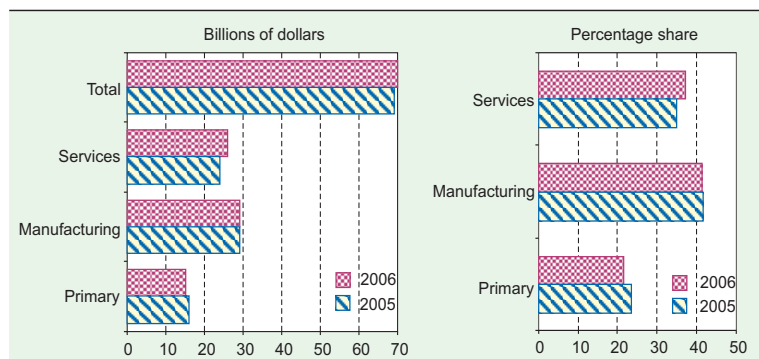
State-owned oil companies. For example, Petrobras is now its preferred partner in efforts to develop extra-heavy oil reserves in the Orinoco Oil Belt and for participating in offshore drilling to produce gas for liquefaction and export. Venezuela's petroleum industry is also attracting investments from China, the Islamic Republic of Iran and the Russian Federation.⁹⁵

In Bolivia, most companies froze new investments after a Government decree in May 2006 that changed the regulations pertaining to the oil and gas industry (*WIR06*). However, after contracts were adapted to the new legislation at the end of 2006 (section c below), enterprises resumed investments. Indeed, in January 2007, eight oil companies, including Brazil's State-owned Petrobras, Repsol YPF (Spain), Total (France), BP and BG (both United Kingdom) bid on a project to export Bolivian natural gas to Argentina.⁹⁶ In addition, Gazprom (Russian Federation) is negotiating with the Bolivian State-oil company YPFB for a possible joint venture for gas exploration and production.

In Peru, there has been steady investment in the oil and gas industry. Petroperu, the State oil company, has signed a record 31 oil and gas exploration contracts over the past two years. Peru also intends to expand value-added activities related to its gas reserves by involving TNCs in the development of a \$2.8 billion petrochemical complex to produce fertilizers and polyethylene.⁹⁷ In Colombia, foreign oil companies are increasingly interested in investing in the oil industry due to new investment incentives, including low royalty rates and the possibility of 100% ownership in some cases. The Government is also seeking to privatize 20% of State-owned Ecopetrol. FDI inflows to the oil industry increased by 57% in 2006, reaching a total of \$1.8 billion.⁹⁸

Foreign investment in mining in Latin America and the Caribbean remained buoyant in 2006. In Chile and Colombia, the high levels of FDI in 2005 were maintained in 2006: \$1.25 billion and \$2 billion respectively, while in Peru, investments amounted to \$1.6 billion (Proinversión,

Figure II.21. Latin America and the Caribbean:^a FDI inflows by sector, 2005-2006



Source: UNCTAD, based on official data from Brazil, Colombia, Costa Rica, Ecuador, Mexico and Venezuela (for the petroleum industry only), and on estimates for the rest.

^a Excluding offshore financial centres such as Belize, Panama, and the Caribbean countries other than Cuba, the Dominican Republic, Haiti, Jamaica and Trinidad and Tobago.

2007), up from \$1 billion in 2005 (*WIR06*), and the Government anticipates continued rapid growth in mining FDI, estimated to total nearly \$10 billion over the next five years. In Bolivia, despite uncertainties created by revisions to the country's mining tax regime, several foreign mining companies have initiated projects that are due to start production in 2007. Finally, Guyana and Suriname are attracting FDI into the bauxite industry.⁹⁹

(ii) Manufacturing continued to attract the largest inflows

FDI flows to the manufacturing sector in Latin America and the Caribbean are estimated to have remained the same as in 2005, despite a significant decline in cross-border M&As, which suggests an increase in greenfield FDI. High commodity prices and rising world demand encouraged FDI in resources-based manufacturing. On the other hand, the increased FDI in the automotive industry was fuelled by strong domestic demand in, and rising exports from Argentina, and by exports from Mexico. Finally, the *maquila* apparel industry in the Central American and Caribbean countries continues to face increasing competition for FDI from Asian countries, especially since the phasing out of the Multi-Fibre Arrangement (MFA).

In resource-based manufacturing, soaring oil prices raised the demand for ethanol, driving an investment rush by both domestic and foreign investors in sugar production and refining in Latin America. In Brazil, where there has been domestic investment in this industry for a long time, foreign interest rose only after oil price hikes. Sugar production and refining is prospering and attracting FDI also in countries that have signed FTAs with the United States. Other industries that have registered increases in FDI include smelting, refining,

metallurgy and petrochemicals in countries such as Bolivia, Brazil, Colombia and Trinidad and Tobago. For example in Brazil, a €3 billion crude steel production facility is being set up by CSA (Brazil-Germany).¹⁰⁰ Finally, in the pulp and paper industry in which FDI has become more prominent since the early 2000s (Barbosa and Mikkilä, 2006), inflows in Brazil rose to \$1.5 billion in 2006 mainly due to a \$1.2 billion pulp mill project by International Paper (United States); while in Uruguay FDI inflows were boosted by the World Bank's approval of a loan and political risk insurance for a pulp and paper plant being built by Botnia (Finland).

The region's advantages in this industry include an abundance of water and land for plantations of fast growing trees and cheaper labour costs. In addition, in Brazil, there is a history of investments in research in genetics, forestry and biotechnology, which has led to improvements in the quality of trees and forest management (Santos Rocha and Togeiro de Almeida, 2007).

In other manufacturing, the automotive industry is an important FDI recipient in Argentina, Brazil and Mexico, where the world's largest automobile and auto parts manufacturers have production facilities. In Mexico, motor vehicle exports rose by 30% in 2006, with 1.5 million units exported (AMIA, 2006), as a result of increased investments by the top five automakers (all foreign) in the country: General Motors, Ford Motor, DaimlerChrysler, Nissan and Volkswagen. Among the factors contributing to Mexico's attractiveness for FDI in the automotive industry is its access to the NAFTA market, and more recently to Europe under the Mexico-EU FTA (effective in 2000) (which also reduces its excessive reliance on a single market).¹⁰¹

In Argentina, where output expansion in the automotive industry was boosted by rapid growth in both the domestic and export markets, investments in car terminals are estimated to have amounted to \$800 million in 2006.¹⁰² In contrast, in Brazil, FDI flows to the automobile sector fell by 24% in 2006,¹⁰³ because of the appreciation of the exchange rate. Nevertheless, significant investment plans – mainly focused on the domestic market – have been announced by companies such as Fiat (Italy), General Motors (United States), Ford (United States), and Volkswagen (Germany), which dominate the domestic market with a combined share of 75%.¹⁰⁴

Finally, the *maquila* apparel industry an important target of investors, especially from the United States, suffered a significant decline in exports to the United States (practically the only market): Mexican *maquila* apparel exports fell by 13% and those of members of the Central American Free Trade Area and the Dominican Republic (DR-CAFTA) fell by 7%. As a consequence, the share of Mexico and Central American and Caribbean countries in total apparel exports to the United States fell significantly, while those of their Asian competitors rose.¹⁰⁵ Haiti and Nicaragua are the only countries in the region that registered a significant increase in apparel exports in 2006 (11% and 23% respectively) (Asociación Hondureña de Maquiladoras, 2006).

(iii) Modest increase of FDI in services

FDI in the services sector (excluding offshore financial centres) increased by an estimated 8% in 2006. A number of foreign companies expanded their existing activities, or acquired new assets, or established new operations in the region, which more than compensated for withdrawals by other firms (*WIR05* and *WIR06*). For instance, in the telecommunications industry the Mexican companies, América Móvil and Telmex, and Telefónica (Spain), continued to expand in the region and also to consolidate their telecommunications services and media operations by acquiring cable TV operators and broadband Internet services.¹⁰⁶ On the other hand, firms such as Verizon (United States) and Telecom Italia continued their strategy of divestments.¹⁰⁷ Similarly in the financial services industry, Bank of America sold its BankBoston units in Brazil, Chile and Uruguay to the Brazilian bank Itaú (*WIR06*), while UBS (Switzerland) acquired the Brazilian Banco Pactual. In retail, large TNCs, such as Wal-Mart, Carrefour and Casino, have been expanding their investments in Brazil, Colombia, Mexico and Central America (ECLAC, 2007). Finally, in the electricity industry there has been a wave of divestments by foreign companies in Brazil that have sold their assets to domestic investors (box II.6).

c. Policy developments

As in 2005, some countries in Latin America adopted a number of measures less favourable to foreign investors, reversing to some extent the trend that had been dominant from the early 1990s until 2004. These changes concerned mainly the extractive industries and led to the revision of contracts and/or tax regimes with a view to securing for the State a greater share in the windfall profits resulting from soaring commodity prices, and/or

its greater control over the industry (chapter VI). The changes also related to some other industries, particularly in Bolivia and Venezuela.

In Venezuela, having taken a majority control in 2006 of 32 marginal oil fields that were managed by foreign oil companies, in 2007 the Government adopted a decree that gave PDVSA a majority equity share and operational control of four joint ventures in the oil-rich Orinoco River basin. Four TNCs involved in the ventures agreed to sign the new agreements that granted PDVSA an average stake of 78%, up from the original 39%, while two refused. The Government of Venezuela assumed State control of other industries, such as telecommunications, electricity and non-fuel mining. In public utilities, after creating a new State-controlled power company in late 2006 to boost electricity generation and halt frequent power supply cuts, the Government declared the energy and telecommunications industries to be strategic and therefore subject to nationalization in 2007. As a result, it negotiated a deal with Verizon, AES and CMS (all United States TNCs) whereby the three agreed to divest their assets to the Government, which now controls the country's largest telecom company, CANTV, and the electricity company, EDC. In non-fuel mining, in 2006 Venezuela's national assembly approved a bill to reform the mining law, and launched a series of public meetings to discuss the reform project with interested parties.

In Bolivia, all foreign oil TNCs agreed to convert their production-sharing contracts into operating contracts, and to turn control over sales to YPF, Bolivia's State-run oil company, as stipulated in the decree for the nationalization of oil and gas resources of May 2006. In addition, the Government reached a deal in 2007 with Petrobras (Brazil) to renationalize the country's only two oil refineries acquired by Petrobras in 1999 as part of a broad privatization programme. The Government is also moving to take over Empresa Nacional de Telecomunicaciones (Entel), now controlled by Telecom Italia, which was privatized in 1996. Moreover, according to the Minister of Mining, reform of the mining sector's tax regime to secure a higher tax take for the Government is a priority for 2007.¹⁰⁸

In Peru, where thriving mining activities have been causing social conflicts, the Government created a high-level commission to address this issue. At the same time, it reached a deal with mining companies whereby they agreed to make "voluntary contributions" to avoid tax increases. Under this agreement, the companies will contribute \$772 million over the next five years towards fighting poverty, malnutrition and

social exclusion. The payment is intended to appease demands by various civil society groups for increased taxes on mining companies.¹⁰⁹

In Argentina, where foreign companies largely control oil and gas production and exports, the Government increased taxes on natural gas exports from 20% to 45% to offset higher costs of imported gas from Bolivia and to avoid domestic price increases. Moreover, in the mineral-rich province of Mendoza, lawmakers voted to block all mining activity if mining companies failed to come up with proposals for a plan to mitigate environmental costs. In public utilities, in December 2006 Argentina's Congress approved an extension for one more year of the Economic Emergency Law, which allows the executive branch to maintain a price freeze on privatized public services and renegotiate contracts with their owners. In January 2007, the Government authorized power distributors Edenor (Argentina) and Edesur (Spain) to increase tariffs by close to 15% for industrial and business clients.¹¹⁰

In contrast to some of the above-mentioned policy changes, in Colombia the Government decided to revitalize the privatization programme of the 1990s and launched a series of sales of State assets in financial services and telecommunications. Privatizations of the largest gas distribution company, Ecogas, local electricity distributors, and part of the largest transmission company, are in the pipeline for 2007. The country's Congress also approved the privatization of 20% of the State-owned oil company Ecopetrol, and approved the reduction of corporate and personal income tax rates to 34% in 2007 and 33% in 2008 from the current 38.5%.¹¹¹

In other Latin American and Caribbean countries, various other changes in FDI-related policy were introduced. Brazil, for instance, ended the monopoly on reinsurance by the State-owned Instituto de Resseguros do Brasil in December 2006. Foreign investment will be allowed, though it will be restricted to 40% of Brazil's market during the first three years of the market opening.¹¹²

Latin American and Caribbean countries continued to sign trade agreements that are likely to affect FDI flows to and from their economies. Chile signed FTAs with China in 2006¹¹³ and with Japan in 2007. In addition,

the Andean Community of Nations has agreed to make Chile an associate member of its trading bloc; the country quit the group 30 years ago. Moreover, the DR-CAFTA agreement became effective during 2006 and 2007 in all signatory countries (Dominican Republic, El Salvador, Guatemala, Honduras and Nicaragua), except Costa Rica.

d. Prospects: moderate growth of inflows, reduced outflows

FDI inflows into Latin America and the Caribbean, excluding the offshore financial centres, are expected to increase moderately in 2007. Commodity prices (see chapter III) and regional economic growth should remain strong in 2007,¹¹⁴ boosting TNCs' profits and FDI. This forecast is confirmed by the results of UNCTAD's *World Investment Prospects Survey* in the region, with 47% of foreign companies indicating plans to increase their investments in the period 2007-2009, 2% to decrease them, and 50% to maintain them at the same level (figure II.22).

However, as cross-border M&As involving the acquisition of assets owned by nationals are not expected to recover significantly, and the withdrawal of TNCs from service activities is likely to continue, the growth of FDI inflows is expected to be driven mainly by greenfield investments, and could therefore be rather moderate. Preliminary cross-border M&A data for the first six months of 2007 show almost the same level as in the corresponding period of 2006. Acquisitions by foreign companies of assets owned by nationals amounted to \$9.5 billion – half the total amount of 2006. Moreover, a number of foreign companies sold their assets to local investors during the first months of 2007, or announced their intention to do so,¹¹⁵ confirming the likelihood of a slowdown in FDI growth.

FDI outflows from Latin America and the Caribbean, excluding offshore financial centres, are expected to decline in 2007 following strong growth in 2006. Preliminary data from Brazil support this forecast: they indicate negative outflows of FDI (-\$3.5 billion) during the first five months (because of the high amount of loan payments from Brazilian affiliates to their parent company in Brazil).¹¹⁶ But a sharp increase in FDI outflows from Mexico should partly compensate for the reduced outflows from Brazil.

Figure II.22. FDI prospects in Latin America and the Caribbean, 2007-2009: responses to UNCTAD survey
(Per cent of respondents)



Source: UNCTAD, 2007b.

B. South-East Europe and the Commonwealth of Independent States¹¹⁷

1. Geographical trends

Inward FDI grew significantly in both South-East Europe and the Commonwealth of Independent States (CIS) in 2006. In South-East Europe, most of the FDI inflows were driven by the privatization of State-owned enterprises and by large projects benefiting from a combination of low production costs in the region and the prospective entry of Bulgaria and Romania into the EU. In the CIS, all resource-based economies experienced strong inward-FDI growth. FDI flows to the Russian Federation grew markedly despite an apparent tightening of national legislation on extraction contracts and on foreigners' access to resources. One reason may be that these legal changes in effect codified and clarified de facto restrictions on foreign investors' involvement in natural resources instead of introducing new constraints. Developed countries, mainly EU members, continued to account for the largest share of flows to the region in the form of both greenfield projects and cross-border M&As. Outward FDI in 2006 also increased, notably from the Russian Federation. There are indications that FDI will grow further in 2007, especially in the large countries and in the two new EU members.

a. Inward FDI surged

In 2006, FDI flows to South-East Europe and the CIS grew by 68%, to \$69 billion, marking the sixth consecutive year of growth and a significant rise over the two previous years (figure II.23). As a result, the share of inward FDI in gross fixed capital formation rose from 16% in 2005 to 21% in 2006.

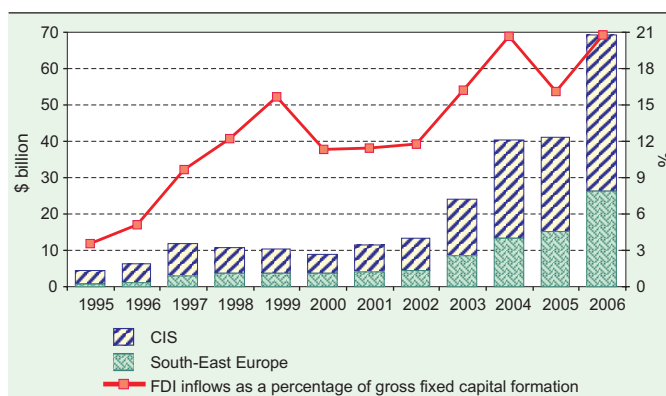
As in previous years, inflows remained unevenly distributed, with five countries (the Russian Federation, Romania, Kazakhstan, Ukraine and Bulgaria in that order) accounting for 82% of the total. Inflows to the region's largest economy, the Russian Federation, more than doubled (figure II.24), reaching a record \$29 billion.

Flows to Romania and Bulgaria also grew significantly in 2006, in anticipation of their joining the EU on 1 January 2007 (box II.7). Romania was the second largest

FDI recipient, with most of the \$11.4 billion worth of flows linked to privatization.¹¹⁸ There was a substantial increase in inflows to Kazakhstan, which reached an unprecedented level of more than \$6 billion (figure II.24 and annex table B.1), mainly due to oil and gas projects, making it the third largest recipient in the region. In contrast, inflows into Ukraine fell in 2006, possibly due to the reduction in privatization-related FDI, combined with the abolition of incentives in special economic zones. In 12 countries of the region, FDI flows remained below \$1 billion, but in certain economies such as Montenegro, they are still considerable in relation to the size of economy. FDI inflows rose in 17 countries in South-East Europe and the CIS in 2006, compared to nine in 2005 (annex table B.1).

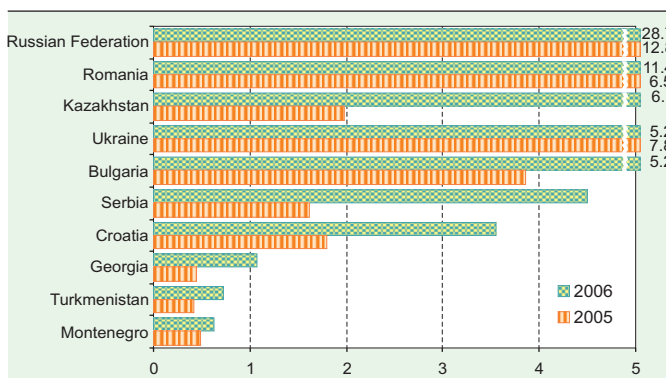
Developed countries were the main investors in the region's greenfield FDI projects. EU countries accounted for 70% of such projects, followed by the United States with 9%. The share of the Russian Federation as a source of greenfield FDI projects remained low (4%).

Figure II.23. South-East Europe and CIS: FDI inflows and their share in gross fixed capital formation, 1995-2006



Source: UNCTAD, FDI/TNC database (www.unctad.org/fdistatistics) and annex tables B.1 and B.3.

Figure II.24. South-East Europe and CIS: top 10 recipients of FDI inflows, 2005-2006^a (Billions of dollars)



Source: UNCTAD, FDI/TNC database (www.unctad.org/fdistatistics) and annex table B.1.

^a Ranked on the basis of the magnitude of the 2006 FDI inflows.

Box II.7. The accession of Bulgaria and Romania to the EU: impact on FDI

In contrast with FDI flows to the eight Eastern European countries that joined the EU on 1 May 2004, inflows to Bulgaria and Romania remained small for most of 1990s due to an inadequate business infrastructure, economic instability, slow privatization and regional conflicts. Only in the beginning of the 2000s^a did they begin to receive sizeable FDI, partly driven by privatizations, as well as important greenfield investments. In 2006, the FDI stock in Bulgaria and Romania together reached \$62 billion, representing a 18-fold increase over the past decade.

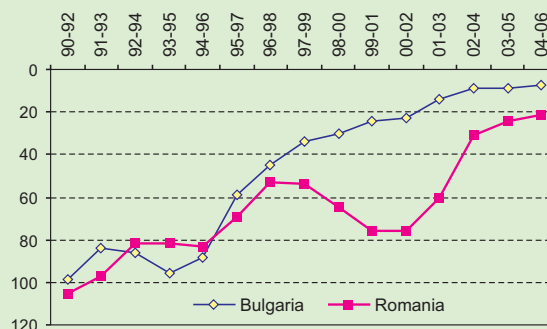
After several years of negotiations, the two countries became members of the EU in January 2007. The pre-accession process gradually transformed the business environment of the two new member States and had a significant impact on FDI. Consequently Bulgaria's rank in the UNCTAD FDI Performance Index moved up to 7th place in 2004-2006 from 92nd in 1990-1992, while Romania's ranking improved from 101st to 21st (box figure II.7.1). Competitive labour costs remain an important factor for efficiency-seeking FDI, but higher value-added industries are also attracting FDI.

EU accession will help anchor the ongoing reforms and support the convergence of the economies of Bulgaria and Romania with those of the rest of the EU. Apart from adopting the EU law (the *acquis communautaire*), these countries are expected to meet the "benchmarks" established by the European Commission in areas such as judicial independence, fight against crime and corruption, and mandatory structural reform to increase transparency and accountability in public administration. These steps could further increase competitiveness in these countries.

Source: UNCTAD.

^a Romania's FDI flows reached \$2 billion in 1998 due to large privatizations that year (*WIR99*: 70), but this was only a temporary surge.

Box figure II.7.1. Inward FDI Performance Index ranking, Bulgaria, Romania, 1990-2006^a



Source: UNCTAD.

^a For the calculation of the Inward FDI Performance Index, see notes to table I.7, chapter I. Ranking out of 141 countries.

In cross-border M&As, the acquisition of private companies dominated in the CIS countries, whereas in South-East Europe most of the M&As involved privatization deals. With the acquisition of Banca Comerciala Romana (Romania) by Erste Bank (Austria), Austria once again became the leading source of cross-border M&A-based investment in the region, followed by the United States and Norway. FDI from developing countries and from sources within the region has also recently emerged (table II.12 and *WIR06*). The share of developing-country TNCs as buyers in cross-border M&As of enterprises in South-East Europe and CIS increased to 16% in 2006, from a mere 1% on 2005. China was the leading buyer from developing countries, while the Russian Federation accounted for 5% of total cross-border M&As in the region.

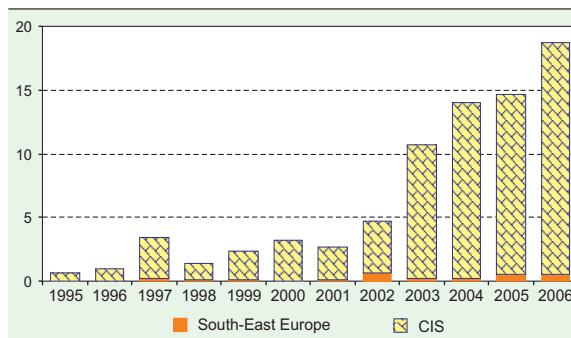
b. Outward FDI growth was sustained

FDI outflows increased for a fifth consecutive year, amounting to \$18.7 billion (figure II.25). The Russian Federation alone accounted for \$18 billion, representing more than 96% of the total and a significant increase (41%) from the FDI outflows in 2005. Some large resource-based Russian TNCs

such as Norisk Nickel and the Evraz Group continue to invest abroad. Similarly, Rusal and Sual merged with part of Glencore International (Switzerland) to create the world's largest aluminium and alumina producer (box II.8 and chapter IV).¹¹⁹

Russian banks also increased their presence in the region, extending for instance into Kazakhstan and Ukraine. FDI outflows from other countries in

Figure II.25. South-East Europe and CIS: FDI outflows, 1995-2006 (Billions of dollars)



Source: UNCTAD, FDI/TNC database (www.unctad.org/fdistatistics) and annex tables B.1 and B.3.

the region remained modest in 2006 – less than \$1 billion.

In greenfield operations, half the projects by investors from South-East Europe and the CIS were undertaken within the region, and were concentrated mainly in the development of extraction activities, such as mining, metals and oil fields. For example, Petrom Romania (now an affiliate of Austria's OMV) invested \$190 million to develop the Komsomol'skoe oil field in Kazakhstan. In terms of value, cross-border M&A purchases by TNCs from the region decreased in 2006 compared to 2005, but within the region they increased by 59% (table II.12).

2. Sectoral trends: FDI in services was buoyant

The data on cross-border M&As in 2006 indicates that the primary and services sectors of South-East Europe and the CIS received higher inflows while flows into manufacturing declined.

Table II.12. South-East Europe and CIS: Cross-border M&As, by home/host region, 2005-2006
(Millions of dollars)

Home/host region	Sales		Purchases	
	2005	2006	2005	2006
World	17 318	25 130	6 812	5 034
Developed countries	16 224	19 619	3 801	2 793
Europe	14 075	16 305	3 340	2 445
European Union-25	14 075	13 969	3 340	2 445
Austria	3 239	5 632	-	-
Czech Republic	635	278	284	-
France	505	1 951	-	-
Germany	569	1 477	15	10
Greece	362	821	-	143
Hungary	497	1 490	-	-
Italy	731	452	653	700
Netherlands	6 189	409	-	-
Poland	51	60	383	-
United Kingdom	286	539	2 005	1 488
Other developed Europe	-	2 336	-	-
Norway	-	1 956	-	-
United States	1 948	3 038	-	348
Japan	14	-	-	-
Developing economies	145	4 006	2 062	736
Africa	22	81	469	675
South Africa	-	81	469	675
Latin America and the Caribbean	102	28	-	-
Asia	21	3 897	1 593	61
Turkey	-	297	1 593	22
China	-	3 500	-	-
India	20	100	-	-
Transition economies	949	1 505	949	1 505
South-East Europe	32	149	91	149
Bulgaria	22	78	20	78
CIS	916	1 356	857	1 356
Russian Federation	910	1 249	237	264

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

Primary sector. The primary sector continued to attract investors, despite new restrictions, especially in oil and gas extraction, in some members of the CIS, and uncertainty over access to and the use of oil and gas transportation (box II.9). However the recent wave of domestic M&As in countries of the region may deter further FDI, especially in extractive industries (box II.8). According to cross-border M&A sales data for 2006, the share of this sector in total sales increased to 17%, from 12% in 2005 (table II.13). Particularly notable was the purchase of OAO Udmurtneft by Sinopec (China) (for \$3.5 billion).

Manufacturing. According to cross-border M&A data, FDI inflows to the manufacturing sector were lower than in 2005 (table II.13). However, within manufacturing, there was a significant increase of flows to the chemical industry due to large cross-border acquisitions in the pharmaceutical industry in South-East Europe (Croatia, Serbia and Romania). Projects in manufacturing represented 55% of all greenfield investments in the region in 2006.

Services sector. FDI in services was particularly buoyant, as reflected in cross-border M&A sales in services which almost doubled in value from 2005 (table II.13) due to increased cross-border M&As in the banking industry. For example Russia Raiffeisen International (Austria) signed an agreement to buy 100% of Impexbank (Russian Federation) for up to \$550 million; OTP Bank (Hungary) acquired Investsberbank (Russian Federation) for \$477 million.¹²⁰ Additionally, large investments were made in energy generation: for example, the energy giant AES (United States) started the rehabilitation of the Maritsa East 1 complex in Bulgaria, with an investment of \$1.4 billion. And in telecommunications, Norwegian Telenor acquired Mobi 63 (Serbia) for \$1.5 billion.

The number of greenfield projects in services rose by 28% from that of 2005, with construction attracting the highest share. Efficiency-seeking investment in industries such as information technology and business services was particularly significant because of the region's skilled labour force. FDI inflows also continue to be important in high value-added activities such as research and development.

As far as the sectoral distribution of outward FDI is concerned, data on cross-border M&As purchases show that petroleum extraction as well as financial services remained the most important targets for the region's TNCs.

Box II.8. The Rusal/Sual/Glencore merger creates the largest integrated aluminium TNC in the world

In the mid-2000s, cross-border M&As in mining revived, particularly in the aluminium industry. Three main trends are emerging in this current wave (Humphreys, 2006): first, it is happening at the peak of the production and price cycle; second, the main driver for the cash-rich companies is their long-term strategy to meet rapidly increasing world demand, especially in East and South-East Asia; third, companies from emerging markets are increasingly involved in M&As. An example is the merger of Rusal, the Russian Federation's largest aluminium company, with its domestic upstream competitor Sual and with Switzerland-based Glencore's aluminium business in 2007. This follows the merger of BHP Billiton/WMC Resources Ltd. in 2005 and that of Xstrata/Falconbridge in 2006. The Rusal merger, concluded on 27 March 2007,^a has created a world leader in aluminium production (by tonnage), with an estimated share of 12.5% in global aluminium sales and 16% of global alumina production, and locations in 17 countries.

One of the main questions concerning the Rusal/Sual/Glencore merger is whether it has been driven by industrial and commercial logic, or whether national interests have also played a part, as in the case of the oil and gas industry in the Russian Federation.

While cross-border M&As in developed countries have been largely horizontal, in emerging markets, especially in the former centrally planned economies, more vertical or "integrated" M&As are taking place. This is a replication of the past experience of huge State-owned enterprises having almost complete control over the supply chain. Similarly, the Rusal/Sual/Glencore merger aims at restoring control over the entire value chain, while also entering new markets. Hence the merger has been both vertical and horizontal: Rusal has surplus bauxite in its supply chain but is short of alumina, while Sual and Glencore have excess refining capacity, and will benefit from Rusal's bauxite surplus.

The merger has wide-ranging implications for the geography of outward FDI from the Russian Federation. Even though both Russian companies (box table II.8.1) had extended their global reach for accessing natural resources through overseas M&As, they were still largely concentrated in the Russian Federation. With the integration of Glencore's assets, their foreign reach will have increased significantly. Moreover, the merger will have given them control of almost the entire Russian aluminium market, rendering competition from foreign companies virtually impossible.

Box table II.8.1. Main assets of Rusal, Sual and Glencore, 2006

Rusal	Sual	Glencore
In the Russian Federation Achinsk alumina refinery Boksitogorsk alumina refinery JSC Bratsk aluminium plant Krasnoyarsk aluminium smelter Novokuzneck aluminium smelter Sayanal Sayanogorsk aluminium smelter	In the Russian Federation Bogoslovsk aluminium plant Irkutsk aluminium smelter Kandalaksha aluminium smelter Nadvoitsy aluminium smelter North Ural bauxite mine Pikalevo alumina refinery Sual-PM Ltd. Ural Silicon Urals aluminium smelter Urals Foil Volgograd aluminium smelter Volkhov aluminium smelter	Alumina Partners of Jamaica (Jamaica) Auginish Alumina Ltd. (Ireland) EurAllumina Spa (Italy) Kubikenborg Aluminium Sundsvall AB (Sweden) West Indies Alumina Co. (Jamaica)
In other countries Armenia foil mill (Armenia) Bauxite Co. of Guyana Inc. (Guyana) Cathode plant (China) Compagnie de Bauxite de Kindia (Guinea) Friguia alumina refinery (Guinea) Nikolaev alumina refinery (Ukraine) Queensland Alumina Ltd. (Australia) 20%	In other countries Zaporozhye aluminium combine (Ukraine)	

Source: "Oleg Deripaska answers Alcoa; Now, the real questions begin", *American Metal Market*, 16 October 2006:13.

Source: UNCTAD.

^a "RUSAL, SUAL and Glencore deal completed", Press Release of United Company RUSAL, 27 March 2007.

3. Policy developments

Countries of South-East Europe and the CIS continued to adopt policies aimed at attracting FDI. However different groups of countries have followed different policy priorities.

In some natural-resource-based economies of the CIS, such as the Russian Federation, Kazakhstan and Uzbekistan, the State continues to increase its control of strategic industries. In the Russian Federation, for instance, the Government

is pursuing a two-pronged strategy. The first aims to prevent or limit the direct control of resources by foreign investors by producing a list of strategic industries¹²¹ that cannot be privatized, or by blocking 25% of the shares or 50.1% majority shares in those industries for the State or other national investors. Second, it has adopted some indirect measures, such as stricter environmental standards, which are putting pressure on foreign companies to sell part of their stakes to local firms, as in the case of the Sakhalin-2 project.¹²² In Kazakhstan, the

Box II.9. Who controls the pipelines?

For both producers and consumers of oil and gas, the question of who controls access to, and the use of, transportation infrastructure is of strategic importance. This is particularly true of pipelines, which offer the cheapest, safest and most efficient way of transporting large volumes of oil and gas. Indeed, in the current era of energy security, a concern of many countries, pipelines are considered an integral and perhaps the most vital part of the oil and gas value chain (Liuhto, 2007).^a This is also a key factor in determining FDI decisions in extraction, because private investment may be impossible if access to pipelines is denied or is too expensive. In the CIS, the Russian Federation occupies the largest land area in the world, while other major oil and gas producers, such as Azerbaijan, Kazakhstan and Turkmenistan are landlocked. For the other resource-based countries in the CIS the disadvantages of landlockedness are further exacerbated by the fact that all pipelines pass through the Russian Federation, making them overly dependent on a single export route.

Since ownership of pipelines gives leverage, or even control, over extracting and producing companies, the pipelines have remained in States' control in all members of the CIS even during the much-contested privatization of the early 1990s. Indeed, in all countries of the region the transport facilities are controlled by majority State-owned companies such as Gazprom and Transneft in the Russian Federation, Beltransgas in Belarus and Naftogas in Ukraine. Recently, both the Russian giants mentioned above have increased their ownership of the transport routes of other countries in exchange for lower export prices that they charge for oil and gas. For example Gazprom^b has full control over the gas pipelines running through the Republic of Moldova and Armenia, as well as majority shares in the pipelines in the Baltic States, Belarus, Serbia and other countries.

Discriminatory access to transit pipelines is one of the main reasons for distortions and inefficiencies in the energy sector in the CIS, hindering both intraregional and extraregional trade.^c

Strategically, ownership has implications for access of third parties to the pipelines. New national borders after the break-up of the Soviet Union created additional difficulties for both importing and exporting countries, as the fragmentation of ownership increased the number of governments that extract rents from their own respective segments of the pipelines. Access to regional and European markets fell largely under the control of neighbouring countries, whose national governments took advantage of monopolistic positions to extract rents by limiting pipeline access (Mathieu and Shiells, 2002). Turkmenistan and Uzbekistan, for instance, are large producers and exporters of natural gas, but they find it difficult to export due to restrictions on their access to the Russian Federation transit pipelines.

The episodes of gas and oil supply interruption in Belarus in early 2007, and gas supply interruption in early 2006 in Ukraine also showed that final customers in the EU are susceptible to uncertainties in the energy market. Producers and consumers who have to pay monopoly rents for access to pipelines are therefore seeking to improve their energy security by diversifying the transportation routes. The construction of alternative pipelines such as the Baku-Tbilisi-Ceyhan oil pipeline linking the Azeri-Chirag-Guneshli oil field in the Caspian Sea to the Mediterranean Sea as well as the Nord Stream gas pipeline linking the Russian Federation with Germany under the Baltic Sea are thus long-term strategic investments, irrespective of their immediate costs.

Source: UNCTAD.

^a Liuhto (2007) argues that hydrocarbon pipelines are strategically even more important for the Russian Government than the hydrocarbon reserves.

^b Gazprom owns and operates the Unified Gas Supply System, which is the largest gas transportation, storage and processing system in the world.

^c See Mathieu and Shiells (2002) for a discussion of the energy sector in the CIS.

Government decreed a pre-emptive right to block the sale of energy assets on its territory¹²³ while in Uzbekistan, the mining company Newmont (United States) had its 50% share in the gold-extraction joint venture Zarafshan-Newmont expropriated in a dispute over taxes.¹²⁴

At the same time, the business climate for foreign investors has improved in non-strategic industries. In 2006, in the context of their bid for WTO membership, some countries harmonized their legislation with WTO norms and standards. In Ukraine, for instance, foreign banks were allowed to establish their branches in the country, and foreigners were allowed to provide legal services.

In the Russian Federation, in addition to some improvements in legislation related to intellectual property rights, foreign investors have obtained similar rights as those of domestic investors to buy Russian banking assets (although the Russian banks have to obtain permission from the central bank when selling more than 10% of their assets, compared to 20% previously). In Kazakhstan, a new law to attract investments in the securities market was approved, while in Kyrgyzstan a 10% flat tax rate replaced an earlier corporate tax of 20%.

In South-East European countries, policies are in line with their accession (or aspirations for accession) to the EU as well as with their interest

Table II.13 South-East Europe and CIS: cross-border M&As, by sector/industry, 2005-2006
(Million of dollars)

Sector/industry	Sales		Purchases	
	2005	2006	2005	2006
Total industry	17 318	25 130	6 812	5 034
Primary	2 088	4 374	2 022	1 799
Mining, quarrying and petroleum	2 088	4 360	2 022	1 784
Mining and quarrying	57	543	-	22
Petroleum	2 031	3 817	2 022	1 762
Secondary	6 747	4 570	2 553	1 265
Food, beverages and tobacco	1 112	739	217	201
Textiles, clothing and leather	1	81	-	-
Chemicals and chemical products	232	3 491	484	4
Metals and metal products	5 323	166	1 851	917
Machinery	12	4	-	-
Electrical and electronic equipment	-	25	-	143
Motor vehicles and other transport equipment	65	15	-	-
Services	8 483	16 185	2 237	1 971
Electricity, gas, and water distribution	1 488	950	52	31
Construction firms	-	49	-	-
Trade	108	298	-	5
Hotels and restaurants	128	35	-	30
Transport, storage and communications	3 155	3 150	327	860
Telecommunications	3 105	2 870	327	860
Finance	2 677	10 961	1 858	1 045
Business activities	153	492	-	-

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

in accelerating the privatization of State assets especially in the telecom and energy industries.¹²⁵ As part of the accession process, Bulgaria and Romania, for instance, have to undertake reforms related to judicial independence, accountability, fighting corruption, and tackling of organized crime (box II.7). Such efforts should further improve the climate for all investments, including FDI. In Albania, Croatia and Serbia also measures favourable to foreign investors were adopted.¹²⁶

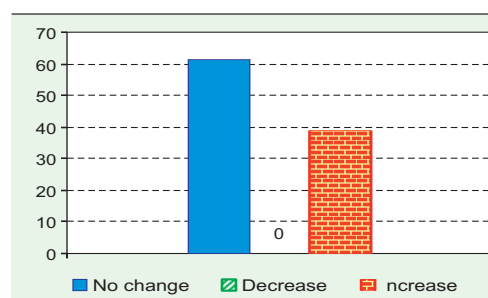
4. Prospects: brighter for larger economies and new EU members

FDI in South-East Europe and CIS is expected to be particularly buoyant in the larger economies such as the Russian Federation and Ukraine, as well as in the new EU members: Bulgaria and Romania. Even though FDI prospects for Kazakhstan and the Russian Federation could be affected by the tighter grip of their Governments on strategic industries, foreign investors are eager to access these countries' natural resources, even under stricter conditions.¹²⁷ FDI in the Russian Federation is also likely to grow in other activities such as the retail trade (e.g. Ikea of Sweden), the automotive industry (Ford, General Motors, and Toyota) and banking (Citibank). With strong real income growth, a booming consumer market, and GDP growth

averaging 7% in the last five years (IMF, 2007a), the country will continue to attract market-seeking FDI. The Government's privatization plan for 2007 includes 1,500 companies and more than 300 real estate properties with total proceeds exceeding \$1.5 billion (IIF, 2007). The business environment in the Russian Federation improved in 2006 (World Bank, 2006). The values of cross-border M&A sales and purchases in the first half of 2007 in the Russian Federation were already larger than those for the whole year in 2006.

According to UNCTAD's *World Investment Prospects Survey*, South-East Europe and the CIS¹²⁸ was the only region where no TNC participating in the survey expected a decrease in FDI inflows in 2007-2008, while 39% anticipated an increase and 61% expected no change (figure II.26). About 21% of the responding TNCs expected an increase in FDI inflows to the Russian Federation, making it the fourth among the most preferred FDI destinations in the world. This was confirmed as well by other corporate surveys. In an annual survey of Japanese manufacturing TNCs (JBIC, 2007), for instance, the largest number of respondents stated an intention to strengthen or expand their activities in the Russian Federation.

Figure II.26. FDI prospects in South-East Europe and CIS, 2007-2009: responses to UNCTAD survey
(Per cent of respondents)



Source: UNCTAD, 2007b.

C. Developed countries

FDI inflows to developed countries surged to \$857 billion, more than twice that in 2004. As in 2005, FDI was driven mainly by cross-border M&As, spurred by favourable financing conditions, high corporate profits, sustained economic growth and rising stock market prices. In contrast to the upward phase of the previous FDI cycle at the end of the last decade, the current expansion was widespread across all the developed regions and economic sectors. Increasing market integration promoted higher cross-border

investments in manufacturing, energy, telecommunications and transportation. Private equity and hedge funds played an important role.

While the United States recovered its position as the largest single FDI host country in 2006, the 25 countries of the EU together accounted for about 41% of total FDI inflows. Flows to most countries in Europe remained stable or rose as compared to those in 2005. Japan's FDI inflows were negative for the first time since 1989. FDI outflows from developed countries rose by 45%, to \$1,023 billion, marking their fifth consecutive year of growth.

The largest share of such flows was directed towards other developed countries. Trends in cross-border M&As as well as UNCTAD's *World Investment Prospects Survey* suggest that FDI into developed countries will reach a new high in 2007.

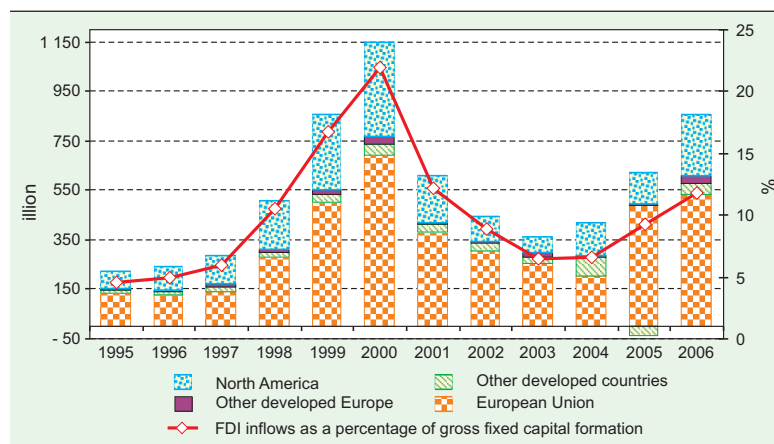
1. Geographical trends

a. Inward FDI grew in all regions and all sectors

FDI inflows to developed countries rose for the third consecutive year, by 45% in 2006, to reach \$857 billion (figure II.27). Inflows rose in 24 out of the 36 developed countries (annex table B.1), and their share in world FDI inflows increased from 62% to about 66%.

FDI inflows into *North America* rose by 88%, to \$244 billion (figure II.27). With its economy growing at more than 3% in 2006, fuelled by buoyant consumer demand and high corporate profits, FDI inflows to the *United States* rebounded to \$175 billion (figure II.28). Reinvested earnings, boosted by the continued high profitability of foreign affiliates in the country, grew by 65% to an all-time high of \$65 billion. There was an unprecedented surge of investments in the chemical industry, which attracted \$26 billion, accounting for 15% of total inflows. This growth was linked to some large cross-border M&As in the pharmaceutical industry and a weaker dollar.¹²⁹ Flows to finance and banking grew almost fivefold compared to 2005, reaching \$31 billion, while those to the wholesale trade rose by 34% to \$21 billion. Germany was the top source country of FDI in the United States, followed by France, Japan

Figure II.27. Developed countries: FDI inflows and their share in gross fixed capital formation, 1995-2006



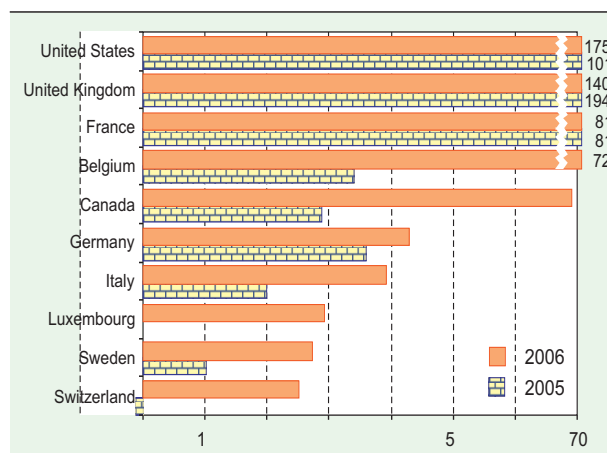
Source: UNCTAD, FDI/TNC database (www.unctad.org/fdistatistics) and annex tables B.1 and B.3.

and the Netherlands in that order (United States, Bureau of Economic Analysis, 2007).

After a sharp rise in 2005, FDI inflows into *Canada* doubled to \$69 billion in 2006, mainly due to a wave of cross-border M&As in the mining industry, notably the acquisitions of Inco by CVRD (Brazil) and of Falconbridge by Xstrata (Switzerland), each valued at more than \$17 billion (annex table A.I.3, chapter IV). FDI in the buoyant mineral industry, among other activities, was stimulated by the country's strong economic growth, tax cuts in recent years and a very competitive business environment (box II.10).

FDI flows into the 25 EU countries rose by 9% in 2006, to a total of \$531 billion. Much of the growth was again driven by cross-border corporate

Figure II.28. Developed countries: top 10 recipients of FDI inflows, 2005-2006^a (Billions of dollars)



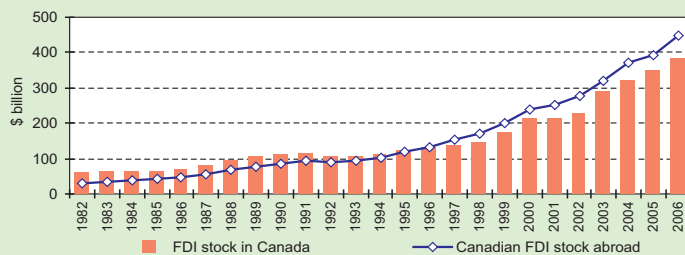
Source: UNCTAD, FDI/TNC database (www.unctad.org/fdistatistics) and annex table B.1.

^a Ranked by the magnitude of FDI inflows in 2006.

Box II.10. Canada: using inward and outward FDI to internationalize

Canada is among the most attractive business locations in the world. The country was ranked first by the World Bank among its surveyed countries for ease of starting a business (World Bank, 2006). Moreover, in UNCTAD's Inward FDI Potential Index, it has been among the top five countries since 1990. At the end of 2006, the inward FDI stock of Canada amounted to \$385 billion (box figure II.10.1) – a fourfold increase from its 1990 level.^a Foreign affiliates accounted for around 45% of the country's exports and 30% of total business revenues in 2005.^b

Box figure II.10.1. Canadian inward and outward FDI stocks, 1982-2006



Source: UNCTAD, FDI/TNC database (www.unctad.org/fdistatistics).

The internationalization of the Canadian economy also continues through outward FDI. Canada ranks among the top 25 outward investor economies in UNCTAD's Outward FDI Performance Index. In contrast to FDI inflows, which have fluctuated heavily in recent years, annual outflows have been relatively stable: their stock has increased more than fivefold since 1990, to \$449 billion in 2006 (box figure II.10.1).

The Canada-US Free Trade Agreement of 1988 and the North American Free Trade Agreement (NAFTA) of 1992 have encouraged Canadian FDI into the United States (MacDermott, 2007; Beaulieu et al., 2006), the prime target country for Canadian TNCs. During the period 2000-2006, 51% of Canadian outward FDI went to that country, compared to 19% to the EU. The leading investors abroad were firms in the finance and insurance industry, which accounted for 46% of total outflows, while those in the energy and metallic minerals industry accounted for 20%. In 2006, Canadian TNCs undertook several large acquisitions in the United States; for example, Goldcorp Inc. acquired Glamis Gold, a United States mining company, for \$8.7 billion, and Brookfield, a Toronto-based real estate firm, together with Blackstone, the United States private equity group, bought Trizec Properties, a real estate investment trust company, for \$2.9 billion (annex table A.I.3).

Further stimulus to outward FDI has come from the Government. Its international commercial policy recently has been paying more attention to outward FDI, a departure from its previous focus on trade and inward FDI (Beaulieu et al., 2006). In 2005, the Government acknowledged that the Canadian economy also benefits from outward investment as this contributes to competitiveness and increased R&D, and leads to technology transfers and spillovers to the Canadian economy.^c

Source: UNCTAD.

^a Compared to its potential, Canada had a lower Inward FDI Performance Index, ranking only 71st, but even this rank is much better than that of other developed countries such as the United States and the United Kingdom.

^b Source: "Canada's international policy statement—a role of pride and influence in the world commerce", at: <http://www.itcan-cican.gc.ca/ips/pdf/IPS-commerce-en.pdf>.

^c Ibid.

restructuring. In fact, 8 of the world's 10 largest cross-border M&As in 2006 took place within the EU. Intra-EU FDI in 2006 was responsible for an appreciable proportion of the inflows into EU member countries.

In the *EU-15*, inward FDI rose by 10%, to reach \$492 billion in 2006. Lower flows to the United Kingdom, the Netherlands and Spain were more than offset by the increase in flows to Belgium, Germany, Italy and Luxembourg. FDI inflows into the *United Kingdom* fell by 28%, to \$140 billion, largely reflecting a significant decrease in equity inflows (by 34%) and repayment of intra-company debt by foreign affiliates to their parent firms. Nevertheless, the country remained the largest FDI recipient in Europe in 2006, and

the second largest worldwide. Several high-value cross-border acquisitions of United Kingdom firms took place, mainly in the telecommunications, transportation and chemical industries.¹³⁰ Inflows to *Sweden* amounted to \$27 billion, the second largest amount since 1999, due to a significant increase in intra-company loans and equity inflows.

Inward FDI flows to the 12 countries forming the *European Monetary Union* (EMU) grew significantly in 2006, rising by 37% to \$318 billion. Inflows to *Belgium* more than doubled to \$72 billion, raising its total FDI stock to \$603 billion, which was more than the country's GDP at the end of 2006. The continued presence in Belgium of TNC "coordination centres",¹³¹ as well as new tax incentives that entered into force in January

2006, may have contributed to that increase. *France* recorded a small increase in inflows to \$81 billion – representing a quarter of total inflows to the 12 EMU countries in 2006.

Inflows to *Germany* increased by 20%, to reach \$43 billion in 2006, the bulk of which came from France, Denmark and the United States in that order. Among industries, banking and insurance received the largest share (32%) (Deutsche Bundesbank, 2007). *Italy's* inward FDI flows, still low compared to other European countries, doubled to \$39 billion, due to large cross-border M&As in the banking sector. Inflows to *Luxembourg* rose substantially mainly due to the purchase of Arcelor by Mittal (Netherlands/United Kingdom) for \$32 billion – the largest acquisition in 2006 (annex table A.I.3). After two consecutive years of negative inflows, as a result of repayment of loans by foreign affiliates to their parent firms, inward FDI flows to *Ireland* increased to \$13 billion in 2006.

A few EMU-12 countries, namely Austria, Spain and the Netherlands, saw a decrease in FDI inflows in 2006. Inflows to *Spain* fell to \$20 billion, the lowest level since 1999, largely reflecting decreased FDI in manufacturing, mainly due to competition from Eastern European and Asian countries. In the *Netherlands* inflows amounted to \$4.4 billion in 2006, down from \$41 billion in 2005, mostly due to the repayment of unusually high intra-company loans in 2005 by some United States and European affiliates.

FDI inflows to the 10 new EU member countries (i.e. excluding the most recent accession countries of Bulgaria and Romania) retained their upward trend, totalling \$39 billion, resulting mainly from a continued rise in reinvested earnings. *Poland* was the top recipient of that group, with record flows of \$14 billion, as a result of increased investments not only from European investors, but also from Japanese companies such as Sharp, Bridgestone, Toyota and Toshiba. Germany and Italy (in that order) continued to be the leading sources of FDI to these countries.¹³²

Among non-EU countries in Europe, *Switzerland* saw a recovery of FDI inflows in 2006, amounting to \$25 billion, largely driven by record reinvested earnings of \$14 billion. Its biotechnology and finance industries attracted the most foreign investments (Ernst and Young, 2006).¹³³

In 2006, FDI inflows to *Japan* turned negative, falling to -\$6.5 billion, following an already low inflow of \$2.8 billion in 2005. Reinvested earnings of \$2.3 billion could not compensate for the large negative equity inflows of \$8.6 billion. Large disinvestments by Japanese affiliates of Vodafone and GM through their financial affiliates in the Netherlands, Canada and

Hong Kong (China), in that order, were responsible for that decrease. In 2006, Japan's economic expansion was still hampered by deflationary pressures and low productivity growth in non-tradable goods and services (Moody's, 2007). The decline in FDI inflows made it impossible to achieve the ambitious target to double Japan's inward FDI stock by the end of 2006 (WIR06: 85). In *Australia*, after the large disinvestment of \$35 billion in 2005, mainly due to the reincorporation of News Corp. (WIR06), inflows rose to \$24 billion.

In 2006, cross-border M&As of developed-country firms increased by 20%, to \$728 billion, the second largest annual increase so far, driven partly by private equity funds (chapter I). The rebound, in both number and value of deals, similar to that in 2005, was driven by economic expansion in the United States and the euro area, strong corporate profits, improved capacity utilization and rising stock markets in developed countries. Nearly 90% of M&As in developed countries were concluded by firms from other developed countries. Some developing-country TNCs were also involved in several mega M&A deals in developed countries in 2006 (annex table A.I.3). Altogether, developing-country firms invested up to \$65 billion in acquisitions in developed countries – a 50% increase from the previous year.

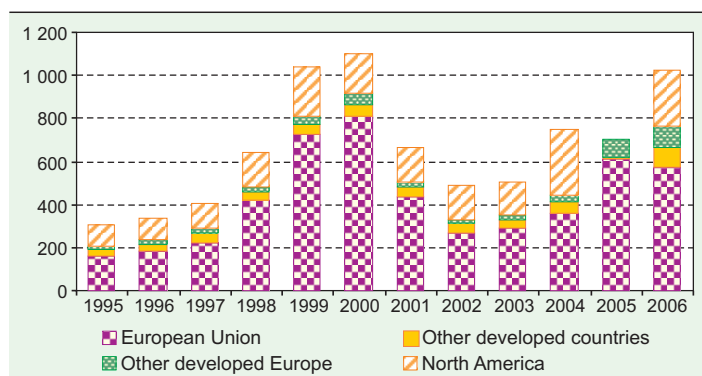
Like cross-border M&As, greenfield projects increased in all major subgroups/economies of developed countries to a total of 5,197 recorded projects in 2006 compared to 4,662 in 2005 (annex table A.I.1). While the EU had the largest combined number (3,844) as well as share (74%) of such projects in developed countries, the United States continued to be the single country with the largest number of projects – 723 in all. The number of greenfield projects in developed countries by firms from developing countries grew by 15% in 2006 to 405 projects.

b. Outward FDI increased sharply

Outflows from developed countries amounted to \$1,023 billion, a growth of 45% (figure II.29). Developed countries continued to maintain their position as net outward investors, with outflows exceeding inflows by \$165 billion. While there was a rebound of FDI outflows from the United States, more than half of total outflows from developed countries in 2006 were from the EU. Outflows from the 10 new EU members, although significantly higher than in 2005, continued to be modest compared to inflows (\$12 billion, or 31% of FDI inflows).

A major reason for the upswing in FDI outflows was a rebound in outward FDI from the *United States*, the largest outward investor in 2006

Figure II.29. Developed countries: FDI outflows, 1995-2006
(Billions of dollars)



Source: UNCTAD, FDI/TNC database (www.unctad.org/fdistatistics) and annex table B.1.

(figure II.30). After the negative outflows of FDI registered in 2005 due to the repatriation of profits induced by the one-off tax incentives provided by the American Jobs Creation Act (*WIR06: 89*), FDI flows from the United States jumped to \$217 billion in 2006, while its FDI stock abroad rose to \$2.4 trillion. Reinvested earnings (\$201 billion) were the main FDI component in that increase. The EU was the region with the highest level of investments (\$112 billion) by United States companies, followed by Asia and Latin America in that order. Manufacturing and financial firms were the major investors, accounting for \$60 billion and \$25 billion respectively (United States Bureau of Economic Analysis, 2007).

In 2006, FDI outflows from the EU countries fell slightly, to \$572 billion. Nevertheless, seven EU countries ranked among the top 10 developed source countries (figure II.30, table II.14). With outflows of \$115 billion, slightly lower than those in 2005, *France* was the second largest source of FDI worldwide for the second year in a row. Companies in *Spain*, profiting from special incentives (*WIR06: 89*) and high growth in various sectors in their home economy (especially property, construction and banking), continued their rapid rate of outward expansion, resulting in record outflows of \$90 billion. Of the three largest cross-border M&As in 2006, two originated from Spain (annex table A.I.3). Large overseas acquisitions by German companies, mainly in the United Kingdom and the United States, led to an increase of 43% in *Germany's* FDI outflows in 2006.

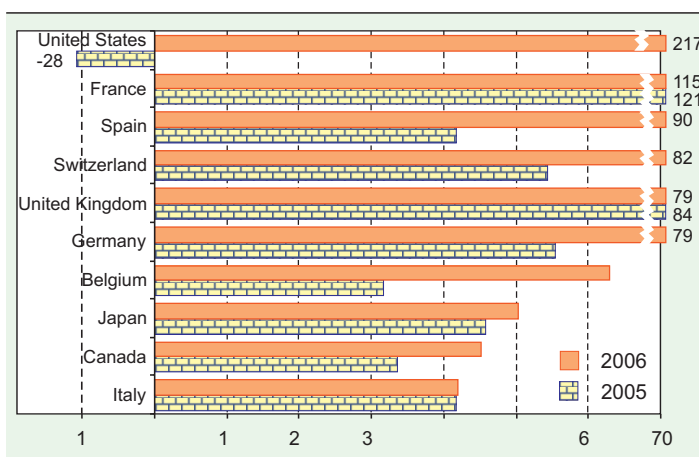
Other major sources of FDI from Europe were the Netherlands, Switzerland and the United Kingdom.

FDI from *Switzerland* nearly doubled to \$82 billion, also a new record. It took the form primarily of acquisitions in the United States and Canada, and mainly in finance and holding companies but also in the mining and chemical industries (Swiss National Bank, 2007). Outflows from the *United Kingdom* fell by 5% to \$79 billion; nevertheless, its position as the world's second largest source country of FDI in terms of stock remained intact. Large United Kingdom companies in telecommunications and finance invested in developing countries, as illustrated by the acquisitions by the Vodafone group of firms in Turkey and South Africa and by HSBC of a bank in Panama.¹³⁴

FDI from *the Netherlands* amounted to \$23 billion as a result of the acquisition of Arcelor (Luxembourg) by Mittal Steel (registered in the Netherlands).

In contrast to its declining inflows, *Japan's* FDI outflows increased further in 2006, by 10%, to reach a record \$50 billion, the second highest since 1990. The depreciation of the yen did not deter outward FDI, while high corporate profitability of Japanese foreign affiliates enhanced reinvested earnings abroad to \$16 billion, the largest ever. While the largest share of Japan's outward FDI flows went to Western Europe (36%), the second largest recipient was Asia (with 35%), overtaking North America (19%). The United States, however, was the single largest country recipient of Japanese FDI with \$9 billion in investments, slightly lower than the \$12 billion recorded in 2005, followed by the Netherlands, the United Kingdom¹³⁵ and China. Finally, outflows from *Israel* reached a record \$14

Figure II.30. Developed countries: top 10 sources of FDI outflows, 2005-2006^a
(Billions of dollars)



Source: UNCTAD, FDI/TNC database (www.unctad.org/fdistatistics) and annex table B.1.

Table II.14. Developed countries: country distribution of FDI flows, by range, ^a 2006

Range	Inflows	Outflows
Over \$50 billion	United States, United Kingdom, France, Belgium and Canada	United States, France, Spain, Switzerland, United Kingdom, Germany, Belgium and Japan
\$10-49 billion	Germany, Italy, Luxembourg, Sweden, Switzerland, Australia, Spain, Israel, Poland and Ireland	Canada, Italy, Sweden, Netherlands, Australia, Ireland, Israel and Norway
\$1-9 billion	New Zealand, Portugal, Denmark, Bermuda, Hungary, Czech Republic, Norway, Greece, Netherlands, Slovakia, Iceland, Finland, Lithuania, Malta, Estonia, Latvia and Cyprus	Denmark, Iceland, Poland, Greece, Austria, Bermuda, Portugal, Hungary, Luxembourg, Czech Republic, New Zealand and Estonia
Less than \$1 billion	Gibraltar, Slovenia, Austria and Japan	Slovenia, Cyprus, Slovakia, Lithuania, Latvia, Finland and Malta

Source: UNCTAD, FDI/TNC database (www.unctad.org/fdistatistics) and annex table B.1.

^a Countries are listed according to the magnitude of FDI.

Table II.15. Developed countries: cross-border M&As, by sector/industry, 2005-2006
(Million of dollars)

Sector/industry	Sales		Purchases	
	2005	2006	2005	2006
Total industry	604 882	727 955	627 064	752 482
Primary	110 474	65 119	98 035	56 850
Mining, quarrying and petroleum	108 769	63 036	97 838	54 102
Mining and quarrying	11 035	50 492	4 858	36 903
Petroleum	97 735	12 544	92 980	17 199
Secondary	171 020	247 233	125 684	197 125
Food, beverages and tobacco	31 706	16 823	17 516	15 474
Textiles, clothing and leather	2 031	1 721	4 638	694
Woods and wood products	3 862	4 841	3 340	4 181
Printing, publishing and allied services	9 778	24 922	7 460	9 223
Oil, gas and petroleum refining	1 882	2 548	757	446
Chemicals and chemical products	53 017	54 162	36 574	36 642
Rubber and miscellaneous plastic products	2 421	7 244	1 336	5 715
Stone, clay, glass and concrete products	4 521	8 557	10 024	7 916
Metals and metal products	20 184	46 606	12 943	42 505
Machinery	4 235	16 520	5 117	21 422
Electrical and electronic equipment	12 687	37 750	10 195	33 760
Measuring, medical, photo equipment & clocks	13 438	8 748	6 424	10 193
Motor vehicles and other transport equipment	9 744	15 449	8 859	8 381
Services	323 388	415 602	403 309	498 507
Electricity, gas and water distribution	35 596	17 630	25 364	9 890
Construction firms	6 124	10 956	2 802	6 592
Trade	24 908	20 267	14 377	13 878
Hotels and restaurants	5 507	26 943	1 814	13 001
Transport, storage and communications	73 900	102 812	49 646	67 022
Telecommunications	47 141	58 151	29 896	59 325
Finance	63 927	92 055	253 322	333 967
Business activities	85 374	101 831	46 321	38 141
Health and social services	5 312	13 425	1 621	1 059
Community, social & personal service activities	21 050	25 439	6 734	10 061

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

billion because of large M&As such as the above-mentioned acquisition by Teva Pharma Inds Ltd of Ivax Corp (United States) (annex table A.I.3).

The countries among the *10 new EU members* with more than \$1 billion in outward FDI were Poland, Hungary, the Czech Republic and Estonia.

2. Sectoral trends: services continued to dominate

Judging from information on cross-border M&As by sector in 2006, services continued to dominate FDI flows between developed countries. Manufacturing gained in importance in terms of both target and acquiring firms, while the importance of the primary sector declined compared to 2005 (table II.15).

In the *primary sector*, although the exceptionally large cross-border M&As in 2005 (such as the acquisition of Royal Dutch Petroleum by Shell Transport & Trading Co. cited in *WIR06: 273*) were not repeated in 2006, the volume of sales and purchases remained high. Cross-border M&As in mining alone, which accounts for the bulk of M&As in the primary sector, increased almost fivefold in terms of sales and more than sevenfold in terms of purchases (table II.15). High commodity prices as well as consolidation of the mining and quarrying industries (Part Two) were the main drivers of this trend. Nevertheless, because of the larger increase in the value of cross-border M&As in manufacturing and services, the share of the primary sector in total cross-border M&As declined.

Cross-border M&As in the *manufacturing sector* of developed countries rose by 45% in terms of sales and by 57% in terms of purchases, led by a significant increase in the metals and metal product, printing and publishing and electrical and electronic equipment industries. While M&As in chemicals and chemical products remained the same as in 2005, the main target in the manufacturing sector and the largest cross-border M&A deal in 2006 was the acquisition of Arcelor by Mittal (annex table A.I.3), which made the metal industry the largest recipient.

Services continued to be the main target and acquiring sector for cross-border M&As in developed countries. M&A activity was particularly intense in financial services, mainly

due to ongoing financial deregulation and restructuring. M&As also increased significantly in telecommunications¹³⁶ and tourism. In 2006, there was a significant increase in FDI in R&D activities, especially in the pharmaceutical and automotive industries (United Kingdom Department of Trade and Industry, 2006).¹³⁷ Apart from being a hub for some manufacturing activities, mainly the automotive industry (*WIR06*: 91), the group of 10 new EU-member countries is becoming attractive also for certain high value-added activities such as R&D.¹³⁸

3. Policy developments

In 2006, many developed countries adopted policies that could directly or indirectly increase their attractiveness for FDI: of the 37 changes in their regulatory frameworks affecting FDI, 30 aimed at facilitating more FDI.¹³⁹ These policies included privatization and liberalization efforts, tax cuts and other monetary incentives, as well as promotion and marketing activities.

Privatization and liberalization. Most of the 10 new EU member States (that joined the EU in 2004) continued the process of privatization and opening up of their domestic economies to foreign investors in 2006, although at a slower pace. The Governments of Latvia and Malta, for instance, sold some State-owned assets. On the other hand, the new Government of Slovakia halted further privatizations of State-owned companies. In other EU countries, such as Austria, Portugal, France and Ireland, several large-scale privatizations were announced or completed.¹⁴⁰

Further liberalization and opening up of some protected industries also took place. For example, the European Parliament approved the EU Directive on Services in the Internal Market in December 2006 (*WIR06*: 93), which is expected to stimulate FDI in this sector. In Australia, a new law was passed that allows more foreign investments and mergers in media: the earlier quantitative restrictions for FDI were eliminated, although investments in the industry would still require government approval. In Italy, the Minister for Economic Development announced a decree to start a programme of liberalization and increase competition in heavily protected services such as professional services, pharmacies, banks and taxis. In Greece, the Government opened its tourism industry to large-scale foreign investment. Japan relaxed its competition policy to facilitate the establishment of large-scale retailing operations.

Tax policy and other incentives. In 2006, several developed countries reformed their tax systems or cut their corporate tax rates to stimulate

investment and attract foreign investors. In Austria, for example, new legislation abolished the Austrian non-resident capital gains tax for most foreign investors. The Czech Republic, Estonia, Greece and the Netherlands, introduced further cuts in their corporate tax rates. In Japan, foreign companies have been allowed to acquire Japanese firms through the exchange of shares since May 2007, which is expected to encourage cross-border M&As.¹⁴¹ In Hungary, even though an additional business tax – called a solidarity tax – was introduced, the withholding tax for dividends paid to foreign corporations was abolished. And in Luxembourg, the dividend withholding tax rate was reduced from 20% to 15% and the income tax in Luxembourg City, where most of the holding and finance companies are located, was also reduced.

However, protectionist sentiment and various kinds of institutional barriers against foreign investment persist, and some are even on the rise again in several developed countries. In Austria, for example, the establishment of a private fund to protect Austrian companies from foreign takeovers is under discussion.¹⁴² A report of the European Commission has concluded that the Community's corporate takeover rules of 2004 have failed to alleviate hostile takeovers (European Commission, 2006). At the same time, efforts are under way to reduce barriers to FDI. For example the European Commission tried to advise Spain to drop restrictions on the bid by the German energy group E.ON for Spanish power company Endesa (though eventually the German bid was withdrawn). In another case, the EU Advocate General in February 2007 backed the EU Commission's 2005 decision to take Germany to the European Court of Justice by claiming that the "Volkswagen Law" contravened EU rules on the free movement of capital (European Court of Justice, 2007).¹⁴³

In the United States, although the continuing commitment to open up to investment and trade has been expressed on several occasions,¹⁴⁴ steps were taken to ensure that foreign investments do not jeopardize national security. Indeed, the Committee on Foreign Direct Investment in the United States (CFIUS) was reorganized for this purpose, and the time period for approval of foreign acquisitions will be extended, especially if the foreign investor is an enterprise that is partly or wholly-owned by a foreign government (*WIR06*).

4. Prospects: optimism for further growth in FDI

The medium-term prospects point to continued high levels of FDI flows to most developed countries, as many of the factors pushing

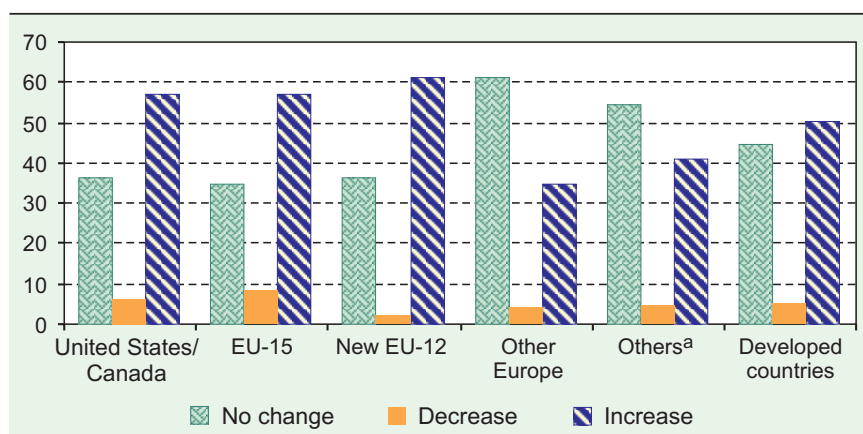
FDI flows upwards are expected to prevail for some time. Economic growth in developed countries seems set to remain robust in 2007 and 2008 (IMF, 2007a) and should continue to support corporate profits and upward movement of equity prices, stimulating further cross-border investments in those countries. While the pace of economic expansion in the United States has eased, it remains solid in the euro area and Japan. The OECD's leading indicators of economic performance in the first half of 2007 point to an upward trend in all the regions, with significant economic growth especially in South-East Asia (OECD, 2007). Increased FDI outflows can therefore be expected, especially to the developing countries. The EU's Directive on Services and the relaxation of some of the requirements of the United States' Sarbanes-Oxley Act¹⁴⁵ are expected to have a positive influence on FDI activity in 2007. The significant increase in cross-border M&As in developed countries (66% in value) in the first half of 2007, compared to the same period in 2006, is another indicator of higher FDI flows in 2007.

UNCTAD's *World Investment Prospects Survey* also indicates bright prospects for further growth in FDI flows in developed countries, with half of the TNCs surveyed anticipating an increase in FDI inflows into developed countries, and 44%

expecting flows to remain the same (figure II.31). Growth of FDI inflows is likely to be the strongest in the United States, the United Kingdom, Poland and Germany (table I.14). Among developed countries as a whole, TNCs expressed greater optimism for FDI inflows to the new EU-12 members,¹⁴⁶ North America and the EU-15, in that order; while in other European and other developed countries (Japan, Australia and New Zealand) 41% of respondents expected FDI inflows to remain stable for the next three years. A number of other corporate surveys reflect optimism regarding business and FDI prospects.¹⁴⁷

However several risks remain. Economic developments crucially depend on future oil prices and the unwinding of global current-account imbalances. The United States' deficits, asset price inflation, and a resulting increase in interest rates, present risks for the world economy. Although the considerable turbulence experienced by financial markets in early 2007 has calmed down, it is a reminder to investors and policymakers of potential financial market risks. The large increase in private equity buyouts in several countries and the accompanying transfer of risks to hedge funds has also increased the vulnerability of financial markets to various shocks (IMF, 2007a; and chapter I).

Figure II.31. FDI prospects in developed countries, 2007-2009: responses to UNCTAD survey
(Per cent of respondents)



Source: UNCTAD, 2007b.

^a Australia, Japan and New Zealand.

Notes

- ¹ At times this share has been higher, reaching more than 70% at the beginning of the decade.
- ² Data on greenfield projects in this Chapter come from OCO Consulting, LOCOMonitor database (www.locomonitor.com).
- ³ Data on international reserves from the IMF's *International Financial Statistics*.
- ⁴ Based on 29 countries; source: IMF, *Balance of Payments Statistics*.
- ⁵ In addition to major oil producers such as Nigeria, Algeria, the Libyan Arab Jamahiriya, Angola and Sudan, mineral-producing countries such as Kenya, Mauritius, Lesotho, Swaziland, the United Republic of Tanzania, Uganda, and Zambia that had started to receive FDI in manufacturing, especially textile processing and export-oriented activities, also received larger inflows into resource exploration activities.
- ⁶ Zambia is the world's fourth largest copper producer, with most of the production undertaken by TNCs (chapter IV). See also "Zambian producers suffer as copper bonanza sends exchange rate soaring", *Financial Times*, 26 September 2006.
- ⁷ Under this Act, the United States Government has been offering trade preferences since 2000 to promote trade and investment in Africa. The expiration of this Act has been extended until 2015.
- ⁸ In 2005-2006, Lesotho witnessed an 8.3% contraction in manufacturing, which was strongly influenced by the removal of quotas after the expiry of the Multi Fibre Arrangement (MFA) on exports from low-cost Asian producers and the continued strength of the South African rand (Lesotho's mloti is pegged to the rand). Source: "Lesotho economy: Manufacturing sector performance to improve", *EIU Viewswire*, 28 June 2006. For Swaziland, see for instance, *Africa Renewal* (previously *Africa Recovery*), vol., 20, No. 1, April 2006: 18.
- ⁹ For example, France's Crédit Agricole acquired Egyptian American Bank (later renamed the new bank Crédit Agricole-Egypt) (Source: "Credit Agricole Egypt's Adrien Phares on his bank's acquisition of EAB", *Business Today*, 16 August 2006). In Nigeria, CNOOC (China) acquired NNPC OML-130 for \$3 billion, and in Sudan, inflows surged partly as a result of the sale of MobiTel to MTC Kuwait for \$1.33 billion.
- ¹⁰ This subregion comprises Algeria, Egypt, the Libyan Arab Jamahiriya, Morocco, Sudan and Tunisia.
- ¹¹ The North African countries received FDI in the manufacturing sector from TNCs engaged in the production of cosmetics, water storage tanks, auto valves, irrigation pumps, minibus assembly lines, utility vehicles and pick-up trucks, paints, pharmaceuticals and chemical production. Source: PricewaterhouseCoopers (www.pwc.com).
- ¹² Source: Central Bank of Egypt. For instance, pharmaceutical giant AstraZeneca invested in a plant to manufacture medicines (for cardiovascular disease, psychiatric disorders and cancer) in Egypt in 2006 ("AstraZeneca opens first manufacturing plant in the Middle East", in-Pharma Technologist.com (www.in-pharmatechnologist.com)).
- ¹³ Tunisia sold 35% of Tunisie Telecom (TT) to a consortium comprising Dubai Technology and Media Free Zone, and Dubai Investment Group for \$2.3 billion.
- ¹⁴ The subregion comprises Benin, Burkina Faso, Cape Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Mauritania, Niger, Nigeria, Saint Helena, Senegal, Sierra Leone and Togo.
- ¹⁵ Source: "Ernie Els to design course in Cape Verde Islands", *Golf Today Travel*, 12 September 2006 (http://www.golftoday.co.uk/travel/press_releases/els_cape_verde.html).
- ¹⁶ The subregion comprises: Burundi, Cameroon, the Central African Republic, Chad, Congo, the Democratic Republic of the Congo, Equatorial Guinea, Gabon, Rwanda and Sao Tome and Principe.
- ¹⁷ Pecten is part of the Shell Group ("Pecten Cameroon Company", *MBendi*, 7 October 2006 (www.mbendi.com)).
- ¹⁸ The subregion comprises Comoros, Djibouti, Eritrea, Ethiopia, Kenya, Madagascar, Mauritius, Seychelles, Somalia, Uganda and the United Republic of Tanzania.
- ¹⁹ The subregion comprises Angola, Botswana, Lesotho, Malawi, Mozambique, Namibia, South Africa, Swaziland, Zambia and Zimbabwe.
- ²⁰ Sources: "Vodafone raises South Africa stake to 50%", *Computer Business Review Online*, 7 December 2006 (http://www.cbronline.com/article_news.asp?guid=78E3F61D-8188-461D-BD07-458659500C6A); "India's Tata group acquiring 26 PCT stake in SAfrican telecom", *AFX News Limited*, 22 August 2006 (<http://www.forbes.com/business/feeds/afx/2006/08/22/afx2963999.html>); and "Dubai-led group gets Cape V&A for R7bn", *Business Day*, 9 October 2006. (<http://www.businessday.co.za/articles/dailymailer.aspx?ID=BD4A275648>). See: www.unctad.org/fdistatistics for longer time series data.
- ²¹ Source: "South Africa: Scrambling for Africa", *AllAfrica*, 22 November 2006 (<http://allafrica.com/stories/200607240385.html>); "AngloGold in \$58 million Russian mining alliance", *BusinessDay*, 7 April 2006; "SA firm wins new oil rights in Tanzania", *All Africa*, 2 May 2006 (www.allafrica.com); and "AngloGold in \$58 million Russian mining alliance", *BusinessDay*, 7 April 2006.
- ²³ Orascom (Egypt) bought a 19.3% stake in Hong Kong-based Hutchison; Telkom acquired part of Portugal Telecom, including its operations in several African countries such as Angola and Morocco; MTN bought into Lebanon's Investcom; Maroc Télécom acquired a majority stake in Burundi's Office national des telecommunications (Onatel); and Naguib Sawiris of Egypt purchased Wind Telecomuncazioni SpA of Italy.
- ²⁴ Angola eased procedures for the entry of foreigners into the country; Kenya scrapped or simplified various types of operational licences, set up a Business Regulatory Reform Unit to bring standards up to international best practices and introduced a 24-hour service at the port of Mombasa and Mauritania eliminated various restrictions on foreign-exchange operations.
- ²⁵ See endnote 69 in chapter I.
- ²⁶ Under AGOA, Africa-based clothing exporters were able to import fabric from the cheapest available suppliers while still enjoying duty-free access to the United States market. When this concession expires in 2007, some of the foreign-owned clothing firms in eligible African countries may well decide to relocate elsewhere. In December 2006, the United States Congress passed AIIA under the AGOA to help avert the diversion of FDI and the loss of thousands of jobs in the region. The new Act supplements and extends the provisions of AGOA to help producers in sub-Saharan Africa better withstand greater competitive pressures from China following the expiry of MFA in 2005.
- ²⁷ Includes China, Hong Kong (China), the Democratic People's Republic of Korea, the Republic of Korea, Macao (China), Mongolia and Taiwan Province of China.
- ²⁸ FDI to financial service industries (mainly banking) declined from \$12 billion in 2005 to \$6 in 2006. Data on FDI in financial industries is reported by the Chinese Government based on data collected separately by China's three financial regulatory bodies: the banking, insurance and securities regulatory commissions. According to the China Banking Regulatory Commission, however, its data on foreign investments are not based on the standard balance-of-payments (BOP) definition of FDI (UNCTAD, 2007e).
- ²⁹ There has been a worsening labour shortage in coastal provinces such as Guangdong. In response, minimum wage levels in several cities in the province have risen significantly in recent years. For example, the minimum wage increased by 17.4% in Shenzhen in 2006.
- ³⁰ Source: Ministry of Commerce, Industry and Energy.
- ³¹ ASEAN members are: Brunei Darussalam, Cambodia, Indonesia, the Lao People's Democratic Republic, Malaysia, Myanmar, the Philippines, Singapore, Thailand and Viet Nam.
- ³² The project is expected eventually to employ 3,000 workers and double Texas Instruments' production capacity ("Texas Instruments unveils \$1 billion Philippines expansion", 3 May 2007, at: www.marketwatch.com).

- ³³ Although wages in Viet Nam have been rising rapidly particularly after the minimum wage level was increased in early 2006, the wage rate is still attractive compared to that in China. The monthly wage rate (including all benefits) of the average worker in Viet Nam was about \$90-\$110 compared to \$160-\$190 in southern China in 2006 (JETRO, 2006: 88).
- ³⁴ The subregion comprises Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka.
- ³⁵ This includes, for instance, the investment of \$20 billion by Emaar Properties (United Arab Emirates) in real estate development in Islamabad and Karachi (see “Emaar unveils three real estate projects in Pakistan with total investment of AED 8.8 billion”, at: <http://www.emaar.com>).
- ³⁶ Largest M&As undertaken by Singaporean firms in developed countries include the PSA International-Peninsular & Oriental Steam Navigation (United Kingdom) deal (\$6.4 billion) and the Temasek-Standard Chartered (United Kingdom) deal (\$4.3 billion), though they are not recorded in 2006 (because payment was not made).
- ³⁷ For example, see “A new wave of overseas investment has led to concerns of hollowing out”, 30 October 2006 (www.xinhuanet.com).
- ³⁸ The objective of establishing these zones is to promote the internationalization of Chinese SMEs. The zones are established and run by Chinese enterprises, with financial support from the Chinese Government (*source*: Ministry of Commerce).
- ³⁹ So far, the Central Foreign Exchange Management Centre, under the State Administration of Foreign Exchange (SAFE), has been the only government agency responsible for managing China’s foreign exchanged reserves (\$1 trillion by the end of 2006). Following the conventional approach to reserves management, which emphasizes security and liquidity, the agency has only invested in fixed-income securities such as United States Treasury Bonds. As highlighted in *WTR06* (box II.7), the Chinese Government has been considering alternative uses for its foreign currency reserves in view of the relatively low returns and high risks associated with the approach followed hitherto. Following a decision made by the State Council at the Central Financial Work Meeting in January 2007, the Chinese Government is establishing a Government Investment Corporation, which is expected to manage a possible \$200 billion fund drawn from the pool of China’s foreign currency reserves.
- ⁴⁰ In 2005, Tata Steel acquired NatSteel (Singapore) for \$486 million. In 2006, Tata Tea purchased a 30% stake in Energy Brands Inc. (United States) for a total acquisition price of \$677 million, and Tata Coffee (a subsidiary of Tata Tea) acquired Eight O’Clock Coffee Company (United States) for \$220 million.
- ⁴¹ India is now the second largest source of FDI inflows to London, accounting for 16% of total inflows.
- ⁴² For example, in terms of sales, Hongfujin Precision Industry (Shenzhen), a subsidiary of Hon Hai Precision Industry, has surpassed Motorola (China) in size, becoming the largest foreign affiliate in China, with about \$15.7 billion in sales and \$14.5 billion in exports in 2006 (Ministry of Commerce of China). In addition, the affiliates in China of Taiwan Province-based Quanta Computer and Inventec ranked number eight and nine, respectively, in the list of top foreign affiliates in China in 2006.
- ⁴³ For example, China Huadian Corporation is cooperating with its local partner Perusahaan Listrik Negara on a \$2 billion electricity project in Indonesia. Other agreements (worth \$4 billion) in electricity and extractive industries were signed in October 2006 at a China-Indonesia energy forum in Shanghai.
- ⁴⁴ For example, Royal Dutch Shell announced in July 2006 that it would invest in a \$5 billion coal-to-liquids plant in Ningxia Province. Anglo American is considering a coal-mining and processing complex worth about \$4 billion (“Anglo American shows China interest”, *Financial Times*, 16 November 2006).
- ⁴⁵ FDI in high-tech industries such as telecom equipment increased significantly in 2006 (according to data provided by the Ministry of Commerce).
- ⁴⁶ *Source*: the Reserve Bank of India.
- ⁴⁷ For example, Wal-Mart will cooperate with the local Bharti Enterprises to build hundreds of shops in the next five years (“Wal-Mart will enter the Indian retailing industry”, *Financial Times*, 28 November 2006).
- ⁴⁸ According to China’s Ministry of Commerce (MOFCOM), Carrefour (France) had established 79 branches in China by the end of June 2006, with total sales reaching \$15 billion in the first half of 2006 (<http://mnc.people.com.cn/GB/54823/4929860.html>). In February 2007, Wal-Mart acquired a 35% stake in Bounteous Company Ltd. (Taiwan Province of China), which operates Trust-Mart in mainland China (see “Wal-Mart expands in China through Trust-Mart stake”, 27 February 2007, *MarketWatch*, at: www.marketwatch.com).
- ⁴⁹ For example, Wal-Mart sold its 16 branches in the Republic of Korea to the local E-Mart in 2006. (Evan Ramstad, “South Korea’s E-Mart is no Wal-Mart, which is why locals love it”, *Wall Street Journal*, 10 August 2006).
- ⁵⁰ For example, TCL had to write off much of its investment recently after it acquired Thomson (France) in 2004.
- ⁵¹ The applications for establishing branches in the United States by Chinese banks, such as Bank of China, China Construction Bank and Bank of Communications, have been denied several times by the United States authorities over the past decade. However, this may change after the Second China-United States Strategic Economic Dialogue in 2007, which reached the conclusion that any such applications should be examined based on the principle of national treatment (Mei Xinyu, “Chinese banks eyes overseas markets”, 5 June 2007, at: www.ftchinese.com).
- ⁵² A priority objective indicated by both the Ministry of Commerce and the National Development and Reform Commission.
- ⁵³ The new income tax rate will be 25%, but foreign affiliates can continue to enjoy previous tax rates (15% or 24% depending on location) during a five-year transition period.
- ⁵⁴ The Indian National Security Commission has proposed to all economic departments of the Government that FDI from certain countries should be subject to approval and monitoring with regard to national security implications.
- ⁵⁵ In 2006, the Ministry of Commerce and the National Development and Reform Commission introduced new rules on foreign takeovers in order to ensure a standard treatment for acquisitions and a screening based on antitrust and “national economic security” concerns. In July 2006, the Government introduced a regulation to restrict FDI in real estate in order to avoid overheating in China’s real estate market.
- ⁵⁶ Seven industries, including telecommunications, petroleum, defence, electricity, coal mining, civil aviation and ocean shipping, are considered to be of strategic importance, and thus to be controlled by the State.
- ⁵⁷ For example, China announced plans to invest about \$200 billion in its railway system over the next five years, and Viet Nam is planning a high-speed railway system.
- ⁵⁸ First, poor infrastructure prevents the country from attracting efficiency-seeking FDI. Second, while the Government is making efforts to attract FDI projects, they are not necessarily welcomed by local communities.
- ⁵⁹ Comprising Bahrain, the Islamic Republic of Iran, Iraq, Jordan, Kuwait, Lebanon, Oman, the Palestinian Territory, Qatar, Saudi Arabia, the Syrian Arab Republic, Turkey, the United Arab Emirates and Yemen.
- ⁶⁰ Turkey was host to the largest cross-border M&A deal of the year in the region – the purchase of TELSİM Mobil Telekomunikasyon of Turkey by the United Kingdom’s Vodafone Group for \$4.6 billion (annex table A.I.3). There were an estimated 43 completed cross-border M&A sales in the country, compared with 23 in 2005 (annex table B.5).
- ⁶¹ Some 93 greenfield projects were recorded in Saudi Arabia, with over 10 in the construction sector (OCO Consulting, Locomonitor database, at: www.locomonitor.com).
- ⁶² Including the Islamic Republic of Iran, Iraq, Jordan, Lebanon, the Palestinian Territory, the Syrian Arab Republic and Yemen.
- ⁶³ In principle, cross-border M&As should be part of FDI flows, but due to different methodologies in collecting these two sets

- of data, figures do not match. For details on data differences between cross-border M&As and FDI flows, see *WIR00*.
- 64 Source: *Oxford Analytica*, 2 July 2007.
- 65 For example, ExxonMobil (United States), Royal Dutch Shell (United Kingdom/Netherlands) and Sasol (South Africa) have gas exploration projects in Qatar, and Royal Dutch Shell and Total (France) have them in Saudi Arabia.
- 66 In petroleum refining, the most significant cross-border acquisition in 2006 took place in Turkey, where OMV (Austria) took a 34% stake in the oil and gas firm Petrol Ofisi AS (Turkey) for \$1.1 billion.
- 67 The motor vehicles and other transport equipment industry accounted for 13% of Turkey's total inward FDI stock in 2004, the second largest recipient industry after transport, storage and communications. This trend is continuing: in 2006, Doktas Docum Sanayi ve Ticaret, an automobile parts and components firm was acquired by Componenta Oyj (Finland) for \$110 million.
- 68 Jordan Investment Board, *Investment Statistics 2006* (<http://www.jordaninvestment.com>).
- 69 Islamic finance, or the use and provision of finance in compliance with Islamic norms (based on the Shariah), operates on the principle of distribution of investment profits, rather than paying out and receiving interest for access to finance. Therefore, Islamic finance can take the form of direct investment rather than loan finance.
- 70 In June 2006, Ummiah Mobile Communications, a major player in Jordan's highly competitive cellular market was bought by Batelco (Bahrain) for \$415 million ("Batelco acquires Jordan mobile operator for \$415 mln", *Khaleej Times*, 25 June 2006), and the Government of Jordan sold off its remaining 41.5% shares of Jordan Telecom to France Télécom for \$183 million ("France Telecom acquires a majority interest in Jordan Telecom", *Financial Times*, 30 June 2006).
- 71 Source: UNCTAD, database on national laws and regulations.
- 72 The Central Bank of Bahrain has also enacted a Trust Law that specifies which investment products can be sold and invested in Bahrain (Bahrain Trust Law, *EIU Viewswire*, October 2006). As of 1 July 2006, licensing categories were defined by the type of regulated activity rather than the type of institution. Offshore banks, including investment banks, will now be covered by a "wholesale banking" licence ("Offshore Banking in Bahrain", *EIU Viewswire*, October 2006). For Saudi Arabia, see "Saudis to construct Euro 5.2 bn financial district in Riyadh", *Financial Times*, 10 May 2006 and for Qatar, see "Qatar Central Bank, 2006", *EIU Viewswire* (www.viewswire.com), 2006.
- 73 Non-Omani citizens will have the right to own residential property and land in "integrated tourism complexes". *Oman Tourism*, *EIU Viewswire*, March 2006.
- 74 The Qatar Government opened its market to foreign investment in the gas sector. There are several large projects under this initiative. For example, the Qatar Liquefied Gas Company Limited (Qatar Gas), a joint-venture company between Qatar Petroleum and ExxonMobil Corporation, has expanded its facilities at the Ras Laffan industrial city natural gas liquefaction plant in Qatar. Started in early 2005, the project investment has been estimated at \$12 billion. Royal Dutch Shell is also investing in a Qatar gas plant to turn Qatari gas into super clean fuel, in a project worth up to \$18 billion.
- 75 The law also consolidates existing legislation and introduces new, tighter provisions regarding transfer pricing and tax havens. Turkey Tax Law, *EIU Viewswire*, March 2006.
- 76 See, for example, "UAE mulls FDI reform", *Khaleej Times*, 22 December 2006; and "UAE Labour Law", *EIU Viewswire*, June 2006.
- 77 <http://ec.europa.eu/trade/issues/bilateral/>, accessed in March 2007.
- 78 The health-care sector is considered to be the industry with the highest growth potential, especially in the West Asian subregion (PricewaterhouseCoopers, 2007a), which could attract some FDI. In Jordan for instance, Kuwaiti investors are seeking government approval to launch a medical city near Amman at a cost of \$3-5 billion.
- 79 In Kuwait, for example, legislation is expected to be passed in 2007, enabling Project Kuwait, a \$7 billion plan to encourage foreign investment and development of oilfields in northern Kuwait, to start in the first half of 2008 (Salisu and Yagudin, 2007).
- 80 Oceania comprises American Samoa, Cook Islands, Fiji, French Polynesia, Guam, Kiribati, Marshall Islands, the Federated States of Micronesia, Nauru, New Caledonia, Niue, Norfolk Islands, Northern Mariana Islands, Palau, Papua New Guinea, Samoa, the Solomon Islands, Tokelau, Tonga, Tuvalu, Vanuatu, Wallis and Futuna Islands.
- 81 Their ranking according to the UNCTAD Inward FDI Performance Index, would be 94 and 136, respectively. However, the index for these economies is calculated separately from that of other economies; only Papua New Guinea is included in the index, which is limited to 141 economies for which the Inward FDI Potential Index is constructed (annex table A.I.6).
- 82 Following the agreement signed with China Metallurgical Construction Group Corporation in 2005 by the Government of Papua New Guinea, work has commenced at the joint Ramu Nickel-cobalt project in which the Chinese corporation holds 85% of equity.
- 83 The First Ministerial Meeting of the China-Pacific Island Countries Economic Development & Cooperation Forum took place in Fiji in 2006 with a view to promoting relations between China and the Pacific countries. China is establishing a loan-finance facility or an investment fund to enable qualified Chinese enterprises to invest in various Pacific island countries.
- 84 For example, in Fiji following a coup in December 2006, an initial decline in the number of tourist arrivals was observed, but the sector is showing signs of rapid recovery (EIU, 2007c). However, it is forecast that the long-run impacts of the coup will result in some 8% contraction in Fiji's real GDP (Narayan and Prasad, 2007). In the short term, FDI is expected to decline, although not nearly as much as the 33% decline in the aftermath of the 2000 coup. The interim Government has set up an inter-agency FDI taskforce to ensure that existing investment projects are implemented, but investors' confidence seems to recover only after a politically stable environment is re-established. In the Solomon Islands, after elections in April 2006, riots led to several business owners fleeing the capital. Tonga also witnessed violence, which led to the destruction of 80% of the capital's business district (EIU, 2007d).
- 85 Oil Search Ltd. was incorporated in Papua New Guinea in 1929 and is listed on the Australian Stock Exchange, with the Government of Papua New Guinea as the principal shareholder (of about 18%).
- 86 Bermuda is no longer included in this region, as it is now classified under developed countries.
- 87 For the Homeland Investment Act, see *WIR06*: 89.
- 88 Although this ratio must be interpreted with caution because data on FDI and M&As are not quite comparable (see *WIR00*), it is however a good barometer of the relative importance of M&As as a mode of FDI.
- 89 In 2006, the purchase by TNCs of local assets owned by foreign affiliates surged by 183 % while that of local assets owned by nationals decreased by 22 %. Both transactions are recorded as cross-border M&As (source: UNCTAD, cross-border M&As database (www.unctad.org/fdistatistics)).
- 90 Reinvested earnings are recorded both in the current account of the balance of payments (as being paid to the direct investor as investment income) and in the capital account (as being reinvested in the enterprise as FDI inflows).
- 91 Data on reinvested earnings in 2006 are available for Argentina, Chile, Colombia, Ecuador, Guyana, Paraguay, Peru, Uruguay and Venezuela. These countries received 57% of the total inward FDI to South America in 2006.
- 92 Source: Central Bank of Costa Rica and Central Bank of the Dominican Republic.
- 93 Including offshore financial centres, outflows increased by 37%, to \$49 billion.
- 94 Source: Central Bank of Brazil.
- 95 *Alexander's Gas & Oil Connections*, Vol. 10, No. 18, 28 September 2005; *América Economía.com*, Edición 342, 29 June 2007, and PDVSA (www.pdvsa.com).
- 96 *Business Latin America*, 22 January 2007 (London: EIU).

- 97 *Business Latin America*, 29 January 2007 (London: EIU), *Business Latin America*, 30 October 2006 (London: EIU), and *Mercopress*, 8 March 2007 (www.mercopress.com).
- 98 Banco de la República, Subgerencia de Estudios Económicos, at: www.banrep.gov.co/economia/flujo/flujoinv.xls.
- 99 Sources: for Chile, Comisión Chilena del Cobre (Cochilco) (www.cochilco.cl) (the amount does not include investments in exploration and in routine maintenance); for Colombia, Banco de la República, *Subgerencia de Estudios Económicos*, at: www.banrep.gov.co/economia/flujo/flujoinv.xls; for Peru, *Proinversión*, 2007 and *Business Latin America*, 23 April 2007 (London: EIU); for Bolivia, *Business Latin America*, 15 January 2007 (London: EIU); for Guyana, *Business Latin America*, 30 October 2007 (London: EIU); for Suriname, *Business Latin America*, 31 July 2006 (London: EIU).
- 100 Sources: *Business Latin America*, 18 September 2006, 14 August 2006 and 9 October 2006 (London: EIU); and www.thyssenkrupp-steel.com.
- 101 In 2007 Nissan began using its Mexican operations to supply cars to 18 European countries. Volkswagen is another automaker that exports to Europe from its Mexican factory (“Horisly’s space”, *Automotive News*, 9 April 2007, at: <http://horisly.blogspot.com/2007/04/nissan-to-supply-europe-from-mexico.html>).
- 102 ADEFA, *Press Release*, December 2006 and *Página 12*, 1 October 2006.
- 103 Including FDI in automotive engines and other transportation equipments (source: Banco Central do Brasil).
- 104 Fiat is proceeding with a \$1.4 billion modernization plan for its operations in Brazil that will extend until 2008. General Motors has announced it might double its annual investment of \$500 million by the end of the decade if GDP growth in Brazil improves. Ford has unveiled plans to invest \$1 billion by 2011, and Volkswagen (Germany) intends to invest \$1.2 billion by 2012 (*Business Latin America*, 22 January 2007 (London: EIU)). However, Volkswagen plans to phase out exports of its Fox model from Brazil to Europe, and will supply it at a lower cost from the Russian Federation (*Business Latin America*, 2 October 2006 (London: EIU)).
- 105 Mexico’s share in total apparel exports to the United States fell from 8.8% in 2005 to 7.4% in 2006, and that of DR-CAFTA countries from 14% to 12.5%. In contrast, the share of China, for example, increased from 22% to 25.9%, and that of Indonesia from 4.2% to 5.1%.
- 106 Examples include the acquisition of Verizon’s (United States) assets in the Dominican Republic by América Móvil for \$2.1 billion, Telmex’s acquisition of shares in Embratel (Brazil) for \$809 million, and the acquisition of the Brazilian Tevecap (cable TV) by Telefónica for \$467 billion.
- 107 Verizon sold its assets in Venezuela to the State and its assets in the Dominican Republic to América Móvil (Mexico), while Telecom Italia sold its assets in Venezuela to the local group Cisneros.
- 108 *Reuters América Latina*, 10 May 2007, and *Business Latin America*, 15 January 2007 (London: EIU).
- 109 *Business Latin America*, 30 October 2006 and 29 January 2007 (London: EIU).
- 110 *Clarín*, 9 January 2007 (www.clarin.com.ar), *Business Latin America*, 7 August 2005, 13 November 2006 and 25 December 2006 (London: EIU).
- 111 *Business Latin America*, 25 December 2006 and 29 January 2007 (London: EIU).
- 112 *Business Latin America*, 22 January 2007 and 27 November 2006 (London: EIU).
- 113 The accord with China has already been implemented, but it does not include chapters on services and investments.
- 114 The region is expected to achieve a GDP growth rate of 4.7% in 2007 (UNCTAD, 2007). Regarding prospects for commodity prices, see chapter III of this *WIR*.
- 115 In addition to the sale of the local assets of AES and CMS (both United States companies) to the Government of Venezuela, CMS announced that it would sell its assets in Brazil, and Union Fenosa (Spain) announced plans to sell its assets in Nicaragua back to the State. In the telecom sector, Verizon (United States) agreed to sell its assets in Venezuela to the Government.
- 116 Source: Central Bank of Brazil.
- 117 Bulgaria and Romania which became new EU member States on 1 January 2007 are classified under South-East Europe and CIS in this Report. For more on geographical grouping, see *WIR06*, p 6.
- 118 In 2006, the \$4.7 billion purchase of Banca Comerciala Romana by the Austrian bank Erste Bank was the largest deal in the country so far (annex table A.I.3).
- 119 For more on the rise of Russian TNCs, see Kalotay, 2007.
- 120 Source: UNCTAD cross-border M&A database. Cross-border M&As of foreign affiliates in 2006 included the acquisition in Croatia by Soci t  G n rale (France) of HVB Splitska owned by Unicredito Italiano for \$1.2 billion, and in Ukraine, the merger of the affiliate of OTP Bank (Hungary) with the affiliate of Raiffeisen Bank (Austria) for \$833 million.
- 121 In March 2006 the Government of the Russian Federation released a preliminary list of 39 industries deemed to be strategic, including energy and metals.
- 122 In June 2007, TNK-BP, agreed to cede its controlling 62.9 % stake in the vast Siberian Kovytko gas field to Gazprom (“BP submits to Kremlin pressure and hands Kovytko to Gazprom” *Financial Times*, 23 June 2007).
- 123 The sale of PetroKazakhstan to CNPC, a Chinese State-owned oil company (*WIR06*: 58) was allowed to go through only after CNPC agreed to sell a 33% stake in PetroKazakhstan to State-owned KazMunaiGaz.
- 124 “Mining groups feel the heat in central Asia”, *Financial Times*, 2 August 2006.
- 125 However in some countries such as Romania the previous privatization deals were disputed (see Hunya, 2007 for the Petrom privatization-related dispute).
- 126 In Serbia, for instance, a new Free Zone Law was enacted, while in Albania, in 2006, an initiative “Albania one Euro” was launched to attract foreign investors especially in energy generation. For more on this latter initiative, see: <http://www.albinvest.gov.al/dokumenti.asp?id=304&menu=96>.
- 127 For example, in July 2007 the French oil company Total agreed to form a consortium with Gazprom to develop one of the world’s largest natural gas deposits (see “Gazprom and Total strike a deal on gas”, *International Herald Tribune*, 13 July 2007).
- 128 In the survey, Romania and Bulgaria were not included as part of the South-East Europe and CIS region.
- 129 For example, Teva Pharma Inds Ltd (Israel) bought Ivax Corp for \$7.4 billion, and Novartis AG (Switzerland) acquired Chiron Corp. for \$6.2 billion.
- 130 For example, Telefonica (Spain) acquired O2 Plc for \$31.7 billion, Ferrovial (Spain) bought a 14% stake in airports operator BAA for \$21.8 billion, and Linde AG (Germany) acquired BOC Group Plc for \$14.1 billion (annex table A.I.3).
- 131 “Coordination centre” status is granted by Royal decree to very large industrial conglomerates which meet certain criteria. Multinational companies with coordination centre status, accounted for one third of Belgium’s FDI inflows and 36% of its outward FDI in the period 1995-2005 (Piette, 2007). These conglomerates enjoy special fiscal advantages (e.g. although they pay normal Belgium corporate income tax rates of up to 33.99%, they are taxed on their trading profits at the rate of 4%-10% of their total “business expenses”).
- 132 For example, MOL (Hungary) sold a natural gas storage and wholesale trading business, to E.ON (Germany) for \$1.3 billion, and the power generator, Slovenske Elektrarne (Slovenia), was taken over by Enel (Italy) for \$1.1 billion (annex table A.I.3).
- 133 For example the acquisition of Winthertur by AXA (France) “AXA buys Winterthur for Euro 7.9 billion” *Financial Times*, 15 June 2006.
- 134 Vodafone bought TELSİM Mobil Telekomunikasyon in Turkey for \$4.6 billion and VenFin Ltd. in South Africa for \$2.9 billion; HSBC bank acquired Grupo Banistmo SA in Panama (annex table A.I.3).
- 135 Major deals included the following: Japan Tobacco acquired Gallagher (United Kingdom) for \$14.7 billion in what was not only the largest acquisition in the tobacco industry, but also the largest foreign takeover by a Japanese manufacturing company. The deal was recorded in 2007 (“Buying overseas: executives

- discover that the developed world is their oyster”, *Financial Times*, 13 March 2007). Toshiba bought Westinghouse Electric Co. (United States) for \$5.4 billion, and Nippon Sheet Glass Co Ltd. acquired Pilkington PLC (United Kingdom) for \$3 billion.
- ¹³⁶ In 2006, two large acquisitions took place in telecommunications, that of the United Kingdom firm O2 PLC by Spain’s Telefonica, and Lucent Technologies by France’s Alcatel.
- ¹³⁷ For instance, Ford (United States) announced that it would invest up to \$1.8 billion over the next six years in its R&D projects in the United Kingdom, while Novartis (Switzerland) plans to create a research facility with 400 scientists in China (“Ford to invest £1 billion in UK R&D”, *Financial Times*, 17 July 2006 and “Novartis in China R&D push”, *Financial Times*, 3 November 2006).
- ¹³⁸ For example, in 2006 Morgan Stanley opened a Business Services & Technology Centre in Budapest (Hungary) (“Eastern Europe becomes a centre of outsourcing”, *The New York Times*, 19 April, 2007).
- ¹³⁹ Source: UNCTAD, database on national laws and regulations.
- ¹⁴⁰ The Austrian Government sold, through an initial public offering (IPO), a 49% stake in the previously 100% State-owned mail service provider, Österreichische Post, while in Portugal, the Government sold, through an IPO in October 2006, 25% of Galp Energia, a large State-owned oil and gas utility. The French Government announced the partial privatization of Gaz de France and the State-owned Aéroports de Paris, and, similarly, the Irish Government announced the offering of a major part of the State-owned national airline, Aer Lingus, to private investors.
- ¹⁴¹ This is further stimulated by a tax deferral, as shareholders of Japanese acquired firms receiving new shares do not necessarily pay the tax at the time of receipt of the shares.
- However, stock-swapping M&As by foreign companies are allowed only when their affiliates in Japan make deals on behalf of their parent firms.
- ¹⁴² “Business in Austria: not so welcome in Vienna”, *The Economist*, 31 March 2007.
- ¹⁴³ The so-called “Volkswagen Law” prevents mergers and investment in Volkswagen, the largest carmaker in the EU, as it caps voting rights and limits board seats at Volkswagen.
- ¹⁴⁴ In addition to the Economic Report of the President, the Department of Commerce launched the *Invest in America* initiative in March 2007. This initiative will reach out to the international investment community, serving as ombudsman in Washington, DC, for the concerns of the international investment community, and will support state and local governments engaged in foreign investment promotion (“Commerce to launch new Federal Initiative to attract foreign investment”, *Press Release* 7 March 2007, Department of Commerce, Washington, DC).
- ¹⁴⁵ The Sarbanes-Oxley Act is a federal law in the United States which establishes new and enhanced standards for all United States public company boards, management and public accounting firms.
- ¹⁴⁶ The new EU-12 group comprises the 10 members that joined the EU in 2004, plus Romania and Bulgaria that joined in 2007.
- ¹⁴⁷ In the 10th Annual Global CEO Survey, 43% of the CEOs preferred Europe as their M&A destination, followed by Asia and then North America (PricewaterhouseCoopers, 2007a); a survey by Ernst and Young indicated that Western Europe maintained its lead as the most attractive global investment region with the United States second, and five countries in Europe figured among the global top 10, and Poland and the Czech Republic ranked 7th and 10th respectively (Ernst and Young, 2007).

PART TWO

TRANSNATIONAL CORPORATIONS, EXTRACTIVE INDUSTRIES AND DEVELOPMENT



INTRODUCTION

During much of the past two decades, transnational corporations (TNC) in extractive industries have attracted limited attention in analyses and in policy debates on issues relating to development. To some extent, this reflected the declining importance of those industries in the world economy and their shrinking share in global FDI, as well as the increasing emphasis placed on industrialization as a key aspect of the development process. However, the recent and significant revival of commodity prices has led to renewed interest in the exploitation of natural resources and in energy security. Following an extended period of low levels of international investment in extractive industries, significant changes are sweeping the landscape of FDI and TNC activity in these industries. It is therefore an opportune time to take a fresh look at this area, its implications for host-country development, and related policy challenges. Part Two of *WIR07* is devoted to this topic.

The renewed interest in the extractive industries partly reflects the structural shift that is occurring in the relative importance of various markets in the world economy. Rising demand for mineral resources from fast-growing markets in Asia has added to the persistent high levels of demand in developed countries, leading to a surge in mineral prices. In 2006, the price of crude oil reaches a level 10 times higher than its lowest point in 1998. Price increases have also occurred in metals such as aluminium, copper, nickel and zinc, and by June 2007 they were far higher than the levels prevailing in 2003. As a result, corporate profits in the extractive industries have soared and international investments have rebounded.

The boom in mineral prices has brought development issues related to the extraction of natural resources back into focus. The appropriate use of revenues from their exports could enable a number of mineral-rich developing countries to accelerate their development process. At the present juncture, given the shared objective of countries to accelerate the progress towards meeting the Millennium Development Goals set forth by the United Nations, it is timely to consider – once again and with the benefit of experience – how resource endowments can promote development.

Such an assessment needs to take into account the potential implications of involving TNCs in the process. During the past decade, TNC investments in the extractive industries have evolved in several respects, with a change in the distribution of such TNCs among home and host economies. New TNCs have surfaced in traditional as well as emerging market economies. A number of importing countries, anxious to secure continued access to mineral supplies, are encouraging their firms to invest abroad in extractive industries. Today, companies headquartered in developing and transition economies account for a noticeable share of TNC investments, including in the extractive industries (*WIR06*). In some of these, notably oil and gas, privately owned TNCs are now competing directly in overseas markets with State-owned companies from the South.

Mineral-rich developing countries see new economic opportunities and development prospects stemming from higher export revenues, but they are also increasingly aware of the potential adverse effects associated with resource extraction. Countries that allow foreign investment



in their extractive industries are seeking to strike the right bargain with the companies involved. This is particularly true for many of the world's poorest economies, for which oil, gas and various metals are by far the largest sources of export and government revenues.

The relationship between TNCs in extractive industries and host States is constantly evolving as countries seek ways of exercising control over their resources and maximizing retained gains, while at the same time drawing on the strengths of the TNCs. In the present decade, the bargaining power of mineral-exporting countries vis-à-vis mining TNCs is growing as a result of the higher mineral prices. Reflecting their improved negotiating position, several governments have recently changed their policies with respect to TNC participation with the aim of increasing their share of the windfall revenues created. At the same time, more and more countries are paying attention to the broader effects of resource extraction, including on the environment, human rights and other social dimensions, with a view to taking the necessary steps for promoting sustainable development.

Although investments in extractive industries account for a small share of global FDI flows, they constitute the bulk of the flows to many low-income economies, particularly in Africa. However, only a few African recipients of significant amounts of such FDI have been able to transform it into broader development gains; instead most of them score low by various measures of development. For example, Angola, Equatorial Guinea, Nigeria and Sudan were among the top five sub-Saharan African host countries of inward FDI stock in 2005 (annex table B.2). They were also the top four sub-Saharan oil exporters. In terms of development, however, their performance has been disappointing. Their rankings out of 171 economies listed according to the Human Development Index of the United Nations Development Programme were: Equatorial Guinea - 121; Sudan - 141; Nigeria - 158; and Angola - 160 (UNDP, 2006).

Owing to the varying experiences of host countries and the failure of many of them to utilize the gains from TNC participation in export-oriented resource extraction for the purpose of accelerating their development, it is necessary to reconsider how foreign investment in the extractive industries can serve as an impetus to development. There are concerns that TNC involvement may not only fail to generate significant economic gains

for a host country, but may also have adverse environmental or social effects. On the other hand, many developing countries may not be able to fully exploit their resources without TNCs. The question is what various stakeholders – host countries, home countries, investors, the international community and civil society – can do to facilitate a development-friendly outcome. A range of international initiatives of relevance to the TNC-extractive industries-development nexus have been set in motion in the past decade. Some of them have been initiated by governments, and others by civil society and industry associations.

WIR07 examines the evolving role of TNCs in extractive industries, and revisits the issue of how investment and other relevant policies in this area may bring about greater development gains. The coverage is limited to minerals, more specifically oil, gas, diamonds and metallic minerals, which account for the bulk of FDI in the primary sector.¹ Chapter III defines the scope of the industries and activities covered, and discusses the recent commodity price boom, with particular attention to the interface between extractive industries and development. Chapter IV examines the trends and developments with respect to FDI and other forms of TNC involvement in extractive industries globally. It provides detailed information on the presence of the leading TNCs in key mineral-exporting countries, based on unique sets of data, with a focus on recent developments. It also discusses the main drivers and determinants of foreign investment in extractive industries, noting that these vary between different groups of TNCs. Chapter V analyses the economic, environmental and social impacts of TNC involvement in extractive industries on host countries. The concluding chapter (chapter VI) is devoted to the policy challenge. While recognizing that governments have the primary responsibility for ensuring that TNC involvement in mineral extraction translates into tangible development benefits – particularly in host countries – it explores the options available to various relevant stakeholders for contributing towards the achievement of that goal.

Note

¹ Agriculture, forestry and fisheries, which are also part of the primary sector, account for less than 1% of all primary-sector FDI from the EU and the United States, the main sources of such FDI.

CHAPTER III

FEATURES OF THE EXTRACTIVE INDUSTRIES

Access to a variety of minerals is important for all economies, not least for those that are at an early stage of development. The current commodity price boom has generated renewed interest in the links between extractive industries and development. The intertwining roles of markets, enterprises and States in the extractive industries vary with the specific nature of those industries. Global markets for mineral resources tend to be highly volatile, partly due to the often significant time lags in the supply response to changes in demand. Investments in the extractive industries are generally associated with high capital intensity and high risk, and are strongly influenced by political decisions, which in turn are considerably affected by swings in the market. When prices are high, governments have a strong bargaining position vis-à-vis the investors and vice versa. At the same time, there is a significant positive correlation between high prices and global investments in exploration.

For resource-rich countries, the price boom that started in 2004 has generated new development opportunities. However, the relationship between exploitation of mineral resources and the development performance of the exporting countries has varied considerably. Countries have to face several challenges beyond the economic concerns, extending to environmental, social and political dimensions. Such concerns vary, depending on the mineral resources and the countries. Many related challenges are linked to the specific features of the industry itself, independently of TNC involvement.

This chapter sets the stage for the analyses that follow in subsequent chapters of the role and impact of TNCs in extractive industries. Section A examines the evolving role of minerals in the world

economy and defines the scope of analysis by identifying the main minerals on which this Report focuses. It points out that the centre of gravity of supply and demand for many minerals has gradually shifted towards developing countries. Section B considers the functioning of mineral markets, highlighting the special characteristics of the most recent commodity price boom and its implications for global investment activities in the extractive industries. Section C outlines some of the main characteristics of investment in these activities and discusses the development opportunities and challenges facing resource-rich countries in the current era.

A. Extractive industries in the world economy

1. Minerals are essential for all economies

Minerals account for a small share of world production and trade.¹ Nonetheless, their supply is essential for the sustainable development of a modern economy. They are basic, essential and strategic raw materials for the production of a wide range of industrial and consumer goods, military equipment, infrastructure, inputs for improving soil productivity, and also for transportation, energy, communications and countless other services (Highley, et al., 2004). No modern economy can function without adequate, affordable and secure access to raw materials. This is easily taken for granted in “normal times”. However, when supply is disrupted or prices rise, affected countries are quick to react. Recent events in disrupted gas deliveries between



Box III.1. Definitions of extractive industries and minerals

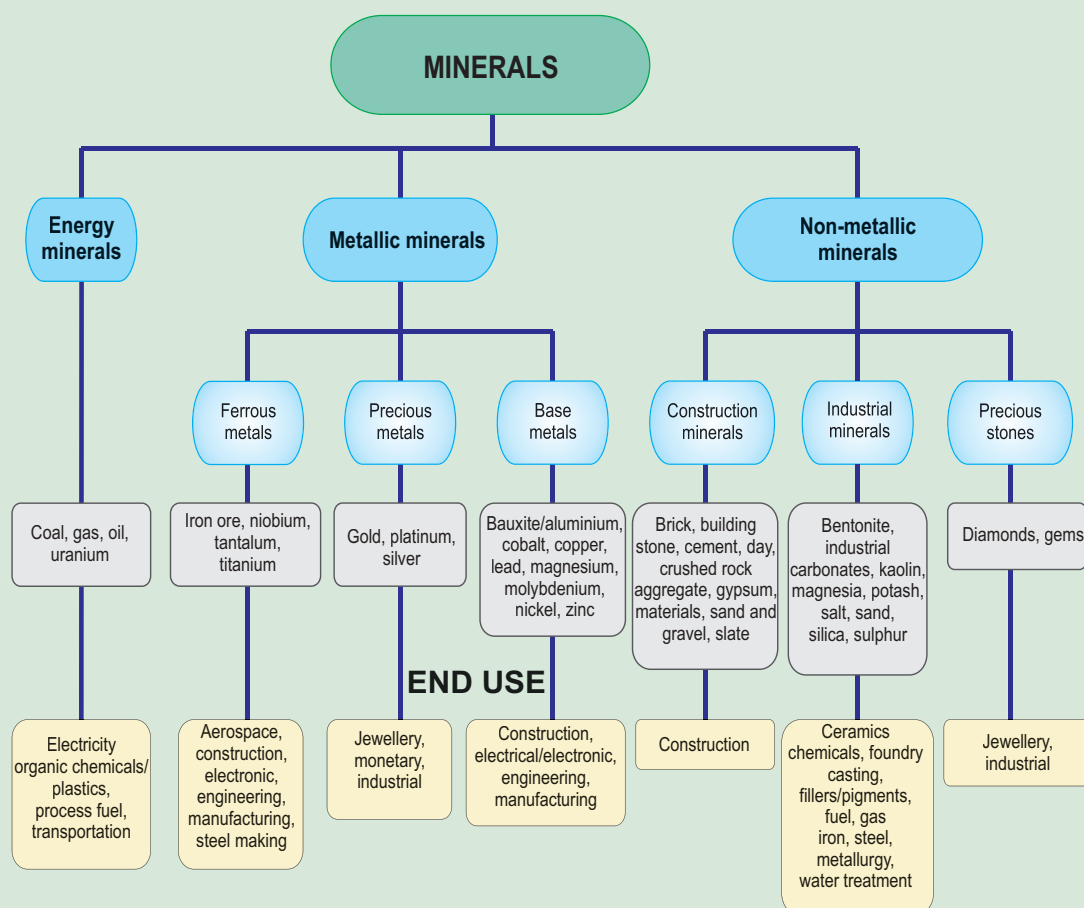
Extractive industries are defined in the *WIR07* as primary activities involved in the extraction of non-renewable resources.^a Thus they do not include such industries as agriculture, forestry and fisheries. The report also employs an economic definition of minerals.^b Economic minerals are those that can be marketed for productive purposes. They can be classified into three main categories (box figure III.1):

- o Energy minerals (oil, gas, coal and uranium),
- o Metallic minerals, and
- o Non-metallic minerals (industrial and construction minerals and precious stones).

An important dimension of economic minerals is the way in which they are traded (IIED, 2002). Globally traded minerals have a high enough value per unit weight to be sold in global markets. They include gold, diamonds, copper and aluminium. Oil and gas also belong to this category. Less globally traded minerals have a sufficiently high value per unit weight to be marketed regionally (some grades of coal, limestone and steel), but seldom globally. Locally traded minerals, mainly sand, gravel and stone, have a very low value per unit of weight.

The present report focuses on the most tradable energy and metallic minerals: oil and gas among the energy minerals; and iron ore (ferrous metals), gold (precious metal), and copper, bauxite/aluminium, zinc and nickel (base metals) among the metallic minerals. Metallic minerals account for about 25% of the total value at the mine stage of global mineral production (excluding oil and gas). Given their importance for selected developing countries and their high tradability, diamonds are also included in the analysis.

Box figure III.1.1. Minerals and their use



Source: UNCTAD.

^a See http://glossary.eea.europa.eu/EEAGlossary/E/extractive_industr. It should be noted that metals are not destructible.

^b Other definitions of minerals are based on geological, legal or biological-medical considerations.

the Russian Federation and Ukraine as well as concerns over the rising oil and gas prices are vivid illustrations. It is therefore not surprising that energy security has resurfaced to the top of the international political agenda, as witnessed, for example, in the G8-summit in Heiligendamm in June 2007 (G8 Summit, 2007).

This report focuses on extractive industries (box III.1), with special attention to energy minerals, notably oil and gas, and to the following metallic minerals: bauxite/aluminium, copper, iron ore, gold, nickel and zinc, and diamonds. Their selection reflects their importance in global mineral production, the role of TNC involvement in their extraction and their tradability at the global level. Throughout this report, a distinction is made between the oil and gas industry, and the metal mining industry.

These two categories of extractive industries are of quite different magnitude. Global production of crude oil and natural gas amounted to an estimated \$2.3 trillion in 2005.² By comparison, global production (at mine site) of metallic minerals was valued at about \$265 billion the same year.³ Commercially, a few metals dominate the metal mining industry. The three most important ones – iron ore, gold and copper – account for some 50% of the total value of metallic minerals produced, followed by nickel and zinc (which represent only about 8%) (table III.1). Bauxite is low on the list mainly because most of the value added in aluminium is created at the refining (alumina production) and smelting (aluminium production) stages (see below). These six metals are economically the most important. Moreover, in most cases, foreign affiliates play a significant role in their global production, their share being more than 50% in bauxite copper and gold production, 36-37%

Table III.1. Most important metals in world mining, 2005

Metal	Share in total value of metallic mineral production ^a (%)	Volume of output (metal content in kilotonnes)	Share of foreign affiliates in world production ^b (%)
Iron ore	21.9	800 000	21
Copper	18.0	16 900	56
Gold	13.5	3	50
Nickel	4.9	1 300	36
Zinc	3.4	10 300	37
Bauxite	1.5	31 000	60
Others	36.8	..	..
All metals	100.0	..	..

Source: UNCTAD, based on data from the Raw Materials Group.

^a Estimates.

^b Foreign affiliates are considered to be those with at least 10% foreign ownership.

in zinc and nickel production, and about 20% in iron ore production.

The metallic mineral industry involves five main stages: exploration, development, mining, processing (smelting and refining) and mine closure. The share of the value added at the various stages of extraction depends on the specifics of each process from mine to metal (table III.2). If the smelting and refining steps are complicated and/or very energy-intensive, the costs of these latter stages may be considerable compared to the mining stage, and hence less value is added at the mining stage. For example, in the case of bauxite/aluminium, less than 10% is created at the mining stage. Gold and the platinum group metals represent the other extreme, as the product at the mining stage

Table III.2. Share of value added at the mining stage of selected metals,^a 2005/2006 (Per cent)

Metal	Share of value added at the mining stage
Gold	100
Platinum group metals	100
Tin	83
Copper	77
Lead	77
Nickel	70
Zinc	63
Cobalt	33
Bauxite/aluminium	9

Source: UNCTAD, based on data from the Raw Materials Group.

^a Estimates.

needs very little further treatment in a specialized refinery. The base metals, copper, lead and zinc are in between, with the product at the mining stage – the concentrate – accounting for most of the value.

In the case of oil and gas, refining applies mainly to oil, but a certain proportion of the natural gas is also used in “gas-to-liquids” plants in which high-quality oil products are produced.

Petroleum refining is the separation and processing of crude oil into three types of products: fuels,⁴ finished non-fuel products,⁵ and chemical industry feedstocks.⁶ The transport part of the value chain is different for oil and gas, respectively. Oil is traded worldwide as it can be easily stored and transported via pipelines, railway, tankers and trucks. Gas, which is more difficult to store and transport, is generally transported between neighbouring countries via pipelines. For long-distance transportation and trade it usually takes the form of liquefied natural gas (LNG). LNG supply involves liquefaction, maritime transportation and re-gasification at the receiving end, where it is connected to the traditional transmission pipelines, storage facilities and distribution networks.⁷ The share of LNG in total gas trade, which was 35% in 2005 (BP, 2006), is expected to increase, with total liquefaction capacity worldwide set to double between 2005 and 2010 (IEA, 2006a).

2. Geography of production and consumption of selected minerals

The world mineral market is characterized by an uneven geographical concentration of resources, production and consumption. The major producers are mainly from developing and transition economies and are net exporters, while the major consumers are mainly from developed countries and rely heavily on imports. Since the 1990s, some Asian developing countries have significantly increased their consumption of minerals to help fuel their booming economies, and are now among the leading consumers and importers.

Oil and gas reserves are highly concentrated in West Asia: its share in world total proven and probable reserves was 62% for oil and 40% for gas at the end of 2005. However, in terms of oil and gas production, West Asia's share was only 23% in 2005. In contrast, developed countries that only accounted for 6% and 8% of global reserves of oil and gas respectively, had a significant 25% share in global oil and gas production (table III.3). For natural gas, the Russian Federation has the largest reserves (27% of the world total) and the highest production (22% of the world total).⁸ The Persian Gulf region, which accounts for only 10% of world gas production,⁹ is set to increase this share as trade in LNG expands.

Developed countries and South, East and South-East Asia are two groups of countries for which the share in world consumption is greater than in world production and reserves. The gap is larger for developed countries, but is growing rapidly for Asian countries (table III.3).¹⁰ This explains why exploration activity is highly concentrated in developed countries where around 70% of new fields are drilled. Among developing countries, exploration activities are mostly concentrated in South, East, and South-East Asia (table III.3).

For metallic minerals, the picture varies by commodity. However, with few exceptions, developed countries and developing Asia consume more metals than they produce, while the converse applies to Africa, Latin America and the Caribbean, as well as to South-East Europe and the Commonwealth of Independent States (CIS). It is interesting to

note, however, that the share of developed countries in the consumption of iron ore, copper and zinc fell significantly in 2005 from that of a decade ago. This was compensated by a strong increase in the share of developing Asian countries for these metals. Also worth noting is the strong increase in the participation of developed countries in iron ore production, to the detriment of Latin American countries and economies in transition and of developing Asia in gold, zinc and bauxite production (table III.4).

For many developing countries, minerals are the most important export products. The heavy reliance on minerals is particularly pronounced among oil-producing countries in Africa and West Asia (table III.5). African and Latin American countries are endowed with diverse minerals, ranging from precious minerals to ferrous and industrial minerals. Africa dominates the world's supply of precious metals and stones, such as platinum, diamonds and gold, of which it is the leading producer, while Latin America is the leading producer of such metals as copper and silver (USGS, 2005).

B. The commodity price boom and its impact on investments

Mineral markets are volatile. The most recent commodity price boom has had a major impact on corporate investment behaviour as well as on government policies. It is therefore important to understand the underlying forces behind the recent

Table III.3. Reserves, production, consumption, and exploration of oil and natural gas, by region, 1995 and 2005

(Per cent)

Economy	Oil and gas						Reserves at end 2005 ^c	
	Exploration ^a		Production ^b		Consumption ^b		Oil ^b	Gas ^b
	1995	2005	1995	2005	1995	2005		
	Share in total number		Share in total volume					
Developed countries	67	71	31	25	56	52	6	8
Developing countries	29	23	49	54	29	36	84	59
Africa	4	6	8	10	3	3	10	8
Latin America	7	6	10	11	7	7	10	4
Developing Asia	17	11	31	33	20	26	65	47
West Asia	2	3	21	23	7	9	62	40
South, East and South-East Asia	15	8	10	10	13	17	3	7
South-East Europe and CIS	5	6	19	20	14	12	10	31
Russian Federation	3	3	16	16	9	8	6	27
Total world	100	100	100	100	100	100	100	100

Source: UNCTAD based on data from IHS Energy and BP, 2006.

^a Shares calculated on the basis of the number of new fields drilled.

^b Shares calculated on the basis of volume.

^c The reserves are proven and probable ultimate recoverable reserves, i.e. the volume that it is expected will be recovered from the deposit over its entire production lifetime. Proven and probable implies a confidence level of 50%.

Table III.4. Production and consumption of selected metallic minerals, 1995 and 2005
(Per cent)

Metal	Developed countries		Africa		Latin America and the Caribbean		Developing Asia		South-East Europe and the CIS		All regions	
	1995	2005	1995	2005	1995	2005	1995	2005	1995	2005	1995	2005
Iron ore production	17	29	6	4	31	24	27	29	19	14	100	100
Pig iron production ^a	37	29	2	1	8	5	39	52	14	13	100	100
Copper production	41	43	6	9	19	21	12	6	22	21	100	100
Copper consumption ^b	64	46	1	1	5	6	28	42	2	5	100	100
Gold production	34	28	30	21	12	18	14	23	10	10	100	100
Gold consumption	37	39	3	4	2	2	56	53	2	2	100	100
Nickel production	31	30	6	5	12	17	28	26	23	22	100	100
Nickel consumption	52	50	5	3	10	13	10	12	23	22	100	100
Zinc production	45	36	4	4	23	21	22	32	6	7	100	100
Zinc consumption	57	42	2	2	15	8	19	39	7	9	100	100
Bauxite production	39	36	15	10	28	27	12	19	6	8	100	100
Alumina production ^c	40	48	2	1	28	20	14	19	16	12	100	100

Source: UNCTAD, based on data from the Raw Materials Group, Virtual Metals and Bloomsbury Minerals Economics Limited.

^a Pig iron production (iron content) is used as a proxy for iron ore consumption.

^b The first column's data for each region are for 1996.

^c Aluminium production is used as a proxy for bauxite consumption.

Table III.5. Developing and transition economies with highest dependency on exports of minerals
(Per cent of total exports, 5-year average (2000-2004))

Sorted by fuels ^a			Sorted by non fuel minerals ^a		
Economy	Fuels	Product description	Economy	Ores and metals	Product description
Algeria	97.8	Oil and gas	Guinea ^{bc}	89.8	Bauxite, alumina, gold and diamonds
Nigeria ^b	97.8	Oil	Botswana ^d	87.2	Diamonds, copper, nickel
Libyan Arab Jamahiriya ^e	96.9	Oil	Suriname ^b	70.0	Alumina (aluminium oxide)
Yemen	93.3	Oil and gas	Zambia ^b	61.5	Copper, cobalt
Kuwait ^b	92.9	Oil	Jamaica	60.8	Alumina, bauxite
Angola ^f	92.2	Oil	Niger ^b	46.1	Uranium and gold
Qatar	89.1	Oil, petrochemicals	Chile	45.0	Copper
Saudi Arabia ^b	88.9	Oil	Mozambique ^b	42.3	Aluminium
Brunei Darussalam ^b	88.3	Oil	Papua New Guinea ^b	38.6	Gold, copper
Azerbaijan	86.6	Oil	Congo Republic ^g	34.0	Various metals
Iran, Islamic Rep. of ^b	86.3	Oil and gas	Ghana ^h	33.3	Gold
Venezuela	83.4	Oil	Cuba	33.2	Nickel
Turkmenistan	81.0	Gas	Peru	32.9	Gold, copper, zinc
Oman	80.6	Oil	Rwanda ^{bi}	32.2	Various metals
Gabon	79.5	Oil	Uzbekistan	30.3	Gold
Sudan ^b	74.2	Oil	Georgia	24.9	Various metals
Syrian Arab Republic	72.8	Oil	South Africa ^c	21.7	Platinum, gold
Bahrain	70.5	Oil	Bolivia	19.1	Zinc, gold
Trinidad and Tobago ^b	61.3	Oil and gas	Kazakhstan	18.0	Various metals
Kazakhstan	56.1	Oil and gas	Bahrain	16.8	Aluminium

Source: UNCTAD, calculation based on COMTRADE database and other sources.

^a Fuels include SITC 3. Ores and metals include SITC 27+28+68 and, when relevant, diamond ore has been added.

^b 2 to 4 year average.

^c The Economist Intelligence Unit.

^d Bank of Botswana, Financial Statistics.

^e Derived from OPEC, Annual Statistical Bulletin.

^f IMF, Staff Reports.

^g IMF, Direction of Trade Statistics.

^h IMF, Ghana statistical annex.

ⁱ IMF, Direction of Trade Statistics.

surge in commodity prices and to examine recent developments from a historical perspective.

1. Booms and busts of mineral prices

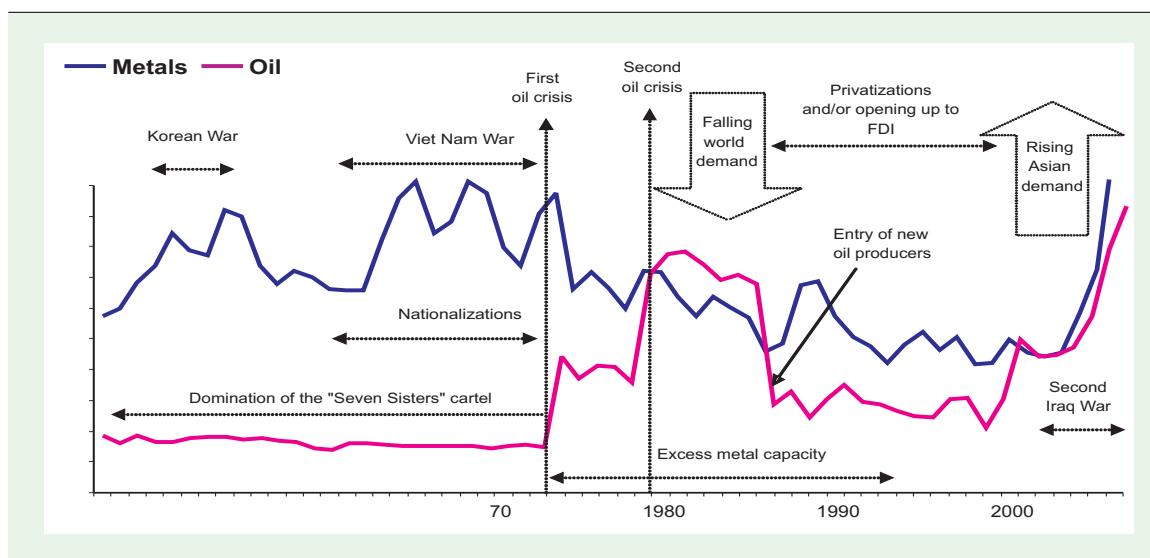
Mineral prices since the Second World War have been very volatile in response to changes in market conditions. 1974 mark the end of the 30-year “golden period” of strong world economic growth, and high demand for minerals that began after the Second World War (figure III.1). During the period 1950–1973, crude oil prices were effectively controlled by the so-called “Seven Sisters” and remained practically constant in real terms.¹¹ During the same period, metal prices were subject to considerable fluctuations around an upward trend. Positive and increasing long-run growth rates were viewed as a durable feature of mineral markets (Tilton, 1990), and the prevailing preoccupation was the risk of a rapid rise in demand for minerals in developing countries.¹²

From the first oil crisis in 1973–1974 until the early 1980s, oil prices began to climb steeply, largely as a result of increased market control by the Organization of the Petroleum Exporting Countries (OPEC).¹³ Metal prices, on the other hand, began a long-term declining trend that reflected several factors, including slower world economic growth, reduced intensity of metal use in many countries (Tilton, 1990), acute competition among producers,

and the build-up of huge excess supply capacity.¹⁴ Crude oil prices also began to decline in real terms in 1985, following the discovery of new reserves in non-OPEC countries such as Angola (now an OPEC member), Mexico, Norway, the then Soviet Union and the United Kingdom. These new sources of supply reduced the market control of OPEC, whose share of world crude production dropped from 53% in 1974 to 30% in 1985 (ECLAC, 2002). The depressed mineral prices of the 1980s and 1990s had important consequences: instead of being regarded as strategically important to economic development, oil and metals were increasingly treated as simple commodities. This “commoditization” of both oil and metals influenced governments’ policy orientations, and contributed to a trend of privatizations, deregulation and increased openness to FDI in several developing and transition economies, especially in metal mining (see chapters IV and VI).

It is only in recent years that the gradual decline in mineral prices has been reversed. For oil, the turning point came in 1999, when prices increased as a result of an agreement signed in 1998 between the OPEC and non-OPEC producers – Mexico, Norway, Oman and the Russian Federation – to reduce supply.¹⁵ From 2003, the geopolitical instabilities in West Asia contributed to a further surge in the price of crude oil (figure III.1).¹⁶ For metals, the long-lasting decline in prices came to an abrupt end in 2004.

Figure III.1. Real price index of crude oil and metallic minerals, 1948-2006
(Base year 2000 = 100)



Source: UNCTAD and Radetzki, forthcoming.

Note: The metals price index includes the following minerals with their respective weights: copper (38.89%), aluminium (23.93%), iron ore (13.65%), zinc (7.22%), nickel (6.70%), tin (3.62%), phosphate rock (2.67%), lead (2.10%), manganese ore (1.20%), tungsten ore (0.02%). The crude petroleum price index reflects the average of Dubai, United Kingdom Brent and West Texas Intermediate crude prices, with relatively equal consumption of medium, light and heavy crudes worldwide. The deflator used is the unit value index of manufactured goods exports by developed countries.

The price boom took most observers by surprise. It was driven by very strong demand coupled with supply constraints. Unlike earlier boom periods, growth in demand this time came mainly from developing countries. China, in particular, is currently experiencing a resource-intensive growth phase;¹⁷ in addition, the country's economy has been growing more than three times that of the world economy over the past decade (UNCTAD, 2007f). It has therefore become a major engine of world mineral demand growth: in 2005, it accounted for 29%, 66% and 25%, respectively, of the growth of oil, copper and nickel demand, and its share in total world demand for oil, copper and nickel was 8.5%, 22% and 16% respectively (BP, 2006; Goodyear, 2006).¹⁸

The price rises were also due to slow supply responses. The extended period of low mineral prices had led to reduced investment in human resources, production and refining capacity, resulting in a significant decline in spare supply capacity. Many high-cost production installations were closed in the process.¹⁹ Thus, when demand suddenly surged, there was little idle production capacity left to satisfy the growing consumption.²⁰ Moreover, shortages and rising costs of inputs caused further delays in the expansion of supply capacity (table III.6). Low levels of stocks, geopolitical instability and

unpredictable events, such as strikes and hurricanes, put additional upward pressure on prices.²¹

2. The boom led to rising profits and investments

The recent boom in mineral prices prompted a worldwide investment surge, fed in part by rising profits. Despite cost increases of many inputs, the profitability of mineral producers has risen fast. *Fortune Global 500* companies in extractive industries reached exceptionally high profitability in both 2005 and 2006, compared with large companies in other industries, as well as historically (figure III.2). The net profits of ExxonMobil for 2006 were the highest ever reported by a United States corporation. A study covering some 80% of the world metal mining industry by capitalization found an increase in net profits, from \$4.4 billion in 2002 to \$67 billion in 2006 (PricewaterhouseCoopers, 2007b).

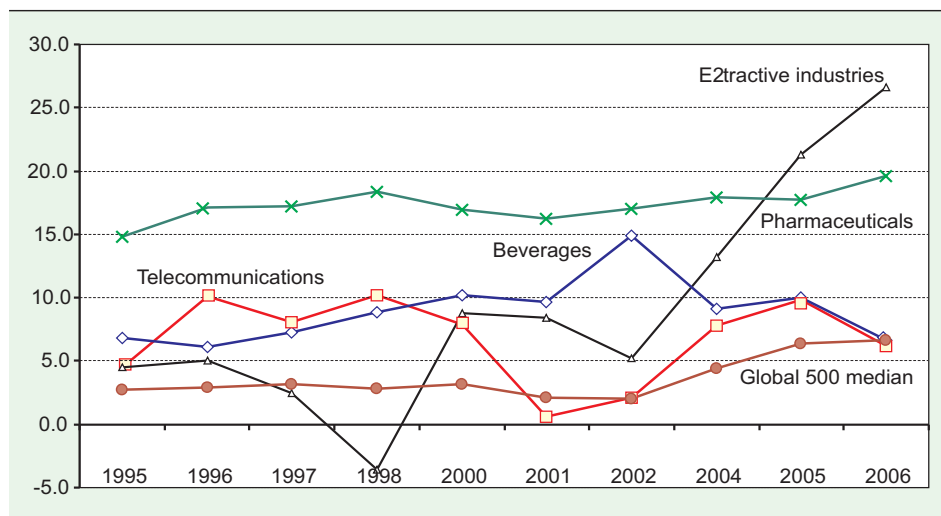
To take advantage of the high commodity prices, firms were eager to expand their production facilities as fast as possible. The intensity of investment and production activity has taken several tracks. As noted above (table III.6), this may have exhausted a number of immediately available key inputs in mineral resource investments.

Table III.6. Supply delays: selected examples
(Month)

Item	Pre-boom lead times (in month)	Lead times, early 2007 (in month)
Grinding mills	20	44
Draglines	18	36
Barges	24	32
Locomotives	12	26
Power generators	12	24
Wagons	12	24
Rope shovels	9	24
Reclaimers	18	24
Tyres	0-6	24
Large haul trucks	0-6	24
Crushers	16	24
Ship loaders	8	22

Source: Rio Tinto, 2007.

Figure III.2. Profitability of Fortune Global 500 companies in extractive industries and other industries, 1995-2006
(Profits in percentage of revenues)



Source: UNCTAD, based on data from the Fortune Global 500 (various years).

Note: Profitability is measured as the ratio of profits to revenues of companies in the Fortune 500 Global, in their respective activity. The common denominator in defining revenues for different industries is income, including sales. Profits are calculated after taxes, and after extraordinary credits or charges that appear in the income statement. For 2006, data for the 1,000 largest corporations in the United States have been used as a proxy.

Oil and gas drilling operations have doubled since 2002, and the number of active rigs has been the highest in 20 years: in mid-2006, the rig utilization rate was estimated at 92%. This intense activity has helped push up costs. For example, drilling day rates have risen by 10–15% per year since 2003 (IEA, 2006b). Companies are scouring the global labour markets for oil and mining engineers, as the dearth of specialized manpower is creating a bottleneck in the execution of investment projects (IMF, 2006).

Supply constraints notwithstanding, the volume of new oil production capacity is expected to grow. According to one study, for the 5-year period 2006–2010, global oil production capacity is projected to increase by 11.7 million barrels per day (mbd), of which no more than 3.8 mbd will be additional oil supplied by the OPEC countries (IEA 2006a). Global demand in the same period is expected to rise by 8.1 mbd, thus relaxing the capacity constraint by 3.6 mbd. Other studies corroborate these findings.²² However, other observers have warned that supply constraints may result in a further tightening of oil market fundamentals (UBS, 2006; IEA, 2007).²³

Investments in expansion of capacity are growing in the metallic mineral industries as well. At the downstream level, refined copper capacity is expected to rise substantially faster than demand during the period 2005–2009, and from 2006 increasing surpluses are anticipated in the copper market (CRU, 2006). A similar situation is expected in the case of nickel from 2007 to 2010.²⁴ In the iron ore market, a turnaround to surplus is expected only in 2009/2010 (UNCTAD, 2007h).

At the upstream level, global private exploration investment in non-ferrous metals rose from \$2 billion in 2002 to more than \$7 billion in 2006, and it is expected to reach \$9 billion in 2007

(figure III.3). Between 2001 and 2005 investment more than doubled in a number of major mineral-rich countries, including Argentina, Canada, Mexico, the Russian Federation, South Africa and the United States (Humphreys, 2005). Among the most important developments in recent years has been the growth of exploration in China, Mongolia and the Russian Federation. Their combined share of global private, non-ferrous exploration expenditures rose from 4% in 2000 to 12% in 2006 (MEG, 2006). However, the level of success in metallic mineral exploration has been low. Indeed, since 1998, only four world class deposits have been discovered by new exploration (figure III.3).²⁵ While reserves may expand as a result of additional finds in and around already existing mines, it is likely that new metal deposits will be located deeper and in more remote areas, and will be of lower grade. As recently summarized by a mining industry expert (Humphreys, 2006: 5):

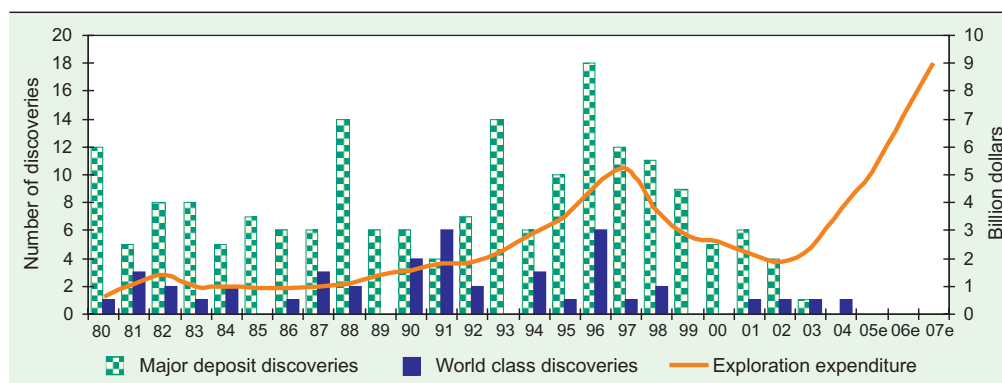
“The cost of finding economic deposits of base metal minerals appears also to be rising... Moreover, the failure of exploration to turn up new monster deposits of the likes of Carajas, Escondida, Grasberg and Norilsk in recent years has resulted in a growing perception that finding and developing very large projects in the future is going to be much more challenging than in the past. Most of the low hanging fruit appears to have gone.”

3. Prices likely to remain high for some time

Some factors suggest that the price boom may reflect a “structural” shift. On the demand side, the economic ascendancy of China, India and other developing countries, along with the resource-

Figure III.3. Number of major discoveries and private non-ferrous mineral exploration expenditure, 1980-2007

(Billion dollars and number of discoveries)



Source: UNCTAD, based on Mineral Economic Group, 2006; and data provided by the Raw Materials Group and BHP Billiton.
e Estimates.

intensive stages of their current development phase could well result in a long-running acceleration of commodity demand growth. This can be seen as a new stage in international commodity markets, with prices remaining at unprecedentedly high levels.²⁶ Another argument suggesting a structural shift is that depleting natural resources are increasing the cost of new output and, in the case of oil, increasing the dependence on the politically unstable West Asian region, with an unavoidable upward price push (see, for example, Deffeyes, 2005; and Laherrere, 2005), at a time of rising demand from large emerging market economies. Increased State involvement in metal mining and oil extraction may result in political factors having a greater influence on production decisions, and it may limit foreign TNCs' access to mineral deposits.

Other experts question the relevance of such observations and tend to play down the threat of depletion, even in the distant future.²⁷ Some of them have also cautioned that expectations of future global commodity demand growth may be exaggerated.²⁸ According to one corporate assessment, expanding output in response to higher prices should mean that prices move back towards marginal costs of production (Rio Tinto, 2007). Still, the period over which this can be expected to happen – which varies from commodity to commodity – is likely to be longer in this current cycle than ever before.²⁹

In conclusion, there are contradictory perspectives regarding the evolution of mineral prices. In the short term, although global economic growth may have peaked in 2004 and, in particular, the United States economic expansion slackened during 2006, there are no indications of an impending worldwide recession. On the supply side, the extended gestation period of mining projects due to the shortage and rising costs of inputs may

well delay the build-up of a sizeable inventory that could relax the supply constraints. Nevertheless, in the medium term there is the likelihood that most of the ongoing investments will materialize, and that the investment plans may even expand further, if prices remain for some time at the elevated levels of 2006. Thus, unless global economic growth slows down, prices may continue to remain relatively high until there is overcapacity in the oil, gas and mineral industries. This may not happen until the beginning of the next decade.³⁰ In the longer term, price behaviour will depend upon the demand and depletion rates as well as on new discoveries. However, industry experts seem to be certain that future deposits will be more expensive to develop, which should keep prices relatively high.

C. Extractive industries: opportunities and challenges for development

1. Characteristics of investments in extractive industries

Investments in extractive industries have particular features, relevant for their development impact. The extraction of mineral resources is largely dominated by large-scale, capital-intensive investments, although artisanal and small-scale mining can be important in some countries and for some specific minerals (box III.2). Some projects are technologically challenging, and investments in them are characterized by a high degree of uncertainty and long gestation periods. In most developing countries – except for China and India

Box. III.2. Artisanal mining

There are an undefined number of small- and medium-scale non-fuel mining enterprises all over the world producing mainly gold, but also precious stones, iron ore and other minerals. They include artisanal and small-scale miners such as the Brazilian garimpeiros (illegal gold miners), the West African orpailleurs (artisans that extract gold, mainly by washing alluvia) and the Chinese backyard iron ore mines set up during Mao's "Great Leap" campaign, many of which are still operating. In 2005-2006 alone, several thousand iron ore mines were opened in China and India. Box table III.2.1 provides estimates of gold production by artisanal miners for selected countries in Africa and Latin America.

Source: UNCTAD.

Box table III.2.1. Artisanal gold production,^a 2005
(Tons)

Country	Artisanal production	Total production
Argentina	0.2	27
Bolivia	3.5	9
Brazil	6.1	35
Colombia	21.6	37
Dem. Rep. of the Congo	2.0	5
Ecuador	3.0	4
Ghana	6.9	65
Kyrgyzstan	1.4	17
Mali	1.8	46
Mexico	7.4	32
Niger	0.5	4
Papua New Guinea	3.2	69
Philippines	1.2	6
United Rep. of Tanzania	5.0	49

Source: UNCTAD, based on data from the Raw Materials Group.

^a Estimates.

where production is consumed or used domestically – mineral extraction is primarily an export-oriented activity, with significant scope for revenue creation, but limited opportunities for employment creation and local linkages. In addition, mineral extraction poses considerable threats to the local environment and may have adverse social implications. Finally, mineral resources are non-renewable and often of strategic, geopolitical importance. As a result, the level of State involvement tends to be high, especially in the case of oil and gas (see chapter IV).

Mineral extraction is capital-intensive. Building a large base-metals mine can cost over a billion dollars. The magnitude of investments in the oil and gas industry is even greater. Constructing a pipeline, developing an oil deposit or revitalizing an ailing, underinvested mineral industry can run into many billions of dollars.³¹ Such kinds of investments in developing countries generally require the involvement of a State-owned enterprise (SOE) that can rely on the financial support of the government, or of TNCs. Not all developing countries, especially among the least developed countries (LDCs), have – or can obtain – the financial resources needed for such investments, either from national SOEs or from national private firms, and have resorted to attracting investments from TNCs. One alternative to TNCs for capital may be to borrow from a lender prepared to accept the high-risk entailed in such investment (e.g. national or regional development banks or the World Bank).³²

Some projects are more technologically challenging than others. In metal mining, most technology can be acquired in the market, and there are generally few differences in the approaches taken by different mining companies. The challenge is in this case related more to the management of projects with long gestation periods, and the need to give due attention to their environmental and social impacts. In oil and gas extraction, the level of technological complexity is particularly high for offshore, deep-sea extraction, whereas onshore extraction is less technologically challenging.

Special consideration should be given to the long gestation periods often involved in extractive projects. The exploration phase may take up to 10 years, and in many cases such investments eventually turn out to be unsuccessful.³³ On average, the costs associated with failure reduce the expected economic returns of exploration. For the exploration projects that result in discoveries, the potential rewards can, however, be considerable (Land, 2007; Goodyear, 2006).

Even if the exploration is successful and a new mine is developed and brought into production, the investor still faces various technical risks,³⁴

market risks (related to demand and price forecasts), political risks (e.g. changes in mining laws, nationalizations), and social and environmental risks. In developed countries, it has become increasingly difficult for mining companies to gain legal access to land and maintain that access (Otto, 2006). If undertaken in countries with a weak institutional framework, the political, social and environmental risks can be very costly in terms of delays, negative publicity, risks of losing their operating licence and significant unforeseen expenditures.³⁵ Indeed, effective management of the social, environmental and other risks is likely to become a source of competitive advantage for firms (Howard, 2006).

When prices are high, companies have a higher propensity for risk. “Certain countries such as Peru, Russia and China, which are generally considered higher risk, are receiving a greater proportion of exploration dollars because of their mineral prospectivity. Companies are willing to accept that risk in the search for reserves, particularly in the current environment of high commodity prices.” (PricewaterhouseCoopers, 2006: 23). In periods of low prices, the profitability of resource extraction projects tends to decline, reducing the bargaining position of a country to attract investment. However, once the investment is made and the mines or wells are successfully working, the high fixed costs, which gave the foreign company bargaining strength at the beginning of the investment, can become a source of vulnerability. If stricter conditions are imposed, for example, the company may have little choice but to accept them, because it cannot easily withdraw.

Another characteristic of extractive industries is the potential for sizeable mineral rents. Metallic mineral and hydrocarbon deposits are heterogeneous, characterized by large differences in production costs depending on their quality and accessibility. The rent is generally higher for oil and gas extraction, partly because OPEC keeps oil prices above the cost of the least productive field. A huge Saudi Arabian oilfield is capable of generating significant volumes of crude oil over a sustained period under its own pressure, resulting in very low extraction costs per barrel of oil. The same barrel of oil is recovered from a deep offshore field at a much higher cost.³⁶ In the metal mining sector, mineral grade variation, coupled with mineralogical conditions, can also be significant (Land, 2007).³⁷

Finally, minerals are often perceived as being of strategic importance both by producer and consumer countries. First, minerals may be strategic for military, industrial or essential civilian needs. Secondly, specifically from a producer point of view, their non-renewable character gives them a

strategic dimension. Energy minerals (especially oil and gas) are geographically more concentrated (table III.3), and thus strategically important in terms of energy security. This dimension partly explains the significant role of SOEs in the oil and gas industry (chapter IV).

2. Public policy concerns of mineral-rich countries

Mineral wealth can be a source of income and prosperity and an opportunity for economic development. However, resource abundance does not automatically translate into economic prosperity, and exploitation of non-renewable resources poses serious challenges to long-term sustainable development prospects. As defined by the World Commission on Environment and Development of the United Nations, sustainable development means “development that meets the needs of the present without compromising the ability of the future generations to meet their needs” (United Nations, 1987). Economic and social development, and environmental protection are seen as the three “interdependent and mutually reinforcing pillars” of sustainable development (United Nations, 2005a). Mineral extraction activities can have significant implications for all three pillars.

Although all human activities should, ideally, meet the criteria of sustainable development, this concept is particularly applicable to extractive activities because they concern intensively consumed, non-renewable resources, and their overexploitation can compromise their possible use – or the use of the revenues generated – by future generations.

This section focuses on development opportunities and challenges that mineral wealth represents for resource-rich countries, regardless of which economic agent is exploiting it. Therefore it does not address the specific impacts on host countries of TNCs’ involvement in the extractive industry – an issue that is examined more closely in chapter V.

a. Mineral endowments represent development opportunities

Successful mineral-based development, as in developed countries such as Australia, Canada, New Zealand, Norway, Sweden and the United States, has not been merely a matter of geological endowments; rather, it has resulted from the existence and continuous development of human resources and skills, learning and innovation around the extractive activities (Ramos, 1998). For example, natural

resource abundance in the United States was more an endogenous, “socially constructed” condition, than a natural endowment alone (David and Wright, 1997). Better scientific understanding and engineering knowledge can contribute to increasing the amount of proved reserves, improve extraction and refining technologies, and widen the scope of end-use and commercial utilization.

A number of today’s upper-middle and high-income developing countries (e.g. Botswana, Chile, Indonesia, Kuwait, Malaysia, Saudi Arabia, South Africa, the United Arab Emirates and Venezuela) have managed, in varying degrees, to take advantage of their natural wealth in order to advance at least certain aspects of development (such as increasing per capita income, reducing poverty, and, in some cases, achieving economic diversification).³⁸ For many other resource-rich developing countries, the impact of mineral wealth on development has been disappointing. Many low-income countries heavily dependent on exporting natural resources “have performed poorly on various measures of economic, social and political development” (Pegg, 2006: 1). This phenomenon is regularly referred to as the “resource curse” (box III.3).

However, the development experience of mineral-rich developed countries is hardly reproducible in the present global context, and resource-rich developing countries may have to find original ways to leverage their natural resources for sustainable development. Developed countries used most of their mineral extraction locally, and local processing as well as inputs were protected by high transportation costs. Today, with relatively low transportation costs and globalized markets, it is more difficult to compete with imported products. Moreover, the intensive exploitation of mineral resources in developing countries has taken place at an earlier stage of their development, to respond to the needs of external, rather than domestic, users. It has thus preceded the development of national human resource capabilities that could help build an integrated mineral activity and create endogenous learning and innovation around it.

This new global context may limit the relative capacity for mineral-rich countries to benefit from their mineral endowments. Therefore they need to devise an overall development strategy for leveraging their non-renewable mineral wealth, not only to improve their present situation but also to ensure sustainable development for the benefit of future generations. In this regard, one important objective should be to build a diversified economy through investment in human capital, infrastructure and productive capacity.

Box III.3. The “resource curse” debate

There is a large body of theoretical and empirical literature that has addressed the role of mineral resources in economic development. Some experts cite evidence to suggest that countries that are rich in minerals have been worse off than less endowed countries in terms of various economic, social and political performance measures. Other experts argue that mineral resources represent a potential source of growth and development if managed well.

In a widely cited study covering a sample of 95 developing countries, a negative relationship was found between natural-resource-based exports (including agricultural products, metallic minerals and energy minerals) and economic growth during the period 1970–1990 (Sachs and Warner, 1997). Other scholars have confirmed that relatively poor per capita growth performance has generally characterized resource-rich developing countries, especially metallic mineral-exporting countries (Auty, 2001a; Mikesell, 1997). Oil exporters have not been immune either to the “resource curse” in terms of low growth (e.g. Gelb, 1988; Shams, 1989; Mikesell, 1997). Many studies also emphasize that countries rich in oil and solid minerals have performed worse in terms of alleviating poverty compared with countries with little or no such mineral wealth (Pedro, 2006).

However, it has also been noted that “there is nothing inherent in resource abundance that condemns countries to either low growth or un-sustainability” (Mikesell, 1997: 191). For example, some studies (Wright and Czelusta, 2003; Davis, 1998; Davis and Tilton, 2002) have questioned the validity of the econometric results and stress that “the reported negative outcomes of mineral economies are case-specific and that economic performance is mixed, heterogeneous and should not be generalized” (Pedro, 2004: 4). Rather than focusing on mineral resources as such, it has been suggested that political underdevelopment may be the root cause of the poor performance of mineral-rich economies (Moore, 2000). Due to weak governance, revenue from mineral extraction has often been wasted, rather than invested in ways that promote sustainable development. Thus governance systems and institutional capacity need to be strengthened, and mineral wealth should be invested in the creation of knowledge for economic innovation, and in human, social and physical capital formation, including infrastructure development. See also chapters V and VI.

Source: UNCTAD.

Mineral wealth represents not only opportunities; it can also, if not adequately managed, hinder development. The ability and capacity of mineral-rich developing countries to address economic, political, social and environmental challenges associated with the extractive industry is a key determinant of their development outcome.

b. The economic challenge

The economic challenge is threefold: how to create value from the mineral deposits; how to capture that value locally; and how to make the best use of revenues created from the extractive activities.

The first part of the challenge is to organize production in an efficient and sustainable way. This may involve different actors, such as artisanal and small-scale miners (see box III.2), large, private or State-owned, domestic or foreign-owned companies. The relative importance of these different players will vary depending on such factors as the nature of the mineral and the level of domestic capabilities.

The value an economy may seek to capture locally from mineral extraction can be direct, through employment, profits and taxes, as well as indirect, through the purchase of goods and services. Again, the scope for local capture of such value depends on how the extraction activity is organized,

as well as on the nature of the minerals and the level of domestic capabilities. Large-scale mineral extraction is highly capital-intensive in nature, which limits the potential for employment creation. The magnitude of profits depends on such factors as the quality of the mineral deposit, the cost of extracting the minerals, the productivity of the operations and global price developments. The ownership of the production will influence the extent to which profits are distributed between the State and the private sector and within the country or abroad. The amount of government revenue depends also on the design and implementation of the fiscal system.

The scope for local procurement depends primarily on the availability of inputs, but also on the procurement policies of the extraction companies; whereas the scope for local use depends on the existence of national capabilities and competitive advantages in developing downstream manufacturing activities. In developing countries, local sourcing of the highly specialized inputs used in mineral exploration and extraction is generally difficult; often it is only activities such as catering, cleaning and, in some cases, construction services³⁹ that are sourced locally (Otto, 2006: 119). Moreover, the downstream capacity of many developing countries barely goes beyond refining activities, and in a number of cases does not even get that far. As a result, fiscal income and profits from the mineral

extraction are arguably the most significant value contributions to a local developing economy. Thus, issues related to the ownership, size, distribution and use of revenues are, more than in other industries, the main focus of policy.

The third part of the economic challenge is related to the use of income resulting from mineral extraction, which is of crucial importance from a development perspective. The impact of the income generated will differ depending on its use: that is, whether it is transferred abroad or not, used to service foreign debt, to repatriate profits, for reinvestment, or for importing consumer goods.

There are many risks associated with the use of income from natural resources. First, government revenue from natural resources could lead to a “rentier attitude” that does not promote productive investments in projects conducive to employment creation and economic growth. While some problems may need urgent responses – especially those related to poverty – long-term, durable solutions are important in order to reduce the continued reliance on assistance.

Second, mineral revenue could lead to a shift away from investment in the manufacturing sector, which may cause the sector to shrink and the economy to specialize in the primary sector, a symptom typical of the “Dutch disease”.⁴⁰ Yet industrialization is crucial for the development of low-income countries. Indeed, a characteristic feature of a successful development path is the growing importance of the manufacturing sector in the early stages of development (Chenery, et al., 1986). Most technical progress is concentrated in manufacturing (Prebisch, 1981), and it is a sector that enables positive externalities and learning opportunities, which play a key role in long-term economic development (Hirschman, 1958). There is a concern that resource-rich countries specialize in products for which demand increases less rapidly than for manufactured goods, leading to a long-term deterioration in their terms of trade (Prebisch, 1949; Singer, 1949). Accordingly, resource-rich countries need to channel the wealth generated in their primary sector into efforts towards greater economic diversification and the upgrading of their manufacturing activities, especially as mineral price volatility may translate into unpredictable government revenues.

c. The environmental, social and political challenges

More than most other industrial activities, mineral extraction tends to leave a strong environmental footprint. It can have profound environmental impacts near a project site and in

surrounding areas, as well as at the global level. Effects vary between the different types of minerals and the stages in the production chain. In the case of oil and gas, considerable environmental damage can result from leakages and spills, flaring of excess gas and the creation of access routes to new areas, often involving deforestation. Oil spills are massively polluting, reducing fisheries and tourism and harming bird life, not to mention the severe ecological impact on other ocean life.⁴¹ At the global level, a major concern regarding extractive industries in general, but especially energy minerals, is their impact on climate change (Liebenthal et. al., 2005; Sala-i-Martin and Subramanian, 2003).

Many of the environmental problems associated with metal mining stem from the contamination of surface and groundwater from toxic wastes.⁴² The issue of access to and quality of water is especially critical when the mining activity takes place in proximity to agricultural or fishing communities (Otto, 2006). Mining may also be associated with deforestation, soil erosion and mine tailings, and, often, firms or government authorities are unwilling or unable to pay for the clean-up costs of closed and abandoned mines.

Extractive activities can also have profound social and political impacts. They can have a positive effect on development by creating jobs, encouraging businesses and providing vital infrastructure for remote communities, such as roads, electricity, education and health. However, they may also generate new social and economic problems related to the involuntary resettlement of populations, loss of traditional livelihoods, health concerns due to the exposure of workers and populations to chemicals and particles, and workers’ safety.⁴³ As governments obtain sufficient revenues from external sources, they can become less dependent on their inhabitants for revenue, and thus less accountable, transparent and responsive to the societies they govern.⁴⁴

Several studies have furthermore found a strong link between dependence on natural resources and the risk of civil war and other conflicts and their prolongation (e.g. Collier and Hoeffler, 2005; Collier et al., 2003; Ross, 2001; Renner, 2002). Detrimental impacts of natural resource dependence on governance and human rights have been observed, particularly in sub-Saharan Africa. Oil and diamonds in Angola, diamonds in Sierra Leone and Liberia, cobalt and other minerals in the Democratic Republic of the Congo and oil in Sudan have fuelled lengthy civil wars. The instability in West Asia and the Persian Gulf region has been attributed to that region’s oil wealth.⁴⁵ The “Carter Doctrine”, which stated that the United States would use military force, if necessary, to defend its national interests in the Persian Gulf region (Carter, 1980),

illustrates that natural resources can also be at the centre of conflicts involving players far beyond the region immediately concerned.

d. The governance challenge

Whether a country can cope successfully with all these important challenges (economic, environmental, social and political) depends in large part on its governance system. The United Nations has defined governance as “the exercise of economic, political and administrative authority to manage a country’s affairs at all levels”.⁴⁶ It defines good governance as:

“Participatory, transparent and accountable. It is also effective and equitable. And it promotes the rule of law. Good governance ensures that political, social and economic priorities are based on broad consensus in society and that the voices of the poorest and the most vulnerable are heard in decision-making over the allocation of development resources.”⁴⁷

Without a well-developed governance-framework, there is an increased risk that benefits from extraction will not materialize, that fiscal systems will lead to uneven sharing of revenues, that lack of a coherent and concerted development strategy will lead to their misuse, that local populations will be left disappointed, and that environmental damage, health risk and conflicts will occur. Thus the quality of institutions prior to the discovery of mineral wealth, and the capacity of a country to regulate, monitor and enforce activities in extractive industries are essential. Resource extraction may not turn well-working

institutions into non-performers, but it may make bad governance worse.

The economic, environmental and social challenges noted above underline the importance of governance in ensuring maximum development gains from resource extraction. But structural, long-term beneficial solutions – such as administrative capacity-building, realignment of existing policies, and human capital accumulation – take time to evolve, and provide few immediate rewards. Thus they have often been skirted. As long as the political will is missing, the challenge of governance cannot be resolved. However, there is an urgent need to continue exploring different ways of addressing it.

* * * * *

Improvement in the terms of trade resulting from the recent commodity price boom represents development opportunities for mineral exporting countries. There are, however, important challenges in harnessing the earnings from extractive industries to boost development. Most of these derive from the specificities of the extractive industry itself, which generally involves large-scale, capital-intensive projects, with low labour intensity, a high environmental footprint, and weak linkages with the local economy of developing countries. While the responsibility for ensuring development gains from mineral exploitation rests first and foremost with governments, the responsibility of other stakeholders in contributing to the development impacts of the activity should not be ignored. And, as shown in the next chapter, TNCs are key players in this context.

Notes

- 1 In 2005, minerals accounted for 3% of world GDP and 13% of world trade (UN COMTRADE database, SITC Rev. 1 and UN/DESA Statistics Division).
- 2 Estimated by multiplying global production of oil and gas in 2005, which amounted to 47 billion barrel oil equivalent (data provided to UNCTAD by IHS), by the 2005 Dubai spot crude price (\$49.35/barrel) (<http://www.bp.com/>).
- 3 Data provided to UNCTAD by the Raw Materials Group.
- 4 Motor gasoline, diesel and distillate fuel oil, liquefied petroleum gas, jet fuel, residual fuel oil, kerosene and coke.
- 5 Solvents, lubricating oils, greases, petroleum wax, petroleum jelly, asphalt and coke.
- 6 Naphtha, ethane, propane, butane, ethylene, propylene, butylenes, butadiene, benzene, toluene and xylene.
- 7 LNG can constitute an alternative to pipeline transportation in regional neighbouring countries when the extra costs involved match the costs of pipeline transportation.
- 8 Data on Russian Federation's gas production are from BP, 2006.
- 9 Data on gas production in the Persian Gulf are from BP, 2006.
- 10 For oil, the respective shares in production and consumption are: 19% and 54% for developed countries, and 9% and 22% for South, East and South-East Asian countries. The corresponding figures for gas are: 38% and 47% for developed countries, and 12% and 13% for South, East and South-East Asian countries (UNCTAD, based on BP, 2006).
- 11 The "Seven Sisters" were: Standard Oil of New Jersey (now ExxonMobil), Royal Dutch Shell, Anglo-Persian Oil Company (now BP), Standard Oil of New York (now part of ExxonMobil), Texaco (now Chevron), Standard Oil of California (now Chevron) and Gulf Oil (now part of Chevron, BP and Cumberland Farms).
- 12 This conviction led to concerns clearly reflected in the argument that "if the present growth trends in world population, industrialization, pollution, food production, and resource depletion continue unchanged, the limits to growth on this planet will be reached some time within the next 100 years" (Meadows et al., 1972: 23–24).
- 13 OPEC is a permanent, intergovernmental organization, created at the Baghdad Conference on 10–14 September 1960 by Iran, Iraq, Kuwait, Saudi Arabia and Venezuela. The five founding members were later joined by nine other members: Qatar (1961), Indonesia (1962), the Socialist People's Libyan Arab Jamahiriya (1962), the United Arab Emirates (1967), Algeria (1969), Nigeria (1971), Ecuador (1973–1992), Gabon (1975–1994) and Angola (2007) (<http://www.opec.org/>). Many similar organizations for other commodities, such as for copper (CIPEC), bauxite (IBA) and iron ore (APEF), were set up during the early 1970s but were not particularly successful.
- 14 Increased competition was the combined result of the emergence of new SOEs in the 1970s, following a wave of nationalizations and the failure of producers in general to anticipate slowdown in the long-run demand growth, which led to excessive investments in new mines and processing facilities and huge surplus production capacity.
- 15 From 2000 to 2003, a combination of quota cuts and growing oil demand pushed prices back into the vicinity of a price band set by OPEC, of \$22–\$28 per barrel.
- 16 Political turmoil in Nigeria and Venezuela, and natural disasters, such as Hurricane Katrina, also contributed to price volatility.
- 17 In 2005, for example, China consumed 2.1 tons of copper and 180 tons of oil per million dollars of GDP. In comparison, the corresponding figures for Japan were 0.3 tons and 50 tons, and for the United States, 0.2 tons and 80 tons (CRU, 2006; IMF, 2006).
- 18 On the importance of the Chinese demand in the recent price boom, see, for example, Cyclope, 2007.
- 19 For oil, for example, this happened especially in the United States and the North Sea, allowing OPEC countries to increase their share in production from 30% in 1985 to 40% in 1999. In addition, low prices were a disincentive for suppliers to maintain spare capacity.
- 20 Global surplus crude oil production was estimated at 1–1.3 million barrels per day (mbd) in August 2006, down from 5.6 mbd in 2002 (IEA, 2006a). Moreover, the worldwide aggregate stock-to-consumption ratio for all base metals was at a record low in the third quarter of 2006 – down to five days' cover (Barclays Capital, 2006).
- 21 For example, at the Minera Escondida in Chile, production (of 1.2 million tonnes of copper concentrates a year) was interrupted for most of July 2006 by labour disputes, resulting in an estimated loss of production of around 45,000 tonnes of copper. Production at Codeco's Chuquicamata mine in Chile (54,000 tonnes of copper concentrates a year) was also disrupted in July 2006 after a rock-slide damaged an ore conveyor belt (Abare, 2006).
- 22 For example, after taking account of reinvestments in existing installations and falling capacity due to field depletion, the net additions in annual capacity from the 100 largest oil projects under development are forecast to average 3% between 2006 and 2008, more than twice the expected demand growth (Goldman Sachs, 2005). See also CERA, 2005; and IHS, 2005.
- 23 Production forecasts are uncertain, however, a study on long-term projections for non-fuel minerals found very large differences between global projections (made more than 25 years ago) of production and consumption for a selected number of non-fuel minerals and the observed results for the year 2000. Projections critically depend on assumptions relating to such factors as population and income growth, technological and regulatory changes, that are difficult to forecast (Sohn, 2005).
- 24 Interview with David Humphreys, chief economist, Norilsk Nickel, September 2006.
- 25 There can be significant lags between the time exploration investments are made and the discovery of a major deposit.
- 26 See, for example, *The Economist*, 16 September 2006.
- 27 For the debate between the pessimists and optimists, see Tilton and Coulter, 2001.
- 28 Some, such as Morgan Stanley's chief economist, Stephen Roach, argue that "commodities are as bubble-prone as any other investment" (*The Telegraph*, 2 October, 2006). Others argue that a significant amount of the impact of demand growth of emerging market economies will be mitigated by weak demand from developed countries, due to the shift of manufacturing from developed to developing countries (Radetzki, forthcoming).
- 29 For example, historically, it has taken more than five years for iron ore prices to return to trend after reaching a peak, while copper and aluminium prices have taken less than three years. Differences arise mainly due to varying market structures of different commodities.
- 30 According to one study, the reversal of the upward price trend is likely to result from an adjustment of Chinese economic growth, which is not expected to take place before 2011 (Cyclope, 2007).
- 31 For example, exploiting oil deposits in the Orinoco Belt in Venezuela cost \$17 billion ("In Venezuela, a face-off over the prospect of oil riches", *International Herald Tribune*, 1 June 2006), and in Azerbaijan, the recently opened Baku-Tbilisi-Ceyhan pipeline cost \$3.9 billion ("Europe: too much of a good thing; Azerbaijan and oil", *The Economist*, 19 August 2006).
- 32 In the case of the World Bank, project financing may be conditional on governmental and institutional reform, such as privatization and liberalization of the investment regime (World Bank, 2005).

- 33 A study of the delay period from discovery to the start of production covering 214 known grassroots gold deposits discovered worldwide in the period 1970–2003 was 6.3 years on average (Schodde, 2004).
- 34 Technical risks include, for example, the actual amount and grades of ore as compared to forecasts, the actual level of operating costs as compared to forecasts, and the adequacy of mining methods and metallurgical process.
- 35 See, for example, Otto, 2006, and <http://www.ifc.org/ifcext/enviro.nsf/Content/RiskManagement>.
- 36 Production costs of a barrel of petroleum were estimated in 2004 to vary between \$1 dollar in the lowest cost zones (West Asia) and \$12–\$15 dollars in the more difficult or mature zones (e.g. Big North offshore, East Siberia, Texas marginal fields) (Chevalier, 2004).
- 37 This also applies to diamonds. Different qualities of stone can be present in a single diamond pipe, with rare finds being thousands of times more valuable than the average carat value of diamond production (Land, 2007).
- 38 See, for example, Stevens, 2002; Sarraf and Jiwanji, 2001; Wright and Czelusta, 2003; and Acemoglu, et al., 2003.
- 39 Construction service costs are important in the development stage of a mining project.
- 40 The term “Dutch disease” originated in the Netherlands during the 1960s, when revenues generated by natural gas discovery led to an appreciation of the national currency and to a sharp decline in the competitiveness of the non-booming tradable sector. The revenue windfall served to increase imports to the detriment of national production, provoking a sharp decline in economic growth. This economic paradox has since been recognized as a situation in which a large inflow of foreign currency – whether it originates from a sharp surge in natural resource prices, or from foreign assistance or foreign investment – adversely affects the performance of the non-booming sectors of an economy, and in particular, the non-booming tradable sector (De Silva, 1994).
- 41 Most spills occur from pipelines and fixed location facilities, usually classified as small spills (less than 7 metric tons), while tankers cause the largest volume of spills (Salim, 2003).
- 42 For example, gold production involves the use of toxic materials such as cyanide, mercury and arsenic, and their inappropriate handling is frequently a source of health and environmental problems (“Why mining is bad for your river”, *World Rivers Review*, Vol. 12, No. 5, October 1997).
- 43 “Although only accounting for 0.4% of the global workforce, mining is responsible for over 3% of fatal accidents at work (about 11,000 per year)” (see ILO website, <http://www.ilo.org/public/english/dialogue/sector/sectors/mining/safety.htm>). Note: these estimates are based on official data that only comprises the formal workforce. Thus, workers in informal mining are not covered.
- 44 Acemoglu et al., 2004; Acemoglu and Robinson, 2006; Keen, 1998; Moore, 2000; Renner, 2002; Tilly, 1975; and Shafer, 1994).
- 45 See, for example, D’Amato, 2001; Pelletiere, 2004 and Klare, 2002, 2004.
- 46 See <http://mirror.undp.org/magnet/policy/chapter1.htm#b>.
- 47 Ibid.

CHAPTER IV

TNCs IN EXTRACTIVE INDUSTRIES

TNCs are prominent players in both the metal mining and the oil and gas industries. With new global players emerging, not least from developing and transition economies, the universe of these extractive-industry TNCs is being transformed. It now encompasses both the traditional, privately owned firms, mostly headquartered in developed countries, and a growing number of State-owned firms.¹ The way in which TNCs engage in overseas investments has evolved differently over time in different extractive industries. Drawing on unique sets of data,² this chapter starts by examining global FDI trends in these industries and the importance of such investments for individual home and host countries. The chapter then goes on to analyse how the universe of extractive-industry TNCs is evolving (section B). Section C examines the main drivers and determinants of related TNC investment. Section D concludes by summarizing the main findings.

A. Global trends in FDI and other forms of TNC participation in extractive industries

1. FDI trends

Extractive industries account for a small share of global FDI flows, though this has not always been the case. In the early twentieth century, FDI went mostly into these industries, reflecting the international expansion of firms that originated largely from the colonial powers. The objective of TNCs in the extractive industries was to gain direct control over the mineral resources required as inputs

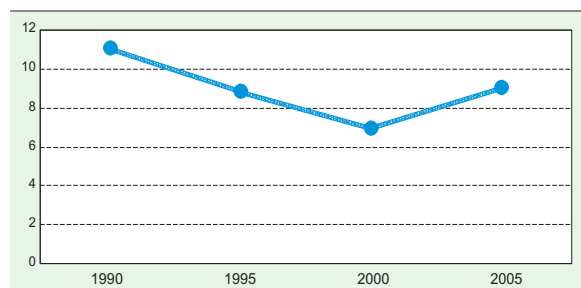
for their growing manufacturing and infrastructure-related industries.³ During the Great Depression (1929-1933), the international expansion of oil companies continued unabated despite the crisis in other overseas investments (Graham, 1996: 26). As former colonies gained independence after the Second World War, and with the creation of the Organization of the Petroleum Exporting Countries (OPEC), many governments chose to nationalize their extractive industries, resulting in a declining involvement of the TNCs that hitherto had been dominant. For example, by 1970, the share of resource-based industries (by investor industry) in United States outward FDI stock had fallen to less than 40% (from more than half at the beginning of the century) (Graham, 1996: 27).

The share of the extractive industries in global inward FDI stocks declined throughout the 1990s until the start of the current commodity boom in 2003, after which it recovered to about 9% in 2005 (figure IV.1). The decline of the primary sector's share in global FDI has been due to its slower growth compared with FDI in manufacturing and services. In absolute terms, however, FDI in the primary sector has continued to grow: it increased in nominal terms nearly 5 times in the 1970s, 3.5 times in the 1980s, and 4 times from 1990 to 2005 (*WIR03*; *WIR05*; annex table A.I.9). The stock of FDI in extractive industries was estimated at \$755 billion in 2005 (annex table A.I.9).

When analysing FDI data related to extractive industries, a number of limitations should be kept in mind. For example, only 22 countries report data on outward FDI stocks in this area (box IV.1) and some forms of TNC involvement may be poorly covered in official statistics, while cross-border mergers and acquisitions



Figure IV.1. Share of extractive industries in world inward FDI stock, 1990, 1995, 2000 and 2005 (Per cent)



Source: UNCTAD estimates, based on annex table A.IV.1 and the FDI/TNC database (www.unctad.org/fdistatistics).

(M&As) can lead to large FDI flows into countries where owners are based but where very limited extraction takes place (box IV.1). It is therefore important to complement FDI data with other statistical information when analysing the extent and nature of TNC involvement.

Developed countries remain the most important sources of outward FDI in extractive industries, although their share in the world total declined somewhat, from 99% in 1990 to 95% in 2005 (annex tables A.I.10 and A.IV.2). Between 1990 and 2005, the Netherlands, the United Kingdom and the United States remained the three largest home countries of outward FDI stock in these industries.⁴

Recently selected developing and transition economies have become significant sources of outward FDI in extraction industries. For example, in 2003 and 2004, the mining industry accounted for 48% and 33%, respectively, of *China's* FDI outflows; and this share fell to 14% in 2005, they still exceeded \$1 billion in absolute terms.⁵ In *India*, oil and gas accounted for an estimated 19% of the total value of overseas acquisitions by its TNCs up to March 2006 (MAPE Advisory Group, 2006). The number of ongoing overseas projects of extractive-industry TNCs from the *Republic of Korea* increased from 141 at the end of 2002 to 218 at the end of 2006, and from \$0.5 billion to \$2.1 billion in value terms, most of which (\$1.9 billion) was accounted for by oil and gas field development (Republic of Korea, 2007).⁶

Owing to the noted lack of comprehensive data on extractive-industry FDI, it is difficult to make comparisons between individual countries and regions. The most complete statistics are provided by the United States, which also distinguishes between different subsectors of the extractive industries. According to these data, FDI in oil and gas is considerably larger than in metal mining. Oil and gas accounted for 71% of United States outward FDI stock in extractive industries in 2005 (and for 84% if FDI in extraction supporting activities is included)

(figure IV.2). Within mining, non-precious metals were the most important target industries for outward FDI from the United States, together accounting for 36% of FDI stocks in such mining.

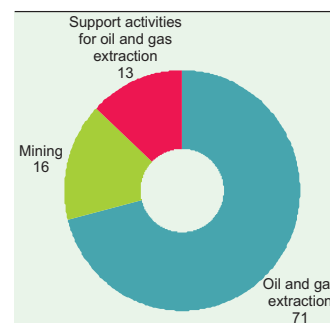
This sectoral distribution is largely confirmed by data on worldwide cross-border M&As. During the period 1990-

2006, oil and gas accounted for almost three quarters of all such deals in extractive industries (annex table A.IV.3). Within the *oil and gas industry*, cross-border M&A purchases have fluctuated significantly (annex table A.IV.3), reaching an all-time high (of more than \$100 billion) in 2005 as a result of the restructuring of Royal Dutch Shell (box IV.1; *WIR06*: 83 and 88). In *mining and quarrying*, cross-border M&A activity has generally been lower, but in 2006, the value of such deals reached a record value of \$55 billion (annex table A.IV.3). Among more than 200 deals recorded in 2006, two were exceptionally large: Companhia Vale do Rio Doce (CVRD, Brazil) acquired Inco (Canada) for about \$17 billion and Xstrata (Switzerland) acquired Falconbridge (Canada) for about the same amount (annex table A.IV.4).⁷ Due to the persistently high mineral prices and profitability of the industry (chapter III), the M&A frenzy is expected to continue, as confirmed, for example, by the takeover bid by Rio Tinto (United Kingdom) for Alcan (Canada) in July 2007 (Berman and Glader, 2007).

2. Developing and transition economies are receiving a growing share of foreign investment

The geographical distribution of inward FDI in extractive industries has fluctuated over time. In the first part of the twentieth century, developing countries were the major destination of FDI in extractive industries. However, nationalizations from the 1950s to the 1970s⁸ triggered a shift towards developed countries (discussed in section B.2), partly due also to discoveries of oil deposits in these countries. Over the long period of low mineral prices, from the 1980s till the early 2000s (chapter III), the mixed (often unsatisfactory) performance of some

Figure IV.2. United States outward FDI stock in extractive industries, 2005 (Per cent)



Source: UNCTAD, based on data from United States, Department of Commerce.

Note: The percentages refer to the industry of the outward investor.

Box IV.1. Complexities of interpreting data on FDI in extractive industries

Difficulties in interpreting data on FDI in the extractive industries arise for four reasons:

- Incomplete reporting (information is available for a limited number of countries, and for varying periods of time);
- Diverging definitions and methodologies used in data collection;
- Imperfect FDI data that fail to capture non-equity-based transactions not registered as FDI flows; and
- Some components of FDI, such as cross-border M&As, may give an inflated picture of real activities.

These four difficulties are interlinked. For instance in 2005, data on FDI in the extractive industries (mining, quarrying and petroleum as defined in the ISIC code) were available for 38–54 economies as inward FDI, but for only 22–29 economies as outward FDI. Even fewer countries break down the extractive industries into oil and gas, on the one hand, and other mining on the other (box table IV.1.1). In addition, data are not available systematically for all years. Another problem is related to differences in the coverage of national data. For example, while the United States explicitly includes “support activities for mining” in its FDI data (that accounts for more than one tenth of its outward FDI stock in this industry), other countries do not show this particular subsector separately. UNCTAD adjusts the United States data by moving this service activity to the services sector. Thus, the data for FDI in the extractive industries should be interpreted with care.

Box table IV.1.1. Number of countries reporting data on FDI in extractive industries, 2005

FDI type	Inward FDI		Outward FDI	
	All extractive industries	Of which, oil and gas and other mining are separately available	All extractive industries	Of which, oil and gas and other mining are separately available
Flows	54	17	29	12
Stocks	38	13	22	8

Source: UNCTAD, FDI/TNC database (www.unctad.org/fdistatistics).

Note: Data for most countries are not available for all years.

There are established international rules on how FDI, including in extractive industries, should be recorded (IMF, 1993). FDI covers not only affiliates incorporated in a host country but also unincorporated branches. These branches may include both unmovable equipment and objects (such as oil pipelines and structures, except when owned by foreign government entities) and mobile equipment (such as gas and oil drilling rigs). All of these items are considered to be direct investment according to the balance-of-payments methodology, provided they exist for at least one year and that they are accounted for separately by the operator, and so recognized by the tax authorities of a host country (IMF, 1993). However, in practice, individual countries differ in how they interpret and apply these rules in statistical data collection, resulting in uneven reporting, which makes international comparisons difficult.

FDI statistics may fail to capture fully the activities of extractive-industry TNCs in a country, even if they follow the international guidelines on data collection. If a TNC has a concession to extract natural resources, it owns the equipment and installations used in its operations. Hence cross-border flows aimed at financing such capital expenditures should be registered as FDI. On the other hand, in the case of production-sharing agreements, equipment and installations typically are the property of the host country, either at the outset of production or progressively. Where local governments or companies rent such equipment and installations from abroad, rental payments should be recorded under services in the current account, not in the capital account (that includes FDI components) of the balance of payments. Hence the full capital expenditure is not necessarily registered under FDI. Moreover, in the case of a service contract, it is only the establishment of the branch servicing that agreement and its capital expenditures financed by parent firms that are recorded as FDI. The subsequent activities of that branch are then recorded as sales of services, such as providing trained personnel or technical advice to the State-owned local oil company. It is recommended that the data on these activities be collected as part of foreign affiliates' trade in services statistics, which are different from the balance of payments that cover essentially financial transactions between residents and non-residents.

Finally, large cross-border M&As may inflate the FDI inflows of countries whose extractive-industry firms are sold to foreign acquirers in the year for which data were collected, without any major change in exploration and extraction activities. For example, the reorganization of Royal Dutch Shell in 2005 resulted in a \$74 billion merger (annex table A.IV.4), and major FDI inflows to the United Kingdom without expanding extractive activities in that country. Moreover, some extractive-industry TNCs may select a location of convenience for their headquarters different from the country in which the activities are taking place. In those cases, related cross-border M&As are recorded under the FDI inflows from the immediate transaction country.

Source: UNCTAD.

State-owned companies (Radetzki, forthcoming) and the need to service foreign debt, led many developing countries to once again allow FDI in metal mining, including through privatizations.⁹ However, few developing and transition economies have chosen to privatize their national oil and gas companies, for example, of Argentina, Bolivia and Peru. Others have allowed the participation of TNCs in the exploration and exploitation of oil through a variety of contracts (see below).

Nevertheless, the importance of developing and transition economies as destinations for TNC investments in extractive industries has increased over the past two decades. Between 1990 and 2000, the estimated stock of inward FDI in extractive industries in these countries rose by nine times, and between 2000 and 2005 it increased again by more than 50% (annex table A.IV.1). The share of developed countries fell from 86% in 1990 to 71% in 2005 (annex table A.I.9).¹⁰ The share of developing countries in the United States' outward FDI stock in extractive industries increased from 31% in 1985 to 44% in 2005 (table IV.1). Between 1995 and 2005, FDI stocks were particularly fast in Africa and Latin America. The Russian Federation and other CIS countries also emerged as important destinations.¹¹

United States outward FDI in extractive industries was fairly evenly distributed among Africa, developing Asia and Latin America and the Caribbean, each accounting for 13-15% in 2005 of the total. In developing Asia, Indonesia received by far the largest share in 2005. In Latin America, excluding the financial centres, Brazil, Mexico and Peru, three countries with large mining potential, were the main recipients, while in Africa, where detailed destinations are not fully given, Egypt was one of the main recipients specified in 2005. Finally, of the transition economies, the Russian Federation was the leading host country of such FDI (table IV.1).

The importance of extractive industries in inward FDI varies greatly by host economy. In all major regional groups, there are countries in which they account for a significant share of the total inward FDI stock. This applies, for example, to Australia, Canada and Norway among developed countries, Botswana, Nigeria and South Africa in Africa, Bolivia, Chile and Venezuela in Latin America and the Caribbean, and Kazakhstan in South-East Europe and the CIS (figure IV.3). Moreover, extractive industries account for the bulk of inward FDI of many low-income, mineral-rich countries. Due to their small domestic markets and weak productive capabilities, they tend to have few other areas into which they can attract FDI.

The recent boom in commodity prices has aroused growing investor interest in opportunities for mineral extraction in low-income countries.

For example, the record inflows of FDI into Africa in 2004-2006 were mostly driven by projects in extractive industries, notably in oil and gas (chapter II; *WIR05*: 41, *WIR06*: 45).¹² Most of the largest FDI-recipient countries in Africa in 2006 were rich in oil or metallic minerals. Similar developments have been observed in Latin America, where most countries with mineral resources have seen increases in FDI in related industries in recent years.¹³ Following new discoveries, a number of new FDI recipients have emerged among developing countries and economies in transition. In oil and gas, Chad and Equatorial Guinea have received large FDI inflows. In Kazakhstan, during the period 1993-2006, oil and natural gas extraction activities attracted cumulative FDI inflows of \$35 billion (National Bank of Kazakhstan, 2007). In addition, Kazakhstan, Mali, Mongolia and Papua New Guinea are among the countries that have emerged as major recipients of FDI in metal mining.

Foreign companies account for varying shares of metallic mineral and diamond production in individual host countries. Based on the value of production at the mining stage, of 33 major mining countries of the world, foreign affiliates were responsible for virtually all production in 2005 in some LDCs, such as Guinea, Mali, the United Republic of Tanzania and Zambia, as well as in Argentina, Botswana, Gabon, Ghana, Mongolia, Namibia and Papua New Guinea (figure IV.4). In another 10 major mining countries – a mix of developed, developing and transition economies – foreign affiliates accounted for between 50% and 86% of all production. In contrast, in the Islamic Republic of Iran, Poland and the Russian Federation, the share of foreign affiliates was very small or negligible (figure IV.4).

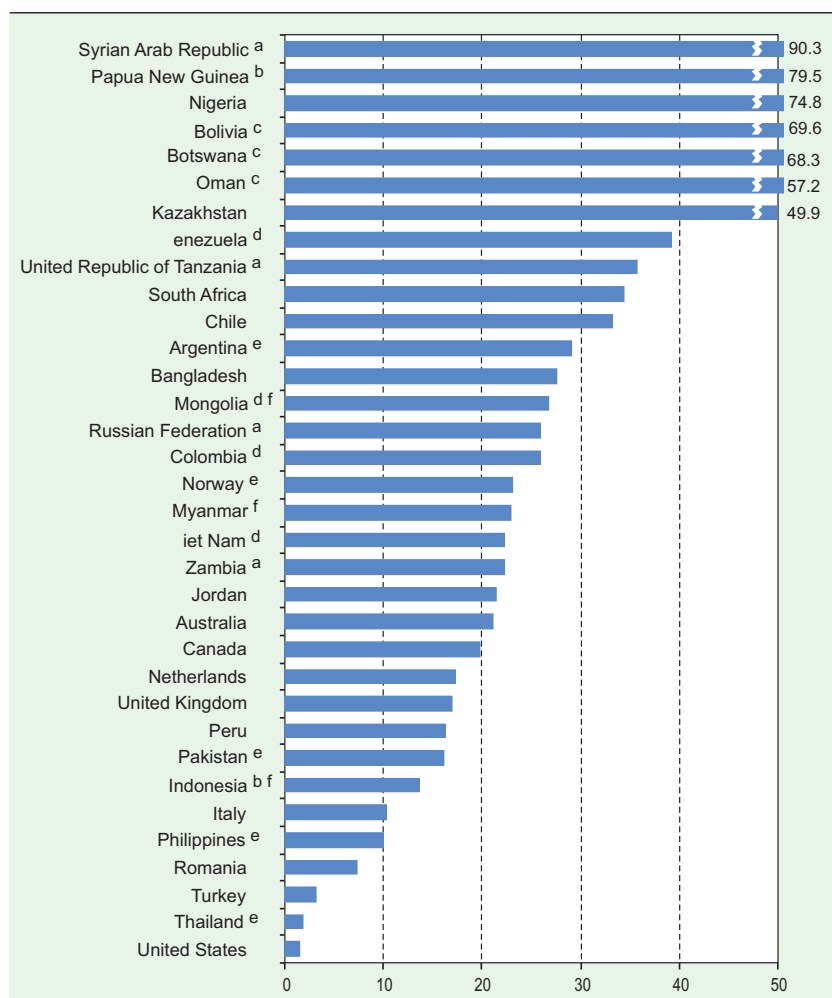
In oil and gas, the share of foreign companies is generally lower than in metal mining. At the global level, foreign companies accounted for an estimated 22% of total oil and gas production in 2005 (table IV.2). The average share was higher in developed countries (36%) than in developing countries (19%) and the transition economies of South-East Europe and the CIS (11%). Moreover, there were wide variations among the various country groups. In West Asia, which was responsible for almost a quarter of the world production of oil and gas in 2005, foreign companies accounted for only 3% of production, whereas in sub-Saharan Africa they accounted for 57% on average. By individual country, foreign companies were responsible for more than half of production in Angola, Argentina, Equatorial Guinea, Indonesia, Sudan and the United Kingdom. At the other end of the spectrum were Iraq, Kuwait, Mexico and Saudi Arabia, in which no production was attributed to foreign firms (figure IV.5).

Table IV.1. United States outward FDI stock in extractive industries, 1985, 1990, 1995, 2000 and 2005
(Millions of dollars)

Host region/economy	1985	1990	1995	2000	2005
Total world	58 724	52 826	68 632	72 111	114 386
Developed countries	33 360	34 261	41 865	33 398	55 802
EU	16 357	12 495	18 573	10 948	11 052
Netherlands	1 928	1 429	1 449	2 218	4 018
United Kingdom	9 231	10 347	12 061	8 135	5 995
Other developed countries	17 003	21 766	23 292	22 450	44 750
Norway	2 695	3 537	3 257	2 463	5 331
Canada	10 443	10 494	9 875	13 629	33 718
Australia	1 681	2 801	2 628	6 222	5 059
Developing economies	17 997	12 627	21 839	37 045	49 835
Africa	4 072	2 054	2 167	7 204	15 305
Botswana	..	2	5	..	..
Cameroon	..	..	158	..	..
Chad	..	..	106	..	..
Congo	..	21	..	..	..
Congo, Democratic Republic of	..	12	69	..	..
Côte d'Ivoire	..	36	42	..	..
Egypt	1 640	1 073	899	1 424	4 085
Gabon	..	324	108	..	..
Kenya	..	42	63	..	..
Nigeria	..	..	578	452	278
South Africa	..	..	..	2	-5
Sudan	..	5	9	..	..
Unspecified Africa	2 432	434	..	5 326	10 947
Latin America and the Caribbean	5 042	4 196	6 056	16 533	17 225
Argentina	466	471	707	580	508
Bahamas	845	345	62	..	..
Bermuda	-168	..	..	..	118
Bolivia	..	168	102	..	..
Brazil	381	507	1 092	680	2 040
British Virgin Islands	14	..	123	1 249	2 461
Chile	60	..	..	3 248	1 040
Colombia	1 053	461	1 255	695	630
Ecuador	..	102	657	464	557
El Salvador	..	..	76	..	..
Guatemala	47	49	79	..	..
Mexico	53	..	61	327	2 082
Panama	515	682	707	..	95
Peru	579	..	81	1 544	2 082
Trinidad and Tobago	399	..	350	..	..
Venezuela	66	113	398	3 379	1 378
Unspecified Latin America and the Caribbean	643	1 199	393	4 367	4 230
Asia and Oceania	8 883	6 377	13 616	13 308	17 305
West Asia	2 208	1 317	2 667	2 179	5 665
Bahrain	..	-88	-130	..	..
Iran, Islamic Republic of	..	..	310	..	..
Oman	..	..	82	..	..
Qatar	..	..	472	..	..
Saudi Arabia	852	..	176	107	..
Turkey	111	..	124	16	48
United Arab Emirates	664	299	230	..	1 064
Unspecified West Asia	581	1 105	482	2 056	4 553
South, East and South-East Asia	6 675	5 071	10 949	11 129	9 602
China	211	114	951	1 404	1 717
India	28	..	26	-343	134
Indonesia	3 895	2 751	4 449	7 212	6 003
Malaysia	605	402	639	..	1 493
Philippines	109	..	326	..	414
Singapore	354	650	2 408	15	-160
Thailand	803	626	1 374	1 111	..
Unspecified South, East and South-East Asia	319	135	..	1 729	..
Unspecified Asia and the Pacific	..	..	..	..	2 038
South-East Europe and CIS	..	1	692	1 670	3 148
Azerbaijan	..	..	206	..	..
Kazakhstan	..	..	-54	..	..
Russian Federation	..	1	392	79	3 148
Unspecified South-East Europe and CIS	..	..	152	1 591	..
Unspecified	7 367	5 937	4 236	-2	5 601

Source: UNCTAD, FDI/TNC database (www.unctad.org/fdistatistics), based on data from the United States Department of Commerce.

Figure IV.3. Share of extractive industries in the inward FDI stock of selected economies, 2005
(Per cent)



Source: UNCTAD estimates, based on data from the UNCTAD FDI/TNC database (www.unctad.org/fdistatistics).

^a 2001.

^b 1997.

^c 2003.

^d 2002.

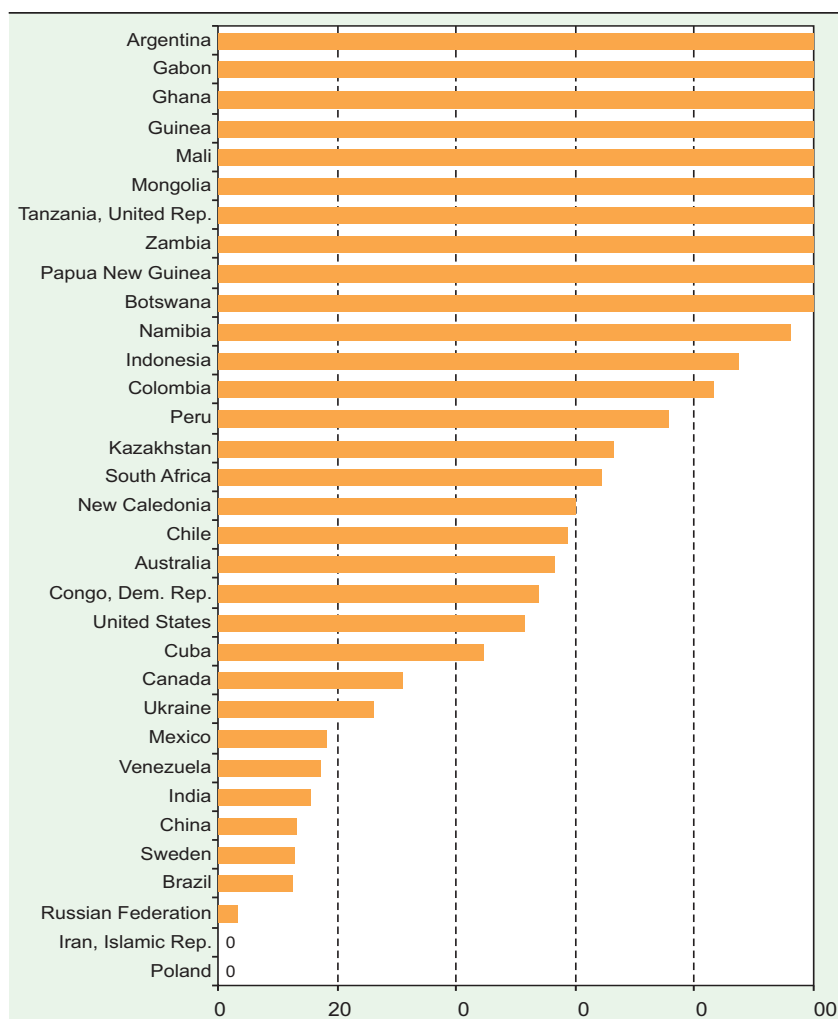
^e 2004.

^f On an approval basis.

During the period 1995-2005, the share of foreign companies in oil and gas extraction evolved differently in various regions and countries. In Europe, it declined from 47% to 36% (table IV.2). Within developing countries, a stable overall average share masked diverging trends. In Africa and Latin America, the shares of foreign companies increased to 41% and 18%, respectively, whereas in developing Asia, their share fell from 19% to 12% on average. In South-East Europe and the CIS, their share increased from 3% to 11%. Foreign companies' share rose particularly fast in Angola, Argentina, Kazakhstan, the Libyan Arab Jamahiriya and Nigeria, and declined the most in Indonesia and Malaysia, as well as in Norway and the United Kingdom among the developed countries.

The involvement of TNCs in the exploration and extraction of oil and gas takes various contractual forms, such as concessions, joint ventures, production-sharing agreements (PSAs) and service contracts (table IV.3; chapter VI), each of which has different implications for recording data on the amount of related FDI and non-FDI flows (box IV.1). Overall, as of June 2007, PSAs were the most frequently used contractual form, accounting for more than 50% of all contracts involving foreign TNCs in the most important oil- and gas-producing developing economies. Such agreements were the main form of TNC participation in countries such as China, Equatorial Guinea, Indonesia, Iraq, the Libyan Arab Jamahiriya, Qatar, Sudan and Viet Nam. Concessions and joint ventures were the next most frequently

**Figure IV.4. Foreign affiliates^a share in metal mining production^b of selected host countries with notable deposits of minerals,^c 2006
(Per cent)**



Source: UNCTAD, based on data from the Raw Materials Group.

^a The share of foreign affiliates includes all firms with foreign ownership of at least 10%.

^b Measured by value of production.

^c Including diamonds, and excluding artisanal mining.

used contractual forms, and the dominant forms in Algeria, Angola, Brazil, Kazakhstan and the Russian Federation (table IV.3). Service contracts were less numerous but nevertheless important, for example, in the Islamic Republic of Iran and Kuwait.¹⁴

It is not straightforward to establish a link between the number and types of contracts with the size of FDI flows. First of all, the average size of contract areas varies considerably, from very large in Saudi Arabia¹⁵ and Sudan to relatively small in Brazil, Kuwait and the Russian Federation (table IV.3). Secondly, different countries of the same region or group could take divergent approaches to legal forms. In Africa, for example, Angola uses mostly concessions, Equatorial Guinea and Sudan mostly PSAs. Thirdly, each contract has its own

terms, resulting in widely varying FDI and non-FDI flows as well as implications for development (chapter VI).

B. The changing universe of TNCs in extractive industries

TNCs have been present in metal mining since the sixteenth century (Harvey and Press, 1990; McKern, 1976), and in the oil industry since the discovery of oil in the late nineteenth century (Yergin, 1991). In colonial times and the early post-colonial decades of the 1950s and 1960s, TNCs from developed countries dominated the extractive industries in developing countries. Since then, their

Table IV.2. Oil and gas production, total and by foreign companies, by region and selected economy,^a 1995 and 2005
(Million barrels of oil equivalent)

Region/economy	1995			2005		
	Total production	Production by foreign companies	Share of foreign companies (%)	Total production	Production by foreign companies	Share of foreign companies (%)
World	37 952	..	..	47 001	10 550	22.4
World excluding North America	30 242	5 572	18.4	39 331	7 941	20.2
Developed economies	11 968	..	..	12 056	4 341	36.0
Europe	3 839	1 795	46.8	3 926	1 409	35.9
European Union	2 619	1 268	48.4	2 357	937	39.8
Of which:						
Netherlands	488	69	14.2	448	51	11.4
United Kingdom	1 547	999	64.6	1 325	666	50.3
Other developed Europe	1 220	527	43.2	1 569	472	30.1
Of which:						
Norway	1 220	527	43.2	1 569	472	30.1
North America	7 710	..	..	7 670	2 609	34.0
Of which:						
Canada	1 712	..	..	2 072	370	17.9
United States	5 998	..	..	5 597	2 239	40.0
Other developed countries	420	203	48.4	461	323	70.1
Developing economies	19 160	3 406	17.8	25 851	4 877	18.9
Africa	3 483	770	22.1	5 049	2 054	40.7
North Africa	1 974	236	12.0	2 706	713	26.4
Of which:						
Algeria	925	3	0.3	1 313	162	12.4
Egypt	420	127	30.2	497	194	39.1
Libyan Arab Jamahiriya	591	86	14.5	735	255	34.7
Sub-Saharan Africa	1 509	534	35.4	2 344	1 340	57.2
Of which:						
Angola	254	159	62.4	507	370	73.0
Equatorial Guinea	..	..	..	160	146	91.5
Nigeria	943	182	19.3	1 301	536	41.2
Sudan	..	..	..	120	77	64.2
Latin America and the Caribbean	3 872	415	10.7	5 215	960	18.4
Latin America	3 759	345	9.2	4 946	871	17.6
Of which:						
Argentina	410	77	18.9	549	444	80.9
Brazil	298	4	1.4	712	14	2.0
Mexico	1 307	-	-	1 665	-	-
Venezuela	1 246	77	6.2	1 417	60	4.2
The Caribbean	113	70	62.0	268	90	33.4
Developing Asia	11 768	2 196	18.7	15 569	1 847	11.9
West Asia	8 263	778	9.4	11 028	389	3.5
Of which:						
Iran, Islamic Republic	1 689	-	-	1 985	47	2.4
Iraq	287	-	-	773	..	..
Kuwait	683	-	-	1 036	..	..
Qatar	256	63	24.4	656	149	22.8
Saudi Arabia	3 364	-	-	4 188	-	-
United Arab Emirates ^b	811	89	11.0	1 226	173	14.1
South, East and South-East Asia	3 504	1 418	40.5	4 541	1 458	32.1
Of which:						
China	1 186	38	3.2	1 604	54	3.4
Indonesia	986	886	89.8	869	659	75.8
Malaysia	445	263	59.2	628	273	43.5
Oceania	37	26	70.7	18	17	93.9
South-East Europe and CIS	6 824	168	2.5	9 093	987	10.8
Of which:						
Kazakhstan	188	45	24.0	626	302	48.2
Russian Federation	5 659	107	1.9	7 125	531	7.5
Uzbekistan	..	..	..	393	21	5.4

Source: UNCTAD, based on data from IHS.

^a The table lists 28 major producer economies.

^b Abu Dhabi only.

Note: Oil and gas production by foreign companies includes extraction carried out by majority foreign-owned firms and attributed to them under PSAs, concessions, joint ventures, or other contractual forms. Foreign company participation through pure service contracts is not included. For each block or field of production worldwide, annual production has been split between the firms involved according to their net percentage share of the output.

Figure IV.5. Share of foreign companies in the oil and gas production^a of selected major oil- and gas-producing economies, 2005
(Per cent)



Source: UNCTAD, based on data from IHS.

^a Measured by million barrels of oil equivalent.

Note: See note to table IV.2.

relative importance has evolved differently in metal mining on the one hand and the oil and gas industry on the other. In general, the major metal mining TNCs are smaller than their oil and gas peers, but TNCs play a more dominant role in the former industry than in the latter.

1. TNCs in the metal mining industry

In the metal mining industry, privately owned TNCs remain the dominant producers. At the same time, significant changes are taking place in the way companies position themselves, and the strategies of newcomer firms from developing and transition economies tend to differ in some ways from those

of the more established players. As in many other industries, there are conflicting tendencies between efforts at consolidating operations and those aimed at focusing on core activities while relying more on specialized service providers. However, following a series of recent M&As, concentration is rising.

a. Continued dominance of private firms

In the 1960s and 1970s, the metal mining industry was affected by widespread nationalizations, leading to more State ownership (box IV.2). For example, the share of the seven largest TNCs in copper mining outside the centrally planned economies fell from 60% in 1960 to 23% in 1981 as a result of

Table IV.3. Main forms of TNC contracts in the oil and gas industry of selected developing and transition host economies, June 2007

(Number of contracts and percentage share)

Host economy	Distribution of foreign TNCs' contracts by main type									Average size of contract territory (km ²)	
	Production sharing		Service or risk service		Concession or joint venture		Other and unspecified		Total		
	Number	Share (%)	Number	Share (%)	Number	Share (%)	Number	Share (%)	Number		Share (%)
Algeria	25	22.9	4	3.7	66	60.6	1	0.9	109	100.0	2 357
Angola	21	19.1	-	-	89	80.9	-	-	110	100.0	640
Brazil	-	-	-	-	189	100.0	-	-	189	100.0	283
China	74	97.4	-	-	-	-	2	2.6	76	100.0	2 973
Equatorial Guinea	20	100.0	-	-	-	-	-	-	20	100.0	1 333
Indonesia	155	100.0	-	-	-	-	-	-	155	100.0	2 902
Iran, Islamic Republic	-	-	16	80.0	-	-	4	20.0	20	100.0	3 575
Iraq	7	87.5	1	12.5	-	-	-	-	8	100.0	625
Kazakhstan	9	9.7	-	-	84	90.3	-	-	93	100.0	1 558
Kuwait	-	-	3	100.0	-	-	-	-	3	100.0	120
Libyan Arab Jamahiriya	107	80.5	-	-	26	19.5	-	-	133	100.0	4 497
Nigeria	81	58.3	-	-	57	41.0	1	0.7	139	100.0	579
Qatar	26	100.0	-	-	-	-	-	-	26	100.0	833
Russian Federation	5	1.1	-	-	470	98.9	-	-	475	100.0	343
Saudi Arabia	-	-	-	-	-	-	3	100.0	3	100.0	75 056
Sudan	14	77.8	-	-	4	22.2	-	-	18	100.0	50 770
United Arab Emirates	-	-	-	-	-	-	12	100.0	12	100.0	375
Uzbekistan	14	43.8	-	-	-	-	18	56.3	32	100.0	3 562
Venezuela	19	38.0	-	-	20	40.0	10	20.0	50	100.0	597
Viet Nam	1	100.0	-	-	-	-	-	-	1	100.0	554
Total	578	34.6	24	1.4	1 005	60.1	51	3.1	1 672	100.0	2 067
Total excluding CIS	564	51.1	21	1.9	451	40.9	51	4.6	1 104	100.0	2 852

Source: UNCTAD, based on data from IHS.

nationalizations (UNCTC, 1983: 208). By the early 1980s, the participation of TNCs in many developing countries had become limited to minority holdings and non-equity agreements with State-owned enterprises. However, many of the nationalizations undertaken in Africa and Latin America in the metal mining industry turned out to be failures (Radetzki, forthcoming). The subsequent 30 years witnessed a continuous decline in the industry, with falling

metal prices and profits. In response, during the 1990s, several countries began reopening their metal mining industries to FDI and privatized their State-owned mining enterprises. By the early 2000s, the privatization process in the industry worldwide, apart from China, had been more or less completed.¹⁶

Worldwide, there are today more than 4,000 metal mining firms, mostly engaged in exploration and extraction (figure IV.6). Most of the 149

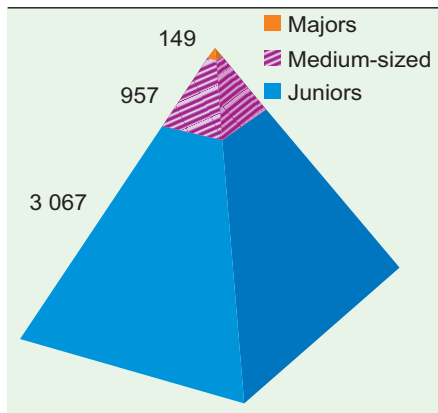
Box IV.2. Nationalizations in metal mining, 1960-1976

In the 1960s and 1970s, governments placed high hopes on the socio-economic development potential of metal mining, based on the industry's strong economic performance following the end of the Second World War. Most government acquisitions of companies or shares in them were made when the market was at its peak. The number of expropriations of foreign mining enterprises increased from 32 between 1960 and 1969 to 48 between 1970 and 1976.

- During the first period, copper mines were nationalized in Chile, Peru, Zaire (now the Democratic Republic of the Congo) and Zambia. Bauxite production in Guinea was also expropriated.
- During the second period, the Government of Jamaica purchased a 51% stake in three previously fully foreign-owned bauxite mines, while it retained the foreign investors as mine operators; Madagascar nationalized its chromite mines; and in Brazil, Chile, India, Mauritania and Venezuela iron ore production was partially taken over by their Governments. The Government of Morocco undertook the production and marketing of phosphate, and the Governments of Indonesia and Bolivia took over control of tin production.

Source: UNCTC, 1978: 14-18.

Figure IV.6. The pyramid of metal mining companies, 2006
(Number of companies)



Source: UNCTAD, based on data from the Raw Materials Group.

“majors”¹⁷ are TNCs, the majority of which have production facilities covering mining, smelting as well as refining. These companies account for some 60% of the total value at the mining stage of all non-energy minerals produced.¹⁸ About 950 medium-sized companies account for almost 40% of the value of production. “Junior” companies include all non-producing companies, notably specialized exploration companies. Much like high-tech companies in the information and communications technology and biotechnology industries, they engage in high-risk investments that can sometimes prove very profitable. If they do find a deposit, it is typically sold to a major mining company with the necessary capital, experience and competence to invest in production. In addition to these 4,000 plus companies, there are a number of unidentified small and medium-sized mining enterprises all over the world, including those engaged in artisanal mining (box III.2).

In 2005, of the 25 leading metal mining companies (ranked by their share in the value of world production), 15 were headquartered in developed countries (table IV.4), 8 were from developing countries and the two remaining were from the Russian Federation.¹⁹ In contrast to the situation in the oil industry (section B.2), State-owned companies occupy a modest place in the list, with the exception of the Corporación Nacional del Cobre de Chile (Codelco), Alrosa (Russian Federation) and KGHM Polska Miedz (Poland). Collectively these latter companies accounted for approximately 14% of the value of all non-energy minerals produced

Table IV.4. Top 25 metal mining companies, 2005^a

Rank 2005	Rank 1995	Company name	Country	State ownership (%)	Share in the value of world production (%)	Cumulative (%)
1	4	BHP Billiton	Australia	-	4.8	4.8
2	2	Rio Tinto	United Kingdom	-	4.6	9.4
3	6	CVRD	Brazil	12	4.4	13.8
4	1	Anglo American	United Kingdom	-	4.3	18.1
5	5	Codelco	Chile	100	3.2	21.3
6	7	Norilsk Nickel	Russian Federation	-	2.2	23.5
7	9	Phelps Dodge	United States	-	2.0	25.5
8	22	Grupo México	Mexico	-	1.6	27.1
9	26	Newmont Mining	United States	-	1.3	28.4
10	11	Freeport McMoran	United States	-	1.3	29.7
11	13	Falconbridge	Canada	-	1.2	30.9
12	53	Anglogold Ashanti	South Africa	3	1.1	32.0
13	15	Inco	Canada	-	1.0	33.0
14	.. ^b	Xstrata	Switzerland	-	1.0	34.0
15	14	Barrick Gold	Canada	-	1.0	35.0
16	.. ^c	Alrosa	Russian Federation	69	0.9	35.9
17	18	Placer Dome	Canada	-	0.9	36.8
18	31	Teck Cominco	Canada	-	0.8	37.6
19	10	Gold Fields	South Africa	10	0.8	38.4
20	19	KGHM Polska Miedz	Poland	44	0.7	39.1
21	88	Antofagasta	United Kingdom	-	0.7	39.8
22	8 ^d	Impala Platinum	South Africa	-	0.7	40.5
23	113	Glencore	Switzerland	-	0.6	41.1
24	.. ^e	Harmony Gold Mining	South Africa	-	0.6	41.7
25	37	Debswana	Botswana	50	0.6	42.3

Source: UNCTAD, based on data from the Raw Materials Group.

^a The ranking is based on the value of total production, including diamond.

^b Glencore had not formed Xstrata in 1995 (MIM, a recent acquisition of Xstrata, was ranked 33).

^c No production data are available for this year.

^d In 2000, Impala was controlled by Gencor Ltd.

^e The company did not exist in 1995.

in the world.²⁰ The top four are global players with worldwide operations, and they produce a variety of metals.²¹ The following six are all more or less single commodity producers with the exception of Grupo México. A decade before, in 1995, there were 17 leading metal mining companies headquartered in developed countries – two more than in 2005 (annex table A.IV.5); and there were one less each of developing-country firms and Russian firms (7 and 1 respectively). In addition, with its acquisition of Inco (a Canadian nickel producer) CVRD was estimated to emerge as the top metallic mineral producer in the world in 2006, the first time that a Latin American-based company would occupy that position.

The degree of concentration in the metal mining industries increased significantly between 1995 and 2005. Following a series of cross-border M&As (section IV.A), the 10 largest metal mining companies in 2005 controlled about 30% of the total value of all non-energy minerals produced globally – up from 26% in 1995 (table IV.4 and

Table IV.5. Host countries in which top 25 metal mining companies are involved in exploration projects, 2006

Company	Home country	Number of foreign locations	Host developed countries		Host developing and transition economies																																
			North America	Western Europe	Other developed countries	Peru	Chile	Indonesia	Tanzania, United Rep.	Brazil	Ghana	Philippines	Kazakhstan	Mexico	New Caledonia	Papua New Guinea	South Africa	Turkey	Zimbabwe	Argentina	Botswana	Congo, Democratic Republic of	Côte d'Ivoire	Cuba	Guatemala	Iran, Islamic Rep. of	Mali	Mongolia	Mozambique	Namibia	Pakistan	Russian Federation	Senegal	Venezuela			
BHP Billiton	Australia	7	-	1	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Rio Tinto	United Kingdom	5	1	-	1	X	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
CVRD	Brazil	3	1	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Anglo American	United Kingdom	14	1	1	1	X	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Codelco	Chile	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Norilsk Nickel	Russian Federation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phelps Dodge Corp	United States	3	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Grupo México	Mexico	3	1	-	1	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Newmont Mining Corp	United States	6	-	-	1	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freeport McMoran	United States	1	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Falconbridge ^a	Canada	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Anglogold Ashanti	South Africa	7	1	-	1	X	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Inco ^b	Canada	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Xstrata plc	Switzerland	14	1	1	1	X	X	-	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Barrick Gold Corp	Canada	5	1	-	1	X	X	-	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Placer Dome ^c	Russian Federation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Alrosa Co	Canada	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Teck Cominco	Canada	6	1	-	1	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KGHM Polska Miedz	South Africa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gold Fields	Poland	4	-	1	1	X	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Antofagasta	United Kingdom	3	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Glencore International	South Africa	2	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Impala Platinum Holdings	Switzerland	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Harmony Gold Mining Co	South Africa	2	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Debswana Diamond	Botswana	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Number of companies that have projects in host country			12	6	4	4	3	3	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2

Source: UNCTAD, based on data from the Raw Materials Group.

^a See Xstrata.^b See CVRD.^c See Barrick Gold.

Note: The number indicates the number of host countries in the region (North America, Western Europe and Other developed countries) in which the respective company has projects.

annex table A.IV.5). This share reached an estimated 33% in 2006. In all metals, the share of the top 10 production companies increased between 1995 and 2005. This degree of concentration rose the fastest in gold mining (from 38% to 47%), followed by iron ore (from 44% to 52%), copper (from 51% to 58%) and zinc production (from 38% to 43%).

b. Varying degrees of internationalization

The level of internationalization of the world's top metal mining companies varies substantially. While some of them are present in a large number of foreign locations, others are at an early stage in terms of internationalization, and a few do not have any foreign exploration or production at all.

In *exploration*, the activities of certain TNCs, such as Anglo American and Xstrata (present in 14 countries each), were widely spread in 2006 (table IV.5). All but four of the top-25 producers (Codelco, Debswana, KGHM Polska Miedz and Norilsk Nickel) were involved in exploration activities in at least one foreign country. In terms of *mining production*, Rio Tinto was the company with activities in the largest number (10) of host countries in 2005, followed by Anglo American and Anglogold Ashanti, both present in nine host countries (table IV.6). On the other hand, as in the case of exploration, large producers from developing countries like Codelco, CVRD and Debswana (and KGHM Polska Miedz of Poland) did not have any overseas mining production in that year.²² In *smelting and refining*, Glencore was the most internationalized top metal mining company, with a presence in 13 host countries, followed by BHP Billiton (9) (table IV.7). Leading firms appear to be more internationalized in exploration and mining production than in smelting and refining. Of the 25 top companies, 21 had overseas mining production activities, whereas just over half of them (13) had foreign refining capacities.

Internationalization of production also varies by metal. For example, in iron ore mining, only half of the top 10 producer companies had overseas production activities in 2005 (annex table A.IV.6). In fact, CVRD, the largest iron ore producer, did not have foreign activities (until 2006) while the production of the second largest firm, Rio Tinto, was 100% abroad. Copper, nickel and zinc production is more internationalized. In each of these metals, 7 of the top 10 producers had foreign production activities in 2005. However, in copper and nickel, the largest company by volume had no production abroad: Codelco and Norilsk Nickel.²³ In zinc, in turn, the largest producer, Teck Cominco, was highly internationalized.

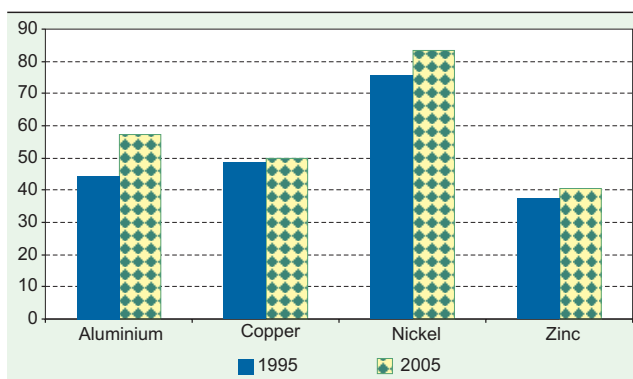
Finally, gold production appears to be the most internationalized, with 8 of the 10 largest firms having production abroad, including the three largest ones (annex table IV.6).²⁴

Of developing host economies of metal mining TNCs, the largest number of *exploration* projects was located in Peru, followed by Chile, Indonesia and the United Republic of Tanzania (table IV.5). As far as *mining production* is concerned, in 2006, Chile and Peru hosted the largest number of top 25 mining companies (table IV.6). As for refineries, Chile was host to the largest number of companies, followed by South Africa and Peru (table IV.7).

The degree of forward (downstream) *vertical integration* along the production/value chain within firms in the metal mining industries varies both by metal and over time. Traditionally, mining and smelting activities have often been integrated within the same company. A snapshot of the situation in 1995 compared to 2005, for aluminium, copper, nickel and zinc, suggests that control over refineries by the top 20 mining companies has increased (figure IV.7). Similarly, the leading refiners have taken steps to gain greater control over the mining production stages. The overall trend is of increasing vertical integration in international (as well as national) production in the industries, which is most clearly seen in the movement of nickel miners downstream into refining.²⁵

Firms in the *aluminium* industry have traditionally been strongly vertically integrated, with mining and smelting activities located in close proximity. In some cases, smelters have been set up in countries where cheap electricity is available, as in Bahrain, Mozambique (Mozal project) and Norway. On the other hand, the level of vertical integration in *zinc* production is lower (figure IV.7). A number of smelters in both Europe and North America have

Figure IV.7. Top 20 mining companies' share in the value of refined production, 1995 and 2005 (Per cent)



Source: UNCTAD, based on data from the Raw Materials Group.

been buying their concentrate inputs from various sources all over the world. Rising energy prices have made integrated production a more attractive option, however. *Copper* exhibits a relatively stable level of vertical integration, between those of aluminium and zinc. In the *iron ore industry*, vertical integration has seen an upswing since the late 1990s with the entry of new major global steel companies with roots in India (Mittal Steel and Tata Steel)²⁶ and the Russian Federation (Severstal).²⁷ These companies have integrated iron and steel works based on a fully controlled supply of raw materials. Posco (Republic of Korea) follows a similar integrated approach. For example, it is building its next integrated steelworks in India, close to the location of iron ore deposits.²⁸

While there appears to be a trend towards higher levels of vertical integration between the mining and refining stages of production, the opposite has been observed between exploration and production:

upstream integration with exploration is declining as mining companies develop strategic relationships with junior, specialized exploration companies. Exploration expenditure data show that the juniors now account for a larger proportion of such activities (figure IV.8). More generally, specialized mining suppliers play an important role in the metal mining industry (box IV.3).

2. TNCs in oil and gas

a. The Seven Sisters have given way to State-owned companies

Until the 1970s, a few major TNCs from the United States and Europe dominated the international oil industry. In 1972, 8 of the top 10 oil producers were privately owned TNCs (Clarke, 2006), including

Box IV.3. The role of mining suppliers

Specialized suppliers of equipment and services are important players in metal mining. Many of them are also increasingly transnational. Suppliers to the mining industry can be grouped according to the markets they address in each of the main stages of mining. Highly knowledge-intensive inputs are required in the production of both equipment and services. Design and technology are embedded in the capital equipment used in the mining industry as well as in the services, which require customization for the unique conditions of each mine. Some firms operate across several markets, providing mining and mineral processing equipment with the associated services.

The growing role of such suppliers is being driven by the reorganization of global mining production and technological rejuvenation of the industry, with continued improvements in exploration, mining and mineral processing.^a Suppliers are focused on specific niches in which they have a globally dominant position.

For some types of mining equipment there is a high level of international specialization of suppliers. Most of these companies are headquartered in the United States or the Nordic countries (box table IV.3.1). However, there are also some examples of equipment suppliers from emerging market economies, such as Belarus, Chile and South Africa.

Examples of some knowledge-intensive service suppliers include large international consulting firms that integrate engineering, project management, procurement and construction activities, such as Kvaerner (Norway), Hatch (Canada), and Bechtel Group (United States); medium-sized specialized engineering consulting companies, such as Bateman (South Africa) SRK Consulting (South Africa), and AMC Consultants (Australia); and small- to medium-sized mining and geological software providers, such as Maptek (Australia).

Box table IV.3.1. Leading suppliers of mining equipment, 2007

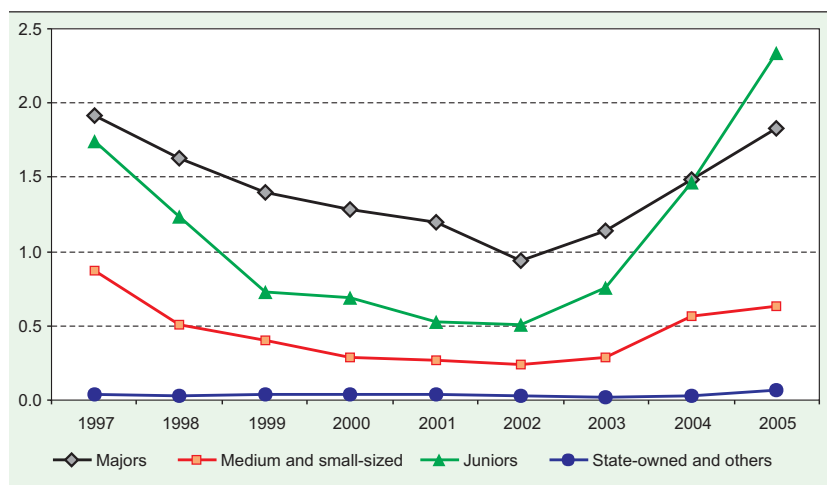
Type of equipment	Lead suppliers	Home country
Exploration drilling equipment	Boart Longyear Atlas Copco, Sandvik	United States Sweden
Drilling equipment, underground	Atlas Copco, Sandvik	Sweden
Drilling equipment, open pit	Atlas Copco, Sandvik Bucyrus, P&H, Terex/ Reeddrill	Sweden United States
Draglines	Bucyrus, P&H	United States
Load haul dump, underground	Atlas Copco, Sandvik Caterpillar	Sweden United States
Explosives	Orica, Dyno Nobel AEL Enaex	Australia South Africa Chile
Trucks, open pit	Caterpillar Hitachi Construction Machinery, Komatsu (Haulpak) Liebherr Terex/Unit Rig Belaz	United States Japan Germany United States Belarus
Articulated dump trucks	Komatsu Caterpillar, Le Tourneau Bell Volvo Astra	Japan United States South Africa Sweden Italy
Shovels	Caterpillar, Bucyrus, P&H Hitachi Construction Machinery, Komatsu Liebherr, Terex	United States Japan Germany
Pumps	ITT/Flygt Weir Group Grindex	United States United Kingdom Sweden
Crushers	Metso FLSmidth Minerals Terex, PR Engineering	Finland Denmark United States
Mills	Metso, Outotech Polysius	Finland Germany

Source: UNCTAD, based on data from the Raw Materials Group.

Source: UNCTAD, based on Urzúa, 2007, and data from the Raw Materials Group.

^a Automation and improvements in underground communication and control systems is leading to the introduction of remote-controlled drilling, roof support and hauling equipment with benefits in terms of productivity and workers' safety as people are removed from high-risk work.

Figure IV.8. Global exploration expenditure, by type of company, 1997-2005
(Billions of dollars)



Source: Metals Economics Group, 2006.

the so-called Seven Sisters (chapter III). These were fully integrated oil companies, active in the extraction and transportation of oil as well as in the production and marketing of petroleum products. In the 1960s, they started to face competition from some developed-country State-owned companies – such as the *Compagnie Française des Pétroles* (France) (predecessor of today's Total) and ENI (Italy). Subsequently, in the early 1970s, with the emergence of OPEC and the wave of oil nationalizations in developing countries, the ownership picture in the oil industry changed permanently, with State-owned national oil companies replacing the dominance of the

private TNCs (Yergin, 1991; box IV.4). For example, the share of TNCs in crude oil production plummeted from 94% in 1970 to 45% in 1979 (UNCTC, 1983: 197).

The major oil companies remain giant corporations in terms of their foreign assets; they ranked in the top 10 in UNCTAD's ranking of the world's 100 largest TNCs in 2005 (chapter I).²⁹ But these large, privately owned TNCs from developed countries no longer control the bulk of the world's oil and gas reserves, and are no longer the leading oil and gas producers. In 2005, the top 10 oil-reserve-holding firms of the world were all State-owned

Box IV.4. Nationalizations in the oil industry

From the beginning of industrial activities in the 1850s till the First World War, petroleum extraction had been 100% privately owned (Yergin, 1991). Since then, the involvement of governments in the management and control of the industry has risen almost constantly. Two major forces have motivated home and host governments to intervene more, and to increase their share in the ownership and management of their oil and gas resources: the strategic importance of these resources for military and other industrial uses, and the considerable rents involved.

Outright nationalization of oil and gas firms, defined as the compulsory transfer of the ownership of the whole industry to the State (UNCTAD, 2000: 4),^a first took place in the context of the Russian Revolution in 1917. This was followed by nationalizations in Bolivia (1937, 1969), Mexico (1938), Venezuela (1943), Iran (1951), and Argentina, Burma, Egypt, Indonesia and Peru in the 1960s (Kobrin, 1985). In the 1970s, nationalizations occurred in Algeria, Iraq, Kuwait, Libya and Nigeria, and there was a gradual increase in Saudi ownership of Aramco (Yergin, 1991). More recent examples of moves towards nationalizations are the Russian Government's bid to increase shares in petroleum companies and in extraction projects (chapter II), and Venezuela's push to reduce foreign TNCs' shares in individual projects.^b

Nationalizations in the oil and gas industry have taken place in periods of favourable market conditions (high international demand and prices), domestic conditions (social consensus in support of nationalizations) and international political conditions. They have changed the global landscape of petroleum extraction, and contributed to the emergence and subsequent strengthening of State-owned firms.

Source: UNCTAD.

^a Nationalizations differ from ordinary expropriations because they apply to the whole industry or the whole economy, and because they always result in a transfer of ownership to the State (ordinary expropriations can also lead to a transfer to a third, private party).

^b It is debatable whether the increase in taxation in Bolivia is a case of nationalization or only a regulatory change.

companies from developing countries, accounting for an estimated 77% of the total, whereas Russian petroleum firms controlled an additional 6%, leaving only about 10% for privately owned developed-country TNCs such as ExxonMobil, BP, Chevron and the Royal Dutch Shell Group.³⁰ The remaining 7% was controlled by joint ventures between developed-country TNCs and developing-country State-owned oil companies (Baker Institute, 2007: 1).

In 2005, three State-owned enterprises topped the list of the world's 50 largest oil and gas producers: Saudi Aramco (Saudi Arabia), Gazprom (Russian Federation) and the National Iranian Oil Company (NIOC) (table IV.8). Saudi Aramco's annual production in 2005 was more than twice as large as that of the largest privately owned oil and gas producer: ExxonMobil (United States). Of the top 50 companies, more than half were majority State-owned, 23 were based in developing countries, 12 were based in South-East Europe and the CIS, and only 15 were from developed countries (table IV.8).³¹

A number of oil and gas firms from developing and transition economies have evolved into TNCs and matured in the past few years. Many, but not all of them are partly or fully State-owned.³² Moreover, some of them, such as CNOOC (China), Pertamina (Indonesia), Petrobras (Brazil), PetroChina (an affiliate of CNPC),³³ and Sinopec³⁴ are listed on the New York Stock Exchange (Baker Institute, 2007). Some State-owned oil companies are run semi-independently or autonomously of their government owners, at least in some respects. For example, while Saudi Aramco is 100% State-owned, it has an independent board and decision-making capabilities.³⁵

The concentration of the industry among the top 10 companies remained unchanged between 1995³⁶ and 2005 (41% of global production), but rose from 59% to 63% among the top 25. A worldwide review of oil and gas firms in 2006 identified five privately owned major TNCs emerging from a wave of consolidations in the industry (ExxonMobil, BP, Shell, Chevron, Total), more than a dozen large independent oil and gas companies (i.e. Repsol YPF, BG, BHP Billiton's oil and gas division, COP, Devon, Oxy, Apache, EnCana, Anadarko/Kerr McGee, PetroCanada, Woodside), about 750 smaller oil firms (most of which are also transnational) (Clarke, 2006), as well as various transnationalized service firms, mostly from North America and Western Europe (table IV.9). At the same time, a number of State-owned enterprises from developing and transition economies have become outward investors, the largest of which have been referred to as the new Seven Sisters (Hoyos, 2007).³⁷

b. TNCs from developing and transition economies are expanding overseas

Whereas companies from developing and transition economies now control most of the global production of oil and gas, their degree of internationalization, although growing fast, is still relatively modest compared to that of the top privately owned oil TNCs (figure IV.9). Indeed, developed-country companies in the top 50 list undertook most of their production overseas (which corresponded to 17% of world production in 2005) (figure IV.9). On the other hand, of the 54% of global oil and gas production that was controlled by companies in developing and transition economies, only a fraction was produced abroad (figure IV.9).

Nevertheless, some of the oil and gas companies from developing and transition economies are rapidly expanding their overseas interests. In 2005, the combined foreign production of CNOOC, CNPC/PetroChina, Lukoil, ONGC, Petrobras, Petronas and Sinopec amounted to 528 million barrels of oil equivalent. This was more than the foreign production of ConocoPhillips, one of the large majors, that year (figure IV.10).

A country-by-country review of the outward expansion of State-owned TNCs reveals a common push to global status (table IV.10, box IV.5). Both CNPC and Petronas are involved in oil and gas production in more than 10 foreign countries, and Kuwait Petroleum Corporation, Petrobras and Sinopec in more than 5 foreign countries. Between 1995 and 2005, the number of foreign economies in which Petronas and CNPC/PetroChina extracted oil and gas increased by 10, Sinopec by 6 and ONGC by 5. The expanding overseas upstream production presence of selected developing- and transition-country TNCs is illustrated in figure IV.11.

Some developing- and transition-economy TNCs have invested large sums in oil and gas production deals around the world during the past two years, sometimes as part of larger consortia. In Uzbekistan, for example, a consortium of CNPC, the Korea National Oil Corporation (KNOC), Lukoil, Petronas and local Uzbekneftegaz has been formed to develop gas fields in the northwest of the country.³⁸ In Peru, the largest oil production field is being exploited by a consortium of CNPC (45%) and Pluspetrol (Argentina, 55%).

Emerging oil and gas TNCs have sometimes formed alliances to compete. For example, CNPC and Sinopec (China) are producing oil and gas in CIS countries such as Azerbaijan, Kazakhstan and Turkmenistan, and in Latin American countries such

**Table IV.8. The world's largest oil and gas extraction companies, ranked by total production,^a
2005**
(Per cent and million barrels of oil equivalent)

Rank in world production	Rank in 1995	Company	Home country	State ownership (%)	Production abroad	Total production	Foreign/total production (%)	Number of host economies with production	Change in number of host economies with production since 1995
1	1	Saudi Aramco	Saudi Arabia	100	-	4 148.8	-	-	-
2	3	Gazprom	Russian Federation	51	5.6	3 608.5	0.2	2	1
3	2	NIOC	Iran, Islamic Republic	100	-	1 810.7	-	-	-
4	5	ExxonMobil	United States	-	1 426.5	1 725.7	82.7	23	4
5	4	Pemex	Mexico	100	-	1 666.2	-	-	-
6	13	BP	United Kingdom	-	1 290.6	1 572.6	82.1	19	2
7	6	Royal Dutch Shell	United Kingdom / Netherlands	-	1 045.2	1 482.7	70.5	25	-1
8	7	CNPC/PetroChina	China	100	188.3	1 119.6	16.8	14	10
9	33	Total	France	-	749.3	997.6	75.1	27	-
10	12	Sonatrach	Algeria	100	1.9	911.8	0.2	1	1
11	8	Petróleos de Venezuela	Venezuela	100	-	902.6	-	-	-
12	9	Kuwait Petroleum Corp	Kuwait	100	20.3	897.3	2.3	8	1
13	16	Chevron	United States	-	550.2	816.9	67.3	24	8
14	23	Abu Dhabi National Oil Co (ADNOC)	United Arab Emirates	100	-	794.9	-	-	-
15	11	Lukoil	Russian Federation	^b	45.8	781.1	5.9	2	-
16	40	ConocoPhillips	United States	-	511.6	755.4	67.7	16	7
17	20	Petrobras	Brazil	56	66.3	749.6	8.8	8	3
18	18	Abu Dhabi Co Onshore Oil Operator	United Arab Emirates	40 ^c	-	710.9	-	-	-
19	22	Nigerian National Petroleum Co	Nigeria	100	-	697.7	-	-	-
20	51	TNK-BP	Russian Federation	^d	-	691.8	-	-	-
21	25	Iraqi Oil Exploration Co	Iraq	100	-	679.7	-	-	-
22	21	ENI	Italy	20	584.4	657.4	88.9	20	9
23	43	Rosneft	Russian Federation	100	-	621.1	-	-	-
24	34	Surgutneftegaz	Russian Federation	-	-	550.7	-	-	-
25	19	National Oil Corp	Libyan Arab Jamahiriya	100	-	491.2	-	-	-
26	-	Petoro	Norway	100	-	483.5	-	-	-
27	14	Statoil	Norway	64	52.8	464.7	11.4	5	2
28	26	ONGC	India	74	34.8	403.7	8.6	5	5
29	-	Uzbekneftegaz	Uzbekistan	100	-	391.7	-	-	-
30	48	Repsol-YPF	Spain	-	365.8	369.5	99.0	9	-1
31	37	Qatar Petroleum	Qatar	100	-	365.3	-	-	-
32	29	Petroleum Development Oman	Oman	60 ^e	-	344.1	-	-	-
33	35	Sibneft	Russian Federation	30.5 ^f	-	343.8	-	-	-
34	-	Sinopec	China	77	48.9	316.6	15.4	6	6
35	-	Turkmenneftegaz	Turkmenistan	100	-	310.3	-	-	-
36	-	Abu Dhabi Petroleum Co	United Arab Emirates	^h	-	284.4	-	-	-
37	46	Norsk Hydro	Norway	44	34.9	248.6	14.0	5	5
38	44	Petronas	Malaysia	100	97.7	242.4	40.3	11	10
39	38	Ecopetrol	Colombia	100	-	221.1	-	-	-
40	32	Egyptian General Petroleum Co	Egypt	100	-	214.0	-	-	-
41	50	CNOOC	China	71	46.1	211.0	21.8	2	1
42	-	Sultanate of Oman	Oman	100	-	206.4	-	-	-
43	28	Nederlandse Aardolie Mij	Netherlands	^j	-	198.8	-	1	1
44	30	Yukos	Russian Federation	-	-	192.4	-	-	-
45	36	Tatneft	Russian Federation	33	-	191.2	-	1	1
46	41	Inpex	Japan	29 ^g	128.8	185.9	69.3	6	2
47	49	Slavneft	Russian Federation	20 ^k	-	182.2	-	-	-
48	45	A.P. Moller-Maersk	Denmark	-	30.4	181.5	16.7	3	2
49	-	BG	United Kingdom	-	114.3	172.8	66.2	8	6
50	39	Sidanco	Russian Federation	^l	-	171.8	-	-	-

Source: UNCTAD, based on data from IHS.

^a Excludes oil sands production. The production of joint ventures is counted under both the partner companies and the joint ventures themselves.

^b ConocoPhillips owns 20% of the shares, its Russian partners 80%.

^c Abu Dhabi National Oil Co (ADNOC) 60%, Abu Dhabi Petroleum Co 40%.

^d BP 50%, other partners 50%.

^e Sultanate of Oman 60%, Partex (Gulbenkian Foundation) 2%, Total 4%, Royal Dutch Shell 34%.

^f Sibneft was acquired by Gazprom in 2005.

^g Itera (Russian Federation) 15.25%, Gazprom 61%, other partners 23.75%.

^h Partex (Gulbenkian Foundation) 5%, ExxonMobil 23.75%, BP 23.75%, Total 23.75%, Royal Dutch Shell 23.75%

ⁱ ExxonMobil 50%, Royal Dutch Shell 50%.

^j Inpex Holdings is owned by the Ministry of Economy, Trade and Industry of Japan (29.3%) and other partners (70.7%).

^k TNK-BP 50%, Gazprom 40%, ENI 10%.

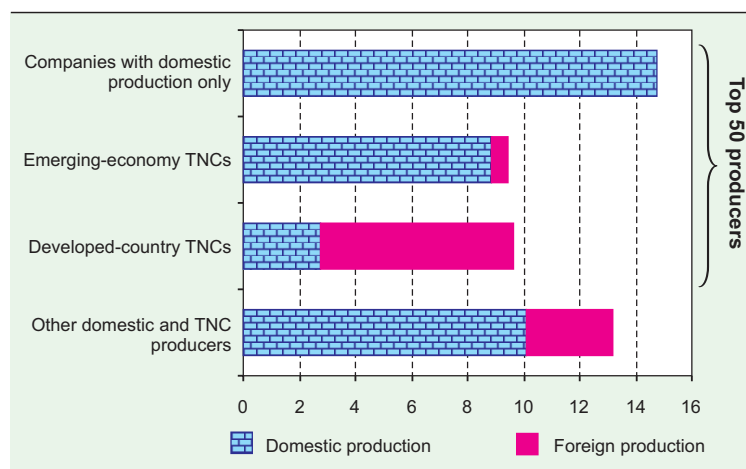
^l TNK-BP 82%, Other partners 18%.

Table IV.9. The world's largest oil and gas service TNCs, ranked by foreign assets, 2005
(Millions of dollars and number of employees)

Rank	Corporation	Country	Foreign assets	Total assets	Foreign sales	Total sales	Number of employees
1	Schlumberger	United States	11 272.0	17 746.0	10 436.0	14 309.0	60 000
2	Halliburton	United States	6 562.4	15 048.0	15 339.0	21 007.0	106 000
3	Aker	Norway	5 159.0	8 131.2	6 297.5	9 172.6	37 000
4	Weatherford International	United States	4 587.9	8 580.3	2 724.0	4 333.2	25 100
5	Transocean	United States	4 437.0	10 457.2	2 244.0	2 891.7	9 600
6	Noble Corp.	United States	3 208.1	4 346.4	1 067.3	1 382.1	5 600
7	Pride International	United States	2 950.9	4 086.5	1 766.9	2 033.3	12 200
8	Globalsantafe Corp.	United States	2 754.6	6 193.9	1 583.7	2 263.5	5 700
9	Nabors Industries	United States	1 755.3	7 230.4	1 169.5	3 459.9	22 599
10	EnSCO International	United States	1 603.6	3 614.1	620.1	1 046.9	3 700
11	Petroleum Geo Services	Norway	1 333.6	1 693.7	850.3	1 142.7	5 130
12	Diamond Offshore Drilling	United States	1 023.9	3 606.9	552.6	1 221.0	4 500
13	Acergy	Luxembourg	903.4	1 377.7	1 386.6	1 396.2	..
14	Prosafe	Norway	886.8	1 058.3	254.2	282.1	665
15	Rowan Companies	United States	627.6	2 975.2	142.9	1 068.8	4 577
16	BJ Services	United States	518.7	3 372.4	1 423.0	3 243.2	13 600
17	Abbot Group	United Kingdom	433.0	966.1	330.5	647.2	4 759
18	Ensign Energy Services	Canada	336.7	1 303.2	516.8	1 301.8	8 500
19	Smith International	United States	312.0	4 055.3	3 058.3	5 579.0	14 697
20	Complete Production Services	United States	92.3	1 121.7	147.8	757.7	..

Source: UNCTAD, largest TNCs database.

Figure IV.9. World production of oil and gas, by types of companies, 2005
(Billion barrels of oil equivalent)



Source: UNCTAD, based on data from IHS.

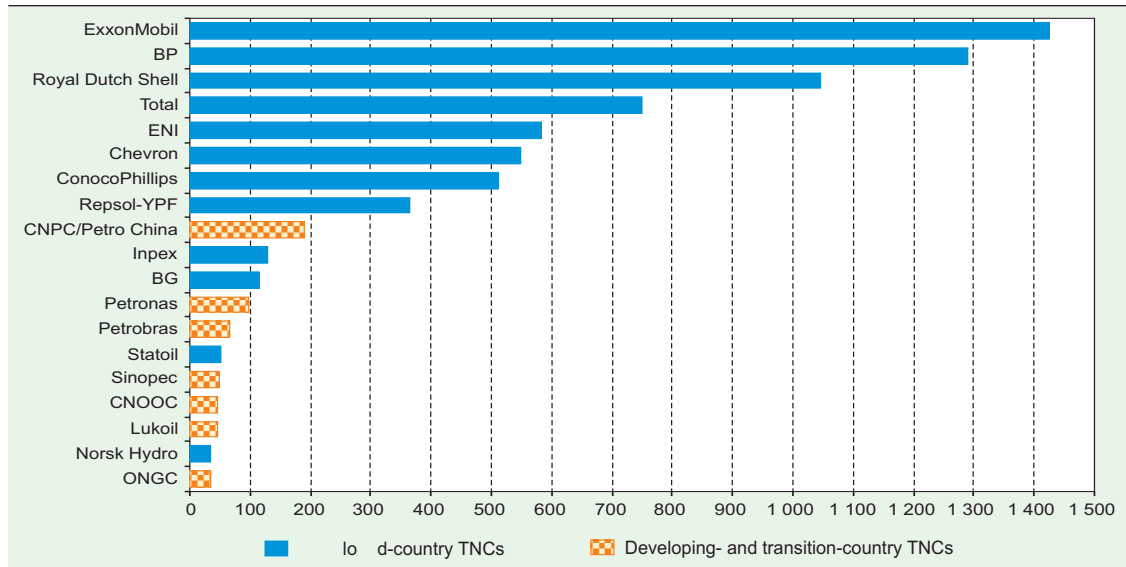
as Ecuador. CNPC has also invested jointly with local firms in countries such as the Islamic Republic of Iran, Sudan and Venezuela, while Sinopec has invested in Colombia and the Russian Federation (table IV.10).³⁹

A few State-owned oil TNCs, in particular from China and India, have invested in some host countries which large private oil companies may have difficulty entering. Such difficulties are due to sanctions imposed on them by individual countries or to other pressures on companies to divest. That is true not only for the above-mentioned projects in Uzbekistan⁴⁰ and the Islamic Republic of Iran,⁴¹ but also in Sudan, which is under United States sanctions

on international human rights grounds due to the conflict in the Darfur region (Canning, 2007: 57).⁴² Sudan accounts for a significant share of the foreign oil reserves exploited by Chinese companies, and CNPC's upstream and refining investments in Sudan are by far the company's largest overseas venture.⁴³ ONGC and Petronas also have extraction operations in Sudan,⁴⁴ whereas CNPC and Petronas, as well as ENI and Total, are present in the Islamic Republic of Iran (table IV.10).

Historically, developed-country TNCs have controlled the value chain, especially due to their dominant position in technology, transportation and distribution networks (Accenture, 2006: 13). However, in the past few years, that situation has changed somewhat. Developed-country TNCs no longer dominate technical project management, which is often outsourced to specialized service companies. That development has helped the local State-owned partners to increase their technological independence in that they can now hire service companies directly, without the intermediation of the traditional majors (Accenture, 2006). Moreover, some transition-economy oil and gas firms, especially Russian TNCs, have invested in several overseas downstream projects with a view to controlling distribution channels linked to those activities. The best-known examples are those of Gazprom's pipeline and distribution projects

Figure IV.10. Oil and gas production of selected TNCs outside their home country, 2005
(Millions of barrels of oil equivalent)



Source: UNCTAD, based on data from IHS.

Box. IV.5. Examples of outward expansion of oil and gas TNCs from developing and transition economies

- Petrobras had production affiliates in 8 host countries in 2005, and exploration and downstream activities in 10 other locations (Ma and Andrews-Speed, 2006).
- Activities of Chinese State-owned oil companies, involving exploration, production, transportation, refining and service contracts, are spread over 46 countries, mostly developing ones (Ma and Andrews-Speed, 2006).^a As for Chinese TNCs, while CNOOC was not successful in its bid for Unocal (United States), it has assured major contracts in other developed countries, such as Australia and Canada (*WIR06*: 58).
- ONGC Videsh (India) has focused especially on oil production in the Russian Federation (Sakhalin 1 project), while Indian Oil Corporation invested in the Libyan Arab Jamahiriya in 2004-2005.^b
- In the Republic of Korea, State-owned KNOC has taken the lead in overseas oilfield development projects. As of June 2006, it was taking part in 26 oilfield development projects in 14 countries. In 2006, it expanded into Australia, Kazakhstan, Nigeria, the Russian Federation and Yemen (Republic of Korea, MOCIE, 2006).
- Petronas' (Malaysia) international expansion began in the 1990s. In its early phase, the company focused more on upstream activities in neighbouring South-East Asian countries. It first moved downstream and outside the region in 1996, when it acquired a South African refiner and player in a petrol station group (Jayasankaran, 1999). Subsequently, since the late 1990s, it has focused its overseas push on explorations in Africa^c and West Asia (Islamic Republic of Iran), as well as being involved in pipeline construction and retailing worldwide (e.g. China, India, Argentina, South Africa, Sudan and the United Kingdom). As of March 2007, Petronas had a presence in 33 countries abroad (Pananond, 2007), including 11 main production locations.
- The overseas expansion of Russian oil and gas TNCs serves to secure access to markets, especially developed-country markets, through downstream integration. They also have important upstream exploration and extraction activities in various members of the CIS or in developing countries with long-standing historical links with the Russian Federation. Many of these exploration and extraction rights have been inherited from the pre-transition period. In 2002, Lukoil, the largest privately owned oil TNC, derived about 5% of its production from fields abroad, including Kazakhstan and Uzbekistan (Vahtra and Liuhto, 2006: 28). State-owned Rosneft participates in foreign upstream ventures via intergovernmental deals in various CIS countries and Afghanistan.
- In the case of Thailand's State-owned PTT, its interest in overseas expansion started only in the late 1990s, and was concentrated mainly in the South-East Asian region, although its exploration affiliate has started to venture into West Asia and Africa. PTT is also taking the lead in a future trans-ASEAN gas pipeline project (Crispin, 2004).

Source: UNCTAD.

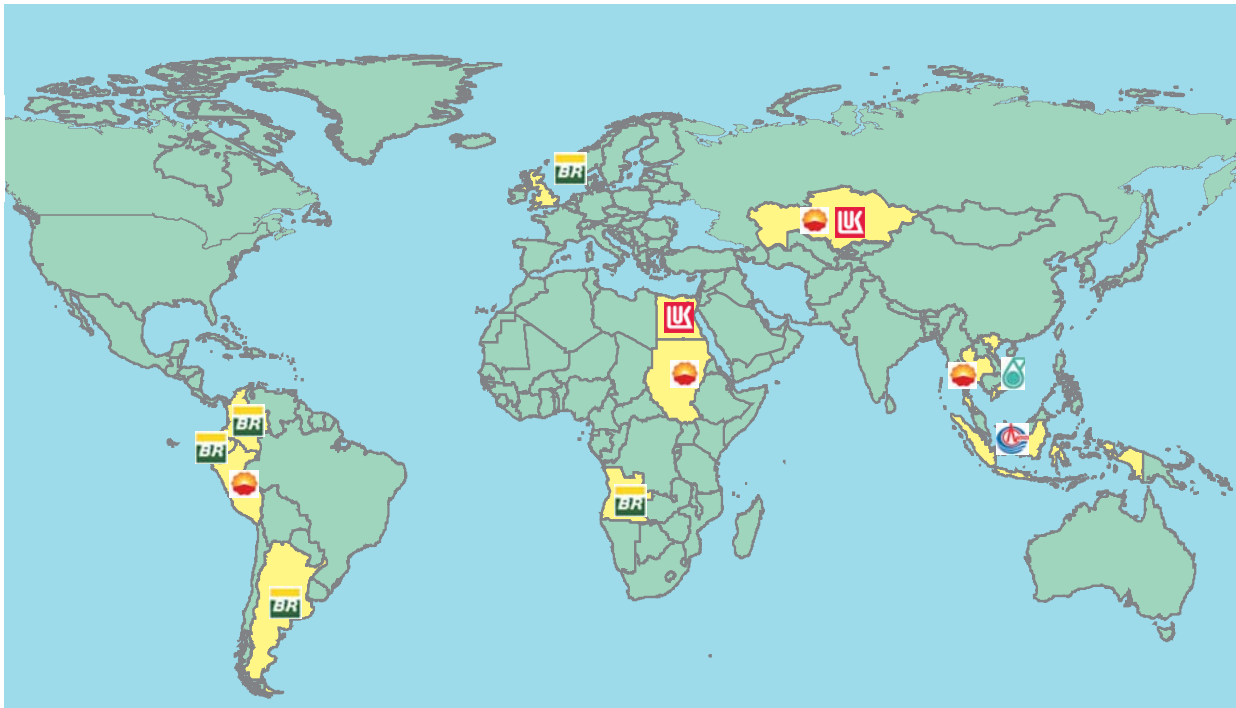
^a By the end of 2005, CNPC alone owned oil and gas assets in 23 countries, including 12 main production locations.

^b In 2005 and 2006, ONGC Videsh made nine acquisitions abroad: in Cuba, Egypt, the Libyan Arab Jamahiriya, Myanmar, Nigeria, Qatar, the Syrian Arab Republic and Viet Nam. With these acquisitions, the company had a presence in 21 projects as of 31 March 2006, including one pipeline project (Jain, 2007).

^c Sudan (1999), Gabon (1999), Chad (2000), Cameroon (2000), Algeria (2001), Mozambique (2002), Ethiopia (2003) and Niger (2005).

Figure IV.11. Selected foreign production locations of oil and gas TNCs, 1995 and 2005

1995



2005



China

India

Brazil

Malaysia

Russian Federation

CNOOC CNPC/PetroChina SINOPEC

ONGC

Petrobras

Petronas

Lukoil

Source: UNCTAD, based on data from IHS.

in Western Europe, as well as Lukoil's expansion into the gas station business in Western Europe and the United States (Vahtra and Liuhto, 2006: 28-29; *WIR99*: 89; *WIR01*: 119).⁴⁵ Developing-country firms that have invested in overseas projects include Saudi and Kuwaiti State-owned oil companies that have partnered with the Chinese firm, Sinopec, in two separate refining and petrochemical ventures in China (Tan, 2006).

C. Drivers and determinants

Although traditional explanations of FDI and international production generally apply also to the extractive industries, at least three special features of resource extraction should be kept in mind (chapter III). First, most investments in extractive industries are capital-intensive and risky, with long gestation periods. Therefore, companies need to be financially strong and able to manage a high degree of risk (Vernon, 1971). Secondly, more than other industrial activities, mineral extraction can engender considerable environmental and social impacts that investors need to address. Thirdly, as some mineral resources, notably oil and gas, are regarded as strategically important to countries, motivations other than purely economic ones often influence investment decisions.

Drivers and determinants of investments by TNCs in extractive industries differ between various stages in the value chain, and between industries and companies. This section discusses the motivations and determinants of FDI and TNC activities in extractive industries, with particular attention to the diverging patterns in the oil and gas and the metal mining industries, and to the rise of extractive-industry TNCs based in developing and transition economies. The analysis is structured according to the factors motivating the internationalization of production by firms, and ownership, internalization and locational advantages that determine whether and where TNCs engage in international production activities.

1. Motivations for internationalization

The motivations for extending production activities in extractive industries across national boundaries can be grouped into resource-seeking, market-seeking, efficiency-seeking and strategic-asset-seeking (Dunning, 1993 and 2000; *WIR98*).

Natural-resource-seeking motives dominate FDI and other forms of TNC involvement in upstream (exploration and extraction) activities. A TNC may seek resources for three reasons: to

meet the needs of its own downstream refining or manufacturing activities, to sell the minerals directly in host, home or international markets, or to secure the strategic requirements of energy or other minerals for its home country (as formulated by the country's government). The first reason has been important historically for petroleum production, but less so after the nationalizations of oil and gas extraction and refining industries and with the development of new commodity exchanges (which provide opportunities for spot transactions, as well as futures and options trade). However, it remains important for vertically integrated TNCs in metallic minerals. The second reason has driven the overseas expansion of most privately owned extractive TNCs and some State-owned oil companies, such as Petrobras, Petronas and Statoil. The third reason explains overseas expansion in extractive activities by both privately owned and State-owned TNCs.

Recently, the growing demand for various minerals has been a key driver of the overseas expansion of State-owned TNCs from Asia (Hoyos, 2007; Gardiner, 2006; Zweig and Bi, 2005). For example, the Government of India has mandated its State-owned oil companies to secure stakes in overseas oil deposits. ONGC Videsh has an objective of acquiring the equivalent of 60 million tonnes of oil per year by 2025, which corresponds to a tenfold growth over its 2006 level (Mitchell and Lahn, 2007: 3). KNOC is expected to increase the share of its foreign production from 4% of the total crude oil imports into its home economy in 2005 to 35% by 2030 (Mitchell and Lahn, 2007: 3). China's "going global" strategy outlined in 2000 is among the most explicit recent policy initiatives taken to boost FDI overseas (*WIR06*: 209-210).⁴⁶

Market-seeking motives are generally of limited importance for exploration and extraction activities, but figure among the drivers of investment in overseas downstream activities. This applies, in particular, to companies based in mineral-rich countries, such as Kuwait, the Russian Federation and Saudi Arabia. These primarily upstream-based firms strengthen their market position largely by moving to downstream markets and capturing the value added associated with the production and sale of finished products (Baker Institute, 2007: 4). Increased control over downstream activities also offers the strategic advantage of securing long-term demand in consumer markets. In addition, since relative profits between upstream and downstream activities may vary over time, vertical integration allows a firm to diversify, which helps mitigate risk.

Efficiency-seeking motives are relevant for investments in the processing or early metal-manufacturing stage, where TNCs seek to exploit

differences in costs of production between countries. They are sometimes combined with market-seeking motives, especially when transportation of the product is difficult or costly. In the case of refining, minimizing the costs of transportation may justify processing close to the source of the minerals, while considerations of access to markets and maximizing the scale of production may prompt locating it closer to the consumer (Tavares et al., 2006).

Strategic-asset-seeking motives can be linked especially to the rise of cross-border M&As by TNCs in the extractive industries. Companies may invest to acquire strategic assets in the form of know-how and technology from other companies or from specialized technology providers, or to speed up their rise to global status by accessing the resources, capabilities and markets of the acquired firms. Such motives may therefore be especially important for new TNCs from emerging market economies that are eager to develop their competitive assets rapidly (Dunning and Narula, 1996; *WIR06*; Jain, 2007). Finally, preemptive motivations may be at play as firms seek to merge with a competitor to eliminate competition and erect barriers against others, and to strengthen their global positioning (Caves, 1971; Vernon, 1971; *WIR00*).⁴⁷

Strategic considerations relating to home economies may play a more direct role in FDI by new TNCs from developing and transition economies – many of which are State-owned – than in FDI by traditional TNCs. In the former cases, home governments may influence corporate motives and strategies, resulting in the extracted raw materials going directly to home countries rather than entering international markets. This may result in implicit restrictions on the end destination imposed by a given home country (Nitzov, 2007). In addition, as in the case of Russian TNCs, the State may encourage a process of international expansion with the aim of increasing control over downstream markets (Vahtra and Liuhto, 2006).

2. Determinants of TNC activity

a. Ownership-specific advantages

As in other economic activities, TNCs in extractive industries rely on some kind of competitive advantages when they undertake FDI or expand internationally by means of other contractual forms (Dunning, 1993 and 2000). These “ownership” advantages may derive from privileged access to capital, technology, superior organization and management know-how, size and/or the common

governance of several parts of the value chain. They may also be linked to such institutional assets as corporate culture, leadership or management diversity, or privileged access to home or host markets, or benefit from having a presence in many different markets. Some ownership advantages may be firm-specific (such as proprietary technology, or management and organizational skills), while others are linked to particular features of the home country (such as access to finance and risk-reducing instruments). Home-country specific advantages can also include physical infrastructure, the innovatory system or educational facilities, which may be unique to a country and internalized by its TNCs.

One of the main firm-specific advantages for both traditional and new TNCs vis-à-vis domestic firms in a host country is their access to finance. For large and capital-intensive extraction projects, financial strength and sheer size are particular assets of major TNCs, which often have internally generated funds to draw upon. For example, in iron ore production for export, only the very largest companies have the potential to invest in the infrastructural installations (e.g. railways, ports and handling systems) needed to compete in the global market. In this segment, the three top companies (CVRD, Rio Tinto and BHP Billiton) control 74% of the world market.⁴⁸ Even with respect to alternative sources of finance, such as borrowing and raising funds through stock markets, traditional TNCs may be in a privileged position in terms of their ability to raise funds. Their long experience with similar projects combined with the expertise required may make lenders and investors more willing to financially support one of their projects, rather than one implemented by firms newly venturing into production abroad.⁴⁹

With some important exceptions, proprietary technology is of limited importance as an ownership-specific advantage for the internationalization of most extractive-industry firms. The technologies used in most oil and gas extraction and metal mining operations are relatively well known today, and can be obtained in the market from specialized providers. However, for certain technologically advanced projects – as in the case of very deep offshore oil-drilling, liquid natural gas extraction, unconventional oil and alternative energy projects – specialized know-how and expertise constitute key firm-specific assets for some TNCs. Some new contenders, including Petrobras and Petronas, have managed to develop world-class capabilities in deep offshore exploration. While proprietary technology may be of limited importance as an ownership-specific advantage for firms in extractive industries, expertise in terms of the ability to manage long-term projects

and associated risks is critical.⁵⁰ Such management and organizational practices and skills are developed within firms, often over long periods of time. Even if, in principle, technology can be acquired from external sources, it takes specialized know-how to make use of it in an effective way.

Access to markets (due to name recognition worldwide and goodwill in home countries) and to transportation and distribution channels are other potentially important ownership advantages, particularly in oil and gas extraction (Accenture, 2006). In the past, it was one factor behind FDI in oil exploration and extraction by some developed-country TNCs that began as distributors of imported oil (Yergin, 1991). Traditional TNCs still have a strong position in downstream industries. Countries with high petroleum demand tend to have large refinery capacities.⁵¹ As of January 2005, 89% of the world's crude oil refinery capacity was located in non-OPEC countries. At the same time, the fastest growing markets for petroleum products are in emerging market economies, thus giving the new contenders (e.g. those from China and India) a potential advantage (Accenture, 2006).

The financial strength of TNCs is sometimes linked to home-country institutional arrangements. For example, large State-owned TNCs, such as those based in China and India, derive advantages from access to subsidized finance and investment insurance when investing abroad (*WIR06*). Financial backing by their home countries can enable them to assume greater risks when investing abroad and they could also be willing to pay more to access mineral resources. A new record in signature bonuses was reached in 2006 when Sinopec, outbid its competitors by paying a \$2.2 billion signature bonus in return for the right to explore for oil in two Angolan blocks.⁵² Chinese oil TNCs have also appeared to be more willing to invest in non-core business to secure control over production. For example, in a licensing round in Nigeria in May 2006, CNPC was awarded four oil exploration and extraction licences in return for agreeing to invest around \$4 billion to revamp a refinery and construct a hydro power plant and a railway line in that country (Mitchell and Lahn, 2007).⁵³

There may be several reasons why these State-owned TNCs are able and willing to pay more than traditional TNCs for access especially to oil and gas reserves abroad (Mitchell and Lahn, 2007).⁵⁴ They may incur lower costs of capital, because interest rates in their home base are lower than in other markets. The State as a shareholder may require fewer or no dividends from them if it places a strong emphasis on energy security. In some cases, there may be direct government participation in financing the projects by

way of export credits, subsidized loans or investment guarantees.

But State ownership can also be a disadvantage. Many State-owned companies in the extractive industries have been used as milking cows by their owners (governments), with too few funds left to undertake reinvestments (Radetzki, forthcoming). Even the world's largest copper producer, Codelco, has at times found it difficult to reconcile the expectations of its owner with the need to develop its production capacities. The policy of transferring all corporate profits to the State has meant that investments by Codelco had to be financed from the depreciation allowance of the company and from debt.⁵⁵ In oil and gas, Mexico's State-owned Pemex was reported to have paid \$54 billion in taxes and royalties in 2006 alone, accounting for nearly 40% of government revenues. As a result, it reported losses (after taxes) over the period 2000-2005, and showed only \$3.9 billion in net profits in 2006 – despite high oil prices – compared with sales of \$97 billion.⁵⁶ Loss-making has led to underinvestment in exploration.⁵⁷ Such cash-stripped companies generally have a slim chance of expanding internationally.

b. Internalization advantages

International vertical integration aimed at controlling the trade or supplies of raw materials has traditionally been a major feature of both oil and gas and metal mining TNCs (Morse 1999; Vernon 1971), especially in times of high demand and high mineral prices (Caves, 1971; Hennart, 2000; Jones, 2005; Williamson, 1990). These strategies have been related to the minimization of transaction costs. However, the degree of internalization has diminished over time, partly as a result of nationalizations (Radetzki, forthcoming). Especially in the oil and gas industry, internalization and vertical integration have been hampered by restrictive host-country policies. Some oil-rich host countries prohibit TNC participation in oil and gas exploration and others allow TNCs to participate only under various contractual arrangements with State-owned local partners (chapter VI). The main reason for these restrictions is the desire of host country governments to control the production of oil and gas, which are perceived to be strategic energy resources, and from which resource rents can be very high.

c. Locational advantages

As in other industries, extractive-industry TNCs decide where to invest abroad based on three broad locational factors: the economic characteristics of a location, the general policy environment of potential host countries, and the extent of business

facilitation versus legal restrictions in the given economic activity (*WIR98*).

The existence and extractability of natural resources are the most important *economic* determinants of where TNCs invest in mineral exploration and extraction. While the (likely) presence of mineral deposits is a necessary requirement to attract resource-seeking investment, it is not a sufficient condition. Many developing countries that are endowed with metallic minerals have traditionally been unable to attract FDI. For companies to be willing to engage in exploration and or extraction, they need to assess whether the volume and quality of minerals are likely to be sufficient to make an investment profitable. This requires, among other things, access to basic geological data. If the chances of finding significant deposits are perceived to be promising, a company will consider the expected risk-return ratio: the higher the risk, the greater the expected return has to be for it to invest. It also takes into account the political, environmental and social risks. However, as noted above, the willingness to take risk and the assessment of risk differ considerably between companies.

In addition to the legal and regulatory systems that determine in particular whether and in what form TNCs are allowed to invest in exploration and extraction. The overall macroeconomic and political environment is also generally of high significance for all forms of investment. The importance of policies and institutions as locational determinants was confirmed in a survey of 39 mining TNCs and factors influencing their investment decisions (Otto, 1992). Out of the 20 highest ranked criteria, all but two (geological potential and measure of profitability) were in one way or another related to government policies or regulatory systems. The top ten among them, ranked by importance attached to them by TNCs, were: security of tenure; ability to repatriate profits; consistency and constancy of mineral policies; management control; mineral ownership; realistic foreign-exchange regulations; stability of exploration and extraction terms; ability to predetermine tax liability; ability to predetermine environment regulations; and the stability of fiscal regime.

Extractive-industry TNCs need to be able to combine the availability of resources with access to good physical infrastructure (ports, roads, power, and telecommunication). The importance of supporting infrastructure varies by project, however. A gold mine may be easier to develop even when basic physical infrastructure is weak, as its output can be transported by air. By contrast, an iron ore mine requires well functioning roads and ports to be economically feasible.

Investments in the processing stage of extractive activities are determined to a lesser extent by the availability of mineral deposits, although some refining and smelting activities may benefit from close proximity to a mine. Access to inputs needed in the refining process play a major role. For example, in the aluminium industry access to cheap energy is valuable and locations that offer opportunities for energy generation (e.g. rivers) are preferred for refining plants. The need for cheap energy is also a factor encouraging integration of TNC activities in the extractive industries with the energy business of host countries (Stuckey, 1983; Whiteway, 1996).

D. Conclusions

This chapter demonstrates that significant changes are under way in the extent and nature of TNC involvement in extractive industries. Some of its findings can be summarized as follows:

- While extractive industries account for a small share of global FDI, they constitute the bulk of inward FDI in a number of low-income countries.
- The boom in mineral prices has fuelled a rise in global investments in both the metal mining and oil and gas industries. Indeed, those industries account largely for the recent increases in FDI in Africa, Latin America and the CIS. The boom has similarly triggered a series of cross-border mega mergers in these industries, resulting in higher levels of market concentration.
- The extent and nature of TNC involvement vary considerably between the metal mining and the oil and gas industries. In the former, widespread nationalizations in the 1960s and 1970s were in most cases subsequently reversed through liberalization and privatizations. As a result, major privately owned TNCs today dominate the global production of metallic minerals. Conversely, the nationalizations of the oil and gas industry permanently changed its structure, and companies with majority State ownership are now the dominant producers. This trend has been accentuated over the past decade.
- Despite the global dominance of majority State-owned companies with a strong focus on domestic production, in a number of countries foreign affiliates of TNCs play a significant role in oil and gas extraction. In several African countries, for example, they account for well over 50% of domestic production. In metal mining, as well, foreign affiliates account for a particularly large proportion of the production of low-income countries.

- A distinct feature of the global extractive industries in the past few years has been the rise of outward FDI from the emerging market economies, a trend that was also highlighted in the *WIR06*. This has been driven particularly by TNCs from selected Asian economies, such as China, India, Malaysia and the Republic of Korea, but also by Brazilian, Kuwaiti and Russian companies. Whereas the trend towards more South-South investment is the most visible in oil and gas, similar developments have also been observed in metal mining.
 - With few exceptions, these new TNCs remain under State control. Although their level of internationalization is understandably much lower than the traditional, privately owned oil and gas majors, a number of them are moving rapidly to gain an international foothold in different oil and gas projects.
 - The expansion of State-owned TNCs from China and India stems from the rising energy demands of their fast growing economies. They are actively seeking to secure access to foreign energy supplies through equity investments in oil and gas extraction projects. Backed financially as well as politically by their respective governments, a key objective for them is to expand production for export to their home economies.
 - In both the oil and gas and the metal mining industries, a number of specialized service providers have emerged. For example, in metal mining in 2005, specialized “junior” exploration companies for the first time reported greater exploration expenditures than the major mining companies. Similar developments have occurred in oil and gas. As a result of greater specialization, there are new opportunities to source services from specialized companies. Nevertheless, many countries prefer to involve TNCs in exploration projects, especially in metal mining, but also for technologically difficult oil and gas projects. TNCs remain a major source of financial resources, management skills and sometimes technology, besides providing access to markets.
 - The interaction of TNC strategies and government policies is instrumental in shaping the ownership and production structures in the extractive industries (chapter VI). Given the continued high levels of mineral prices (chapter III), it is likely that the intense investment activity will be sustained for some time as companies seek to meet the high level of demand.
 - TNCs in extractive-industries invest overseas for the same three broad reasons as TNCs in other industries: the economic characteristics of the location, the policy and institutional framework of the potential host country, and the impact of either legal restrictions or business facilitation on the conditions of entry and operations. In the exploration and production stages, such locational decisions are determined first and foremost by the availability of extractable resources, and the quality of the physical infrastructure such as ports, roads, power and telecommunications. In processing activities, investments are more market-seeking and efficiency-seeking, and depend less on the location of natural resources and the evolution of their prices. The locational decisions of such firms, like those of firms in manufacturing or services, are influenced more by factors such as availability of infrastructure, cheap energy and human resources, as well as proximity and access to markets. In all stages of natural-resource-based activities, government policies and institutions have a major influence on locational decisions (chapter VI).
- Taken together, the recent changes in extractive industries have resulted in a more multifaceted TNC universe that continues to change in dynamic ways and on different trajectories, depending on the mineral, region and country. These dynamics raise questions about their impact on developing countries – an issue addressed in the next chapter.

Notes

- ¹ In oil and gas, majority State-owned firms are commonly referred to as “national oil companies”. In line with the definitions of FDI and TNCs, “national oil companies” that invest abroad are thus included in the universe of TNCs.
- ² This Report draws on statistics from UNCTAD’s FDI/TNC and cross-border M&A databases (www.unctad.org/fdistatistics), as well as unpublished data provided by IHS (<http://www.ihs.com>) and the Raw Materials Group (<http://www.rmg.se>) (on oil and gas, and metal mining, respectively).
- ³ In 1914, more than half of the outward FDI stock of the United Kingdom was reported to be in resource-based industries (Houston and Dunning, 1976), mainly extractive, of which most was located in developing countries (Corley, 1994). Similarly, more than half of the United States FDI stock was concentrated in resource-based industries in developing countries (Wilkins, 1970).
- ⁴ In 2005 the Netherlands replaced the United Kingdom as the number one source of extractive-industry FDI. This change in ranking was prompted partly by the reorganization of Royal Dutch Shell, mentioned in box IV.1.
- ⁵ At the end of 2005, 15% of China’s outward FDI stock (\$9 billion) was in mining (UNCTAD, FDI/TNC database (www.unctad.org/fdistatistics)).
- ⁶ In oil and gas, as of June 2006, companies from the Republic of Korea were involved in 72 projects in 28 countries worldwide. Asia and Oceania (excluding West Asia) were the leading destinations (22%), followed by North America (21%) and Latin America and the Caribbean (21%). A survey of 35 mineral-resource-related companies in the Republic of Korea forecasts that their investments in overseas mineral resource development will reach \$3.7 billion in 2007 (Republic of Korea, MOCIE, 2006).
- ⁷ Other large-scale acquisitions included Goldcorp’s (Canada) purchase of Glamis Gold (United States), Sinopec’s 49.9% stake in Udmurtneft, CNOOC’s investment in Nigeria, Royal Dutch Shell’s acquisition of BlackRock Ventures (Canada), and CITIC’s (China) acquisition of Nations Energy (Canada) (annex table A.IV.4).
- ⁸ In the period 1960-1969, petroleum and other mining together represented an average of 45% of the total number of expropriations by developing-country States. This proportion rose to 62% in 1970-1976 (UNCTC, 1978: 14-18).
- ⁹ Examples include Zambia (copper), Ghana (gold), Peru (base metals and oil), Argentina and Bolivia (base metals and oil) and the Russian Federation (oil in the early 1990s).
- ¹⁰ In terms of inflows, the share of developed countries fell somewhat: from 74% in 1989-1991 to 78% in 2003-2005 (annex table A.I.11).
- ¹¹ For example, in 2005, the FDI stock in the extractive industries of those countries was \$36 billion, higher than the stock in a traditional mining country, South Africa (\$27 billion) (annex table A.I.9).
- ¹² In 2004, the share of oil and gas exceeded 60% of total FDI inflows in Angola, Egypt, Equatorial Guinea and Nigeria and that industry has also accounted for the largest share of FDI in Algeria, the Libyan Arab Jamahiriya and Sudan in recent years (*WIR05*).
- ¹³ FDI in oil and gas increased sharply in Colombia and Ecuador in 2005; and in Venezuela, it amounted to \$1 billion. It also increased in Argentina and Trinidad and Tobago in 2004 (the most recent year for which their data are available). FDI in metal mining was buoyant in Argentina, Chile, Colombia and Peru (*WIR06*). In Bolivia, uncertainties surrounding the implementation of its restrictive new 2005 law relating to oil and gas led to a fall in FDI (*WIR06*: 71-72).
- ¹⁴ In Venezuela in 2006, the Government transformed the risk service contracts of foreign companies into joint ventures with its State-owned petroleum company, *Petróleos de Venezuela* (chapter VI).
- ¹⁵ In Saudi Arabia, the three contracts with foreign firms have been signed under the Gas Investment Law of 19 September 2003. These contracts are currently categorized as “surface exploration” rights (information provided by IHS).
- ¹⁶ Only a few world-class State-owned companies remain today, such as Codelco (Chile) and LKAB (Sweden), or risky assets with only long-term potential, such as the remainder of Gécamines (the multi-metal mining company founded in the early twentieth century in the Democratic Republic of Congo), the aluminium industry of Venezuela and some Indian State-owned metal mining companies. In the CIS, only a limited production capacity remains under State control. In China, mining activities continue to be largely under the control of the central Government or regional or local public authorities. However, several partial privatizations and initial public offerings have successfully been carried out in Chinese metal mining firms in recent years.
- ¹⁷ The distinction between these companies and the medium-sized companies is somewhat arbitrary, mainly based on the fact that the latter usually focus on production at the mining stage only.
- ¹⁸ Data from the Raw Materials Group.
- ¹⁹ BHP Billiton and Anglo American are currently headquartered in developed countries. However, they have their roots in South Africa, where they were originally established and headquartered.
- ²⁰ State ownership in 1995 played a more important role than in 2005 as governments at that time still held majority ownership in CVRD and KGHM Polska Miedz – shares that were reduced to minority holdings by 2005 – and the Russian Government owned 49% of Norilsk Nickel, a participation that was subsequently sold (see annex table A.IV.5).
- ²¹ For example, Anglo American is active in coal, copper, gold and nickel production, and BHP Billiton has interests in coal, copper, iron and nickel, as well as oil.
- ²² With the acquisition of Inco (Canada) in 2006, CVRD owns now foreign metal mining production, however.
- ²³ Norilsk Nickel has however foreign production in gold.
- ²⁴ Large internationalized firms figure in more than one top list: Anglo American is on the iron ore, copper, nickel and zinc top lists, BHP Billiton on the iron ore, copper and nickel top lists, and Rio Tinto on the iron ore, copper and gold lists. In turn, firms with no investment abroad such as CVRD and Codelco are single-metal specialists.
- ²⁵ Over the period 1995 to 2005, *Norilsk Nickel* moved from a strong focus on mining to a vertically integrated approach. The capacity of the Norilsk nickel/copper refinery was increased from 93.8 to 127 kilotonnes, and that of Monchegorsk nickel/copper refinery from 86.3 to 116 kilotonnes. *BHP Billiton* started moving into vertical integration in 1995 with no control over mines or refineries. By 2005, it had vertically integrated 152 kilotonnes of mine production and 144 kilotonnes of refined production into its nickel value chain. This was achieved through the acquisition of Montelibano Nickel Complex (Colombia) and of WMC’s assets, including the Kwinana nickel refinery (Australia) and the Yabulu nickel refinery (Australia) (information from the Raw Materials Group).
- ²⁶ Mittal Steel, which merged with Arcelor in early 2006, has gradually built a position among the top 10 iron ore producers by taking over fully integrated (often loss-making) steelworks. The company made acquisitions of this type over the period 2005-2006 in Algeria, Bosnia, Kazakhstan, Mexico, Ukraine and the United States. In South Africa, Mittal did not acquire ownership of the former Iscor mines, but made sure it had access to iron ore on a cost-plus basis. During 2006, Mittal also made its first investments into pure iron ore mines in Liberia and Senegal, although the latter transaction is being contested.
- ²⁷ Severstal has integrated upstream into coal and iron ore mining within the Russian Federation, and is planning similar investments abroad.
- ²⁸ “Steel mills trying to regain some control of input costs”, *MEPS Steel News*, 23 June 2006 (Sheffield, MEPS (International) Ltd.; accessible at: www.meps.co.uk/viewpoint6-05.htm).
- ²⁹ Over the decade 1996-2005, their number fluctuated between 8 and 12, as some of the large oil and gas TNCs merged (reducing their number) and new ones entered the list.

- ³⁰ According to Bakes Institute, 2007, they ranked 14th, 17th, 19th and 25th respectively among the oil and gas firms with the largest reserves worldwide.
- ³¹ In the Russian Federation between 1995 and 2005, State ownership increased from minority to majority in Gazprom, and decreased from majority to minority in Sibneft, Slavneft and Tatneft. It also decreased from a majority to a minority share in ENI (Italy) and Abu Dhabi Co Onshore Operator (United Arab Emirates).
- ³² Lukoil (Russian Federation), for example, is 100% privately owned.
- ³³ "PetroChina announces A-share listing, boosts shares", *Interfax-China* (Shanghai), 20 June 2007.
- ³⁴ "Monthly Energy Chronology - 2000" (Washington, DC, Energy Information Administration; available at: www.eia.doe.gov/emeu/cabs/chrn2000.html).
- ³⁵ In Saudi Arabia, policy-making and regulation are the prerogatives of the Ministry of Petroleum and Minerals, while operations are left to Aramco. Aramco has an independent financial structure, paying royalties and taxes to the State Treasury and dividends to its shareholders. It has been observed that this kind of independence of the financial and managerial structures increases the company's efficiency, allowing it to focus on its long-term goals without the risk that its strategy will be disrupted by a change of chief executive officer every time there is a change of government (Al-Naimi, 2004).
- ³⁶ Excluding North America.
- ³⁷ The new Seven Sisters are considered to be: Saudi Aramco (Saudi Arabia), Gazprom (Russian Federation), CNPC (China), NIOC (Islamic Republic of Iran), Petróleos de Venezuela (Venezuela), Petrobras (Brazil) and Petronas (Malaysia) (Hoyos, 2007).
- ³⁸ Asian Development Bank, "Central Asia Regional News", *December 2005 Monthly Digest* (<http://adb.org/Carec/Central-Asia-News-Digest/2005/December-2005.pdf>).
- ³⁹ ONGC (India) and Sinopec (China) in August 2006 jointly acquired a stake in Omimex de Colombia, owned by Omimex Resources (United States) ("ONGC, Sinopec buy half of Colombian oil company" (Houston, TX, Rigzone; accessible at: www.rigzone.com/news/article.asp?a_id=35185). The joint purchase of the Syrian Al Furat Petroleum Co. and the joint Sino-Indian development of the Yahavaran oilfield in the Islamic Republic of Iran are two additional examples of partnerships (*Financial Times*, 13 January 2006; "BBC interviews CK on China-India trade talks, oil exploration," *China Knowledge*, 17 March 2006, <http://chinaknowledge.com/news-detail.aspx?id=2418>).
- ⁴⁰ In 2005, the EU imposed sanctions on Uzbekistan due to human rights violations. These sanctions affect the arms trade directly, but all business transactions of European firms indirectly. See "Europeans set arms embargo to protest Uzbeks' crackdown", *New York Times*, 4 October 2005: A6.
- ⁴¹ Under the Iran-Libya Sanctions Act passed in 1996, the United States imposes sanctions on firms that invest \$20 million or more annually in oil and gas projects in the Islamic Republic of Iran (Katzmann, 2001). It thus hinders investments not just by United States TNCs, but also by companies with major business interests in the United States (Canning, 2007: 57).
- ⁴² The United States Executive Order 13067 "Blocking Sudanese Government Property and Prohibiting Transactions with Sudan" was issued on 4 November 1997 (see www.clintonfoundation.org/legacy/110397-executive-order-13067-on-imposing-sanctions-on-sudan.htm for the full text).
- ⁴³ The company holds a 40% stake in the Greater Nile Petroleum Operating Corporation, the biggest extractive venture in Sudan and has also invested in downstream operations.
- ⁴⁴ "Oil-hungry China takes Sudan under its wing," *Telegraph online edition*, 23 April 2005, <http://www.telegraph.co.uk/news/main.jhtml?xml=/news/2005/04/23/wsud23.xml&sSheet=/news/2005/04/23/ixworld.html>; and Hoyos, 2006.
- ⁴⁵ Gazprom has downstream equity investments in over 20 countries, including several EU member States, Turkey, and members of the CIS. In the CIS, the company is practically the sole supplier of natural gas (Vahtra and Liuhto, 2006: 28-29). Lukoil owns refineries in Bulgaria, Romania and Ukraine. It also possesses a retail network of some 1,000 gas stations in the CIS and Central and Eastern Europe. In addition to its acquisitions of firms in transition economies, Lukoil acquired Getty Petroleum Marketing in 2000, which controls 1,300 gas stations in the United States, and in 2004 it acquired an additional 800 stations from ConocoPhillips.
- ⁴⁶ In October 2004, the National Development and Reform Commission and the Export-Import Bank of China issued a circular which established, as one of four priorities, the promotion of resource exploration projects to mitigate the domestic shortage of natural resources.
- ⁴⁷ Gaining advantages of size and scale is one of the main drivers of M&As. In the oil industry the fluctuations in oil prices can be an added driver, leading to a wave of "mega mergers" as in the late 1990s (Stonham, 2000). For example, the merger of Exxon with Mobil enhanced the position of the newly formed company in Asia (Gilley, 1998).
- ⁴⁸ Data from the Raw Materials Group.
- ⁴⁹ In recent years, adherence to international social and environmental standards, such as those established by the Equator Principles, has also become a factor that financial institutions consider when financing projects (chapter VI, *WIR06*). In this context, the well-established TNCs may have an advantage over the new contenders.
- ⁵⁰ The cost of off-the-shelf technology sourcing can be another factor holding back overseas expansion. Technologically less developed TNCs have to add the price of purchasing technology from outside providers to the full costs of their overseas expansion.
- ⁵¹ The United States has far more refinery capacity than any other country, with ownership of 149 of the world's 691 refineries (see "Non-OPEC Fact Sheet" (Washington, DC, Energy Information Administration, June 2005; available at: <http://www.eia.doe.gov/emeu/cabs/nonopec.html>).
- ⁵² See <http://www.globalinsight.com/SDA/SDADetail5873.htm>.
- ⁵³ CNPC is involved in similar arrangements also in Algeria and Sudan, while ONGC has entered into similar agreements in Nigeria, and Petronas in Sudan (Mitchell and Lahn, 2007; Accenture, 2006).
- ⁵⁴ See also Global Witness, *Oil Transparency 2007*; available at: www.globalwitness.org.
- ⁵⁵ Of the \$3 billion worth of investment over the period 1994-1999, 66% came from depreciation, and the rest from selling assets and contracting a debt of \$625 million ("Latin America: Beating the oil curse"; *Business Week* online, 4 June 2007; accessible at: www.businessweek.com/magazine/content/07_23/b4037051.htm?campaign_id=nws_insdr_may25&link_position=link2).
- ⁵⁶ Ibid.
- ⁵⁷ It has been estimated that if there is no new discovery of oil by 2017, Mexico may risk becoming a net oil importer (ibid).

CHAPTER V

DEVELOPMENT IMPLICATIONS FOR HOST COUNTRIES

Mineral endowments provide opportunities for economic development and poverty alleviation in the countries where they are located. As noted in chapter III, some of today's developed and developing countries have successfully leveraged their mineral resources for accelerating their development process. In other cases, the development impact of extractive activities has been and remains disappointing. In many developing and transition economies, TNCs play an important role in mineral extraction and related activities (chapter IV), and can therefore have a significant impact on the development of those countries. This chapter draws on available evidence to analyse their economic, environmental and social impacts on those countries. Although the different determining factors are intertwined, and counterfactuals are hard to construct, the chapter seeks to isolate TNC-specific impacts wherever possible. The analysis concentrates on upstream activities (i.e. exploration and extraction), but other parts of the value chain are also considered, as appropriate.

A. A framework for assessing implications for host countries of TNC involvement in extractive industries

TNC involvement in extractive industries may have both positive and negative effects on a host developing economy. In exploiting their mineral resources, developing countries often face constraints, for example, with respect to capital and foreign exchange, technical and managerial capabilities, and access

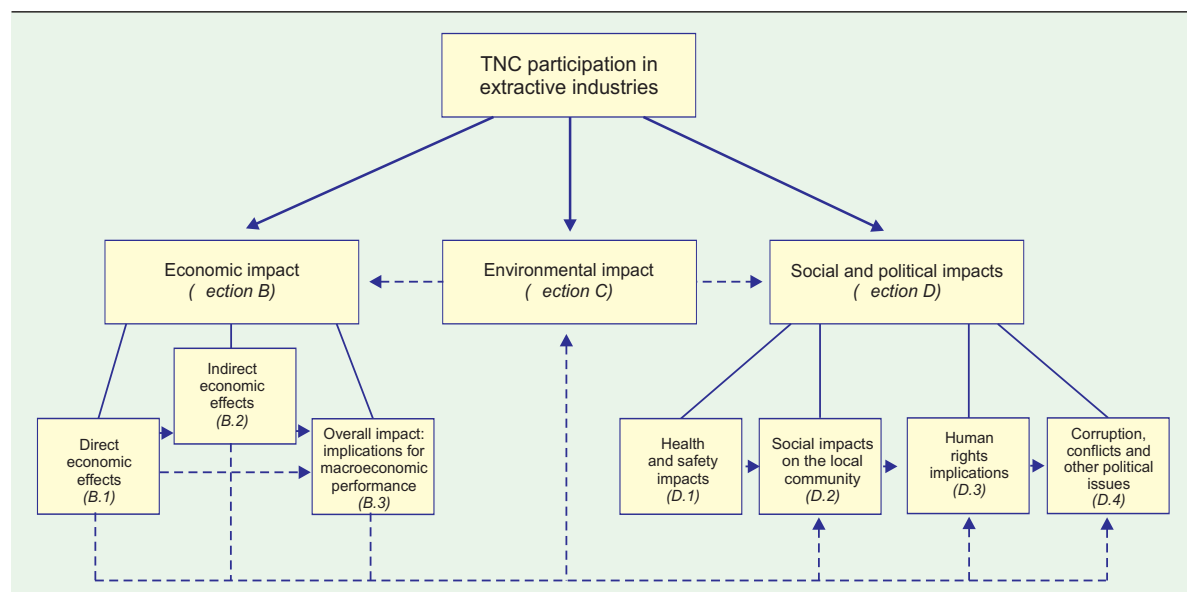
to markets and distribution channels. TNC involvement may be a way for a country to at least partly overcome these constraints, leading to both direct and indirect economic gains. In addition, TNCs may contribute to higher levels of efficiency, productivity and innovation in the industries concerned. On the other hand, their activities may also generate or increase economic, environmental and social costs. By definition, foreign investment implies that a part of the value created will be allocated to the TNCs involved, and, by extension, to their home countries. Unequal bargaining power between large TNCs and governments may lead to less than optimal outcomes of negotiations for a host country, especially since the short-term profit maximization motives of the TNCs do not necessarily coincide with the longer term development objectives of a host country.

Figure V.1 sets out an analytical framework for assessing whether, and under what circumstances, TNC involvement may help developing countries exploit their natural resources in a way that promotes sustainable development. The economic, environmental and social benefits and costs are interdependent and mutually reinforcing.

Development impacts are context-specific and their assessment calls for a dynamic, historical perspective. The factors determining the impacts of an extractive-industry project, with or without TNC participation, can be specific to the industry, country or company. Many underlying causes of the net results are related to the nature of the extractive industries (chapter III); and there are significant differences between various types of extractive industries as well as between various stages in the value chain.



Figure V.1. Development implications of TNC participation in extractive industries: an analytical framework



Source: UNCTAD.

Country-specific factors include the magnitude and quality of mineral endowments, the size of the economy, the institutional environment, government policies and domestic capabilities. Firm-specific factors are related to the characteristics and activities of TNCs. The analyses in the sections below consider not only the effects on the host economy as a whole, but also the interests and concerns of various stakeholders, including central and local governments, local communities (including, in certain cases, indigenous peoples), labour and suppliers. Throughout, wherever possible, it seeks to consider different counterfactuals: extraction with TNC participation or no extraction; and extraction by TNCs or by domestic enterprises, as well as by different types of TNCs.

B. Economic impact

TNC involvement in the extractive industries can have an economic impact at local and national levels. TNCs invest and participate in business activities at various stages along the value chain and in different forms (chapter IV). Their participation can make direct economic contributions (section B.1) and indirect ones (section B.2), and may also have significant implications for the overall macroeconomic performance of a host country (section B.3).

TNCs may help create value in the host economy directly through various equity or non-equity forms of involvement, and indirectly via linkages with, and spillovers to, other economic entities. Where local financial resources and

capabilities for undertaking the investment are lacking, TNC production represents a direct addition to output and income for the host economy; the significance of this depends on the size and nature of TNCs' local value-creating activities and their positioning along the value chain. Indirect effects depend on the extent of local procurement, forward linkages and various spillovers, as well as the multiplier effects of the income generated. Where domestic enterprises exist, the net outcome is also influenced by the impact on competition: whether domestic enterprises benefit from or are crowded out by the entry of TNCs. Compared with FDI in other industries, the limited scope for linkages between foreign affiliates and local firms in extractive industries may constrain TNCs' indirect contribution to local value creation. Thus the volume of value added and income created by foreign affiliates themselves strongly influence the overall economic impact. Equally, if not more important, the extent to which the value created is captured locally through taxes, wages and sometimes shared profits affects the net results of TNC involvement. For many developing countries, potentially the most important economic benefit of TNC activities in extractive industries is the generation of government revenues.

It is difficult to make generalizations about the economic impacts. They depend on the characteristics of the TNCs involved, as well as on the forms of TNC involvement – equity participation or a contractual arrangement, greenfield investments or cross-border M&As. Furthermore, there are significant differences between oil and gas and metal mining activities, between various minerals, and between investments at different stages of

the value chain. The scope for benefits is also influenced by various host-country factors. In terms of markets, increased production of minerals can either serve domestic markets, as in large emerging economies, such as China and India,¹ or it can target foreign markets, which is largely the case for other developing economies. The economic impacts at any given point in time are also affected by the international economic environment, notably global market conditions and commodity prices.

1. Direct economic effects

As in other industries, TNC participation in the extractive industries can increase financial resources for investment, improve management, transfer technology and enhance technological capabilities, generate employment and skills, and increase production and income in the host economy. It may also accelerate modernization and enhance the competitiveness of domestic industries. Moreover, often the most important direct economic contributions of FDI in extractive industries – more so than in other industries – are its promotion of exports and generation of government revenues. However, foreign participation implies that part of the total income generated will be captured by the TNCs involved; in some cases, their relatively strong bargaining power enables them to receive a significant share of this income (by negotiating particularly favourable contractual arrangements), and sometimes they may use transfer prices to reduce or avoid taxation.

a. Financial contributions

Large-scale extractive activities are highly capital-intensive (chapters III). At the project level, for example, investment in Minera Escondida in Northern Chile totalled \$4 billion between 1991 and 2004 (ICMM/World Bank/UNCTAD, 2006),² and Petrobras' planned investments in offshore oil fields in the Gulf of Mexico over the next decade are expected to amount to \$15 billion.³ At the country level, building an oil and gas industry or revitalizing a mining industry can cost many billions of dollars.⁴ Only a limited number of companies in developing countries have the financial resources necessary to undertake such investments. Lack of funds can therefore constitute a substantial barrier to exploiting a mineral deposit. The participation of TNCs, with access to large-scale funding from internal or external sources, represents one way to overcome such financial constraints. Of course there may be other alternatives for accessing funds, such as borrowing in international financial markets or from intergovernmental development-finance

institutions, but funding from such sources may not be available to domestic enterprises in all countries.

The importance of TNC participation for raising the necessary financial resources and undertaking investment varies among extractive industries and countries. In the metal mining industry, years of underinvestment by State-owned enterprises following a wave of nationalizations in the 1960s and 1970s led many developing countries to return to a policy of attracting TNCs in order to halt a further decline of production and exports (chapter IV). This reopening to FDI has helped boost investment in a number of extraction activities. In Zambia, for example, FDI has been instrumental in rehabilitating the declining copper industry, initially through TNC takeovers of State-owned mines, and later through greenfield investments in new mines and post-privatization investments in acquired mines (UNCTAD, 2007m). In Ghana, foreign companies have invested over \$5 billion in new gold-mining projects since 1986. Similarly, in Peru, the FDI stock in metal mining rose from practically none in 1992 to \$3 billion in 2005, and 90% of the \$10 billion investment in the country's mining industry during the past 15 years has been by foreign TNCs.⁵ The country's ranking in terms of reserves and production of a number of minerals, such as zinc and silver, has improved as a result of the increasing investment in exploration operations and production activities by TNCs.

In the oil and gas industry, State-owned oil companies have dominated investment and production in most oil-producing developing countries in West Asia since the oil nationalizations of the early 1970s (chapter IV). In other developing and transition economies, TNCs have been actively involved over the past decade, through concessions, joint ventures, production-sharing agreements and service contracts (chapters IV and VI). In countries such as Azerbaijan and Kazakhstan in the CIS, Angola, Equatorial Guinea and Egypt in Africa, Indonesia and Myanmar in Asia, and Ecuador and Peru in Latin America, foreign capital injected by TNCs has helped in the undertaking of various extractive projects. In Bolivia, during the 1990s, the lack of domestic funding was a major reason for the Government to privatize its national oil company, Yacimientos Petrolíferos Fiscales Bolivianos, which allowed the country to exploit deposits discovered earlier.⁶ TNC investment in distribution infrastructure, such as pipelines, has also enabled developing and transition economies to enhance their exports of oil and gas.

In the past decade, the international expansion of TNCs from a number of developing countries has opened a new source of finance for extractive projects in other developing countries (chapter

IV). Many of these TNCs are State-owned, and are financially supported by their home-country governments, for example through export-import banks.

Financial constraints may be less of a problem for developing countries where State-owned mining enterprises have access to funds from their respective governments, and some of which have large and successful operations that generate profits, enabling reinvestment. A number of State-owned oil companies from developing countries and transition economies, such as CNPC and CNOOC (China), Petrobras (Brazil), PDVSA (Venezuela) and Rosneft (Russian Federation), have been successful in raising capital in international capital markets through bank loans or initial public offerings (IPOs).⁷ However, significant technological and managerial capabilities and success in running profitable operations are necessary for such access to financial markets. In the case of Petrobras, for example, its excellence in offshore oil and gas exploitation technology opened the door to private financing for the development of a deposit in Brazil at the cost of \$4 billion (ECLAC, 2002: 155).

For poorer countries, the main alternative to turning to TNCs for capital has been to borrow from a development finance institution that is prepared to accept high-risk investments. As such opportunities are limited, many low-income developing countries that have used them to finance exploration (e.g. Equatorial Guinea, Guinea-Bissau and the United Republic of Tanzania) or midstream activities (e.g. an oil pipeline in Chad) have subsequently turned to TNCs for investment. In Latin America, the planned creation of Banco del Sur, a regionally controlled multilateral lender, may become a new source of finance for regional development, including for extractive industries.⁸

Large-scale extractive projects are today frequently based on multinational public-private partnerships, in which a group of governments and companies share varying degrees of control over the financing, exploration, production and marketing of mineral resources (Likosky, 2006). A foreign government may become involved in a project through an export credit agency which advances loans to a project company, as in the case of the Camisea project in Peru, the Baku-Tbilisi-Ceyhan project and the Chad-Cameroon pipeline project.⁹ Intergovernmental organizations may also sometimes participate. For example, the Inter-American Development Bank is involved in the Camisea project, and the International Finance Corporation (IFC) is providing part of the financing for the Baku-Tbilisi-Ceyhan project and the Chad-Cameroon pipeline as well as for the Ahafo gold mine in Ghana. Sometimes the customers of

extracted minerals are also willing to participate in such consortia.

Different types of financing have different implications for economic development. In general, the greater the capabilities and competitive strength of a country's enterprises, private or State-owned, the more choice they have in accessing project financing. Developing countries with relatively strong domestic technological and managerial capabilities and a robust institutional structure can draw on national and international capital markets for funds to exploit their mineral resources, which allows them greater control. For countries with lower capabilities, an alternative is for the governments to borrow from development institutions. One feature of TNC-based financing is that it does not generate foreign debt for host-country governments. Instead, countries have to offer part of the resource rents in exchange for the participation of the TNCs. Such financing is usually more expensive than that from other sources, as the rate of profits of foreign firms normally exceeds the rate of interest on international loans (*WIR99*: 161). Meanwhile, a key advantage of TNC involvement in the financing of a mining project is that TNCs bring not only capital, but a bundle of additional assets, in the form of technology, management and other know-how, which are of particular value when domestic capabilities are scarce, and they can share the risks associated with various extraction-related activities.

b. Technology contributions

For some extraction projects, access to technology and know-how can be a major reason for countries to rely on TNCs. While many metal mining projects involve mature technologies that are obtainable in the open market, not all countries possess the necessary skills and capabilities to make good use of them. Moreover, some projects – such as deep-water oil extraction or the production of liquefied natural gas – are technically challenging. This may explain why TNCs play a more important role in developing countries in the development of deep-water oil and gas deposits, while the richest, most easily accessible and profitable oil deposits – such as those in West Asia – tend to remain in the hands of State-owned oil companies (chapter IV). In addition, the transfer of technology – including proprietary technology that TNCs are often willing to provide only to their affiliates – and the strengthening of domestic technological capabilities are reasons why many countries seek to attract FDI into their extractive industries.

As in other industries, most of the innovation and technological development in the extractive

industries are undertaken by developed-country TNCs, generally in their home countries (*WIR05*). Because of their ownership-specific advantages (chapter IV), such TNCs bring knowledge and improvements in exploration and extraction techniques that may not otherwise be locally available. Developing countries that possess sufficient engineering expertise and technically competent State-owned oil companies (such as for example Saudi Aramco or Petrobras) have mostly relied on arm's length transactions for the acquisition of technology. Some of them have successfully developed the skills and knowledge required for the effective exploitation of their natural resources.

Even countries with sufficient expertise in the oil industry sometimes turn to TNCs for certain projects. State-owned companies often cooperate with TNCs in the development of oil and gas fields that are difficult to access, and for the extraction of heavy crude oil.¹⁰ For instance, Kuwait turned to such firms for the development of oilfields in its northern region, which requires advanced technology and highly qualified personnel (Bahgat, 2000: 28). The Russian Federation, where indigenous enterprises have developed and applied many modern technologies, still relies on foreign expertise for the long-distance horizontal drilling capabilities needed to exploit the huge oil and gas reserves off Sakhalin Island. In Venezuela, the Government has involved TNCs in order to maximize production of the abundant deposits of extra-heavy crude oil in the Orinoco River basin.¹¹

By bringing in advanced technology and managerial expertise, TNCs can potentially contribute not only to the establishment of new industries or activities that might not otherwise be developed, but also to improving efficiency in the short and long run in extractive and related activities. Technology spillovers from foreign affiliates to domestic companies are potentially important for the development of developing countries' indigenous technological capabilities. However, due to a lack of human, physical and institutional capacities to absorb them, such spillover effects often tend to be very limited in low-income countries, as are backward and forward linkages (*WIR99*; *WIR01*; section B.2.a). Where such deficiencies can be overcome, technology and managerial know-how can eventually spread to domestic companies through various channels. In China, for example, the development of CNOOC's technological capability in offshore oil exploration has been largely based on its cooperation with TNC affiliates in the country.¹²

TNCs from developed countries are still the technology leaders in the world's extractive

industries. However, some oil companies from developing countries – such as Petrobras (Brazil) and Petronas (Malaysia) – are now as operationally competitive as their counterparts from developed countries (chapter IV). In addition, there is a view among State-owned oil companies in some developing countries that TNCs from other developing countries may “understand their requirements better” than TNCs from developed countries (Accenture, 2006: 13; *WIR06*).

International service providers – TNCs that specialize in activities related to particular stages of the value chain – have increasingly become important sources of technology and know-how (chapter IV). Their emergence in both the oil and gas industry and the metal mining industry provides new opportunities for the unbundling of the production process. This might make it easier for developing countries to acquire the specific knowledge they need at various stages, particularly expertise in managing long-term, high-risk and capital-intensive projects. However, the effective use of unbundled assets and specialized contractors requires the host country to have a trained and experienced cadre of technical and management personnel with sufficient expertise and practical experience necessary to bring together and coordinate a variety of suppliers of technology, engineering firms and construction companies.

c. Employment impacts

Extractive industries generally make only a limited contribution to employment at the macro level (table V.1).¹³ This applies to both oil and gas and metal mining, and especially to projects involving TNCs, as they tend to use more capital-intensive technologies than domestic companies in developing countries.¹⁴ Advances in technology brought into a host country by TNCs may reduce labour intensity in exploration and production activities as the new machinery and processes increase labour productivity.¹⁵ In addition, large numbers of expatriates are sometimes involved. Nevertheless, while the overall impact on host-country employment tends to be small, large-scale extractive projects can have significant employment effects at the local level. Moreover, TNCs' contributions in terms of training and skills upgrading may be important for developing countries.

The small direct contribution to employment creation by the mining industry is in sharp contrast to its often significant contributions to revenue and income (section B.1.e).¹⁶ For example, in Botswana, where the mining industry accounts for 40% of GDP, 90% of exports and 50% of government

Table V.1. Total employment and employment in extractive industries, selected developing countries, latest year

Item	Indonesia ^a	Malaysia ^b	United Rep. of Tanzania ^c	Viet Nam ^a
Total employment (thousand)	85 702	6 391	16 915	35 386
Total employment in extractive industries (thousand)	774	33	29	110
Employment in extractive industries as % of the total employment	0.9	0.5	0.2	0.3
Employment by foreign affiliates in extractive industries (thousand)	66	6	1	8

Source: ILO and UNCTAD.

^a Data for 1996.

^b Data for 1989.

^c Total data for 2001; foreign-affiliate data for 2000.

revenues, it employed only 9,200 people, or around 3% of the total labour force (UNCTAD, 2007i).¹⁷ In Chile, the contribution of mining to national employment fell from 2% to 0.84% between 1986 and 2005, with employment in copper production declining from 1.03% to 0.76% (UNCTAD, 2007j). In contrast, the contribution of mining to GDP rose from about 8% in the 1980s to 16% in 2005. In Peru, the mining industry employed 101,200 people in 2006, accounting for only 0.7% of the working population of the country. Of these, 35,870 were employed by foreign affiliates: 14,430 directly and 21,440 indirectly.¹⁸ Yet the share of the mining industry in the country's GDP has been about 7% in recent years.

The use of advanced technologies and modern exploration and production techniques by TNCs may sometimes reduce overall employment in the extractive industries as a result of productivity improvements. The employment of semi-skilled local people in particular may be jeopardized further as the industry moves towards ever higher levels of automation, and smaller and more specialized labour (MMSD, 2002). In Ghana, for example, there was a gradual reduction in the levels of local employment in the country's mining industry during the period 1995-2005, when foreign companies' share of mining production increased rapidly, leading to a net loss of more than 7,000 jobs (table V.2). One reason was technical, as all post-reform mining projects have been capital-intensive surface operations, where more sophisticated techniques have enhanced labour productivity. Another reason was that former

State-owned mines had to be restructured (MMSD, 2002).

The contribution of the oil and gas industry to total national employment is also generally small, with or without TNC involvement. Many OPEC countries rely on oil for the bulk of their income and exports, but the direct employment generated by the industry is limited. In Saudi Arabia, for example, less than 1.5% of the working population is employed in this industry (Accenture, 2006), yet it accounts for 45% of GDP, 90% of exports and 75% of government revenues. A similar situation exists in oil-rich countries where TNCs play an important role in oil and gas production. In Equatorial Guinea, for example, where foreign companies account for more than 92% of oil production (figure IV.5), the number of people directly employed in the oil and gas industry has been estimated at less than 10,000 (or about 4% of the working population), and these are mainly expatriate workers (Frynas, 2004), while it accounts for 86% of the country's GDP.

In low-income countries, especially in Africa, the proportion of expatriate workers involved in extractive industries can be very high. In the United Republic of Tanzania, much of the labour recruitment by TNCs takes place in the commercial capital, Dar es Salaam, or in countries with a long tradition of skilled labour in mining such as Australia, Canada, Ghana, Namibia and South Africa (Mwalyosi, 2004). Local managers and professionals may be particularly difficult to recruit locally, as in Ghana where expatriates are mainly at the senior level.

Table V.2. Employment in Ghana's mining industry, 1995-2005

Item	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Total employment in the mining industry	22 519	21 030	20 343	21 261	17 858	16 537	16 340	14 311	16 056	15 525	15 396
Expatriate staff (A)	234	229	221	261	242	233	205	242	188	166	181
Ghanaian senior staff (B)	2 511	3 143	2 862	2 804	2 442	1 697	1 807	1 813	1 901	1 736	1 905
Ghanaian junior staff	19 774	17 658	17 260	18 196	15 174	14 607	14 328	12 257	13 968	13 622	13 310
Ratio of A to B (%)	9.3	7.3	7.7	9.3	9.9	13.7	11.3	13.3	9.9	9.6	9.5

Source: Minerals Commission of Ghana.

As noted, despite their low labour intensity, large-scale extractive projects can have a significant employment effect at the local level (especially if there are few other employment opportunities). For example, in metal mining, the Obuasi mine (Ghana), owned by AngloGold Ashanti, employs about 6,700 local staff (ICMM/World Bank/UNCTAD, 2006), and in oil and gas, the Sakhalin-2 project employs nearly 17,000 people, over two thirds of them Russians. In its next operational phase, the Sakhalin-2 consortium will create 2,400 permanent jobs, of which a similar share is likely to be taken by Russians. Foreign investments in oil and gas extraction in the region have contributed to reducing unemployment in Sakhalin to the lowest rate (0.2%) among the different regions of the Russian Federation.¹⁹

The overall impact of TNC activities in extractive industries on local employment can be significantly enhanced by multiplier effects, as indirect employment may occur at different stages of the value chain. According to some estimates, the Obuasi mine has created some 30,000 indirect jobs (ICMM/World Bank/UNCTAD, 2006). In Mali, three gold mines (Morila, Sadiola and Yatéla) employed some 1,000 workers each, with a multiplier effect of six to eight (Cole-Baker, 2007). While the direct employment created by Minera Escondida in Chile was about 2,800 people in 2004, the total employment, including contractors and other induced employment may have been as much as 15,000 people (Dietsche et al., 2007a: 40–41).

The net impact on the local employment depends partly on how large-scale extraction activities affect employment in pre-existing activities in mining areas (e.g. artisanal and small-scale mining or agriculture). In the metal mining industry, the entry of TNCs may displace or diminish such activities, with adverse effects on employment in artisanal and small-scale mining. For example, the rapid rise in exploration and excavation activities by TNCs in Ghana since the implementation of

the structural adjustment programme has displaced thousands of artisanal gold miners (Hilson and Potter, 2005).²⁰ Finding a solution to the potential conflict between small-scale mining, which is more labour-intensive, and industrial mining, which is safer and more efficient but less labour-intensive, is an important issue in many developing countries (chapters III and VI).

A number of extractive-industry TNCs invest in human resource development by offering training and skills upgrading to their workers (UNCTAD, 2002). In 1999, Minera Escondida in Chile established a specialized training centre that helps develop the occupational skills required in various mining operations (box V.1). In Botswana, Debswana – a joint venture between the Government and De Beers – has established an intensive training and apprenticeship programme. It also offers its employees scholarships for advanced training both within and outside the country (UNCTAD, 2007i). In the oil industry as well, TNC contributions have helped create the general oil and gas workforce as well as skilled engineers (Accenture, 2006). For some developing countries, engineers trained by TNCs in sophisticated technologies are particularly valuable. In China, since the 1980s, international oil companies such as ConocoPhillips, ExxonMobil and Shell have helped produce qualified local engineers for offshore oil exploration.²¹ While TNCs themselves benefit from such training, as it eliminates the need to hire more expensive expatriate engineers from their home countries, it can constitute a valuable contribution to human resource development for the industry in the host country.

d. Enhancement of exports

Exports are an important means for a country to allocate resources efficiently based on its comparative advantages. They also help generate the foreign exchange required to finance its imports

Box V.1. Fostering skills in the mining industry: the case of CEIM in Chile

The Centro de Entrenamiento Industrial y Minero (CEIM), the industrial and mining training centre founded in 1999, belongs to the Escondida Educational Foundation^a and is a non-profit organization. Its main mission is to foster excellence in the mining industry. The Centre has developed several programmes to improve employment opportunities for local workers within a particular region (Region II) in Chile. It has an alliance with the British Columbia Technological Institute of Vancouver, Canada, which allows the Centre to manage, develop and certify its skills training programmes under an international certification scheme (CEIM-BCTI). Another alliance with Minera Escondida and 20 other companies has further strengthened the Centre. It is expected to train 350 technicians in electronics, electrical engineering, heavy machinery and industrial machinery every year, beginning in December 2006.

Source: Dietsche et al., 2007a.

^a The Minera Escondida Foundation is a non-profit organization created in 1999 to develop projects in support of education, health, youth and indigenous people (see www.bhpbilliton.com).

of goods and services, including those needed for industrialization, and thereby, to promote economic growth. While most countries' extractive industries are export-oriented, TNCs can help boost mineral exports by facilitating an expansion of production and through their access to global markets.²² At the same time, the involvement of TNCs in trading, including intra-firm trading activities, has sometimes given rise to concerns about the limited value added to minerals before exporting, and the use of transfer pricing.

For a number of developing countries, revenues from a single mineral account for a large share of their total export earnings (chapter III).²³ In recent years, high mineral prices have reinforced this pattern. In Chile, for example, the share of copper in the total exports of goods rose from an average of 38% in 1991-2003 to 61% in 2006.²⁴ Evidence from countries in which TNCs dominate mineral production (chapter IV) suggests that their entry has led to significant export growth:

- In Ghana, after the entry of FDI on a large scale, gold exports, mainly by TNCs, rose threefold from 1990 to 2004, increasing their share of the total exports of the country from a quarter to 37% (UNCTAD, 2005b: 48-50).
- In Zambia, the production and exports of copper have grown significantly since the late 1990s. This has been a direct result of FDI that revived the industry (UNCTAD, 2007m). In 2006, exports of copper and cobalt by TNCs were \$3.2 billion, about four fifths of the country's total exports.²⁵
- In the United Republic of Tanzania, since gold mining was opened up to FDI in the 1990s and TNCs assumed a dominant role in gold production, it has emerged as an important export-oriented industry (UNCTAD, 2002). From no export earnings prior to 1990, gold exports earned \$640 million by 2005, and TNCs' total mineral exports reached \$693 million in 2005, accounting for 43% of the total exports of the country.²⁶
- FDI has played a major role in enhancing Peru's export performance. Between 1990 and 2006, exports of metallic minerals surged from about \$1.5 billion to \$15 billion, with their share in total exports rising from 42% to 62% (UNCTAD, 2007k).

In the oil and gas industry, TNCs have similarly helped countries such as Angola, Argentina, Azerbaijan, Ecuador, Indonesia, Kazakhstan and Peru increase production and exports over the long term. In Ecuador, an oil pipeline constructed by a consortium of TNCs during the period 2001-2003 facilitated increased exports of crude oil by

adding transport capacity for 400,000 barrels per day (ECLAC, 2004: 48). In many other developing countries, such as the oil-producing countries in West Asia, it is the State-owned companies that are controlled and managed without TNC participation that have successfully expanded oil exports.

Compared to exports of manufactured goods, which can help firms from developing countries obtain economies of scale, expand scope of production, and learn from their experience in export markets (*WIR02*), exports of unprocessed minerals yield much fewer potential benefits of these kinds. If countries could add value to the minerals extracted before they are exported, export revenues as well as the potential for learning could increase significantly. However, in many developing countries, most minerals are exported in unprocessed form (section B.2.a).

While TNC participation is likely to boost the export revenues of host countries, their affiliates may also have a higher propensity to import various inputs from foreign suppliers. Foreign affiliates may also repatriate their profits, thereby reducing the positive effects of the increased export revenues their participation may generate. This could also reduce the effects from improvements in the terms-of-trade (as a result of the recent increase in mineral prices) on the national income of a host country (section B.3; UNCTAD, 2005c). Reflecting the complex relationship between trade and investment, a rapid growth of exports is likely to influence the balance of payments, and possibly also the real exchange rate. Such an effect underlines the importance of well-conceived macroeconomic policies for mineral-exporting countries (section B.3, chapter III, chapter VI).

e. Generation of government revenue

For many mineral-exporting developing countries, the most important direct contribution of mineral extraction is increased income for the host country, much of which takes the form of government revenues. When extraction involves TNC participation, the income accruing to the host country depends both on the amount of the value created, and on how that value is shared between the host-country recipients (i.e. labour, other input providers and the government) and the TNC. Capturing the maximum value created by TNCs is a major concern of host countries with regard to TNC participation (chapter VI). It assumes particular significance in the extractive industries, especially when a sizeable proportion of the value of minerals sold consists of resource rents.²⁷ Their distribution between the TNC and the host country

is negotiated as part of the terms and conditions for TNC participation. Although salaries and wages paid to local employees and inputs purchased from local suppliers generate incomes to varying degrees in different extractive industries, capturing a significant share of the mineral rents through taxes and other payments to the government is particularly important for host countries.

Increased production and exports due to TNC involvement in extractive industries do not automatically generate large government revenues. The fact that TNCs are involved means, by definition, that a certain proportion of the revenues will go to them rather than to the host economy. However, if the participation of TNCs helps expand the scale of production and, by extension, the overall size of the revenues, then, depending on the terms and conditions governing TNC participation, the amount of the government's revenue may still be greater than if no TNCs had been involved.

Governments raise revenues from extractive industries through direct ownership (wholly State-owned companies or joint ventures), taxes, levies, royalties and/or other payments under various contractual arrangements (including production-sharing agreements). The approach chosen differs between the oil and gas and metal mining industries (chapters IV and VI). Data on the distribution of revenue between host developing countries and TNCs are generally scarce, which complicates international comparisons and assessments. Various studies of fiscal regimes suggest that the government's take in revenues generated from oil and gas activities over the lifetime of a project vary widely (between 25% and 90%);²⁸ the corresponding range in metal mining is between 25% and 60% (Land, 2007; Otto, Batarseh and Cordes, 2000).

Government revenues collected from projects undertaken by TNCs can be compared to the companies' revenues or profits. In Mali, for example, the total income tax paid by the Sadiola mine was \$20 million during 2000–2003, accounting for 3% of its gross revenue and 10% of its income before tax; and the mines of Morila and Yatéla in the same country did not pay any income taxes during that period because of tax holidays (Cole-Baker, 2007).²⁹ Such firm-level data on profitability and tax payments are generally hard to obtain.³⁰ Comparisons are often made instead between a government's revenue and the country's mineral exports.³¹ In Chile, the total copper exports of the 10 largest private mining companies (nine of which are foreign-owned) during the period 1991–2003 were estimated at some \$33 billion, while their tax payments were \$2.1 billion (6.5% of their copper export revenues).³² This share increased

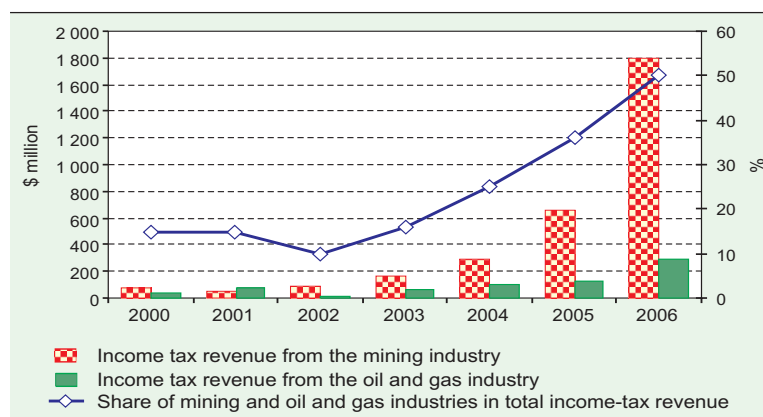
to 16.3% over the next two years.³³ During 2004–2006, foreign mining companies in Peru paid \$3.5 billion in income taxes, equivalent to 14% of their export revenues.³⁴ In the United Republic of Tanzania, out of earnings of \$2.8 billion from mineral exports during 1999–2005, the Government received some \$252 million (9% of export revenues) in the form of various tax payments and royalties. In 2005, this contribution accounted for 4% of total government revenues.³⁵ In Zambia, the \$75 million in government revenues from copper mining corresponded to less than 5% of the value of copper and cobalt exports in 2005.³⁶ In these and other developing countries, various stakeholders have expressed dissatisfaction with the share of revenues remaining in the country, and a number of countries have taken steps to increase the government's take (chapter VI).³⁷

Low taxes and royalty payments as a share of export revenues are not the same as low shares in mining profits. The latter are the difference between total revenues and costs and may be low in the early years of mining projects as firms try to recover their fixed costs. It often takes time for an extractive-industry project to generate significant government revenues. This is partly because most countries offer accelerated depreciation and other incentives to investors to allow them to recover, over a period of time, the significant cost outlays involved in such projects so as to reduce risk and encourage investments.³⁸ Thus tax payments may not become due until several years after a project begins to generate export revenues.

In Peru, for example, income taxes from the mining industry were very small during the entire decade of the 1990s (UNCTAD, 2007k). As late as in 1998–1999, they amounted to well below \$100 million per year, or about 7% of total government revenues. As the benefits to companies from accelerated depreciation gradually declined, and as metal prices increased, the picture changed dramatically. Between 2000 and 2006, the annual income tax revenue from mining companies rose from \$70 million to \$1.8 billion (figure V.2), and from 10% to 43% of total government revenue.³⁹ During the same period, the annual income tax revenue from the oil and gas industry rose from \$35 million to \$296 million, corresponding to 5%–7% of total government revenue (figure V.2).

The sharing of mineral rents is also influenced by TNCs' accounting practices, financial behaviour and possible transfer-pricing activities. By manipulating transactions that are internal to them, TNCs may, to some extent, choose where to declare profits to minimize their tax burden (*WIR99*). In Chile, it took considerable time before

Figure V.2. Income tax revenue from mining and oil and gas industries, Peru, 2000-2006



Source: Superintendencia de Administración Tributaria, Peru.

the affiliates of foreign mining companies started to pay any taxes, with the exception of Minera Escondida. While the accelerated depreciation allowance explained part of this, the tax system was also designed in a way that encouraged companies to finance their investment through intra-company loans, the repayment of which reduced their net revenues for several years (UNRISD, 2005). These factors help explain why in Chile, following the FDI boom in mining, the share of the State-owned company, Codelco, in the country's total copper production fell from 85% in 1980 to around 32% in 2005,⁴⁰ while its contribution to the Government was substantially higher than that of the foreign affiliates (figure V.3), and despite this it showed greater profitability. Since 2003, tax revenues from foreign affiliates have started to rise, but they were still below those from Codelco in 2006.

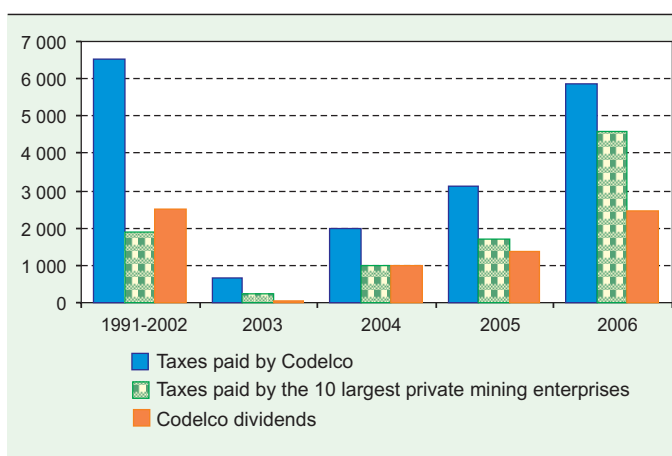
The issue of retained value through tax revenues, long a concern of developing countries that host TNCs in extractive industries, has attracted renewed attention during the recent price boom which has contributed to increased corporate profits and higher tax revenues, as highlighted in the case of Peru (figure V.2). Between 2002 and 2006, the net profits of 40 of the world's largest mining companies⁴¹ rose from \$4 billion to \$67 billion (PricewaterhouseCoopers, 2007b). At the same time, the total income taxes paid by these companies rose from \$2 billion to \$27 billion (Ibid.).⁴² However, data on the allocation of the taxes by country are not available. It seems that a significant proportion may have gone to the home countries of the TNCs.⁴³

This has prompted criticism that the conditions offered by some developing countries for FDI projects in extractive industries have been overly generous, resulting in a disproportionately low share of government revenues in the total rents.⁴⁴ Against the backdrop of high mineral prices, several countries have made changes in their fiscal regimes related to the extractive industries (chapter VI). The recent price boom has also led various stakeholders, such as local communities and workers, to demand a larger share of the revenues from mining. The increasing number of strikes following the price boom shows

that workers are anxious to increase their share of the revenues (PricewaterhouseCoopers, 2006; chapter VI).⁴⁵

As already noted, governments can also secure a share of the resource rent through equity ownership; State ownership or joint ventures with TNCs are commonly used modes, especially in the oil and gas industry (chapters IV and VI). Some examples also exist in metal mining. In Chile, for example, State-owned Codelco has entered into a joint venture with Phelps Dodge Mining Co. (now part of Freeport-McMoRan Copper & Gold).⁴⁶ In Botswana, diamonds are mined by Debswana, a 50-50 joint venture between the Government of Botswana and De Beers, through which Botswana

Figure V.3. Contributions to fiscal revenues by Codelco and the 10 largest private mining enterprises^a in Chile, total of 1991-2002, 2003-2006 (Millions of dollars)



Source: The Chilean Copper Commission, Ministry of Finance of Chile and Codelco.

^a Data on taxes in 2005 and 2006 correspond to all private mining enterprises (including the 10 largest).

receives a large share of the rents. The Government of Botswana also has significant ownership shares in some other mining companies, many of which are listed on the Botswana Stock Exchange (as dual listings given that their primary listings are in London, Toronto or Australia) (table V.3). This gives the Botswana public, particularly institutional investors, an opportunity to take an ownership stake in these mining projects, and, accordingly, a share in the rents.

The sharing of revenue from a particular mining project between a TNC and a host country partly reflects their relative bargaining power (Vernon, 1971; Moran, 1974).⁴⁷ Countries that have rich deposits and considerable domestic capabilities to exploit them are in a better position to reap a larger share of the rents through advantageous ownership and tax arrangements. The evolving balance of bargaining power between TNCs and host-country governments may explain the dynamics of rent sharing over time and the changes in tax regimes and ownership arrangements in many developing countries. In Botswana, for example, the Government's shareholding in Debswana was initially 15%, but later increased to 50%. The volatile nature of mineral prices influences the relative bargaining power. In periods of low prices, the profitability of resource extraction projects tends to decline, reducing the bargaining position of a country in its efforts to attract investment, and vice versa.

To conclude, the net flow of revenue and income generated for a host country from TNC operations in the extractive industries depends on how TNC participation affects the overall size of the value created, the nature of the revenue-sharing (or capturing) mechanisms in place, and the extent to which they can be adapted to changing

conditions in the industries and markets. Ultimately, the development implications of the government revenues generated from mineral extraction (with or without TNCs) will be determined by how the funds are managed and used vis-à-vis the country's development objectives and the needs of both current and future generations (chapter III). Governments may need to neutralize the impact of large windfall revenues on greater aggregate demand, inflation and exchange rate appreciation. This requires prudent fiscal management aimed at revenue sterilization for example, by accumulating budget surpluses, paying off debt, and/or channelling revenues into a stabilization fund⁴⁸ that could be used to prop up the budget when aggregate demand is insufficient and output and real incomes are falling.⁴⁹ Without appropriate policies and institutions in place, there is an increased risk that the government revenues will do little to promote sustainable development (chapter VI).

2. Indirect economic effects

In addition to their direct effects on the host economy through the various channels discussed above, TNC activities in extractive industries can indirectly affect host countries, for instance through their impact on business linkages and infrastructure development. In addition, by participating in extractive industries in host countries, TNCs can inject competition into these industries, and in so doing help boost economic efficiency through reduced production costs, innovation and technological change.⁵⁰ However, in countries with weaker domestic capabilities, the participation of TNCs may drive existing domestic enterprises, and particularly artisanal and small-scale mining firms, out of business. Such crowding out could

Table V.3. Ownership structure of major mining companies in Botswana, 2005

Company	Mineral	Main mines	Ownership	Listings
BCL	Nickel, copper, cobalt	Selebi-Phikwe	Public & misc. 38%; LionOre (Canada) 29%; Government of Botswana (GoB) 33%	Toronto Stock Exchange (TSE) Botswana Stock Exchange (BSE)
Botswana Ash	Soda ash & salt	Sua Pan	Anglo American (21%); De Beers (21%); GoB (50%); banks (8%)	
Debswana	Diamonds and coal	Orapa, Jwaneng, Letlhakane, Dantshaa, Morupule	De Beers (private) ^a 50%; GoB 50%	
Diamonex	Diamonds	Lerala	Diamonex (Australia) 100%	Australian Stock Exchange BSE
Mupane Gold	Gold	Mupane	Iamgold (Canada) 100%	TSE BSE
Tati Nickel	Nickel, copper, cobalt	Phoenix	LionOre (Canada) 85%; GoB 15%	TSE BSE

Source: UNCTAD.

^a Owned by Anglo American (United Kingdom) (45%), Central Holdings (South Africa) (40%) and Government of Botswana (15%).

affect host-country enterprise development in extractive industries; it may also have adverse impacts on employment (section B.1.c) and trigger conflicts between foreign companies and domestic stakeholders (section D.2).

a. Linkages

Through linkages between foreign affiliates and domestic enterprises, TNC participation may play a catalytic role in the development of related industries (*WIR01*) and, under certain conditions, of an extractive industry cluster. Linkages can take place along and beyond the extractive-industry value chain. Backward linkages occur when foreign affiliates acquire inputs (goods or services) from local suppliers, and forward linkages occur when foreign affiliates sell outputs (minerals) to domestic buyers. Linkages can be developed with domestic firms or with other foreign affiliates in the host country. Linkages with the latter may generate a lower degree of local value added than those with the former, but they can nevertheless be important especially in countries where domestic capabilities are at a nascent stage.

However, a common feature of the extractive industries, especially when TNCs are involved, is the relatively limited incidence of linkages with domestic suppliers, particularly as compared with manufacturing and services sectors (chapter III). In Africa, where the extractive industries still account for the largest proportion of FDI (chapter IV), “the tendency of FDI to reinforce enclave-type development appears to be a real danger, with external integration privileged over the internal integration of the local economy” (UNCTAD, 2005b: 35). Similar concerns exist in Latin America. According to one study, “extractive activity carried out by TNCs [...] mainly uses imported inputs [...], with the result that it is poorly integrated into local productive structures (except in the case of natural gas), and gives rise to very few productive linkages” (ECLAC, 2004: 48).

While a booming *metal mining industry* can help promote supplier-buyer relationships in various related services, manufacturing and other activities that produce inputs for exploration, most equipment used by exploration projects tends to be imported (Otto et al., 2006). In Chile, for example, backward linkages of the copper mining industry with domestic manufacturing have generally been weak: most of the machinery, trucks and sophisticated inputs are imported (UNCTAD, 2007j). Although supplies of services such as construction, transportation, catering and cleaning are more likely to be sourced locally, linkages

with domestic providers of knowledge-intensive and high value-added services are often weak. The experience of low-income developing countries in building up their domestic capabilities in these areas has generally been disappointing. In most of them, international suppliers meet the growing demand for such services, sometimes through locally established affiliates. In Ghana, for example, 60 mining support service companies, mostly foreign-owned, had been established by 1998, providing various services (including geological, engineering and drilling) to the foreign-invested mines. Services such as haulage and construction were dominated by local firms (Aryee, 2001).

Forward linkages in metal mining can involve the development of processing and various manufacturing activities. TNC participation can help provide inputs that encourage the emergence of refining, smelting or manufacturing activities, and contribute to the creation of industrial clusters (Ramos, 1998). Foreign investment in gold mining, for example, has fostered the development of a jewellery manufacturing industry in Indonesia (Leyland, 2005). In many other mineral-rich developing countries, however, little processing and manufacturing have emerged. Small, low-income developing economies typically do not have the capacity to enter into the smelting and refining stages of the value chain, which are capital-intensive and tend to have larger economies of scale (Mintek, 2007). Although some developing countries succeeded in establishing capacities for smelting or other types of processing of metallic minerals decades ago (Radetzki, 1993), divergent views between TNCs and host-country governments about the location of such activities are likely to persist.

In *the oil and gas industry*, oilfield services now account for the bulk of the total cost of oil production (chapter IV).⁵¹ The size of the oilfield services market in Africa alone has been estimated at about \$30 billion per year (UNCTAD, 2006d), the bulk of which is served by large services TNCs (table IV.9). The value of the oilfield services market in Nigeria, for example, was about \$8-10 billion (Kupolokun, 2004), yet only one tenth of these services were contracted to local companies. This suggests a high potential for enhancing the participation of local contractors in the supply chain (UNCTAD, 2006d). Moreover, the share of local content in the country is very low in comparison with some other oil-producing developing countries such as Brazil and Malaysia (table V.4). In developing and transition economies with stronger domestic capabilities, there is greater scope for backward linkages. The Sakhalin-2 project in the Russian Federation has awarded \$8.3 billion worth

Table V.4. Local content in supplies to upstream oil and gas activities, and GDP, selected oil-producing countries, various years

Item	Brazil	Indonesia	Malaysia	Mexico	Nigeria
Local content in supplies to upstream oil and gas activities (%), 2000	70	25	70	Largely local	5
GDP (\$ million), 2005	799 413	281 276	130 770	768 437	113 461
GDP per capita (\$), 2005	4 289	1 263	5 159	7 180	863

Source: UNCTAD and Heum et al., 2003: 21.

of contracts to Russian companies (UNCTAD, 2007). The proportion of contracts awarded to Russian firms, above 50% in 2006, is expected to grow further during the operational phase (Ibid.). Indonesia has managed to achieve 25% local content, while other developing countries such as Brazil, Malaysia and Mexico have performed much better (table V.4).

Crude output in the oil and gas industry can feed into the rest of the economy as intermediate inputs: crude oil for the petroleum refining industry and gas and its liquid feedstocks for the petrochemical industry. Such forward linkages have helped the development of the manufacturing sector not only in some developed countries but also in a number of developing and transition economies. Although domestic efforts are crucial in this process, TNC presence may also play a role. Newcomer TNCs in the global oil and gas industry seem to be more willing to invest in downstream activities. For example, CNPC (China) built the Khartoum Refinery in Sudan, with an annual oil refining capacity of 2.5 million tons in 2003. In Nigeria, the development of downstream capacities was a key criterion in the recent bidding rounds for licences, and Chinese oil companies were willing to invest in downstream activities (Accenture, 2006; Mitchell and Lahn, 2007). In oil-producing countries in West Asia, domestic State-owned oil companies have successfully expanded from upstream exploration and production to downstream manufacturing activities, particularly petrochemicals, often through alliances with TNCs with a global marketing presence (Al-Moneef, 2006).

There are several reasons for the frequently low incidence of linkages between foreign affiliates and local firms in extractive industries. Some are related to constraints regarding the availability, quality and cost of local inputs, economies of scale that inhibit processing activities, and the lack of efficiency and competitiveness of domestic firms. In addition, foreign affiliates may prefer to source inputs from non-resident suppliers with whom they have long-established relationships. In low-income countries, a lack of suppliers with the required capabilities and a shortage of appropriate

skills in the local work force can make it difficult to source locally or expand activities downstream. For example, in Mongolia significant organizational development and capacity-building of local firms is needed in order for them to meet new demand by the emerging mining industries and for those industries to create significant multiplier effects (Slowey and Lewis, 2004). Limited linkages also exist in the oil and gas industry in developing countries, particularly in LDCs (Nordås, Vatne and Heum, 2003).

While data limitation makes it difficult to directly compare TNCs and domestic companies, the available evidence suggests that domestically owned mining or oil companies tend to have stronger local linkages. In Chile, for example, a relatively high level of local refining activities were recorded when the State-owned enterprises dominated the value chain of copper production. In the 1980s, when Codelco was the principal producer of copper, the share of refined output in the country's total copper exports was nearly 70%. Since 1989, that percentage has been declining, to 58% in 1995 and 53% in 2005, largely due to the impact of foreign investment, mainly in Minera Escondida.⁵² In the oil and gas industry as well, the links and stimulating effects of extractive industries on the domestic economy seem to be stronger in countries where State-owned oil companies dominate oil and gas production (table V.4). In oil-producing countries in West Asia, for instance, the inputs of goods and services provided to the oil and gas industry by local sources rose significantly after nationalization of that industry (Al-Moneef, 2006). It was also after nationalization that oil and gas production led to the development of refining and petrochemical industries in those countries.

To accelerate development and improve the long-term welfare of a country and its people, its non-renewable natural resource wealth needs to be transformed into a broader industrial base. TNCs can be a driving force behind the emergence of independent domestic suppliers and industrial clusters only if host countries are able to develop their domestic capabilities. Proactive policies and supporting institutions can play an important role in this respect (chapter VI).

b. Infrastructure development

TNC activities in extractive industries are often associated with the development of public utilities including electricity and water supply in a region, and of transportation infrastructure like roads, railways and ports. Such facilities are often necessary for the extraction, transport and export of some minerals.⁵³

There are many such examples. For the operations of Minera Escondida in Chile considerable investments for the supply of power and water were required, as well as an extensive road development programme (Dietsche et al., 2007a). The privatization of Zambia Consolidated Copper Mines Limited (ZCCM) in the late 1990s was followed by significant investments by TNCs in Zambia's infrastructure and urban development.⁵⁴ In the United Republic of Tanzania, there have been steady infrastructural developments in the Mwanza region as a result of the development of the Lake Victoria Goldfields over the past decade. The improved roads, airport facilities, hotels and ancillary services have contributed to an increase in tourism in the northern part of the country.⁵⁵ Large foreign-invested oil and gas projects may also lead to the development of local infrastructure. For example, the Sakhalin-1 and Sakhalin-2 projects in the Russian Federation required the improvement of roads, bridges, airport and seaport facilities, railways, public medical facilities, waste management, telecommunications and other forms of infrastructure. The Sakhalin-2 project alone involves a \$390-million infrastructure upgrade programme.⁵⁶

Such investments can be important for low-income countries, particularly LDCs, where the lack of infrastructure is a major obstacle to economic and social development. TNCs may play an important role in this respect, but their contributions to infrastructure can also be controversial. The extent to which new infrastructure brings broader benefits to a host economy depends, among other things, on the specificity of the assets and infrastructure developed and the project's location. Specialized transportation infrastructure, such as pipelines for long-distance oil and gas transportation and helicopter services for transporting gold and diamonds, may be confined to the extractive projects with few benefits for the country. By contrast, the building of roads, railways and harbours for transporting copper or iron ore can benefit the economy as a whole. The scope for broader benefits also depends on the location of a project. If a mine is located in a remote area, as in the cases of Minera Escondida and the Sakhalin projects, benefits to surrounding areas may be marginal.⁵⁷ Conversely, if

the mineral extraction takes place in more populated areas, new infrastructure may benefit more people. Finally, benefits may be linked to the life cycle of a project, as the infrastructure created to support the project may not be maintained once it closes.

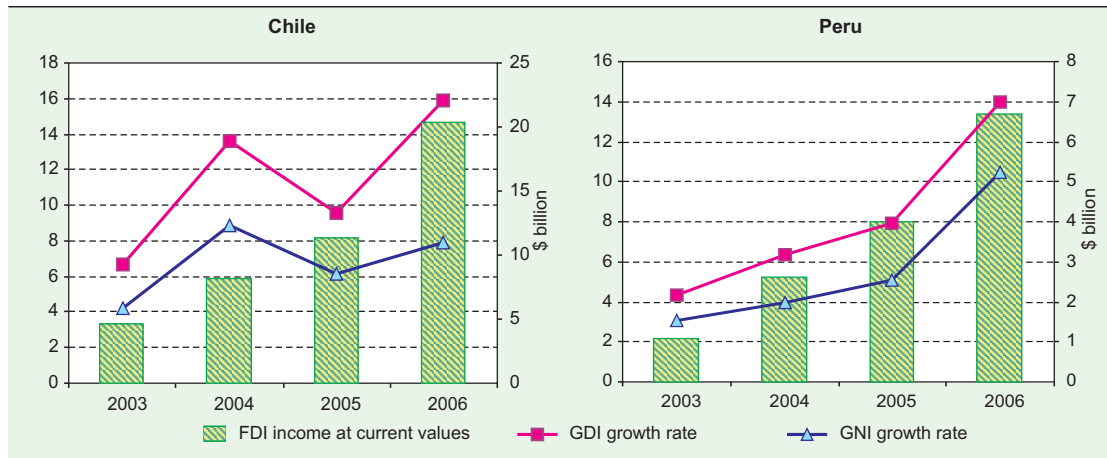
3. Overall impact: implications for macroeconomic performance

What are the implications of the direct and indirect effects of TNC activities in extractive industries for the overall economic performance of a host developing country? The TNC participation may significantly influence the economic performance of host countries at the macro level, in terms of macroeconomic stability, economic growth and income distribution. Much of the impact relates to the development of the extractive activities in general (chapter III), but TNCs can play a specific role.

In terms of macroeconomic stability, arguably the most important effects from TNC activities in extractive industries arise from their influence on the balance of payments of a host country, with potential implications for inflation and the real exchange rate (chapter III). On the one hand, both capital inflows in the investment phase and export revenues in the operation phase can have a positive impact on a country's balance of payments. In Botswana, for example, mineral exports by TNCs have enabled the country to run current account surpluses and to accumulate substantial foreign exchange reserves, which have helped it earn the highest credit rating in Africa.⁵⁸ On the other hand, during the construction of a large mining project, imports of equipment and services may have the opposite effects, as will the subsequent repatriation of profits. In Chile, for example, the recent commodity price boom has led not only to a surge in the share of FDI financed through reinvested earnings but also to an increase in the repatriation of profits by foreign affiliates (chapter II). Between 2003 and 2006, the latter grew from \$2 billion to \$13 billion.⁵⁹

In terms of economic growth performance, TNC involvement in extractive industries generates income in the forms of wages and other payments for host-country inputs and, most importantly, government revenues (section B.1.e). The latter may help developing countries overcome initial constraints on their economic growth, such as low levels of saving and investment, and provide financial resources for investment in infrastructure and human capital. Provided the revenues are appropriately used, this can give a "big push" to the growth of a host economy.⁶⁰ At the same time, resource extraction may also have a negative effect

Figure V.4. Growth rates of GDI and GNI, and FDI income, Chile and Peru, 2003-2006



Source: UNCTAD.

on industrialization and long-term economic growth by strengthening various distorting effects.⁶¹ The manner and extent of revenue sharing between TNCs and the host country significantly influence the extent to which extractive industries contribute to economic growth. Also, high FDI income may reduce the positive impacts of any terms of trade improvements on national income. This has been apparent in Chile and Peru in recent years, as highlighted by the gap between the growth rates of gross domestic income (GDI) and gross national income (GNI) (figure V.4).⁶² Furthermore, foreign companies may have a greater propensity to use foreign suppliers of various inputs, thereby limiting TNCs' indirect contributions to domestic value creation through local procurement and other linkages to domestic enterprises (section B.2.a).

Positive contributions to the economic growth of TNC-led extractive industries have been observed in some low-income countries. In Ghana, for example, the share of mining in GDP rose from 1.5% in the mid-1980 to 5.7% in the second half of the 1990s, despite generally low gold prices during that period. GDP per capita, after declining in 1980–1989 by 0.6% annually, started growing again, reaching an average growth rate of 1.9% in 1990–2004, and accelerating to 3% in 2003–2004 (UNCTAD, 2005d: 329). Botswana's abundance of diamonds, exploited jointly with TNCs, has contributed to the country's strong economic growth (box V.2). These and other successful examples notwithstanding, it has been argued that resource-rich economies have tended to grow less rapidly than resource-poor economies (box III.2), though the specific role of TNCs, if any, in this context has not been much studied. However, it is a fact that the growth performance of a number of host countries in which TNCs play a significant role in extractive

industries has generally been poor, as highlighted in the case of Nigeria (box V.3).

In addition, even if TNC participation in extractive industries contributes to economic growth in the host country as a whole, the benefits may not be well distributed and the well-being of most of the citizens may not improve. For example, in Equatorial Guinea, where TNCs dominate oil production (chapter IV), the rapid growth of GDP since the early 1990s has not been accompanied by an improvement in the economic and social welfare of the majority of the people. Although GDP per capita reached \$4,100 in 2004, the country ranks 120 in the Human Development Index: 57% of its people have no sustainable access to potable water, the majority of the people live on less than a dollar a day, and the average life expectancy is 43 years (UNDP, 2006a). This situation is attributed to a lack of transparency and accountability in the management and deployment of the country's mineral wealth (World Bank, 2002).

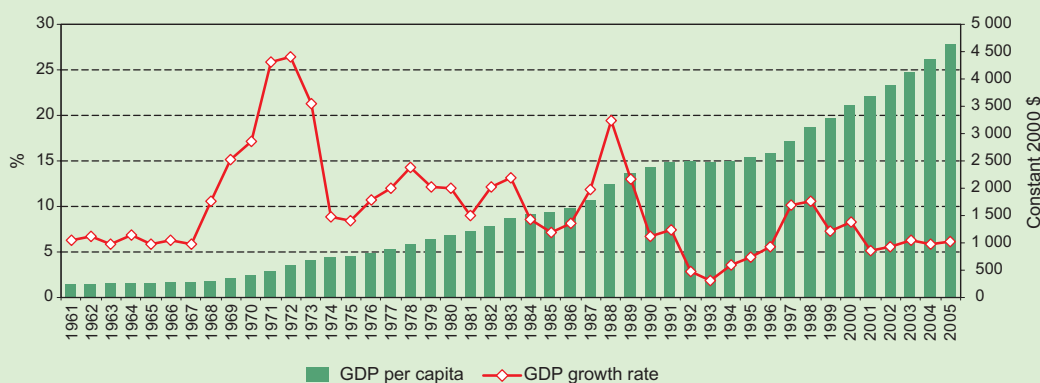
Similar problems prevail in several other host developing countries, especially in Africa. Indeed, the way government revenues are managed and used significantly influences the distribution of income. While resource revenues can be used to improve the welfare of the host-country population and for long-term economic growth, under certain circumstances they may be appropriated by small groups, and consumed rather than invested. If this occurs, capital accumulation and productivity growth, which are crucial for economic development, cannot be realized, and the country (or at least the majority of its population) may end up worse off.

To sum up, the extent to which TNC participation promotes the overall economic performance of a host country depends on many factors, including the scale of TNCs' value-

Box V.2. TNC activities in extractive industries and host-country economic development: the experience of Botswana

Over the 30-year period from 1970 to 2000, Botswana was the fastest-growing economy in the world (box figure V.2.1) and the structure of its economy was transformed. At the time of the country's independence in 1966, agriculture accounted for 40% of GDP, while mining was virtually non-existent; by 2006 agriculture accounted for 2% of GDP and mining for 40%. As a result of mineral-led economic growth, the country has progressed from being one of the poorest countries in the world to becoming an upper-middle-income developing country, and it is the only country ever to have graduated from LDC status.^a

Box figure V.2.1. GDP growth and GDP per capita, Botswana, 1961-2005



Source: UNCTAD.

The impact of TNCs on Botswana's economy has been integrally linked with that of the mining industry as a whole, as almost all the mining companies are either wholly owned by TNCs or are operated as joint ventures with the Government. Over the period 1975-2006, the industry directly contributed to 46% of total GDP growth, with a particularly strong impact in the early part of the period (box table V.2.1).

Diamonds accounted for about four fifths of Botswana's total exports during the period 2001-2005,^b which made the country the world's largest producer and exporter of diamonds in value terms. Through its joint venture with De Beers, the main TNC involved in its diamond mining, Botswana has exploited its key natural resource and gained a significant share of the profits.^c A combination of mineral wealth and foreign investment has yielded considerable development benefits for Botswana, in terms of rapid growth, rising living standards and extensive investment in social and economic infrastructure, along with healthy fiscal and balance-of-payments positions.

The contributions of TNCs to Botswana's economic development have taken place in the context of an open and transparent mineral licensing and taxation regime, and a competent institutional structure. Foreign investment in mining has been encouraged. Leveraging its strong bargaining position, the Government has negotiated favourable rent-sharing arrangements with TNCs.^d Although the Government has an ownership stake of 15%-50% in major mining projects, it has not assumed a direct operational role in the mining ventures.

Source: UNCTAD.

^a Income per capita has risen from \$76 at independence in 1966 to \$5,500 in 2005/06.

^b Other important mineral exports include copper and nickel. Their share in Botswana's total exports during 2001-2005 was 8%.

^c De Beers' origins lie in the South African diamond industry. Over time, the company dominated the global diamond industry worldwide. At its peak, De Beers was responsible for marketing more than two thirds of global rough diamond production, and exerted significant control over pricing.

^d In the mid-1970s, the Government used the opportunity provided by De Beers' applications for further mining licences to reopen negotiations on the terms of the agreement between them. It was criticized for driving too hard a bargain, which it was claimed would discourage further FDI (Hartland-Thunberg, 1978). However, despite the less favourable agreement, De Beers expanded its operation in Botswana. In the mid-1980s, Botswana gained a 5% stake in De Beers, which gave the Government indirect ownership of the TNC. More recently, the Government has again negotiated with De Beers. In return for renewing its licences, the Government has secured commitments from the company to undertake downstream activities in Botswana.

Box table V.2.1. Contribution of mining and other industries to GDP growth in Botswana, 1975-2006 (Per cent)

Period	1975-1985	1986-1995	1996-2006	1975-2006
Mining	73.6	20.4	49.0	45.6
Other industries	26.4	79.6	51.0	54.4

Source: Central Statistical Office of Botswana.

Box V.3. TNC activities in extractive industries and economic development in Nigeria

Nigeria started oil production in 1958. In spite of having been a significant oil producer for decades, the country has not been able to transform its oil resources into economic growth. Its growth performance has been slower than that of most other oil-producing countries, and many other sub-Saharan African countries (Heum et al., 2003).

Nigeria's oil extraction and production has long involved the participation of Shell.^a The TNC began operating in Nigeria's oil industry well before that country's independence, and is still the leading oil-producing company in the country.^b Indeed its operations have contributed significantly to increasing Nigeria's exports – total oil revenues were roughly \$350 billion during the period 1965-2000 (Sala-i-Martin and Subramanian, 2003). Historical data on government revenues from Shell's operations in Nigeria are not available; in 2005 and 2006, they amounted to \$4.3 billion and \$3.5 billion, respectively, in the form of taxes and royalties.^c

GDP growth in Nigeria has been lower than that of its non-oil-producing neighbouring countries, and more than half of Nigerians still live below the poverty line. The country's poor economic performance can be explained largely by its inability to develop its human resources and build a broader industrial base (Heum et al., 2003). The share of manufacturing in GDP had remained at a very low level during the period 1960-2000, and the industrial base continues to remain extremely narrow and heavily dependent on oil. The windfall revenues from oil have had only a minor impact on non-oil value creation and private consumption (Bevan, Collier and Gunning, 1999). Moreover, the inequitable allocation of revenues from oil and gas continues to adversely affect development (UNDP, 2006b). Indeed, despite its oil wealth, Nigeria ranks 159 among 177 countries in the Human Development Index (UNDP, 2006a).

Source: UNCTAD.

^a In 1937, the company was granted an oil exploration licence covering the entire country.

^b Shell Petroleum Development Company of Nigeria Limited (SPDC) is a joint venture operated by Shell which accounts for more than 40% of Nigeria's total oil production. The joint venture is owned by Nigerian National Petroleum Corporation (55%), Shell (30%), TotalFinaElf (10%) and Agip (5%).

^c The Shell Sustainability Reports 2005 and 2006 (www.shell.com/nigeria).

creation activities in the host country, the sharing of revenues between TNCs and the host country, and the capabilities of domestic enterprises and institutions. Whether inputs are sourced locally or imported from abroad will also influence the degree of TNC contribution to local value creation. Most importantly, appropriate institutions and policies can help eliminate or mitigate various distorting effects and leverage TNC participation in extractive industries for economic development. In particular, how government revenues are managed and used considerably influences the final impact. This in turn depends, among other things, on the overall institutional and policy environment of the host economy (chapter VI)

C. Environmental impact

Extractive activities, regardless of who performs them, incur environmental costs. Metal mining has been identified as a highly polluting industry, and oil and gas extraction is also associated with a variety of environmental risks (chapter III). Given that certain negative environmental consequences are unavoidable, the question is to what extent TNC participation contributes to reducing or accentuating them. Clearly, when TNCs are the only firms capable of undertaking extraction activities owing to the lack of domestic firms with

the appropriate capabilities and resources, they will be responsible for any environmental degradation.⁶³ On the other hand, some TNCs may use more advanced and environmentally friendly production technologies and techniques than their domestic counterparts and may also employ and diffuse higher standards of environmental management.

The environmental impacts of extraction projects are influenced by the type of minerals extracted, the technology used, the scale of the extraction activities and the location of the projects, all of which are partly determined by the strategies and activities of TNCs. The larger a mine or an oil field, the greater is its potential environmental impact on the surrounding area and even beyond. The environmental impacts also depend on the geological structures and the techniques of extraction.⁶⁴ Furthermore, risks increase when mining is undertaken in the proximity of other economic activities, such as agriculture and fishing, and especially if there is a risk of water contamination. Many mineral deposits are found in environmentally protected areas (usually protected forests), which serve to regulate water flows, prevent floods, control soil erosion, prevent intrusion of sea water, maintain soil fertility and help protect the surrounding ecosystem. If badly managed, the extraction of such deposits can therefore have disastrous environmental impacts. Government

policies and environmental regulations in the host country – including their effective implementation and enforcement – as well as pressures from various stakeholders, such as shareholders, lenders, NGOs and local communities, can influence the environmental practices of TNCs.

In the metal mining industry, fears of adverse environmental consequences often trigger opposition to foreign-invested mining projects, particularly by environmentalists and local communities, who are among the first to be affected. This has been the case, for example, in Ecuador and Peru (ECLAC, 2004: 49).⁶⁵ However, in some instances, the pressure to achieve high economic growth rates, create employment and attract FDI has tempted developing countries to accept foreign-invested mining projects that are particularly environmentally risky. In Indonesia, for example, the Government

under the New Order regime (1966–1998) legally allowed foreign investment in mining in protected areas, which prompted criticism from various stakeholders, including indigenous peoples and NGOs, both within and outside the country (Erman and Aminullah, 2007).⁶⁶ Environmental problems resulting from the dumping of tailings into the sea and rivers by Newmont Mining (United States) in North Sulawesi and Freeport-McMoRan (United States) in Papua badly damaged the image of TNCs in extractive industries in Indonesia (Ibid.). The environmental impacts of mining by TNCs in some sub-Saharan African countries have been mixed (box V.4; Extractive Industries Review Secretariat, 2003).

Once the minerals have been extracted, the mine and its surrounding environment should be restored to its previous state.⁶⁷ Traditionally, however, it has been common to abandon a mine

Box V.4. Environmental impacts of FDI in the metal mining industry in selected African countries

In mineral-rich sub-Saharan African countries such as Ghana, the United Republic of Tanzania and Zambia, the environmental impact of TNC activities in the metal mining industry has been mixed. Whereas significant negative consequences in terms of deforestation and air and water pollution have been observed, TNCs have also introduced more environment-friendly technologies and higher standards of environmental protection compared to those of the local artisanal miners.

Ghana. Mineral extraction and processing are estimated to account for some 10% of Ghana's industrial pollution (Boocock, 2002). Exploration and mining in forest reserves is a major environmental issue in the country. Foreign-invested mines have contributed to air and water pollution, and have been rated poorly in an official assessment of their environmental practices.^a However, the evidence also shows that improved environmental performance in mining is directly linked to the introduction of new technologies through FDI. For example, emissions of sulphur dioxide and arsenic at the Obuasi mine used to be 1,000 times higher than internationally accepted standards (Aubynn, 1997), but they have been largely reduced with the introduction by TNCs of a new technology for gold extraction. The TNCs were motivated more by conditions attached to loans than by domestic legislation (Warhurst, 1998). Although large-scale mining has also contributed to water pollution, the major problem in gold mining is caused by the use of mercury by artisanal miners (Boocock, 2002).

United Republic of Tanzania. Gold mining activities of TNCs have led to various environmental problems in the country (Kulindwa et al., 2003; George, 2003). Dust pollution in the area around the Geita Gold Mine has contaminated drinking water sources of nearby villages. As a result, the mining firm has had to supply tap water to the local community (George, 2003). TNCs have introduced an environment-friendly technology for gold mining, but at the same time, the large scale of their operations has resulted in significant land clearance and considerable deforestation. For example, the Geita Gold Mine has acquired 110 square kilometres in the Geita Forest Reserve, of which a significant proportion has been cleared (Ibid.).

Zambia. Air and water pollution from copper mining has caused major environmental problems in Zambia (Boocock, 2002). Kabwe, a mining town, is known as one of the world's most polluted places from decades of copper mining.^b During the privatization of ZCCM in the late 1990s, foreign investors were exempted from the environmental liabilities of the past activities of that company, and compliance with environmental regulations was deferred (Ibid.). After the privatization, the new technologies used by TNCs had positive environmental impacts by reducing sulphur dioxide emissions and the concentration of metals in waste dumps. However, other TNCs continue to cause environmental damage. For example, Chimani, a mine opened by Chinese investors in 2005, had been emitting air pollution beyond the statutory limits, affecting hundreds of residents of nearby townships before the Government shut it down in May 2007.^c

Source: UNCTAD.

^a The Ghana Environmental Protection Agency publishes an annual rating of mining companies based on their environmental performance. The rating consists of five categories, from A to E (best to worst). In 2000, only one company received a B rating while others rated from C to E (Boocock, 2002).

^b See www.blacksmithinstitute.org/site10d.php.

^c "Zambia closes Chinese mine over air pollution: lack of pollution controls threatens health of area residents", *Agence France Presse*, 15 May 2007 (www.industry.com).

Box V.5. Environmental impact of TNC activities in the Niger Delta

Oil exploration and production by TNCs has had significant impacts on the environment in the Niger Delta in Nigeria. In this area of natural wealth and extremely low income, environmental degradation and poverty are interlinked, as the poorest people of the Delta are often the worst affected by the environmental impacts of TNCs' oil extraction activities, not only in terms of their health, but also their livelihoods.

Major environmental problems include the destruction of freshwater ecosystems from the construction of canals which has caused saltwater to flow into freshwater zones; oil spills, of which some 5,400 incidents were officially recorded between 2000 and 2004;^a air pollution resulting from most of the gas produced being flared; and the depletion and illegal logging of forests to enable exploration and production activities by TNCs. In addition, unrecycled and untreated waste generated by oil operators has been discharged onto land, mangrove and freshwater swamps as well as into the sea. However, it is not only TNCs that have caused environmental damage; Nigerian oil firms in the region have also been very lax in their environmental practices (Litvin, 2003).

In some respects, the situation has improved over time. Currently, most foreign facilities have been certified under ISO 14001 relating to environmental management standards. Shell Nigeria, for example, has undertaken a series of investments in gas collection and utilization projects, with a view to eliminating gas flaring by 2009.^b However, it should be pointed out that the date for ending gas flaring in Nigeria's oil industry has repeatedly been postponed (Idemudia, 2007).

Source: UNCTAD.

^a See "5,400 spills threaten Niger Delta-Ugochukwu", *Daily Champion*, 24 November 2004, <http://allafrica.com/stories/printable/200411240494.html>.

^b According to the company, between 2000 and 2005, its gas flaring was reduced by 30%. Shell Nigeria is committed to ending continuous flaring at the Shell Petroleum Development Company of Nigeria joint venture's more than 1,000 wells during 2009 (Shell Sustainability Report 2006, www.shell.com/nigeria).

site (Peck, 2005), which can lead to various environmental problems such as acid mine drainage, surface and groundwater pollution, soil contamination, landslides due to collapse of waste and tailings dumps (Balkau, 1999). Today, most large TNCs have made substantial progress in restoring mine sites following their closure, and it is mainly the artisanal and small-scale miners that now pose a problem in developing countries (OECD, 2002; Peck, 2005).⁶⁸ Nevertheless, the environmental legacy left by TNCs' past mining activities still frequently leads to environmental problems (Danielson and Lagos, 2001), sometimes requiring them to share the responsibility for cleaning up.

In the oil and gas industry as well, TNC activities have had negative environmental impacts. In the Niger Delta in Nigeria, for example, oil spills, the flaring of excess gas and deforestation from oil exploration and production activities by TNCs have had damaging effects on the environment (box V.5). In Equatorial Guinea, on the other hand, oil companies appear to be respecting internationally accepted oilfield practices and environmental standards (World Bank, 2002: 8).

The environmental performance of companies varies. Some TNCs are attaching increasing importance to higher environmental standards when undertaking investments, partly in response to external pressure by various stakeholders, and partly out of self-interest. TNC activities have become more visible, and environmental issues today are

more closely monitored. As a result, those that cause environmental damage face greater reputational and financial risks (Bond and Weber-Fahr, 2002). Growing environmental awareness among the large, established TNCs in both metal mining and oil and gas extraction can be considered a positive development. Accidents still occur, but their environmental practices have generally improved over the past decade. Nowadays, most large mining TNCs apply their home-country environmental standards to their new projects abroad. Many have also established industry-wide guidelines or codes of conduct covering the performance of subcontractors.⁶⁹ However, some new entrants in the global extractive industries have emerged from home countries with relatively weak environmental legislation. It is important for these emerging TNCs to implement good practices and apply higher standards of environmental protection, which will benefit both themselves and the host countries in which they operate (chapter VI).

The environmental performance of large, established TNCs is often superior to that of domestic enterprises, particularly of artisanal and small-scale miners (e.g. Ericsson and Norås, 2005). Chile's mining industry, in which State-owned enterprises, TNCs and joint ventures are involved, enables comparisons of their relative performance. Early studies (e.g. Borregaard, Blanco and Wautiez, 1998) highlighted the gap in environmental performance between foreign and Chilean companies in the 1980s and 1990s. But this

gap narrowed in the 1990s (Borregaard and Dufey, 2002). Most of the remaining differences are related to environmental management skills (Ibid.), while concerns related to TNC-operated extractive projects have more to do with the large scale of their projects and, thereby, their larger environmental footprints.

TNCs may introduce and diffuse higher standards and more advanced technologies for environmental protection. Empirical evidence suggests that “FDI in the mining sector can reduce or increase pressures on the environment, as compared with domestic investment, depending on the geographical location and whether regulatory, technology or scale effects are considered” (OECD, 2002: 10). In Peru, foreign investment has stimulated the use of more environment-friendly technologies and catalysed a technological transformation in the country’s mining industry,⁷⁰ which has contributed towards a better environmental performance of the whole industry (Pascó-Font, 2000).

The overall environmental impact depends largely on host-country regulations and the institutional competence of governments for implementing them. Given the necessary framework and conditions, favourable effects in terms of improved standards and their diffusion, including through spillovers to domestic firms, could follow. For governments, the challenge is to minimize and manage the environmental stress caused by extractive activities, regardless of whether these are undertaken by domestic firms or by foreign TNCs. Host-country policies and regulatory measures need to be designed and implemented in a way that encourages companies to adopt the highest possible standards of environmental protection and to reduce negative impacts resulting from their activities (chapter VI).

D. Social and political impacts

The social and political impacts of TNC involvement in extractive industries, more than in other industries, have been the focus of considerable attention. Concerns related to health and safety have consistently presented a challenge to the extractive industries (section D.1). Social concerns often also arise from the relationship between TNCs and the local communities residing in the vicinity of their extractive operations, the influx of migrant workers and various related issues (section D.2). Additional risks are associated with human rights abuses, committed directly or indirectly by TNCs (section D.3). Political problems may stem from disputes over the distribution of the resource revenues,

corruption, and even armed conflict among different groups seeking to benefit from the revenues generated by extractive activities (section D.4). TNCs can introduce higher standards in dealing with various social issues, but they can also become associated with specific problems.

Generalizations are difficult to make, as the outcome depends largely on the specific host-country situation. Negative social and political effects have been observed mainly in mineral-rich, poor countries with weakly governed States. Problems are often associated with the characteristics of certain minerals, poor governance structures, and weak institutional capacities of host countries in the formulation and implementation of laws and regulations.

1. Health and safety impacts

TNC activities in the extractive industries can have health and safety impacts not only on people working in those industries (occupational health and safety), but also on nearby communities, for example, through air and water pollution resulting from those activities (discussed in the previous section).⁷¹

Mining in general has been identified as among the most hazardous industries.⁷² However, the occupational safety and health implications vary significantly between different mining activities and countries. In the working environment of a surface mine, for example, airborne contaminants (such as rock dust and fumes), excessive noise, vibration and heat stress can create health problems for mineworkers who are subject to a frequent and prolonged exposure to them. In this context, a distinction can be made between industrial and artisanal mining. TNCs’ extractive activities belong to the former category, and are usually larger in scale, better regulated and safer (Dreschler, 2001). Informal artisanal mining, on the other hand, takes a particularly heavy toll in terms of death and injuries in countries where large numbers of people are engaged in this hazardous activity, due to the lack of controls and regulations.

Historically, coal mining has been associated with major health and safety risks related to slope failure, the collapse of underground mining roofs, gas explosions and unhealthy air quality. Improvements in mining methods and protection technologies have greatly reduced these risks in modern coal mines, where more than 90% of coal is now produced using mechanical automation techniques. In addition to technical improvements, TNCs have transformed their safety record by making safety a priority (Rui, 2005). Therefore,

Box V.6. Worker safety in coal mines in China

China produces one third of the world's coal output, but accounts for four fifths of the world's coal-mine fatalities. In 2003, the death rate per million tons of coal mined in China was 130 times higher than in the United States, 250 times higher than in Australia and 10 times higher than in the Russian Federation.^a There has been a significant and widening gap between the safety record of Chinese domestic coal mines and that of coal-mining TNCs worldwide (Rui, 2005 and forthcoming). In the past five years, the situation has improved. However, in 2006, while TNC-operated mines had close to zero deaths per million tons of coal extracted, the average overall rate in China was still more than 2 deaths per million ton, mainly due to a particularly high death rate in township and village enterprises (box table V.6.1).

Box table V.6.1. Safety performance of different types of coal producers in China, 1999-2006
(Deaths per million tons)

Coal producer	1999	2001	2002	2003	2004	2005	2006
Key State-owned enterprises	1.0	1.5	1.3	1.0	0.9	0.9	0.6
Local State-owned enterprises	3.5	4.7	3.7	2.0	2.3	2.0	1.1
Township and village enterprises	11.0	18.5	12.2	13.4	5.6	5.5	4.4
National average	4.5	5.3	4.6	3.6	3.1	2.8	2.0

Source: Rui, 2005 and forthcoming; China National Coal Association, various years.

Source: UNCTAD, based on Rui, 2005 and forthcoming.

^a Chinese Academy of Social Science, 2006.

^b Source: State Administration of Work Safety and State Administration of Coal Mine Safety, China (www.chinasafety.gov.cn).

In 2005, 23,000 privately owned and collective-owned coal mines produced 38% of the coal mined in China, but accounted for 70% of related deaths and accidents. The Government acknowledges that the rates of severe and particularly large accidents “were consistently high” (China National Coal Association, 2005). Officially, the number of deaths has been over 4,700 per year since 2000.^b Unofficial estimates put the numbers even higher, reflecting the fact that township and village mining enterprises usually do not publish details of accidents and deaths.

the incidence of multiple fatalities is now rare in the developed world, and relatively uncommon in TNCs' operations in developing countries. By contrast, domestic coal producers in many developing countries have not yet attached the same priority to safety considerations. For example, in China, over 60% of all coal-mining operations still use non-mechanical methods, resulting in a large number of serious accidents (box V.6).

In the oil and gas industry, the frequency of accidents is lower than in mining and many other industries.⁷³ However, because the products of the industry are combustible and potentially explosive, accidents such as fires and explosions can have serious consequences. In July 1988, for example, 167 workers were killed when the Piper Alpha North Sea rig of Occidental Petroleum (United States) exploded after a gas leak.⁷⁴ After this worst oil-rig disaster in the world, TNCs tightened up their safety procedures. Now, they generally attach greater importance to high safety standards; in many cases, these standards are higher than those of indigenous companies in developing and transition economies. The Sakhalin-1 Project, for example, has had an accident rate which is more than four times lower than the average for the Russian oil and gas industry.⁷⁵ In spite of the higher health and safety standards being adopted by TNCs, additional efforts are needed to further reduce the health and safety risks posed by their activities.⁷⁶

2. Social impacts on the local community

Local communities are the most directly affected by TNC activities in extractive industries. On the one hand, their well-being can be enhanced by the economic contributions of TNCs, such as job creation and higher incomes, or through improvements to local infrastructure and social services. Such contributions can help reduce local poverty and increase social welfare in absolute terms. On the other hand, there may also be various social costs.⁷⁷ These cannot always be attributed to TNCs per se, but to the inherent characteristics of extractive activities. However, given their prominent role in the mineral production of many developing countries (chapter IV), TNCs inevitably become associated with related problems (Ballard and Banks, 2003).

Several factors underlie the social impacts of TNC involvement on the local community. First, adverse social consequences are associated with the relationship between TNCs and local communities within the general area or region where the extractive operations are located. Resource extraction operations are cadastral in that their areas of operation are delineated, which implies that the groups of people living in those areas enter into an economic relationship with the company; they are defined as “landowners” or “mining lease

residents” and gain access to a range of benefits or compensation from the company. The people that reside in the vicinity but outside the lines of demarcation have no such access to benefits and are often marginal in terms of economic relations with the company. Conflicts around the large-scale mining sector that prevail in some developing countries are driven as much by this marginalization, as by the distribution of benefits to the insider groups (Banks, 2007).⁷⁸

There are various sources of potential tension at the community level, including the use and management of land, the relocation of people (including indigenous populations), and accordingly the loss of land and livelihoods.⁷⁹ Indeed, the latter has been the main grievance against mining activities in Indonesia. For example, in the construction of the Kelian Mine in Indonesia by Rio Tinto (United Kingdom) and the local PT KEM, the land and assets of the local people were expropriated; some were compensated, but at rates considered unfair by the community (Oxfam Community Aid Abroad, 2001). In the case of the Soroako project in South Sulawesi, Indonesia operated by Inco (Canada), much of the agricultural land adjacent to the mine was requisitioned for the mine’s infrastructure, including an airport, a sports oval and a golf course. Local communities were excluded from negotiations regarding the land, and compensation for the acquired land was perceived to be inadequate (Ballard, 2001). When the communities are included, it can spark off internal disputes and questions about identity as people strive for recognition as “landowners” to claim eligibility for compensation (Banks, 2005). Moreover, social problems may erupt as a result of disagreements over compensation. In the cases of the Kelian Mine in Indonesia and the Bulyanhulu Mine in the United Republic of Tanzania, for example, it was alleged that the relocated people experienced a dramatic fall in their living standards due to inadequate compensation (Oxfam Community Aid Abroad, 2001; Extractive Industries Review Secretariat, 2003).

In addition, large mines usually need ample and stable supplies of electricity, water and other utility services. When TNCs’ mining operations are in regions where these services are inadequate or unreliable, competition for them may create tensions between the TNCs and the local community. Furthermore, crowding-out effects on artisanal miners may trigger conflicts between foreign and domestic operators. For example, the displacement of artisanal gold miners in the United Republic of Tanzania has exacerbated conflicts between them and those that have displaced them (Hilson and Potter, 2005). For indigenous peoples who usually live in vulnerable environments, TNC activities in

extractive industries may threaten their culture and interdependence with biological diversity, disrupt their traditional lifestyles and affect their social welfare (box V.7).

TNC entry may also create tensions between local communities and migrant workers. As noted above, there is often a need to bring in workers from other parts of a host country, or expatriate workers, to operate a large mine. This can lead to a reconfiguration of local social structures, relationships and identities. Some studies suggest that FDI in mining operations in the United Republic of Tanzania is a “successful vehicle for social integration”, as the mining firms attract labour from all over the country (Kulindwa et al., 2003), while others have a much less positive assessment of their impact on local communities (George, 2003). With or without TNC involvement, the influx of migrant workers, contractors and others linked to large extractive projects can be socially disruptive for local communities (Banks, forthcoming), sometimes causing them to suffer from various social pathologies, such as increasing levels of alcoholism, prostitution, gambling, violence and lawlessness, as well as diseases, including HIV/AIDS.⁸⁰

Social problems can also be associated with the closure of mines operated by TNCs (e.g. the Misima mine in Papua New Guinea and the Kelian mine in Indonesia). After deposits are exhausted or become uneconomical to extract, and TNCs close their operations and leave, local populations might be left with no alternative employment opportunities, a scaled down infrastructure and destroyed land. For instance, one of the issues for the joint venture involving TNCs at the Porgera gold mine in Papua New Guinea is how to facilitate and improve the scope for small-scale mining once its large-scale operations end (Banks, 2007).

In response to such challenges, more and more TNCs are becoming aware of the social effects of their activities. In the context of responsible investment, they have been focusing on meeting the needs of local communities in order to obtain a social licence – an implicit *de facto* licence for mining from civil society (in addition to an explicit *de jure* licence from the State). Accordingly, extractive-industry TNCs are frequently helping local communities improve roads, health and education facilities and water systems. Some improvements have resulted in limited or only short-term benefits for communities, while others make positive contributions over longer periods:

- In Botswana, two major mining companies (Debswana and BCL) have invested extensively in health and education facilities in local communities. Both companies operate hospitals

Box V.7. Social impacts of extractive-industry TNCs on indigenous peoples: selected cases

Indigenous peoples usually live in vulnerable environments that may also constitute reservoirs of biodiversity. A large number of them still occupy their traditional lands, and rely on subsistence activities such as hunting, fishing, trapping, gathering or herding. Their survival depends on the survival and sustenance of their ecosystems. The land is also at the core of their collective identity and spirituality. Yet many TNC activities in extractive industries take place in areas inhabited by indigenous peoples, and they can have serious environmental impacts on those areas, as noted earlier, affecting the inhabitants' livelihoods and way of life. The loss of biodiversity or alteration of their ecosystems as a result of TNCs' activities can therefore have dramatic consequences.^a In addition, various cases of abuse and violations of their social, cultural, economic, civil and political rights have been reported.^b

Ok Tedi mine in Papua New Guinea. The Ok Tedi copper and gold mine^c is located in the Star Mountains of Papua New Guinea, an area inhabited mainly by indigenous peoples. Since the late 1980s, almost 2,000 square kilometres of downstream lowland rainforest has been flooded and destroyed by tailings and waste rock from the mine. This has caused environmental and social harm to the 50,000 people who live downstream of the mine. Their means of subsistence and activities have been disrupted as a result of heavy water effluents, and air and soil contamination generated by the mining operations. Various indigenous peoples have suffered from chronic illnesses, including rashes and sores caused by pollution. In 1994, 30,000 landowners from Papua New Guinea brought a legal claim against the mining company BHP (now BHP Billiton). A negotiated settlement worth approximately \$500 million in compensation and commitments to tailings containment was reached in June 1996, though this may not have been entirely successful in addressing the issues (Kirsch, 2007).

ChevronTexaco's oil operations in Ecuador. From 1964 to 1992, Texaco (now part of Chevron) built and operated oil exploration and production facilities in the northern region of the Ecuadorian Amazon. Before the oil company arrived, an area of more than 400,000 hectares was pristine rainforest, with six indigenous communities and about 30,000 indigenous peoples living in the natural environment. Heavy pollution caused by oil extraction, production and transportation had serious consequences. The construction of exploration roads was followed by an influx of settlers who damaged the surrounding forests through logging, extensive agriculture and the introduction of domestic animals. In addition, the new settlers and foreign workers introduced various diseases among the indigenous communities. The result was an exploding health crisis among the region's indigenous and farming communities, including rising levels of cancer, reproductive problems and birth defects.

The Chad-Cameroon pipeline project and the Bagyéli people. The Chad-Cameroon pipeline project involves a consortium of companies: ExxonMobil (United States) is the operator, with 40% of the private equity, Petronas (Malaysia) has a share of 35% and Chevron (United States) has 25%.^d The 1,070-kilometre pipeline cuts through some of Africa's old growth tropical rainforest and through the villages of the Bagyéli indigenous communities. These communities depend on the forest and forest products for their subsistence-based lifestyle. Less than 5% of the affected Bagyéli are employed in the pipeline project. However, its impact on their social welfare has been considerable. Increased logging, the loss of water resources, and noise and river pollution have damaged their hunting grounds and fishing areas; while the destruction of the surrounding forest and medicinal plants have caused cultural and health problems.

Source: UNCTAD, based on Kirsch, 2002 and 2007; Forest Peoples Programme, at: www.forestpeoples.org; and AmazonWatch, at: www.amazonwatch.org.

^a See conclusions of the 2001 OHCHR workshop on indigenous peoples, private sector natural resource, energy and mining companies and human rights (United Nations Document No. E/CN.4/Sub.2/AC.4/2002/3).

^b See the report of the Special Rapporteur on indigenous people (United Nations Document No. E/CN.4/2003/90)

^c The Ok Tedi mine is operated by Ok Tedi Mining Ltd (OTML) which is majority-owned by the PNG Sustainable Development Program Limited (PNGSDP). Prior to 2002, it was majority-owned by BHP Billiton. PNGSDP is the result of an agreement between BHP Billiton and the Papua New Guinea Government. Under the agreement, all of the dividends from OTML that would once have gone to BHP Billiton now go to PNGSDP, which has the role of spending profits from the mine wisely on development in Papua New Guinea. As a company "limited by guarantee", PNGSDP does not have shareholders (see <http://www.pngsdp.com/companyprofile.html>; PNGSDP, Annual Report 2002).

^d The project also benefited from World Bank and IFC loans.

- that are open to both company employees and the general public. Debswana has been actively addressing the HIV/AIDS problem, and was the first company to provide anti-retroviral therapy (ART) to employees and family members free of charge (UNCTAD, 2007i).⁸¹
- In Chile, Minera Escondida donates 1% of its pre-tax income to corporate social responsibility-related projects in the country (UNCTAD, 2007j).
- In Indonesia, Freeport-McMoRan Copper & Gold has been donating 1% of its gross revenues to support community development projects at the village level. Since 1996, it has contributed \$61 million to the Freeport Fund for Papua Development, a programme managed together with an NGO and the leaders of local tribes and churches (Erman and Aminullah, 2007).

- In the United Republic of Tanzania, some mining TNCs have launched specific social investment programmes in various areas such as health and education to increase the well-being of local communities. The total expenditures were \$30 million for the period 1999-2005.⁸²

TNC involvement in local community development is not without its problems. One issue is whether it causes some States to abdicate some of their core functions, such as providing basic education or health care. A firm's investment in social infrastructure may be motivated by factors other than advancing the best interests of the local community; it may respond to the priorities of specific government officials rather than to those of the wider community. Or their investment may serve to assuage local fears and serve public relations purposes. Community development projects should identify the needs of the local community through a needs assessment exercise conducted prior to the inception of a project. However, this may not always happen. For example, according to one study, some of the schools, hospitals and clinics built in Sudan by Petrodar Operating Company (British Virgin Islands),⁸³ appeared not to be "primarily designed to serve the needs of the people" and to "remain poorly utilised or even empty" (ECOS, 2006: 23). This might be avoided by linking community development programmes of TNCs to the development planning processes of local governments (Frynas, 2005: 583-587).

3. Human rights implications

TNC participation in extractive industries has been criticized as having a potentially adverse impact on the human rights situation in some host countries. Alleged human rights abuses include the disappearance of people, arbitrary detention and torture, loss of land and livelihoods without negotiation and without adequate compensation, forced resettlement, the destruction of ritually or culturally significant sites without consultation or compensation and labour rights violations. In other instances, the dislocation of local populations has been linked to crimes against humanity.

In a survey of alleged corporate human rights abuses, as many as two thirds of the total of 65 abuses reported by NGOs were related to the extractive industries (United Nations, 2006), and they occurred mainly in poor countries with weakly governed States. As noted by the Special Representative of the Secretary-General of the United Nations on human rights and transnational corporations and other business enterprises: "there is clearly a negative symbiosis between the worst corporate-related human rights abuses and host

countries that are characterized by a combination of relatively low national income, current or recent conflict exposure, and weak or corrupt governance" (Ibid., para. 27).

According to the same survey, a variety of the alleged violations of human rights were committed by public (often government-controlled) and private security forces protecting company assets.⁸⁴ The use of such forces by some TNCs in weakly governed States or conflict zones has prompted concerns regarding the use of indiscriminate force.⁸⁵ There have been many reported abuses by private security forces,⁸⁶ as well as a large number of charges against private firms acting on behalf of TNCs.⁸⁷ Another problem occurs when TNCs rely on State forces to provide security. While these forces may be under the control of a host-State entity, TNCs might still be held accountable for their behaviour when they support their actions either by paying their salaries, or providing intelligence or other services such as transportation.

4. Corruption, conflict and other political issues

TNCs in extractive industries are more likely than those in other industries to retain a presence in conflict zones, because these areas are often endowed with minerals associated with high rents. TNC participation can reinforce adverse political impacts, often related to the distribution of resource revenues. The quality of governance is a key factor in determining whether a mineral-resource-rich country will succumb to such interrelated political problems as disputes over the resource rent, corruption, or even armed conflict or war.

Corruption is often endemic in societies that rely on extractive industries as their main source of income – with or without TNC involvement (Leite and Weidmann, 2001; Ross, 2001; Sali-i-Martin and Subramanian, 2003: 9). TNCs can add to the problem by adhering to non-transparent business practices, for example in host countries that treat the amount of revenues generated by extractive industries as a State secret (Catholic Relief Services, 2003: 1). TNC participation may not only add to corruption in a country; it can also extend support to authoritarian regimes, for example by providing governing elites with access to funds (Shankleman, 2006: 3).

Many conflict-prone States are desperately poor, despite significant mineral resources (UNDP, 2005: 165). TNCs are often the only avenue for some of them to exploit their resource wealth. But a foreign investor and the resulting inflows of revenue can contribute indirectly to conflict by sustaining regimes that fail to address socio-economic

and political grievances and/or by providing an economic incentive for the conflict. TNCs investing in conflict-prone areas might be confronted by various stakeholders fighting for control of the resource rent. A TNC's decision to support local communities by investing in a particular region might arouse the envy of other groups, thereby unintentionally fuelling secessionist movements and/or providing support to one ethnic group over another. TNC participation may also sustain conflicts by unintentionally financing combatants (International Peace Academy, 2004).

The link between conflicts and extractive-industry TNCs is indirect, with governance failure at the central and local levels being the mediating variable. TNCs might become the target of local turmoil, for example, if promised improvements and contributions are not realized. In the case of Shell in Nigeria, it was agreed between the central and the local governments that an increased share of revenues from oil exploration would flow to the local governments, which in turn would provide local services (Litvin, 2003). However, little of this additional revenue found its way into local development projects. As a result, activists in the Niger Delta targeted Shell, which has a local presence, whereas the Government is based far away in the capital (UNDP, 2006b).

The existence of human rights violations and/or conflict situations highlights the dilemma faced by TNCs when deciding whether or not they should engage in operations in a certain country. The mere presence of foreign investors may contribute indirectly to the maintenance or prolongation of a conflict. The issue has been highlighted in the case of Sudan, where some companies have chosen to divest while others have entered.⁸⁸ More research is needed to clarify under what circumstances it is appropriate for a company to operate in countries characterized by conflict or serious human rights violations.

E. Conclusions

As in other industries, the involvement of TNCs in extractive industries may assist or hamper the achievement of various development objectives. At best, it can put a host country on a faster development track; at worst it can accelerate a vicious circle of negative results. The net outcome depends on such factors as the mineral extracted, the behaviour of the TNC involved and the country's institutional capacity to regulate and monitor its extractive industries. Host-country policies and institutions are crucial in this context, as they shape the relationship between TNCs and various

stakeholders, influence the behaviour of TNCs and determine how the resource rent will be shared. Without a well-developed institutional framework, there is an increased risk that economic benefits from mineral extraction will be outweighed by environmental and social costs, resulting in few, if any, benefits (chapter VI).

Many of the underlying determinants of the economic performance of resource-rich countries are not directly related to TNCs. Therefore, the involvement of extractive-industry TNCs per se may not be the main factor explaining the net outcome of resource-based development. TNCs can, however, improve the overall performance of the extractive industries by contributing capital, technology and management skills and, as a result, boost output, exports and government revenues. They can also complement domestic investment and expose local companies to competition. Moreover, responsible TNCs may be better placed to address adverse environmental and social impacts of their activities. But there can also be drawbacks to their presence in developing countries that are related, for example, to their ownership and control over production and revenues, transfer pricing, limited local procurement and linkages and various adverse environmental and social impacts of their activities, as well as to the unequal bargaining power of host-country governments vis-à-vis the TNCs.

Some new extractive-industry TNCs originate in home economies with less stringent regulations in the social and environmental areas. Moreover, they may not be subjected to the same level of public scrutiny (e.g. by media and civil society) as other companies (*WIR06*). A number of them operate in host countries which other TNCs are, for a variety of reasons, less likely to operate in (chapter IV). The overseas expansion of these newcomers is a recent phenomenon, and relevant data for systematic comparisons are lacking. As their foreign activities are expected to expand, however, they would likely benefit from an increased awareness of how to address various social and environmental issues associated with their activities abroad.

The most positive outcomes of resource extraction have been achieved in countries with well-functioning institutions, where the development of industries has involved the active participation of domestic enterprises rather than only TNCs. Low-income countries that lack adequate domestic resources and productive capabilities are the most in need of the package of assets that TNCs can offer: foreign capital, know-how, technology and skills. At the same time, weak domestic capabilities often limit their ability to reap various benefits from the entry and operations of TNCs. This weakness also places them in a less favourable position in

negotiations with foreign investors and reduces their opportunities for securing wider economic benefits through linkages and spillovers. Government policies therefore need to address not only the manner of participation of TNCs in the extractive industries, but also the capabilities of domestic companies in those and supportive industries.

The chances of benefiting from TNC participation in the extractive industries increase if host governments have a long-term plan concerning natural resource extraction, and an effective,

mechanism for ensuring that the benefits accruing are fairly shared by the various stakeholders. Governments also need to invest some of the revenues earned from mineral extraction in building the economic and social infrastructure needed for sustainable development. The challenge is to take advantage of what TNCs can offer as a catalyst for industrial and economic growth while minimizing the costs. In particular, when designing institutions and policies, social and environmental concerns need to be balanced against economic considerations.

Notes

- 1 The shares of minerals in the total exports of China and India during the period 1990–1999 were 1.9% and 3.8% respectively, which are the lowest among 51 developing countries with significant mining industries (World Bank and IFC, 2002).
- 2 Minera Escondida has the largest copper production in the world. It is owned by BHP Billiton (Australia) (57.5%), Rio Tinto (United Kingdom) (30.0%), JECO Corp. (Japan) (10.0%) and IFC (2.5%) (www.escondida.cl).
- 3 “Latin America: beating the oil curse”, *Business Week*, 4 June 2007.
- 4 It has been estimated that in the Russian Federation \$900 billion in investments would be required to increase the current output of 9 million barrels of oil per day to 10.5 million barrels per day by 2030, see “A side door to Russia’s oil fields Moscow’s need for Western technology could lower barriers”, *International Herald Tribune*, 13 May 2006.
- 5 *Source*: Ministry of Energy and Mining, Government of Peru.
- 6 See, for example, “The wealth underground: Bolivian gas in State and corporate hands”, *Znet*, 8 May 2006 (www.zmag.org). See section II.A.3 for the latest trends in the nationalization of Bolivia’s oil and gas industry.
- 7 For example, Rosneft raised some \$10 billion through an IPO.
- 8 The initial capital of the proposed bank will come from the foreign exchange reserves of several Latin American countries, including Argentina, Bolivia, Brazil, Ecuador, Paraguay and Venezuela. These reserves have substantially increased since 2004 partly as the result of the commodity price boom. It has been proposed that all member countries contribute fairly equal shares to the Bank’s initial capital. Among others, it has been announced that it could provide finance for the gas pipeline project from Argentina to Bolivia (See “Banco del Sur to start up in IH07”, 1 May 2007, at: www.rigzone.com).
- 9 For example, the Camisea Project is owned by a gas production and gas pipeline consortium, TGP, which has received a loan of \$109 million from the Brazilian Development Bank (BNDES).
- 10 Heavy crude oil is any type of crude oil which does not flow easily. Its production is usually difficult, requiring a variety of enhanced oil recovery techniques.
- 11 See “Venezuela moves to nationalize its oil industry”, *Power and Interest News Report*, 19 May 2006 (www.pinr.com).
- 12 See “CNOOC: limited room in the down stream, deep-sea technology still weak”, 25 April 2005 (<http://biz.ec.com.cn>).
- 13 Different activities along the extractive value chain have different degrees of labour intensity and require different types and levels of skills and competencies. Most job opportunities usually arise in construction and extraction occupations, followed by other blue-collar occupations in production, transportation (including of materials), and installation and maintenance, as well as various management and professional occupations, such as engineers and technicians (Bureau of Labor Statistics, United States Department of Labor, www.bls.gov).
- 14 For example, in 2003, every \$1 million of United States outward FDI stock in the extractive industries in developing countries was related to 2.5 jobs, compared with 23.8 jobs in manufacturing (table I.6).
- 15 In metal mining, for example, surface mining operations that dominate TNCs’ extractive activities are particularly capital-intensive.
- 16 In some developing countries, artisanal and small-scale mining, which is labour-intensive, contributes significantly to employment creation (chapter III).
- 17 Mining companies employ somewhat more people, as employees not directly engaged in mining activities are classified under other economic activities.
- 18 *Source*: National Institute of Statistics and Information of Peru.
- 19 See “Sakhalin Energy 2006” (www.sakhalinenergy.com) and “Shell v Russia 2007” (<http://www.shell.com>).
- 20 See section D for related social problems.
- 21 See “CNOOC: limited room in the down stream, deep-sea technology still weak”, 25 April 2005 (<http://biz.ec.com.cn>).
- 22 Although their marketing advantages for distributing minerals may not be as important as in distributing consumer goods, foreign affiliates in mining often have advantages over local firms in host developing countries in accessing and serving foreign markets.
- 23 In Botswana, for example, mineral extraction driven by TNC participation has had a strong impact on exports, which rose from \$15 million in 1969, prior to the start of mineral exports, to \$4.4 billion in 2005. Minerals now dominate the country’s exports, with diamonds accounting for 78% of total exports during 2001–2005 (*Source*: Central Statistics Office of Botswana).
- 24 *Source*: Chilean Central Bank and ECLAC Yearbooks.
- 25 *Source*: Central Statistics of Zambia.
- 26 *Source*: Ministry of Energy and Minerals and National Bureau of Statistics, United Republic of Tanzania.
- 27 Mineral rents reflect the difference between the market price of the minerals and the relevant costs, including the costs of exploration, production and any necessary processing (processing or treatment required to make transportation economically feasible), as well as a certain (“normal”) return on investment.
- 28 The government’s “take” refers to the proportion of the undiscounted net revenues generated over a project’s lifetime that is captured through the fiscal system.
- 29 In Mali, the 1991 mining code provided mining companies a 5-year tax holiday after first production. The mining code revised in 1999 abolished the tax holiday, but the stability guaranteed by the mining convention meant that the companies could opt to remain under the previous fiscal rules (Cole-Baker, 2007).
- 30 In the oil and gas industry (as in the metal mining industry), information on tax payments by TNCs is seldom disclosed on a country-specific basis (Save the Children, 2005).
- 31 Comparing tax payments with export revenues can be misleading as the latter is a gross measure that includes the cost of production.
- 32 *Source*: Chilean Copper Commission and the Ministry of Finance of Chile. Data on non-copper mineral exports are not available.
- 33 During the period 2004–2005, total copper exports of the 10 largest private mining companies amounted to \$16.6 billion,

- and their tax payments totalled \$2.7 billion (Source: Chilean Copper Commission and the Ministry of Finance of Chile).
- 34 Source: Bolsa de Valores de Lima (www.bvl.com.pe) and Superintendencia Nacional de Administración Tributaria (www.sunat.gob.pe).
- 35 Source: Ministry of Energy and Minerals, United Republic of Tanzania.
- 36 Source: Central Statistical Office of Zambia.
- 37 In Bolivia, for example, in an interview the Minister of Mining, Guillermo Dalence, called the \$45 million received in tax revenue a “ludicrous amount” compared with the recorded mining exports of \$1 billion in 2006. See “Bolivian official calls for 600% mining tax increase”, *Resource Investor*, 8 January 2007 (www.resourceinvestor.com).
- 38 Even without accelerated depreciation, operations may take a long time to show any profits, particularly if companies are allowed to carry over losses to subsequent years.
- 39 In addition, another \$125 million was collected in 2006 following the introduction of a royalty tax on mining companies in 2004.
- 40 Source: Chilean Copper Commission.
- 41 These companies represent over 80% of the global metal mining industry by capitalization.
- 42 Governments have also collected indirect tax revenues, such as import duties, property taxes and royalties.
- 43 For example, United States, the home country of ALCOA, accounted for 14% of the company’s income from continuing operations in 2004, but for 30% of the company’s total current income tax payment (ALCOA, Annual Report 2005).
- 44 See, for example, Campbell, 2004; UNRISD, 2005; Christian Aid, 2007.
- 45 For example, labour unrest has been a continuing problem for Grupo México, with strikes occurring during 2004 and 2005 at each of its divisions. In some cases, disputes concerned labour contract renewals; in others, potential job losses triggered the discontent. In mid-2006, the company was once again strike-bound, with both its Cananea and La Caridad copper operations affected, as well as its San Martin polymetallic mine.
- 46 El Abra is the first important joint venture between a foreign company and Codelco. Phelps Dodge and Codelco own 49% and 51%, respectively, of the venture.
- 47 However, the bargaining between the two is not a zero-sum game, as some kinds of collaborative strategies can increase the overall size of the rents to be divided and increase the absolute level of returns to all parties. The specific policy choices and institutional arrangements are the outcome of the interplay of domestic groups trying to maximize their own interests as well as the national interest.
- 48 See also chapters III and VI.
- 49 Governments also need to avoid using the revenue or expectations of more revenue to increase borrowing as this may exacerbate the symptoms of Dutch disease by adding to the appreciation of the real exchange rate. See also chapters III and VI.
- 50 In developing and transition economies where State-owned enterprises play an important role, especially in the oil and gas industry, the cost of monopoly in terms of efficiency loss can be high. For example, in six oil-producing countries in which a State-owned company has dominated the oil and gas industry, the lack of competition has resulted in lower efficiency in upstream activities (Heum et al., 2003).
- 51 Oilfield services include a wide range of operation and management services in the exploration, production and distribution processes. According to an estimate by the African Export Import Bank, oilfield services now account for 90% of the total cost of producing one barrel of oil (UNCTAD, 2006d).
- 52 Minera Escondida, which accounted for 24% of total copper production in Chile in 2005, was planned from the outset to supply, among others, the overseas refineries of JECO Corp. (Japan) that partly financed the investment (Dietsche et al., 2007a).
- 53 For example, Rio Tinto (United Kingdom) must build roads, a new port and power and water supply systems in order to develop an ilmenite mine in Madagascar (“Madagascar is becoming an attractive mining destination”, *New Frontiers*, 15 March 2007).
- 54 At Lumwana, a new township of 20,000 houses, together with schools, health centres and police services, is planned as an additional investment. In the Solwezi district, near the Kansanshi mine, a great expansion of social services is under way in the form of new housing developments, road rehabilitation and improvements in the supply of education, health and other social amenities (UNCTAD, 2007g).
- 55 Deirdre Lewis (CSA Group), personal communication, July 2007.
- 56 See “Sakhalin-1 Project 2007” (www.sakhalin1.com); “Sakhalin Energy 2006” (www.sakhalinenergy.com); “Exxon Mobil” (2006) (www.businesswire.com); “Shell v Rossii” (2007) (www.shell.com).
- 57 The benefits of the investments in infrastructure related to Minera Escondida were limited simply because the mine’s location is in a desert with few settlements (Dietsche et al., 2007a).
- 58 Botswana’s foreign exchange reserves are among the largest in the world, relative to the size of the economy; this is a major factor that has helped earn the country an investment grade credit rating by Moody’s, and Standard & Poors (UNCTAD, 2007i).
- 59 FDI inflows to Chile in 2006 were \$8 billion, of which reinvested earnings accounted for 93% (chapter II).
- 60 See, for example, Sachs and Warner, 1999; and Murphy, Shleifer and Vishny, 2000.
- 61 One concern is related to the “trap of specialization” and its implication for industrialization. In addition to the negative effect of the appreciation of the real exchange rate of local currency on exports, the stimulated oil and non-tradable sectors may pull resources from other sectors. That makes the economy specialized in the primary sector and causes the manufacturing sector to shrink, a typical “Dutch disease” syndrome.
- 62 The distribution of income gains from improving terms of trade can be largely captured by examining the difference between GDI and GNI. Accounted for by net factor payments abroad, the difference can be considerable in countries where the income effects of terms-of-trade changes are associated with changes in FDI income (UNCTAD, 2005c: 104).
- 63 Indeed, much of the early debate on the environmental impacts of TNCs in developing countries focused on the extractive industries, largely because of the highly visible “environmental footprints” left by some extractive projects in which they were involved (*WIR99*: 291).
- 64 For example, technologies used for extracting diamonds from kimberlite pipes in Botswana have much less of an environmental impact than those used for extraction from alluvial deposits. In general, open pit mines tend to be more environmentally damaging than underground mines.
- 65 The public image of mining TNCs was adversely affected during the 1990s by a number of widely publicized spills from tailings dams, including in Guyana (1995) and the Philippines (1996) (*WIR99*: 291). Tailings are the fine particles produced by the processing of minerals, which involves the use of acid and heavy metals that can leach into water supplies, and the dust containing these particles can adversely affect health and the environment.
- 66 In the reform era after 1998, the Ministry of Forestry drafted a new forestry bill, which included a ban on mining in forest conservation areas.
- 67 In surface mining, the layers of soil or overburden that are removed to open up the mine are usually used to fill it in and reshape the land after its closure. Underground mining does not require an extensive reclamation process; however, it is still important to ensure that water remains uncontaminated and that abandoned mines will not collapse.
- 68 For example, abandoned pits and shafts over a large area of unregulated artisanal mining in West Africa have posed a risk to local populations and animals (Balkau, 1999).
- 69 For example, members of the International Council of Mining and Metals subscribe to a set of industry-wide principles to promote more environment-friendly investments (see www.icmm.com).

- ⁷⁰ For example, increased use of hydrometallurgical processes have lower environmental impacts than the pyrometallurgical processes used previously, because they use less water and have no air emissions (Borregaard and Dufey, 2002).
- ⁷¹ For example, the dangerously high lead levels found in children's blood in communities living in La Oroya, Peru are attributed to the mining and smelting operations of Doe Run Corporation (United States) (<http://www.blacksmithinstitute.org/site10e.php>).
- ⁷² According to the ILO, "especially hazardous sectors" include agriculture, construction, fishing, mining and shipbreaking industries, as well as the informal sector (www.ilo.org/public/english/protection/safework/hazardwk/index.htm).
- ⁷³ See ILO, "Sector activities: oil & gas production" (www.ilo.org/public/english/dialogue/sector/sectors/oilgas/safety.htm).
- ⁷⁴ "Oil industry defends its safety record", *The Guardian*, 13 December 2005.
- ⁷⁵ See "Sakhalin-1 Project 2007" (www.sakhalin1.com) and "Exxon Mobil" (2006) (www.businesswire.com).
- ⁷⁶ For example, BP (United Kingdom) has been involved in a number of incidents in recent years. In 2005, an accident at a refinery in Texas City, United States, killed 15 workers and injured many more. In 2006, an oil spill of between 200,000 and 300,000 barrels of oil was detected on the Trans-Alaska Pipeline, which is maintained by BP, and in the Gulf of Mexico cracks in oil platform equipment were found on the seabed (See "BP's credibility gap", *International Herald Tribune*, 12 August 2006).
- ⁷⁷ Many of these costs are related to perceived unfairness and growing inequalities. For example, increasing inequality around a large-scale mine has been conceived in terms of four overlapping and intersecting axes: geography, hierarchy, gender and identity (Banks, 2005).
- ⁷⁸ For example, at the Porgera mine in Papua New Guinea, those groups living within the Special Mining Lease received substantial compensation, while those outside did not. This inequality of treatment created friction among the people of the Porgeran community (Biersack, 2006).
- ⁷⁹ Land is central to the livelihoods and cultures of many communities, especially those living in remote areas, and when they are affected by mining operations compensation and employment can seldom provide an acceptable alternative (see, for example, Robinson, 1991).
- ⁸⁰ For example, the Chad-Cameroon pipeline project has been accompanied by increasing alcoholism and prostitution, and there has been a marked increase in the rate of HIV/AIDS infections along the pipeline corridor (Horta, Nguiffo and Djiraibe, 2007).
- ⁸¹ Debswana's hospitals at Jwaneng and Orapa are now specialized infectious disease care centres, which provide local communities with ART and related treatment in partnership with the Government of Botswana (UNCTAD, 2007i).
- ⁸² *Source*: Ministry of Minerals and Energy, the United Republic of Tanzania.
- ⁸³ Petrodar Operating Company is owned by CNPC (China) (41%), Petronas (Malaysia) (40%), Sudan Petroleum Company (8%), Sinopec (China) (6%) and Al Thani Corporation (United Arab Emirates) (5%) (www.petrodar.com/profile.html).
- ⁸⁴ Local artisanal miners have sometimes become victims. For example, in the Obuasi gold-mining project undertaken by AngloGold Ashanti in Ghana, force was allegedly used to keep artisanal miners out of the company's lease area, resulting in the deaths of some of these miners (ActionAid, 2006). However, AngloGold Ashanti stated that its security staff fully respected human rights (see response of AngloGold Ashanti to ActionAid report concerning Obuasi, Ghana, 7 October 2006, at: www.reports-andmaterials.org).
- ⁸⁵ For example, the Grasberg mine operated by Freeport (now part of Freeport-McMoRan Copper & Gold) in Indonesia was allegedly involved in the extrajudicial killing by the Indonesian military of as many as 200 people between 1975 and 1997; almost all of them were unarmed civilians (Ballard, 2001).
- ⁸⁶ A presentation by the Business and Human Rights Resource Centre to the meeting of a United Nations Working Group on the use of mercenaries listed a number of alleged human rights abuses committed by private security companies in the service of mining TNCs (<http://www.reports-and-materials.org/BHR-statement-to-UN-Working-Group-on-mercenaries-21-Feb-2007.doc>).
- ⁸⁷ Business and Human Rights Resource Center, "Private security companies and human rights", Public seminar co-hosted by the Business and Human Rights Resource Centre and the United Nations Working Group on the use of mercenaries as a means of violating human rights and impeding the exercise of the rights of peoples to self-determination, 21 March 2007, Geneva, Switzerland.
- ⁸⁸ For example, due to pressure from NGOs and their shareholders, Talisman Energy (Canada) in October 2002 divested its ownership interest in an oil extraction project to ONGC Videsh (India) (Manhas, 2007). Lundin Petroleum (Sweden) in June 2003 sold its rights to explore for and produce oil and gas in one concession (Block 5A) to Petronas (Malaysia) but retained an ownership stake in another (Block 5B) (Batruch, 2003; Human Rights Watch, 2003).

CHAPTER VI

THE POLICY CHALLENGE

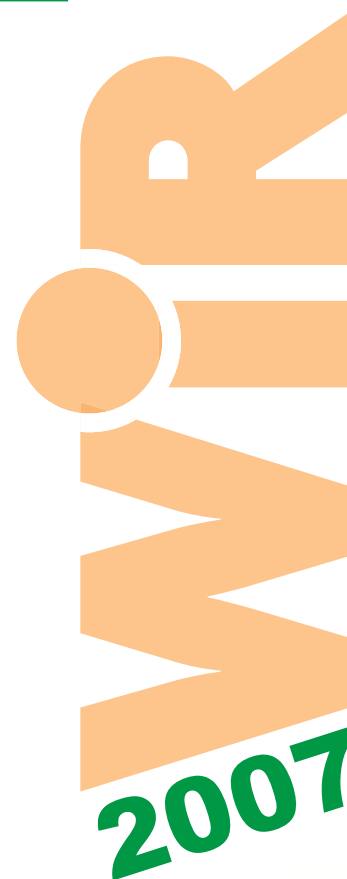
There have been significant changes in the role of TNCs in the extractive industries since the 1960s, some of them triggered by policy shifts in host countries.¹ These firms operate in most of the mineral-rich countries today, under different contractual arrangements and to varying degrees (chapter IV). Many low-income countries have to rely on TNCs' capital, know-how and management skills for the extraction of their mineral deposits, but there are concerns related to some of the economic consequences of this reliance; a major issue has to do with the sharing of the revenues generated. There is also growing awareness of the need to address the environmental and social impacts of extractive activities, with or without the involvement of TNCs. Indeed, after decades of resource extraction, the transformation of dormant mineral deposits into sustainable development gains remains a demanding undertaking in many countries (chapter V).

This chapter takes stock of recent policy developments, at national and international levels, and considers policy options available to host developing countries to enhance their gains from TNC involvement. Section A discusses some of the government policies and actions needed to meet the governance challenge. They are not necessarily directly related to TNCs per se, but rather to the overall governance framework and to policies and institutions for the extractive industries in particular. Section B examines how countries regulate the entry and operations of TNCs in different extractive industries. Section C discusses ways in which countries might increase their share of the rents from the extractive industries by changes in their relevant policies and institutional frameworks, particularly their fiscal regimes; it also examines the

implications of regulatory changes. Section D looks at ways of promoting linkages, skills development and technology transfer. Policies to address potential environmental, social and political costs are explored in sections E and F, and section G concludes.

A. The broader government policy and institutional framework

Government policies and institutions pertaining to extractive industries are a critical factor for ensuring sustainable development gains from mineral extraction, with or without TNC involvement (chapters III and V). Efficient management of a mineral-based economy requires well-developed capacities for governance and a commitment to the objective of sustainable development on the part of a country's leaders and policymakers (Auty, 2001b; Bergesen, Haugland and Lunde, 2000). However, in a number of mineral-rich countries, government policies may be aimed at short-term gains rather than long-term development objectives. Furthermore, the distribution and use of the host country's share of mineral revenues may pay little attention to development considerations. In the worst-case scenario, easy access to revenues from mineral resources can make governments less accountable to their constituents (Moore, 2000) and their actions more likely to be aimed at preserving the interests of a small governing elite.² The entry of TNCs in such countries can enable ruling elites to prolong their stay in power and misuse a country's assets, with limited benefits for the people at large.



As with other economic activities, it is important to develop and maintain a governance framework based on the rule of law, and supporting institutions that provide an environment in which companies have incentives to invest in productive activities. Beyond the overall governance framework, countries need institutions and policies geared specifically to the extractive industries. Key elements should include (ECA, 2004; Otto, 2006):

- A knowledge base of a country's mineral endowments through geological surveys. This is a prerequisite for mineral exploration (see for example Otto, 1995). Many African countries possess vast mineral reserves that have not yet been properly surveyed.³ Governments also need an understanding of the relevant mineral industries and their importance in the national and global context. The better the knowledge base, the stronger the bargaining position of a government vis-à-vis private enterprises in general and TNCs in particular.
- A legal framework governing the exploration and exploitation of mineral resources that establishes mineral ownership rights. In most countries, the State is the owner of the minerals, in others the rights go with land ownership, and in yet others there are different ownership regimes depending on the mineral (ECA, 2004: 80).
- An administrative framework for the extraction of mineral resources. This involves the issuing of licences, defining under what conditions exploration or extraction may take place and developing mining-right cadastres (i.e. compilations of current exploration and mining activities in the country and their ownership) (Otto, 2006).
- Policies relating to the production of minerals that regulate the activities of industrial and artisanal mining, State-owned and privately owned domestic enterprises and TNCs.
- A system of revenue management. This concerns the sharing and distribution of the rents from mineral extraction. Depending on how they are managed, such rents can have both positive and negative consequences for an economy.
- Policies related to the health and safety of workers, protection of the environment and the rights of local communities.

There is no single formula to apply. Countries need to integrate their specific policies for the extractive industries into an overall development strategy, specifying the role they can play in national economic development. Given that mineral deposits will one day be exhausted, economic benefits from extractive activities need to be sustainable.

To this end, an appropriate portion of the revenues from mineral extraction should be channelled into education, health, infrastructure and other forms of human capital formation and social infrastructure. The distribution of revenues needs to be in line with broader macroeconomic, industrial, trade, social and other policies and their underpinning institutions.

To avoid unequitable solutions, it is also important to engage all relevant stakeholders – governments, civil society, affected communities, labour unions, industry and international organizations – in the process of policy discussion and formulation. The distribution of revenues is a common source of social conflict, which can be mitigated by allocating a share of the revenues to provincial and other lower levels of government, especially in the local areas most directly affected. However, this requires that adequate governance systems and capabilities be developed at the level of local government as well.

The quality of the overall and sectoral policy and institutional framework affects the relative bargaining power of a host country vis-à-vis prospective investors, domestic as well as foreign. The willingness of companies to invest in a project depends on the risk-reward relationship (chapter IV). When risks are perceived to be high, TNCs may only be willing to invest in minerals they expect will generate large rents. A government can influence these risks and at the same time improve its bargaining positions. By providing better information on its mineral endowments it can lower exploration costs; through its regulatory and fiscal policies, it can reduce the financial risk; and by providing greater political stability, it can mitigate the political risk. Moreover, by developing its knowledge, information and negotiating capabilities, it can seek to eliminate the asymmetry that often prevails in these respects between TNCs and host developing-country governments.

B. Regulating the entry and operations of TNCs in extractive industries

Policies towards foreign involvement in extractive industries have changed over time and still vary considerably between countries and minerals. Approaches range from total prohibition of foreign investment to almost complete reliance on TNCs, with notable differences between the oil and gas industry on the one hand and the metal mining industry on the other, and also between different segments of their respective value chains. For those countries that are open to FDI or other forms of TNC

participation in extractive industries, the challenge is to regulate the entry and operations of TNCs in a way that maximizes development gains. TNC involvement is governed by various national laws, regulations, contracts and more informal institutions. Many countries have also entered into international investment agreements (IIAs) of relevance to TNC operations in extractive industries.

In the oil and gas industry, TNCs operate under arrangements which range from concessions to service contracts with State-owned oil companies. In the metal mining industry, TNCs mainly operate under concessions granted through exploration and mining licences. In both industries, the arrangements reflect an ongoing process through which governments seek to find the appropriate balance between the rights and obligations of the State on the one hand, and TNCs on the other.

1. Oil and gas: from “old-style” concessions to partnership agreements

National legislation governing the oil and gas industry defines which forms of TNC participation are permissible. Sometimes, different forms of participation are allowed for different types of TNC activities. Such legislation, which in certain countries has been written into the national constitution, typically authorizes the making of contracts to govern the operations of TNCs on terms consistent with the legislation.

As noted, until the early 1970s a small number of TNCs dominated global oil production, mainly on the basis of concessions. Against a relatively small cost, it gave TNCs the exclusive right to explore, produce and market the resources: a highly uneven financial bargain between a host government and a foreign company (Smith, 1991; Omorogbe, 1997). Moreover, the foreign company was granted rights for periods ranging from 40 to 75 years, and it had secure rights over large tracts of land, sometimes even extending throughout the country (Omorogbe, 1997: 58).⁴ Many of these concession agreements ended with decolonization, the creation of OPEC and the widespread nationalizations that took place in the oil industry during the 1970s (box IV.4).

Nowadays, TNC activities in oil and gas extraction are regulated by different types of partnership agreements most often with State-owned oil or gas companies of host developing countries (Likosky, 2006). While there are similarities among these types of agreements, they also differ in important respects. The most relevant contractual arrangements today are modern concessions, joint ventures, production-sharing agreements (PSAs) and

service agreements (box VI.1). As noted (table IV.1), among the main oil-producing developing countries, more than half of all known contracts with TNCs that were in force in June 2007 were PSAs. Joint venture and concessions accounted for another 41%, services agreements for 2% and other contractual forms made up the balance.

There is a qualitative difference between concessions, PSAs, joint ventures, and risk sharing agreements, on the one hand, and pure service contracts on the other. Under the former, the TNC assumes a greater risk and also has a share in the revenue, as set out in contractual clauses and legislation. Under pure service contracts, the company is remunerated by the host government for the specific services it provides.

It is difficult to generalize as to which contractual forms are the most beneficial for a country. Since countries vary in the quality of their resources and in their level of domestic expertise, one contractual form may be more appropriate than another for different projects within the same country. The effect of a given contract is determined by its content, which is based on negotiations between the State (often represented by a national oil or gas company) and the investor (or consortia of investors). For example, royalty and taxation rates will be contractually determined. The same often applies to issues such as local content, training, host government control over key decisions, the State-owned corporation's participation, and, more recently, human rights and environmental considerations.

All this implies the need for considerable negotiating skills on the part of governments to ensure a satisfactory outcome. In the oil and gas industry, it is typically the national oil or gas company in a developing country that is responsible for such negotiations. There are often significant imbalances between the skills of major TNCs and developing-country governments. A recent study of the Niger Delta illustrates the asymmetrical relationship with regard to environmental protection (UNDP, 2006b: 188):

“The companies have several advantages over and above all the government regulating agencies. They have better quality and up-to-date maps, as well as satellite images and other remote sensing techniques, and sophisticated computer hardware and software for environmental data gathering, analysis and display.”

The extent to which TNCs are involved in oil and gas extraction varies considerably by country (chapter IV). According to one estimate, in 2005 TNCs from developed countries had

unrestricted access to only 10% of the world's known oil reserves, mainly in developed countries and to another 7% through joint ventures with State-owned national oil companies (chapter IV). The remaining reserves were basically off limits to TNCs. Downstream activities including refining, petrochemicals, transportation and distribution are generally more open to foreign investments in many countries.⁵

In *West Asia*, most countries ban FDI in the exploration and extraction of oil and gas.⁶ While the constitution of the Islamic Republic of Iran prohibits the granting of petroleum rights to foreign companies, it permits foreign investment in the form of buy-back contracts.⁷

In *Latin America and the Caribbean*, institutional reforms in the 1990s opened parts of the industry to private (and foreign) investment; they focused on exploration and production in new

regions and deep waters or involved extraction from marginal or extra-heavy crude oilfields at high cost. The richest and most profitable oil deposits have remained in the hands of State-owned companies, but sometimes developed with the involvement of foreign TNCs.⁸ Mexico, however, maintains its monopoly of the State-owned company, PEMEX in oil exploration and extraction (ECLAC, 2002: 143). In natural gas, countries in this region have opened to FDI to a greater extent, often offering incentives to foreign investors. In Argentina, Bolivia, Peru and Trinidad and Tobago, TNCs have been permitted to operate large gas fields alongside State-owned enterprises, while in Colombia and Venezuela they have been required to enter into agreements with State-owned enterprises.

African oil producing countries as well as *China* and *Indonesia* have involved TNCs in their oil industry through various PSAs,

Box VI.1. Common forms of contractual arrangements with TNCs in the oil and gas industry

Under *modern concessions*, foreign firms are granted the right to explore, produce, and market resources from a specific geographic area. Thereby they assume all the risks in case of failure and reap the rewards in case of a commercial find. The rewards are a function of the level of production, price, taxes and other fees. Foreign firms usually have the right to choose applicable laws and forums for dispute resolution. Concessions are long-term and may be renewed.

Under a *joint-venture* arrangement, the foreign company does business jointly with a State-owned company. Partners share the exploration and production costs in proportion to their equity stakes. Usually the State-owned oil company has a majority interest. As in the cases of concessions and PSAs, the specific legal arrangement determines the extent of foreign control. However, the joint venture provides a corporate, structured means for technology transfer and shared decision-making. It may enable a host country to put a premium on technology transfer and thereby pursue the aim of reducing the reliance on foreign companies. Inevitably, the prospect of such independence runs counter to the interests of TNCs. As a result, the extent of technology transfer built into the joint venture is negotiated, and varies depending upon the bargaining strength of the national government.

In *production-sharing agreements*, foreign firms bear all the exploration costs and risks. If resources are not found, the company is the loser. However, if commercially exploitable resources are discovered, it has the right to recoup sunk costs and an agreed share of the profits. The arrangement may be useful if a host government needs a company to undertake the risk of exploration. For instance, a TNC might find such an arrangement more useful than a modern concession if it is uncertain about its ability to recoup its sunk costs within the strictly definite time period provided for by the modern concession. The first PSA was signed by Indonesia in 1961 with Asamera Oil Corporation (Canada).^a

Risk service contracts resemble PSAs and address situations in which a host government seeks to utilize TNCs to bear the risk of exploration. If commercially exploitable resources are discovered, the TNC receives cash remuneration for its efforts in addition to a possible stake in the subsequent enterprise. If no discovery is made, it incurs all the losses. Under *pure service agreements* foreign firms supply the host country with services and know-how related to exploration and/or development. In return, they receive remuneration in accordance with the terms and conditions of the contract, regardless of whether there is a commercial find or not. Hence, in this case the government bears the risk. To rely on such a service contract and assume the principal responsibility for a project, a host government must have sufficient technological know-how and access to capital.

The distinction between these various types of arrangements may not always be obvious. The parties may use different names for contracts with similar terms and conditions, or conversely, use the same name for contracts with different terms and conditions (Bindemann, 1999). What form is the most appropriate for a given country or extraction project depends on a number of parameters, including the maturity of the oil industry, the fiscal regime, import or export dependency, geological aspects, costs and the regulatory framework.

Source: UNCTAD, based on Smith, 1991; Bindemann, 1999; and Omorogbe, 1997.

^a See, for example, Fabrikant, 1975; and Machmud, 2000.

accompanied often by joint ventures or other types of capital participation (chapter IV). In the *Russian Federation*, the State-owned enterprises – Rosneft in oil and Gazprom in gas – have occasionally partnered with TNCs when finance or the latest technology have been needed to develop difficult or remote fields.

Recent policy changes in a number of oil-producing countries have tended to further limit the extent to which TNCs can engage in oil and gas exploration and extraction (see section C below). Meanwhile, the noted rise of new oil and gas TNCs from emerging economies (chapter IV) implies greater competition for those oil and gas projects that are still open to TNC participation.

2. Codes and mining agreements governing FDI in metal mining

National legislation governing the mining industry defines which organizational forms TNC participation may take in metal mining. In contrast to the situation in the oil and gas industry, concessions are the predominant form of TNC participation in metal mining in developing countries. Mining companies obtain licences to explore for and produce minerals and have the right to exploit the mineral deposits by virtue of such licences. Many mining laws allow TNC operations to be governed by mining agreements on terms consistent with the legislation, especially in the case of large mining projects (Barberis, 1999). In some countries, a mix of national and sub-national laws governs the mining industry.⁹

As in oil and gas, regulatory frameworks have changed over time, and are still evolving. In Africa, for example, after a period when State ownership was dominant, a process of deregulation and privatization started in the 1980s. Increased liberalization, deregulation and privatization were promoted in African economies in general, including by international financial institutions, as a means of correcting macroeconomic imbalances, stimulating economic recovery and establishing a more sustainable growth path. Promotion of FDI was an integral part of this strategy and often involved the offer of tax incentives. Among the main reasons advanced in support of the institutional reforms was the under-performance of the mining industry in many developing countries, the absence of interest in or capabilities for exploration and investment, and rising external debts (UNCTAD, 2005b). A common feature in the 1990s was the enactment of new mining codes, or revisions of the existing ones,¹⁰ specifically designed to provide assurances and better conditions for investors (box VI.2).

As part of mining code reforms, restrictions on foreign ownership of metal mining operations were eased or entirely abolished in most developing countries. Most countries in Latin America and the Caribbean introduced substantial changes in their mining legislation in the 1990s (Albavera, Ortiz and Moussa, 2001).¹¹ In Peru, State dominance was reversed in 1991-1992 through new legislation which made the promotion of investments into the mining industry, and the privatization of State-owned mining as well as oil companies a matter of national interest.¹² The Argentinean mining code was radically changed for similar reasons. In Brazil, Indonesia, Papua New Guinea and the Philippines, TNCs were allowed a 100% equity ownership in mining ventures (Otto, 2000; Barberis, 1999). Chile also opened up to FDI, but retained State ownership of Codelco.

Common features of current mining laws include increased security of tenure, open access to historical exploration reports, streamlined and transparent exploration application procedures, geographically defined exploration areas, provision for dispute resolution and methods to resolve conflicting land uses (Otto, 2006: 113). A number of countries stipulate conditions related to the employment of domestic or foreign employees in the metal mining industry (Law Business Research, 2005).¹³

Moreover, with a view to providing additional certainty to investors, many developing and transition economies went beyond opening up to foreign investment in extractive industries by locking policy changes into fiscal stability clauses¹⁴ as well as by signing various international investment agreements (IIAs). The most important IIAs in this context were bilateral investment treaties (BITs) on the promotion and protection of foreign investment.¹⁵ In many mineral-rich countries, the number of BITs has increased rapidly during the past decade (table VI.1).¹⁶

It is important to place these regulatory changes in perspective. The liberalization efforts of the 1980s and 1990s were undertaken against the backdrop of historically low mineral prices, and in many countries with large external debts, which saw a need to attract foreign investment as a means of increasing exports and earning more foreign currency.¹⁷ Countries that had previously nationalized the mining industry had to convince foreign companies that new investments would not meet the same fate. In hindsight, and in view of current high mineral prices, some of the mining codes then adopted and some mining agreements negotiated may have been overgenerous to foreign investors. It has been argued that liberalization

Box VI.2. Three generations of mining code reforms in Africa in the 1980s and 1990s

The reform of regulatory and legal frameworks in the mining industry in Africa since the 1980s has contributed to a more welcoming institutional environment for FDI. Three generations of mining code revisions in African countries have been identified (Campbell, 2004).

The first generation in the 1980s involved a number of variants of State withdrawal or privatization, which were deemed necessary to attract FDI. In Ghana, for example, an active policy to divest the Government's shares in State-owned mines and attract FDI into the mining sector involved the streamlining of the legal and institutional framework. Policy changes initiated in 1986 included the establishment of the Minerals Commission to act as a one-stop investment centre for mining, the enactment of the first comprehensive mining code – the Minerals and Mining Law – and the promulgation of the Mineral (Royalties) Regulations, as well as the Additional Profit Tax Law. These laws formed the basis for providing generous tax incentives to investors in mining. While the generally applicable corporate tax rate was 55% in the mid-1980s, the mining industry rate was fixed at 45%. Front-end charges, which had previously amounted to 12% of the total value of profits from minerals extracted, were reduced to 3%-12% (depending on profitability).

The second generation of reforms (in the early to mid-1990s) involved an increasing recognition of the need for certain forms of regulation, notably with respect to the environment, with responsibility for this assigned mainly to private actors. In Guinea, for example, among the various aspects of increased liberalization (as illustrated in Article 16 of the country's 1995 Mining Code), protection of the environment and the responsibility for the monitoring and enforcement of environmental laws were assigned to the operating companies. In addition, its new mining policy aimed at restoring competitiveness through a mining industry tax system and it provided a stable tax regime through the duration of the assigned mining rights.

The third generation of institutional change dates from the end of the 1990s. It explicitly recognized the role of States in facilitating as well as regulating FDI and was largely encouraged by the World Bank. Examples of this generation of code revisions can be found in Mali, Madagascar and the United Republic of Tanzania. The 1999 Mining Codes of Mali and Madagascar included special provisions for the protection of the environment. However, neither country was well equipped to enforce the observance of the environmental standards by private operators.^a Following a five-year sectoral reform project financed by the World Bank, a new mining code was also introduced in the United Republic of Tanzania in 1998. It allowed 100% foreign ownership, introduced guarantees against nationalization and expropriation, and permitted unrestricted repatriation of profits and capital. As in Mali and Guinea, the revised mining code offered a royalty rate of 3% of the value of exports, and a variety of incentives such as tax exemptions and a waiver on import duties.

Many of the mining code reforms took place at a time when metal prices were thought to be in secular decline and countries struggled to attract mining FDI. In view of the often disappointing performance of State-owned mining companies and the need to repay the external debt, the reforms sought to reduce the role of the State as operator of mining activities and to create an environment favourable to FDI. And FDI did increase. In the United Republic of Tanzania, for example, annual FDI inflows surged from virtually zero in 1990 to more than \$500 million in 2000, mainly related to gold mining. In Ghana, annual inflows were about 10 times higher at the end of the 1990s than they had been in 1990.

Source: UNCTAD, based on Campbell, 2004 and 2006.

^a See "African mining codes questioned", *Mining Journal*, London, 14 February 2003.

of fiscal and regulatory frameworks of extractive industries was introduced without the necessary safeguards for securing long-term development objectives (Campbell, 2004; UNCTAD, 2005b). Another contentious issue arises from the fact that the tax conditions were locked in through stabilization clauses and investors were provided enhanced protection in IIAs at a time when the bargaining position of countries was particularly weak.

In response, several countries have recently made their regulatory frameworks governing TNC participation more stringent. This may be seen partly as a counter-reaction to the liberalization efforts of the 1990s, partly as a reflection of the increased

bargaining power of countries in the current period of high mineral prices. Already a decade ago, some experts were predicting that such a counter-reaction to liberalization would occur. To quote from one expert: "When conditions change, it is reasonable to assume that the developing countries, will again make efforts to assert 'permanent sovereignty' over their natural resources in whatever way possible and that since it is their second time around, they will achieve more success. Any supposed 'incentives' or stabilization measures which have come into existence during this period and which appear to run counter to nationalistic ideals are likely to prove problematic in the long run" (Omorogbe, 1997: 30). Recent legislative changes in a number of countries seem to confirm the validity of that prediction.

Table VI.1. Number of BITs concluded by developing and transition economies in which oil, gas and other minerals account for a significant share of total exports,^a 1995 and 2006

Countries most dependent on fuel exports			Countries most dependent on exports of non-fuel minerals		
Economy	1995	2006	Economy	1995	2006
Algeria	5	36	Guinea	3	18
Nigeria	5	19	Botswana	0	9
Libyan Arab Jamahiriya	2	18	Suriname	1	3
Yemen	5	34	Zambia	2	12
Kuwait	16	46	Jamaica	9	16
Angola	0	5	Niger	3	5
Qatar	0	34	Chile	24	52
Saudi Arabia	2	16	Mozambique	1	21
Brunei Darussalam	0	5	Papua New Guinea	5	5
Azerbaijan	4	27	Congo	5	9
Iran, Islamic Rep. of	8	55	Ghana	8	26
Venezuela	13	26	Cuba	12	60
Turkmenistan	12	19	Peru	23	31
Oman	8	26	Rwanda	3	34
Gabon	4	12	Uzbekistan	16	41
Sudan	4	25	Georgia	12	27
Syrian Arab Republic	6	33	South Africa	8	36
Bahrain	1	19	Bolivia	16	22
Trinidad and Tobago	4	10	Kazakhstan	15	35
Kazakhstan	15	35	Bahrain	1	19

Source: UNCTAD (www.unctad.org/ia) and table III.5.

^a Countries were ranked according to the share of fuel and non-fuel minerals in their exports during 2000 and 2004. See note "a" to table III.5.

C. Arrangements for rent-sharing

The diversity of arrangements adopted by different host countries with respect to the sharing of rent between governments and TNCs in extractive industries indicates that there is no one-size-fits-all formula. Finding the right balance is not easy, as witnessed by the many changes that have taken place over time. This section looks at recent trends concerning changes in the ownership and fiscal regimes adopted by host countries aimed at reaping greater benefits from TNC-driven mineral extraction. The implications of unilateral government action are discussed, and the use of progressive taxation is highlighted as a possible way of reducing vulnerability to price volatility.

As government revenue is among the most important benefits from mineral extraction (chapter V), it is not surprising that policymakers devote much attention to finding an institutional framework that ensures the government a satisfactory share in the profits from this activity. Optimizing a fiscal system for the extractive industries is difficult: if taxation is too low, it can result in foregone tax revenue for the host country; if it is too high, it may suffocate the industry and provide little incentive for companies to invest. Every country has followed its own path, depending on various factors. As a result, the share of resource rents captured by host governments varies considerably from country to

country and also between different industries (box VI.3; chapter V).

1. Recent policy changes

As a result of higher mineral prices, a number of governments have taken steps to increase their share of the profits generated by extractive activities, including those with TNC participation, amending the fiscal system or contractual relations. For example:

- *Algeria* promulgated regulations imposing a windfall tax on production values at prices exceeding \$30/barrel of oil in December 2006. The tax rate ranges from 5% to 50% depending on the total output.¹⁸
- In *Bolivia*, the Government passed the new Hydrocarbon Law 3058 in 2006, repealing the law that had privatized the sector a decade earlier. As a result, control over oil resources was transferred to the State agency, Yacimientos Petroliferos Fiscales Bolivianos (YPFB). The new law cancelled contracts and required the negotiation of new ones on terms more favourable to the Government including higher tax and royalty rates.¹⁹ The Minister of Mining has also proposed that the tax rate be raised from the current level of about 5% to at least 30%.²⁰
- In *Chile*, the Chamber of Deputies has approved a 4%-5% special tax on gross operating profits of mining companies (box VI.4).
- *China* imposed a special upstream tax levy in 2006 on oil companies at rates between 20% and 40% for oil prices in excess of \$40/barrel of oil. This action prompted ConocoPhillips to invoke the international arbitration clause in its PSA.²¹
- *The Democratic Republic of the Congo* is to review 60 mining contracts that were signed over the past decade and that may result in contract renegotiations with the aim of reaping greater development gains from mining.²²
- In *Ecuador*, a new hydrocarbons law of 2006 increased the share of revenue accruing to the Government from oil and gas projects, prompting a series of contract renegotiations and disputes (*WIR06*).²³
- In *Mongolia*, a windfall profit tax was introduced in May 2006 on key commodities. The new tax rate was set at 68% on profits from copper and gold, after deduction of extraction costs, and only if global prices exceeded a specified level.²⁴ Royalty rates for all metallic minerals were also doubled from 2.5% to 5% in 2006. Moreover, the Minerals Law was amended in July the same year, so as to give the national Government the

Box VI.3. Different ways of sharing the rent

Revenue for the government from *oil and gas* extraction by TNCs can be obtained in different ways. The fiscal terms may be regulated by legislation and through specific contracts. Fiscal provisions may comprise pre-production as well as post-production payments. The former may include bidding fees, signature bonuses and various rental fees, which allow a host country to earn some revenue even before any discovery has been made.^a Post-production payments include taxes, royalties, profits from the sale of oil and dividends from State participation in joint ventures (Omorogbe, 2005). The precise composition of the fiscal package varies by country and project. For example, in Nigeria, the royalty tax rate is the highest (20%) for onshore activities, with a gradual reduction depending on the depth of an offshore project (Ibid.). In Peru, the royalty rate for oil varies by contract, between 20% and 25% of the gross revenue, and it is 37.2% of gross revenue on natural gas and liquified natural gas of the Camisea project (Perupetro, 2005).

The fiscal regimes governing *metal mining* activity similarly vary considerably (Otto et al., 2006). The main distinction is between taxes based on the mineral deposit, or on the inputs or actions needed to exploit the deposit (*in rem* taxes), and taxes that are related to the net revenue generated by the resource extraction (*in personam* taxes). The most common among the former taxes are royalties, property tax, withholding tax and various fees, while for the latter, they include income tax, capital gains tax and withholding profit tax.

Each tax has its merits and drawbacks, depending on what policymakers are seeking to achieve. For example, a royalty tax offers stability and predictability in government revenues, it is easy to administer, less prone to corruption and involves little risk of tax evasion. On the other hand, it adds to production cost, and thereby reduces the attractiveness of a given project at the same time as it, by adding to the variable costs may make marginal reserves sub-economic. A tax on income or profits generates revenues only if and when production becomes profitable, and in principle does not distort resource allocation or investment decisions. On the other hand, such taxes are more challenging to administer and monitor. They can also induce companies to report low profits and to make use of transfer pricing (Otto et al., 2006). Countries with relatively underdeveloped institutions and weak administrative capabilities may be more inclined to rely on royalties or various fees. Profit-based systems may be more suitable in countries with more sophisticated tax regimes. For similar reasons, developing countries may also find it convenient to avoid systems that require burdensome negotiations with the foreign investor. This point is particularly relevant in the case of mining, where the negotiations, unlike for the oil and gas industry, are handled by a ministry rather than by a State-owned company.^b

Source: UNCTAD.

^a Such pre-production payments can be significant. For example, a new record signature bonus was reached when Sinopec (China), in 2006 announced that it would pay a \$2.2 billion signature bonus to get the right to explore for oil in two Angolan blocks (see www.globalinsight.com/SDA/SDADetail5873.htm).

^b State-owned oil or gas companies may have an advantage over ministries in negotiations with TNCs since they often have a cadre of trained personnel with more effective negotiating skills (Land, 2007).

right to acquire a stake of up to 50% in a strategic asset discovered with State funding, and up to 34% interest in a deposit if the exploration was funded privately.²⁵

- *Peru* in 2004 introduced a 1%-3% royalty tax based on mining companies' annual sales. There is a political debate in the country as to whether the tax terms granted by previous governments should be renegotiated.²⁶
- In *the Russian Federation*, the Government is in the process of introducing new limitations on foreign participation in the share capital of strategic companies and in the exploration and extraction of strategic deposits (especially large oil and gas fields). The new subsoil law, submitted to parliament in 2005, is expected to enter into force in late 2007 (RIA Novosti, 2007a and b; Liuhto, 2007).²⁷ Similarly, since 2003, the Government has renegotiated the terms of almost all TNC-related oil and gas contracts (OECD, 2006), resulting in an increase in the

Government's share in the returns from projects, and higher taxes and royalties.²⁸

- *South Africa* was revising its mining legislation in June 2007 with a view to increasing its revenues and development benefits from mining. The draft legislation proposes a royalty rate between 1% and 6%, depending on the type of mineral.²⁹
- *Venezuela* has decided to entirely re-write the rules on equity participation and taxation to reduce foreign oil company interests and increase the taxes imposed on them. In 2001, the Government passed a new Hydrocarbons Law, which raised royalty rates and required that future investments would be limited to 49% ownership of a joint project, while a 51% controlling share was reserved for the State-owned oil company, PDVSA.³⁰ In 2006, risk service contracts with 17 foreign companies in Venezuela were transformed into joint ventures with PDVSA. A Presidential Decree in February 2007 expropriated projects in the Orinoco River Belt.³¹ In doing so, it

Box VI.4. Chile's new mining tax

Fiscal revenues from the copper mining industry have been a source of intense debate in Chile over the past several years. For the period 1985-2002, only one of the large private mining enterprises had paid any significant income taxes (chapter V). Comparative fiscal studies have shown that Chile offered a tax system that was among the most attractive for investments in mining.^a It did not impose any royalty fees. Furthermore, it allowed accelerated depreciation, the possibility to accumulate indefinitely all losses as fiscal credits, extremely high loan-to-equity ratios while taxing interest payments at a much lower rate than profits.^b The fact that the contributions by the State-owned Codelco to fiscal revenues in the period 1991-2003 were 3.4 times higher than those of the 10 major foreign mining companies together (while its production volume in tons was lower) evoked a strong debate.

In response, the Government introduced a specific mining tax. It was approved in a year when the price of copper had increased substantially and revenues had grown. The new tax came into effect in February 2006 with a progressive tax rate determined by the taxpayer's gross sales of minerals. Enterprises that were covered by tax stability in the legal framework that applied before December 2004 did not have to pay this tax. However, they were given the option to switch to another tax stability scheme contained in the new legislation.^c

Source: UNCTAD.

^a See Albavera, Ortiz and Moussa, 2001 and Otto, Batarseh and Cordes, 2000.

^b In 2001 the Government introduced a rule that if the debt-to-equity ratio was higher than 3, the excess amount of loans would be subject to the tax rate applied on profits.

^c A new article in Chile's Foreign Investment Statute (DL 600) states that mining investments of \$50 million or more may, for 15 years from the start of commercial production, claim stability of (a) the specific mining tax, including its rate and tax base and the future imposition of any other tax assessed on income from mining activities, including royalties or similar charges; and (b) the mining licence rate and method of determination.

formed mixed corporate entities charged with exploiting resources, and in which PDVSA is to hold majority equity. The decree also provided that any disputes regarding the Orinoco projects would be heard in Venezuelan courts according to Venezuelan law (Dugan and Profaizer, 2007).

- In *Zambia*, the annual budget announced in February 2007 increased mining royalties and tax rates and curtailed the provision of tax holidays (Land, 2007).³²

The introduction of new taxes, royalties or price ceilings has also been discussed in Argentina, Chad, Mauritania and other countries.³³ Regulatory changes have similarly been observed in developed countries. Western Australia, for example, has introduced a royalty on gold production, and in the United States there have been calls for Federal royalties in the mining industry (Otto et al., 2006). In 2006, the United Kingdom introduced a windfall tax on North Sea oil profits to reflect the structural shift towards higher oil prices, and the supplementary charge to corporation tax was increased from 10% to 20%.³⁴

2. Implications of recent policy changes

Changes by governments to laws and contracts governing foreign investment in extractive industries are not a new phenomenon. In the 1970s and 1980s, the shift from traditional concessions

to modern partnership-based agreements often involved the renegotiations of contracts and/or nationalizations.³⁵ Some of the changes led to legal disputes, and the setting up of special *ad hoc* arbitral tribunals by the parties concerned. However, the host country that had nationalized in a number of cases refused to appear before the tribunal. This had the effect of undermining the legitimacy of the subsequent decision, which would be made on the basis of the submissions of the investor alone (Muchlinski, 2007).³⁶

Experts disagree over the advisability and legitimacy of renegotiations, and also whether these advance a country's developmental goals. Some argue that the renegotiation demands are likely to run counter to the interests of developing countries and should therefore only be pursued in exceptional circumstances (Kolo and Wälde, 2004). Others believe that the renegotiations can be justified, as in Bolivia, as an "attempt to represent the interests of the poor people of this country",³⁷ and that the privatizations which recent renegotiations sought to overturn in that country were themselves not legally valid, as they had not passed through that country's Congress as required by law.

The tension in international law arises essentially from the conflicting needs for contractual stability (sanctity of contract) and contractual evolution (responding to a "fundamental change in circumstances").³⁸ Contracts that include stabilization clauses freeze the law governing the contract to the one in force at the time of

its formation. The inclusion of such clauses serves to ensure that the wishes of the parties as embodied in the terms of the agreement continue to govern.³⁹ Moving along the spectrum, the law of the Russian Federation governing PSAs provides investor protection against changes in legislation, but specified certain exceptions under which the Government is able to change conditions without safeguarding the commercial interests of the investor.⁴⁰ In other cases parties may voluntarily have incorporated a renegotiation clause into the contract.

Compared with earlier waves of unilateral government actions and nationalizations, an added dimension in recent renegotiations is the wider use of IIAs, of which BITs are the most relevant instruments. While potentially enhancing the chances of attracting FDI, entering into IIAs implies that governments surrender some freedom to adjust their institutional frameworks in response to changed circumstances. The Energy Charter Treaty (ECT) is also of importance, especially for investments in the transition economies of South-East Europe and the CIS, as it aims at strengthening the rule of law by creating common rules to be observed by all participating governments.⁴¹ It is the only example of a specialized international instrument covering the promotion and protection of investors and their investments in the energy industry, from exploration to end-use.

What are the implications for countries and investors of the proliferation of BITs and other IIAs in the context of the recent trend towards increased unilateral government actions in some countries? If a State is determined to put an end to a contractual relationship prevailing under existing terms, an IIA cannot prevent this, but it may grant the foreign investor the right to claim compensation through international arbitration in the case of a dispute. Protection under IIAs therefore mainly becomes relevant in the context of an “exit strategy” for foreign investors (i.e. in situations where it is perceived that there is no possibility to continue their investment activities because of the renegotiation demands). Furthermore, as recent experience has shown, the scope of protection granted by an IIA depends on the way a treaty has been formulated, and its interpretations by arbitration tribunals, which has not always been consistent.

The outcome of unilateral action on the part of governments often depends on the bargaining power of the two parties. For those countries that possess proven and high-value mineral and petroleum deposits, this may be a viable approach to capturing a share of the benefits from extractive activities. However, other countries may find

this course of action more difficult to follow. The response will vary; some companies will accept a negotiated settlement, while others may defend their interests through legal remedies to obtain economic compensation; yet others may pull out of negotiations altogether. In Venezuela, most companies operating under risk service contracts opted to continue under the less favourable conditions imposed by the Government in 2006, whereas at least one – the State-owned ENI (Italy) – chose to take the Government to international arbitration.⁴² In addition, the Government reached a deal with Petrobras (Brazil) to renationalize the country’s only two oil refineries acquired by the company in 1999 as part of a broad privatization programme (see chapter II). In Bolivia, all foreign oil TNCs agreed to convert their PSAs into operating contracts, and to turn control over sales to the State-run oil company.

3. Is progressive taxation a solution?

The regulatory changes noted above suggest that a number of governments have considered their previous regulations to have been overly generous vis-à-vis foreign investors. It can be argued that under an appropriately designed fiscal regime, it should be possible for a government to adjust its share progressively according to changes in economic circumstances, such as an increase in mineral prices, particularly since there are ways of doing this without distorting investment decisions.⁴³ In principle, progressive taxation offers the flexibility to induce investment in high-risk ventures yet still assures governments a significant share of high profits, if and when they occur (box VI.5).

However, cross-country studies repeatedly show that many fiscal regimes for the extractive industries are *regressive* rather than *progressive*, implying that the government’s share falls as profitability improves (Land, 2007).⁴⁴ One explanation may be related to weaknesses in governments’ capacity to negotiate effectively with TNCs, partly due to the lack of specialized skills needed to understand the fiscal options available; or there may be weaknesses in the tax administrations. In addition, some governments may have limited capacity to implement more sophisticated forms of taxation. This is especially true of taxes the administration of which requires robust reporting and auditing, and where vigilance is needed to safeguard against tax avoidance measures, such as underreporting of revenues and over-statement of costs.⁴⁵ The risk profile of the projects may also influence the choice of tax.

Moreover, the inclusion of a progressive tax in a fiscal regime is not a sufficient condition for the entire fiscal regime to be progressive. The interaction with other parts of the fiscal system may offset the progressive elements. The fiscal policy for mining is often weakened (from a government perspective) by the provision of incentives for investors, such as tax

holidays, or offering them the possibility to qualify for pioneer or export industry status under general investment legislation.⁴⁶ Where there is a lack of fiscal policy coherence in government, this may lead to “cherry picking” among different taxation schemes by companies (Land, 2007).

Box VI.5. Progressive taxes and the extractive industries

A progressive tax is structured to adjust the fiscal burden, either directly or indirectly, according to the profits earned on a predetermined basis. There is a wide spectrum of fiscal and other instruments that purport to achieve this, though in practice many have limitations. They include taxes on production, business revenues or profits, State equity participation and production sharing, as employed in the oil and gas industry.

Progressive profit taxes. Many profit taxes are applied at escalating rates. In its simplest form, the tax rate escalates with increases in taxable income. A difficulty is how to determine a scale of tax rates that does not merely discriminate between small and large companies. One way of resolving this could be to base the thresholds at which the higher tax rates are applied on profit ratios rather than absolute levels of profits. An early arrangement of this kind was used in Papua New Guinea for the Bougainville copper project.^a An adaptation of the same principle is the use of a variable rate, as employed in the mining industries of Botswana, Namibia, South Africa and Uganda. In these cases, a profit-to-sales ratio is used to define the tax rate in a formula that also includes start and top tax rates.^b

The principal characteristic of these examples of profit taxes is that the applicable tax rate depends on the profit performance of companies on an annual tax accounting basis. There are other profit taxes where the applicable tax rate depends on the profitability of an investment achieved on a cumulative basis. For example, in some cases, the applicable tax rate is linked to the rates of return achieved over the project’s life to that point. Several countries have employed this approach, in both the oil and mining industries, usually by establishing a separate tax to supplement an ordinary flat-rate corporate income tax.^c Its advantage is the ability to target resource rent at the project level. In practice, however, it is difficult to determine the minimum required rate of return of an investor.

Price-based windfall taxes. Another way of taxing profits is to impose higher tax rates using a proxy for profitability. A typical example is a price-based windfall tax on profits, as introduced in Algeria and China. These target the windfall profits that are expected to flow from periods of unusually high prices. The advantage of such taxes is that they are relatively simple to administer. A limitation is that product prices alone do not determine the level of profitability.

Sliding scale royalties. Royalties can be structured on a progressive basis. Under this approach the rates imposed escalate on the basis of a chosen threshold. Many of the characteristics of this type of royalty are the same as those of progressive profit taxes, except that the fiscal imposition is on revenues and not profits, unless the royalty is structured as a royalty on net profits.^d

Carried interest participation. State equity participation can be structured in a progressive way to operate as if it were a progressive tax. A carried equity option enables a government to fund its share of the costs of a project out of net project earnings without imposing a liability for any shortfall in net earnings. The investor effectively provides an interest-bearing loan to the government, secured against future project profits. This participation operates like an additional profits tax.

Profit oil sharing under PSAs. Under this type of arrangement, the balance of production that is not allocated to the recovery of project costs is divided between the investor and the government according to an agreed formula. Some PSAs include an oil price element or a cost indicator (e.g. the depth of water in which an offshore project is located). Although some degree of correlation with profitability can be expected under such arrangements, the correlation is unlikely to be exact. An increasing number of PSAs feature sliding scales that are based on direct measures of profitability. Others employ the rate of return on particular projects.

Source: UNCTAD, based on Land, 2007.

^a Under the renegotiated Bougainville Mining Agreement a higher profits tax rate was applied in any year in which taxable profits exceeded a defined percentage of the capital base of the project (Land, 1995).

^b The formula used to derive the applicable tax rate in Botswana, for example, is $70-1500/x$, where x (%) = taxable income/gross income subject to a minimum tax rate of 25%.

^c Prominent examples include the Petroleum Revenue Tax introduced by the Government of the United Kingdom in 1976 to capture a higher share of profits from its North Sea oil and the Additional Profits Tax first adopted in Australia, Canada and Papua New Guinea in the 1970s and subsequently contained in mining legislation in Ghana and in several mining and petroleum agreements (Land, 2007).

^d Ghana employs a sliding scale mineral royalty with a starting rate of 3% and rising to 12% in line with gold prices.

D. Policies for broader economic benefits

When designing policies related to the participation of TNCs in extractive industries, policymakers should initially consider how the activities of TNCs could be best made to serve long-term development goals. This may be achieved by promoting backward and forward linkages both within the extractive industries and with related industries, in addition to negotiating an optimal share of revenues. In order to reap broader economic benefits from TNC involvement in extractive industries, it is also essential that any revenue generated from mineral extraction be invested in sustainable activities, including human resource and technology development. The success of host-country initiatives in this respect can be influenced by the actions of home countries and foreign investors.

1. Promoting linkages

All forms of linkages – backward, forward and horizontal – may contribute to learning processes and increased local value added in the host economy and ultimately contribute to broader development objectives. However, there are few positive examples of “mineral clusters” that have emerged around TNC-based mineral extraction in developing countries (chapter V). Most policy initiatives launched in African countries to remedy this situation have had only limited success (Pedro, 2004: 13).⁴⁷

In general, extractive industries are characterized by a relatively low incidence of *backward linkages* (chapter V). Nevertheless, host countries can attempt such linkages through various instruments. For example, a number of developed- and developing-country governments have imposed import restrictions or other requirements on TNC affiliates in order to increase local procurement. This practice appears to be more common in the oil and gas industry than in the metal mining industry (Heum et al., 2003; Otto, 2006). In the former case, the levels of local content that have to be achieved are often specified in the contracts regulating the extractive activity. Alternatively, affiliates may be required to state how they plan to increase local content.

For example, for a long time Nigeria has unsuccessfully sought to raise the level of local value added from its largely TNC-operated oil and gas industry (Heum et al., 2003). As of 2005, the local content produced by domestic companies remained basically the same as it had been in the

1960s – at around 5% (Omorogbe, 2005).⁴⁸ The country recently embarked on a new programme to increase and deepen the participation of its domestic investors and contractors in the oil and gas industry and to foster linkages between foreign affiliates and various downstream processes. The National Petroleum Investment Management Services have been mandated to raise local content requirements from 40% in 2005 to 45% in 2006, and further to 70% by 2010 (UNCTAD, 2006b: 11).⁴⁹ In other countries, contracts may specify that local supply should be preferred if it can compete on quality and price. For example, one agreement provides that the operator and its contractors shall “[g]ive priority to local contractors as long as their prices and performance are comparable with international prices and performance”.⁵⁰ Similar clauses can be found in contracts concluded in Latin America and the Caribbean. Brazil, for example, requires oil firms to use 40% of their investments to purchase goods and services supplied by domestic firms.⁵¹ It also imposes a minimum local content requirement of 30% for offshore projects and 70% for onshore projects.⁵² Similar requirements are sometimes applied in the *metal mining* industry.⁵³

When formulating their policies and objectives related to promoting greater local value added, countries need to take into account commitments made in various international agreements. For example, in some cases, local content requirements may be inconsistent with provisions in certain IIAs. The WTO Agreement on Trade-related Investment Measures (the TRIMs Agreement) prohibits TRIMs that are inconsistent with the obligations of national treatment (Article III GATT 1994) and of general elimination of quantitative restrictions (Article XI GATT 1994).⁵⁴ Corresponding provisions exist in the ECT (Articles 5 and 29). To date there have been no cases before the WTO Dispute Settlement Body that specifically concern performance requirements in the extractive industries. While local content requirements related to trade in services fall outside the TRIMs Agreement, some BITs – notably some Canadian and United States BITs – prohibit the use of such requirements.⁵⁵

While some performance requirements have helped catalyse a change in corporate strategies in the automotive and electronic industries (UNCTAD, 2003a), there is little evidence of significant positive impacts in the extractive industries (Nordås, Vatne and Heum, 2003). As noted in one study (Heum et al., 2003: 22): “Local content which can add value to the economy will only develop when local industrial capacity is sufficiently developed and open to interaction with leading international companies. Value addition does not develop by decree”. In other words, to promote efficient and sustainable

backward linkages, there should be greater attention to strengthening domestic productive capabilities and to providing an environment conducive to productive investments by both local and foreign firms.

In extractive industries, as in other industries, a strategy to encourage backward linkages may start out by identifying specific areas offering the greatest potential for such linkages (*WIR01*).⁵⁶ As part of efforts to foster stronger supplier capabilities, governments may have to address various bottlenecks in the general business environment (such as skills shortages, high costs of capital and corruption) as well as offering targeted support programmes. In some countries and industries, the involvement of foreign affiliates in such targeted programmes has been useful (for illustrations, see *WIR01*).

TNCs can assist in developing local linkages and improving productive capabilities in a host country. While many inputs (such as technologically sophisticated equipment or knowledge-intensive services) are difficult to obtain or to develop locally, there are likely to be a number of goods and services that could potentially be sourced from within the host economy. Often, foreign affiliates may find it advantageous to use local suppliers when the quality and price of the goods and services they offer meet the stipulated standards. TNCs can play an active role in identifying areas with the greatest potential for local linkages, supporting local suppliers in their training, procedures and quality control; sharing technology and market information with local suppliers; extending financial support (for example, by offering guarantees for bank loans), and assisting government agencies involved in enterprise and supplier development programmes (*WIR01*: 214, see also box VI.6).

A similar approach could be taken to promote *forward linkages* and downstream activities. The aim may be to develop the ability to refine locally and add value to raw materials before they are exported. Processing may involve large-scale, capital-intensive activities, such as smelting and refining, or labour-intensive operations such as handcrafted jewellery and metal fabrication. While successful promotion of downstream processing can bring significant benefits to an economy (chapter V), downstream activities should not be promoted at any cost. A country should have an existing comparative advantage in the activity being fostered, or at least be able to develop such an advantage.⁵⁷ In addition, the value of downstream processing may differ by mineral. As highlighted in chapter III, a relatively small share of the total value chain is generated at the mining stage in the case of bauxite, whereas the converse relationship applies in the case of gold.

In the oil and gas industry, some countries have bargained with TNCs to develop downstream activities. The success of CNOOC, CNPC and Sinopec in bidding rounds in Nigeria has partly been attributed to their willingness to invest in downstream activities, such as refining and power plants (chapter V; Accenture, 2006). West Asian countries are increasingly recognizing the need to diversify their extractive-industry-based economies, and are also promoting the development of their oil refining and petrochemicals industries. Saudi Aramco (Saudi Arabia), for example, has entered into partnerships with TNCs in gas development and refinery expansion and the petrochemicals group Saudi Basic Industries Corporation has been involving foreign investors in private petrochemical projects.⁵⁸

The scope for downstream processing may sometimes be limited by the trade policies of other countries. Importing countries have on occasion subsidized the refining of minerals, making it difficult for the producer countries to compete at the refining stage without also subsidizing that activity (see, for example, Jha, Nedumpara and Endow, 2006). Tariff escalation is another potential barrier (UNCTAD, 2003b: tables 9 and 10).⁵⁹ Thus, in order to assist developing countries to add more value to their mineral deposits and to encourage industrialization, importing countries may have to consider revising their trade policies.

2. Promoting skills and technology development

The lack of skills, productive and technological capabilities and institutional support remains a critical bottleneck in many developing countries, which prevents them from reaping greater benefits from their extractive industries. Addressing this challenge is essential for increasing local value added and for enabling domestic companies and institutions to learn, interact and compete with foreign affiliates. Investments in human resources are similarly important for countries to diversify into non-resource-based activities. Higher commodity prices and government revenues present an opportunity for mineral-rich countries to invest in human resource development. In order to address basic skills shortages it is important to strengthen the educational system so that it delivers the kind of skills most needed for the particular development stage of a country.

With a view to upgrading domestic skills, a number of countries require foreign investors to make a commitment to training of staff and to transferring management skills functions and other

Box VI.6. Promotion of technology transfer in the oil industry: the case of Norway

In the early stages of the development of Norway's oil and gas industry, there was limited knowledge and expertise in the country about offshore exploration. Concerned about the need for Norwegian participation, the Government placed strong emphasis on developing capabilities in the local enterprise sector as well as in universities. This was partly done by requiring foreign oil companies to set up fully operating affiliates in Norway, and partly by encouraging them to recruit Norwegian nationals.

Various policies were used to facilitate the entry of domestic firms into the supply chains controlled by foreign TNCs. Foreign firms were not excluded, but measures were enacted to enhance the competitiveness of domestic firms. All the policy measures mentioned below were in place until the mid- and late 1980s:

- Norwegian companies had to be included on the list of bidders, and the Government had to be informed about the firms listed on the bidders list before a tender was opened. It could require that specific Norwegian firms be included, but it could not exclude foreign firms from the list. The appropriate Ministry also had to be informed as to which company the job would be awarded before the contract was signed. Only once, however, did a decision change after Ministry intervention.
- As part of the concessionary process, oil companies had to present plans on how the local content would be increased on a competitive basis.
- When negotiating concessions, foreign oil companies were also encouraged to enter into R&D projects with Norwegian universities and research institutions, which resulted in both enlarging and deepening the Norwegian knowledge base on offshore oil and gas. It was enlarged in the sense that the education system was included, and it was deepened by including not only development projects but also scientific research. This is attributed to having boosted the ability of Norwegian oil companies to adjust better to new challenges, such as price fluctuations, field development in deeper water and smaller petroleum fields.
- Foreign oil companies were encouraged to offer technical assistance to local companies so that they could learn the business from experienced organizations and personnel. Joint ventures or cooperative agreements in engineering were also fostered. Associated transfers of technology were probably an important element in improving the country's industrial position.
- Statoil and other Norwegian oil companies started a practice of informing the domestic industry about plans and solutions for future field developments, which helped domestic firms prepare future business opportunities. Foreign oil companies also adopted this approach, thus giving domestic suppliers a competitive edge vis-à-vis their foreign competitors.
- The Government had a deliberate strategy to "Norwegianize" the domestic oil business through contracts and labour relations. This worked in favour of domestic firms relative to foreign firms, without jeopardizing economic efficiency.

Source: UNCTAD, based on Heum, 2002.

responsibilities to local personnel.⁶⁰ For example, in competitive biddings for new oil and gas fields in Brazil, one of the criteria for winning a licence was an undertaking to train local staff (Heum et al., 2003); in Equatorial Guinea, the Hydrocarbons Law stipulates that oil TNCs should not only train their workers but also contribute to the training of ministry personnel and to maintaining oil related institutes and training centres;⁶¹ Botswana requires all mining investors to have a localization and training plan that will enable local personnel to take over skilled positions over time.⁶² The experience of some developed countries may also be relevant. When Norway first discovered oil in the North Sea, it lacked the technological capabilities to exploit the offshore deposits. A combination of policy measures promoted technology transfer by foreign affiliates to domestic firms (box VI.6).

A basic problem in many developing countries is the lack of adequate educational facilities. Worse still, the increased global demand for mining engineers (that has emerged on the back of the commodity boom) combined with

the closure of some mining schools in developed countries, has increased the risk of a brain drain from African countries.⁶³ In Africa, high quality mining schools exist mainly in Algeria and South Africa.⁶⁴ It has recently been proposed that existing centres of excellence in Africa should be strengthened and new ones created (ECA, 2007a). Some home countries encourage their companies to support skills development when investing abroad. For example, through its Industrial Cooperation Program, the Canadian International Development Agency provides a cash contribution to Canadian companies that start a business and provide training in developing or transition economies.⁶⁵

Another challenge facing developing countries is that the skills required for setting up training and R&D facilities in metal mining are typically located in developed countries. One way to support the development of indigenous skills in this area is to set up local R&D institutes in mining and mineral processing. Important research is being done at many of the traditional schools of mines around Europe, the United States and in some developing

countries (such as Chile), but only a handful of organizations are emerging as global leaders in the relevant fields of science and research, mostly in developed countries such as Australia (CSIRO and Amira), Canada (Camiro), Sweden (Bergforsk and Minmet), and the United Kingdom (Miro), but also in South Africa (Mintek and CSIR Miningtek).⁶⁶

E. Coping with environmental challenges

More and more countries are introducing environmental legislation, often with specific regulations for extractive industries. At the same time, a growing number of companies are adopting industry standards. Nevertheless, the work is unfinished. Many countries lack the willingness or capability to implement and enforce their environmental laws; and while many environmental challenges associated with extractive industries relate to artisanal and small-scale mining, rather than to large-scale mining activities (chapter V), more junior companies as well as large TNCs need to improve their environmental performance. At the national level, a number of actors, such as host-country governments, TNCs and institutional investors or lenders, home-country governments, civil society and local communities, share the responsibility to mitigate environmental impacts.

Host-country governments apply different environmental standards. In many developed countries, it has become increasingly difficult to obtain rights to explore or extract minerals (Otto, 2006: 109). In addition to an increasing number of environmental regulations (often simultaneously issued at the central, regional and local levels), ever larger areas are being protected. Many areas have been zoned in ways that essentially render them off-limits to extractive industry operations.⁶⁷ This is leading TNCs to pursue exploration in countries that do not have similar restrictions.

Environmental protection is mostly addressed through two forms of legislation: general legislation that concerns all industries, and specific regulations for the extractive industries (section VI.B). In the past decade or so more than a hundred countries have reviewed and reformed their mining codes. Many of them have introduced new provisions to address environmental issues (Otto, 2006).⁶⁸ Mining laws that contain provisions on the environment usually require one or all of the following: an environmental (and social) impact assessment, an environmental management plan, and measures which aim to ensure sustainability after the closure of the operations (MMSD, 2002: 338).

An environmental impact assessment (EIA) is the most significant and commonly used environmental tool in both the mining and oil industries alike.⁶⁹ But to be fully effective, it has been proposed that such assessments include a participatory approach and be integrated with other tools, such as a social impact assessment (MMSD, 2002: 248). The results of an environmental impact assessment should also be situated within a broader environmental management strategy, that incorporates environmental responsibilities in everyday management practices. In South Africa for example, according to the Minerals Act, all operating mines must have an environmental management plan that has been approved by the Department of Minerals and Energy (OECD, 2002: 8). Mining laws should also explicitly include mine closure plans, which should be drawn up at the inception of a project and revised as needed.⁷⁰ The goal of such a programme is typically to restore the natural environment to its original state as far as possible. Since such restoration might be quite costly it may be advisable to set up a rehabilitation or restoration fund at the inception of the extractive industry project (MMSD, 2002: 243).⁷¹ But even if a law or a contract addresses environmental issues and contains such instruments, host developing-country governments may lack the capacity, technical expertise and/or political will to implement and enforce the provisions.⁷²

An important factor related to the implementation of environmental protection is public participation. The process of obtaining a mining license is often government-centred and outcomes are not sufficiently reflecting a representative and participatory process (ECA, 2007b: 217). While recent environmental legislation has attempted to take the concerns of other stakeholders into consideration, local people still often lack influence over whether or not a project should be undertaken (MMSD, 2002: 233). In the context of facilitating and encouraging public awareness and participation, the Aarhus Convention of the Economic Commission for Europe (ECE) may serve as an interesting model.⁷³ The establishment of tripartite governance structures that include governments, civil society and private companies has also been proposed, for example at the 2007 Big Table (box VI.7).

Many TNCs in the extractive industries have incorporated environmental standards into their corporate policies and strategies. In addition to individual companies, international industry associations – at least in the mining industry – have addressed environmental concerns and developed international standards. The International Council on Mining and Metals (box VI.8), UNCTAD, the

Box VI.7. The 2007 Big Table

The Big Table is an initiative of the United Nations Economic Commission for Africa (ECA) to promote a constructive dialogue between senior African policymakers and their developed-country counterparts. The Big Table 2007, co-organized by the ECA and the African Development Bank, set out the challenges of effectively managing Africa's natural resources for growth and poverty reduction, and proposed an agenda for future action. Key issues included natural resource governance; ownership, participation and intergenerational equity; bargaining power and the role of emerging global actors; environmental stewardship; and capacity-building, partnerships and regional integration.

Acknowledging that the continent's natural resources are important assets for Africa and the world, it was recognized that they can contribute to growth and development if properly managed. For this to happen, Africa must own its development process, its governance systems and institutional capacity should be strengthened, and the wealth from natural resources must be invested in the creation of knowledge for economic innovation, and in the building of social and physical capital. The meeting agreed on the following (see also ECA, 2007a):

- The NEPAD Heads of State and Government Implementation Committee should consider expanding the scope of the African Peer Review Mechanism to include governance of natural resources.
- A peer-learning group on natural resources management will be established.
- Natural resources should be mainstreamed in the next round of poverty reduction strategy papers.
- Local parliaments and independent committees should be involved in the monitoring of natural resources projects.
- Africa's mining codes need to be reviewed to provide better options for Africa to extract benefits from mineral resource exploitation. A study group will be established to that effect.
- A grant facility should be established to help Africa's mineral producers in contract negotiations.
- The international community should support Africa's efforts to map and create inventories of its mineral resources, not least for African countries to obtain better terms in negotiations with external partners.

Source: United Nations Economic Commission for Africa.

^a It was attended by 52 participants including Ministers and senior officials from 11 African countries, and by high-level representatives from developed countries, regional and international organizations, research centres, the private sector and NGOs.

United Nations Environment Programme, and the United Kingdom Department for International Development have jointly developed a website to provide access to a library of good practice guidelines, standards, case studies, legislation and other relevant material (annex to this chapter).⁷⁴ However, "particularly in fragile states some natural resource companies were not observing the highest corporate standards" (ECA, 2007a: 2), and a number of TNCs still do not abide by high environmental standards (chapter V).⁷⁵ The record of compliance by junior mining companies with environmental standards set, for example, by industry associations is generally not very good (ECA, 2007b: 222).

The influence of lenders and home States is also important. A number of international financial institutions now take environmental impacts into account before providing finance to extractive-industry investment projects. In 2001, the World Bank launched an extensive review of its mandate aimed at producing a set of recommendations that would guide the future involvement of the World Bank Group in the oil, gas and mining industries. One of its conclusions was that in countries with weak macro and sectoral governance, the Bank should focus its support on strengthening governance and the management of environmental

and social risks rather than on promoting more investment (Liebenthal, Michelitsch and Tarazona, 2005: 95). The International Finance Corporation (IFC) also emphasizes the importance of public participation in its lending decisions and its existing policies require the submission of a Public Consultation and Disclosure Plan for any project with potentially significant environmental and social impacts.⁷⁶

A major initiative, designed for application in all sectors, was the creation of the Equator Principles, a voluntary set of guidelines for managing environmental and social issues in project finance lending, developed by leading private financial institutions with IFC advice and guidance (*WIR06*: 236).⁷⁷ It is too early to assess their impact on the lending behaviour of the large commercial banks that have committed to the principles.⁷⁸ Nonetheless, one of the main contributions of the Equator Principles is that they lay the groundwork for further action by providing a set of broad policy guidelines. The effectiveness of the Principles may be undermined by the emergence of other sources of financing that do not abide by the same standards. While additional sources of financing must be welcomed from a developmental perspective, such funding also needs to pay sufficient attention to potential environmental and social implications.

Box VI.8. The International Council on Mining and Metals

The International Council on Mining and Metals (ICMM) was founded in 2001 by some of the major mining companies. Its declared vision is to create a “viable mining, minerals and metals industry that is widely recognized as essential for modern living and a key contributor to sustainable development.” The Council is made up of 15 companies,^a and 24 national mining and global commodity associations.^b The 15 companies account for just over 25% of global mining production. All member companies are required to implement the ICMM Sustainable Development Framework – which consists of a set of 10 principles, public reporting and independent assurance guidelines – and comply with policy commitments made by the ICMM Council.

Source: ICMM (www.icmm.com).

^a Alcoa, Anglo American, AngloGold Ashanti, BHP Billiton, CVRD, Freeport-McMoRan Copper & Gold, Lonmin, Mitsubishi Materials, Newmont, Nippon Mining & Metals, Rio Tinto, Sumitomo Metal Mining, Teck Cominco, Xstrata and Zinifex.

^b Camara Minera de Mexico, the Chamber of Mines of South Africa, the Cobalt Development Institute, Consejo Minero de Chile, Eurometaux, Euromines, the Federation of Indian Mineral Industries, the Indonesian Mining Association, Instituto Brasileiro de Mineração, the International Aluminium Institute, the International Copper Association, the International Wrought Copper Council, the International Zinc Association, the Japan Mining Industry Association, the Lead Development Association, the International Minerals Council of Australia, the Mining Association of Canada, the Mining Industry Associations of Southern Africa, the Nickel Institute, the Prospectors and Developers Association of Canada, Sociedad Nacional de Minería, Sociedad Nacional de Minería, Petróleo y Energía, the World Coal Institute, and the World Gold Council.

F. Addressing social and political concerns

More than in other areas, investments in extractive activities may have far-reaching social and political implications for a host country (chapter V). Their impacts can range from the national level (e.g. relating to human rights or corruption) to the local level (e.g. concerning local communities or company employees). The protection of the interests and rights of people that might be affected is first and foremost a government obligation – in both host and home countries. In the case of investments in weakly governed or authoritarian States, it is also important to consider the responsibilities of TNCs. Particular attention should be paid to the protection of human rights, including those of labour and the local community.

1. Labour-related concerns

Workers' health and safety are among the major concerns in the extractive industries. In most mineral-rich countries, mining remains the most hazardous occupation in terms of the number of people exposed to risk, despite considerable efforts to reduce the toll of death, injury and disease among mineworkers (chapter V). Most mining-related accidents occur in hazardous artisanal mines. But even if extraction activities by TNCs may be less exposed to hazards, health and safety issues remain important concerns.

The International Labour Organization (ILO) has been dealing with labour and social problems of the mining industry since its early days.⁷⁹ For over 50 years, tripartite meetings on mining have addressed a variety of issues ranging from employment, working conditions and training

to occupational safety and health and industrial relations in coal and non-coal mining. As a result over 140 conclusions and resolutions have been agreed, including the Mining Convention. Some of these agreements and resolutions have been implemented at the national level, while the ILO has provided assistance for others, such as training programmes and the development of codes of safety practice. The ILO's objective is to ensure decent and safe work for all mineworkers, and that the industry contributes to sustainable development.

The most common obstacle to the implementation of international norms is the lack of domestic capacity in a country, sometimes combined with a lack of political will. However, host-country governments are responsible for the implementation of internationally accepted conventions. A lack of capacity in the host country is no excuse for non-implementation, as this can also be addressed by the participation of home countries, international organization and/or other competent organizations through technical assistance programmes (see the annex to this chapter).

As for TNCs, it is their responsibility to observe the requirements of local labour laws and practices. They should also adhere to fundamental labour standards as set out in ILO Conventions and reemphasized by the ILO Declaration on Fundamental Principles and Rights at Work (1998).⁸⁰ In countries where governments restrict the exercise of fundamental labour rights, such as the freedom of association and collective bargaining, TNCs face a dilemma. Should they observe the ban and prohibit the establishment of worker representation, thereby aiding the government in infringing the human rights of the workers,⁸¹ or should they oppose it and risk government censure that may adversely affect their investment? A corporate code of conduct or

an international framework agreement laying down the basic rights of workers is therefore important.⁸² The recently concluded agreements between the International Federation of Chemical, Energy, Mine and General Workers' Unions (ICEM) and TNCs are one such example (box VI.9).

2. Local community concerns

Given their exposure to extractive-industry projects, it is important for policymakers to address the concerns of local communities when developing the regulatory framework for related activities. This may involve designing appropriate mechanisms for the sharing of revenue, undertaking needs assessments, offering adequate compensation, and ensuring that communities have a say in decisions related to extraction activities. It is also important to link community development programmes of TNCs with the development planning processes of local governments (chapter V). Particular attention needs to be paid to indigenous minorities (box VI.10).

As might be expected, country-specific practices with regard to the distribution of fiscal revenue from extractive activities between central and local governments and local communities in areas where extractive activities are located vary a great deal. For example:

- In Ecuador, an average of 90% of available oil rents during the period 1995-2000 were assigned to the central Government (Liebenthal, Michelitsch and Tarazona, 2005: 86).

- In Peru, the law establishes diverse mechanisms for the distribution of the benefits generated from mining and oil and gas activities to the State treasury and the producing regions. The latter receive 50% of the income taxes paid by mining companies to the State, 10% of the gross value of all oil production and 50% of the income generated from royalties on natural gas production.⁸³
- In Equatorial Guinea, all oil revenues accrue to the central Government (Liebenthal, Michelitsch and Tarazona, 2005: 86).
- In Nigeria, the share of mineral proceeds paid by the Federal Government to the producing region fell from around 50% in the 1960s to zero in 1979-1981, after which it increased to about 13% by the end of the 1990s (UNDP, 2006b).
- In Indonesia, after the introduction of a regional autonomy law in 2001, provincial and district governments competed against each other to increase their share of the revenues.⁸⁴ The mechanism for revenue distribution remains unclear (Erman and Aminullah, 2007).

In order for local people to benefit from such revenues, it is important that the funds be managed in a way that promotes the community's welfare and development. This is particularly important, given the recent commodity price boom.⁸⁵ Without the adequate skills to manage these funds, they risk contributing to the development of a local version of the "resource curse" (chapter III).⁸⁶ South Africa's Mineral and Petroleum Resources Development Act

Box VI.9. ICEM and Global Framework Agreements

Global framework agreements are signed between partners on basic, shared principles, and are not unilateral, voluntary guidelines or codes set by companies. The agreements of the International Federation of Chemical, Energy, Mine and General Workers' Unions (ICEM) have been the outcome of a process involving ICEM and its affiliates in the home countries of TNCs. So far, ICEM has concluded four global framework agreements with TNCs in extractive industries: Lukoil (Russian Federation), Statoil (Norway), AngloGold Ashanti (South Africa) and RAG (Germany).

The basic standards include: the right for every employee to be represented by a union of his/her own choice; basic trade union rights (ILO Conventions number 87 and 98); employ no forced or bonded labour (ILO 29, 105); employ no child labour (ILO 138, 182); exercise equality of opportunity and treatment in employment (ILO 100, 111); pay fair wages and benefits according to good industry standards; provide a safe work environment; deploy common "best practice" standards; and commit to sustainable social and environmental development. These standards also extend to contractors.

Additionally the ICEM agreements specify that they cover all activities and operations over which the company has direct control, and that the company will exercise its best efforts to encourage and secure compliance with the standards and principles by its subcontractors, licensees and suppliers. The agreements have been used both to discuss issues fundamental to both parties, and to solve problems. Representatives of ICEM and the respective company meet regularly to review the agreement's application and experiences in implementing the agreed principles. Some of the framework agreements facilitate meetings of union representatives of their worldwide organizations and develop a social dialogue with management at all levels.

Source: UNCTAD, based on information from ICEM (www.icem.org).

Box VI.10. Protecting the rights of indigenous peoples in the context of FDI in extractive industries

A number of international norms and guidelines have been adopted in recent years containing procedural safeguards relating to the exploration and exploitation of natural resources in areas where indigenous people live.^a These instruments affirm the collective rights of indigenous peoples to ownership and control of their lands and natural resources, and to be consulted prior to the development of projects that may affect them. They also affirm their right to adequate compensation, and to refuse their relocation, other than exceptional cases, and on the basis of prescribed procedures. In addition, a number of States now give legal recognition to indigenous peoples' collective rights over land and natural resources based on traditional use and occupation.^b

The role of TNCs. Experience suggests that grassroots cooperation between extractive-industry TNCs and indigenous peoples can reduce the risks of misunderstandings and conflicts, protect the company's brand image and improve its profitability. In the past, lack of consultation with indigenous communities and denial of their rights resulted in civil protests and mobilizations that compelled some companies to cancel their projects or withdraw from operations (e.g. in Bolivia, Colombia, Guyana and Peru). A growing number of extractive-industry TNCs (e.g. Alcan, Rio Tinto and Placer Dome) are now acknowledging the rights of indigenous peoples, and have developed their own related policies and guidelines. In addition, a few impact assessment plans and benefit-sharing agreements have been negotiated between companies and indigenous peoples.^c

The role of financial institutions and development agencies. The protection and promotion of indigenous peoples' rights have become a concern of financial institutions and development agencies. Various private banks, international institutions (including the World Bank Group), multilateral development banks, as well as some national development agencies have established policies and guidelines on projects affecting indigenous peoples. The World Bank Operational Policy Bank Procedure on Indigenous Peoples (OP/BP 4.10) applies to all projects taking place on lands occupied by them.^d Signatory banks of the Equator Principles have also committed to adhering to the IFC Performance Standard 7 relating to indigenous peoples.^e

Despite these initiatives, challenges remain, notably on substantive policies which fall short of meeting international human rights standards. Moreover, in many countries, policy implementation and enforcement mechanisms are either absent or fail to offer sufficient guarantees and independence. It is important to give priority to concrete measures and affirmative action that contribute to closing the existing gap between corporate policies and their practical implementation.

Source: UNCTAD, based on information provided by the United Nations Office of the High Commissioner for Human Rights (OHCHR).

^a These include the ILO Convention (No. 169) concerning Indigenous and Tribal Peoples in Independent Countries, the United Nations Declaration on the Rights of Indigenous Peoples, and the Proposed Inter-American Declaration on the Rights of Indigenous Peoples.

^b For more information, see the 2002 Report of the Special Rapporteur on the Situation of Human Rights and Fundamental Freedoms of Indigenous People to the Commission on Human Rights (UN doc E/CN.4/2002/97).

^c For example, the Raglan Agreement (1995) between Nunavimmiut and Falconbridge (Canada) for a nickel mining project, and the Voisay Bay Agreement signed in 2002 between the Innu Nation and Inco (Canada).

^d The policy requires the borrower to engage in a process of free, prior, and informed consultation at each stage of the project to ascertain the support of the community affected by the project, and to provide it with all relevant information about the potential adverse impact of the project.

^e It calls for measures to protect the rights of indigenous peoples. It requires borrowers, for example, to formulate social and environmental assessment plans, ensure indigenous peoples free, prior and informed consultation, provide a grievance mechanism, ensure good faith negotiations with representative bodies of indigenous peoples, and formulate measures with regard to relocation and compensation.

of 2002 seeks to ensure that local communities share in the benefits from minerals extracted from their lands while at the same time helping promoting capacity-building at the community level (box VI.11).

Community concerns are not only related to the amount of money that is awarded to them, but also to the social and environmental effects of the extractive activities. There are growing expectations on TNCs to both protect existing livelihoods and maximize the positive development impact through community-development assistance (Idemudia, 2007). TNC contributions to community-development projects, such as local schools and hospitals, the creation of microcredit schemes for

local people and employment assistance (chapter V), can be valuable to the local economy.⁸⁷

However, such contributions can also raise sensitive policy issues. Where local government is weak and/or poorly financed, there is often a tendency for both the community and the State to rely on the TNCs to assume many of the "governmental" roles around the operation. When the company has on-site resources, capacities and skills, communities are likely to expect regular services from it (Banks, 2007). Such an approach does nothing to build local capacity and it may pose problems for communities once a project is completed. In situations where the presence of the corporation and its resources is many times larger

Box VI.11. The introduction of community “preferent rights” in South Africa

Section 104 of the South African Mineral and Petroleum Resources Development Act of 2002 (MPRDA) introduced preferent rights as an option for communities who wish to participate in mineral development on their land. When a preferent right is granted to a community, a mining company is obliged to obtain the consent of that community before it can secure any mineral development rights. It is hoped that this new feature will make a difference to the livelihoods of people in rural communities. Preferent rights also provide for ongoing benefit-sharing that is made possible by royalties payable directly to communities.

Requirements for a preferent right are that: (i) only the community that owns the land may apply for such a right; (ii) it may not be granted over other rights already issued under the MPRDA; and (iii) the community has to submit proof that it has access to technical and financial resources. It is anticipated that access to such resources will be in some form of a joint-venture relationship with exploration and mining companies. The preferent right must be used to contribute to community development and social uplift. As part of the application process, the community has to submit a (community) development plan demonstrating that the benefits from the right will accrue directly to them. The duration of a preferent right is five years initially, renewable for further periods of five years at a time, upon proof of compliance with the community development plan.

TNCs and other mining companies that form partnerships in the context of preferent rights are likely to benefit from security and continuity of tenure afforded by the rights granted. Because of the potential benefit for companies, communities have been advised to consider the credentials of different applicant mining companies before making a decision. Consideration may be given to a company’s technical competence for extracting a specific mineral, its financial strength and any history of its relationships with other communities. The decision may also be influenced by the company’s commitments to the social plan, labour plan and other requirements.

Regardless of whether or not a community holds a preferent right, the law requires the involvement of communities in decisions that affect them, and the integration of their development plans with those of local municipalities. Community assistance includes any contribution to skills development, sharing of infrastructure, provision of social (government) services through social plans and provision of business opportunities to communities through procurement.

Source: UNCTAD, based on Cawood, 2007.

than a government presence, the key is to facilitate and improve capacity for service delivery rather than to assume the responsibilities of the government (Banks, 2007). Similar observations have been made by TNCs themselves, as illustrated by the following comment by a manager of Chevron (United States) (Armstrong, 2001, cited in Omorogbe, 2002: 585):

“We should be very careful about stepping in government’s shoes by directly providing some kinds of benefits to local communities. If we aren’t cautious, we will not only encourage communities to treat companies as if they are government; we will also destroy government’s incentive to do the job it should be doing for local communities to assume their share of ownership and responsibility for their own welfare and improvement”.

An assessment of community-development projects by oil TNCs in the Niger Delta concluded, among other things, that partnership-based projects are more likely to succeed if there is an enabling environment for such partnerships; that bottom-up corporate partnerships are more efficient means than top-down approaches to promote community development; and that lack of tangible effects from partnership-based corporate community development assistance is sometimes linked to government failure (Idemudia, 2007).

3. Human rights

Human rights – civil and political as well as economic and social – are essential for welfare-enhancing development (UNDP, 2000: iii). As noted in chapter V, the involvement of TNCs in extractive industries has sometimes resulted in alleged human rights violations in host countries. The main obligation for protecting human rights rests with States (United Nations, 2007, para. 10); it includes preventing corporations (State-owned and privately owned) from breaching rights, and if they do so, taking steps to holding them to account and provide reparation to the victims.

Host countries have a duty to protect their citizens against human rights abuses. This duty extends to protection against unacceptable behaviour by business entities (United Nations, 2007, para. 10). For a host-country government to be able to meet its obligations, an effective institutional framework, providing for participatory decision-making processes, is therefore needed. Certain minimum capabilities of the various stakeholders are required to enable them to influence decisions (ECA, 2004). One way to achieve a better balance between a favourable investment environment and the interests of local populations is to strengthen human rights standards in the regulatory regime of the host country, and to provide for external

monitoring and enforcement of that regime. In addition, human rights standards can be adopted by corporations by mutual contractual agreement.⁸⁸

As a significant proportion of the world's natural resources are located in poor, weakly governed or authoritarian States, the responsibility of extractive-industry TNCs themselves becomes a pertinent issue. The Special Representative of the Secretary-General (SRSG) of the United Nations, appointed to examine the issue of human rights and TNCs and other business enterprises, noted that there had been a gradual extension of corporate liability for international crimes (e.g. war crimes, crimes against peace, crimes against humanity) (United Nations, 2007). This trend derived from two developments: the expansion and clarification of individual responsibility by international ad hoc tribunals and the Statute of the International Criminal Court, and the extension of responsibility for international crimes to corporations under domestic law. Those combined developments suggest that the legal risk for companies (as well as the remedial options for victims) will increase with the expansion in the number of jurisdictions that allow charges to be made for international crimes.⁸⁹

Regarding human rights violations other than international crimes, no comparable legal developments were identified. International human rights instruments do not seem to impose *direct* legal responsibilities on corporations (United Nations, 2007, para. 44). This protection gap for victims is partly filled by mechanisms that do not themselves create legally binding obligations. Examples of such “soft law” arrangements are the standards set by international organizations such as the ILO Tripartite Declaration of Principles Concerning Multinational Enterprises and Social Policy, the OECD Guidelines for Multinational Enterprises,⁹⁰ the United Nations Global Compact (box VI.12), and the Equator Principles.⁹¹

Various corporate codes address human rights issues, such as the ICMM principles (box VI.8). Pre-investment human rights assessments have been identified as the measure that would yield the most immediate results in the human rights performance of firms (United Nations, 2007, para. 77). A number of policy tools are already available to help TNCs assess the potential human rights impacts of their operations. These include the compliance assessment developed by the Danish Institute for

Box VI.12. Extractive industries and the United Nations Global Compact

More than 160 oil and gas and metal mining companies are participating in the United Nations Global Compact. A significant (and growing) number of these companies are headquartered in developing countries, including Oil India (India), Petrobras (Brazil) and Sinopec (China). Participating companies are expected to integrate the Global Compact's 10 principles into their operations and throughout their supply chains.^a To fulfil the “Communication on Progress” requirement, companies are asked to report their progress in annual reports, sustainability reports and other forms of public communication, which helps to substantiate their participation in the Global Compact. For example, Statoil (Norway) has embedded the Global Compact principles throughout its business, and in its training and operational procedures. It also includes the principles in commercial contracts and uses the initiative as a platform in specific business contexts with other companies, including with Petrobras in Nigeria.^b

The Global Compact Policy Dialogue on *The Role of the Private Sector in Zones of Conflict* explores how best to promote the beneficial aspects of trade and investment while reducing the negative effects that can lead to or sustain conflict. Such dialogues seek to sensitize companies to the need to anticipate possible security risks posed by their operations and to adopt conflict-sensitive business practices.

The Global Compact has also begun to engage companies in the oil and gas industry in a series of peer-to-peer industry forums for national and international companies. These enable companies to share experiences related to the challenges and opportunities they face in implementing the Global Compact principles. The first workshop, for companies across Latin America, took place in Mexico in July 2006 and focused on human rights practices. In March 2007, the Global Compact and the World Petroleum Council convened a second workshop for the Asia region, which dealt with all 10 Global Compact principles. These meetings are designed to be hands-on with practical case studies of positive and negative experiences faced by the oil and gas sector. Engaging newcomers from developing countries in the process is considered to be very important.

Source: UNCTAD, based on information obtained from the United Nations Global Compact.

^a The ten principles concern the areas of human rights, labour, the environment and anti-corruption and are derived from the Universal Declaration of Human Rights, the International Labour Organization's Declaration on Fundamental Principles and Rights at Work, the Rio Declaration on Environment and Development, and the United Nations Convention Against Corruption (www.globalcompact.org).

^b Should a participant fail to submit a communication on progress for two years, it is labeled “inactive” on the Global Compact website (www.globalcompact.org/CommunicatingProgress/index.html).

Human Rights, and the risk and impact assessments and screening tools produced by International Alert (United Nations, 2007).⁹² A new guide to human rights impact assessments is also being developed jointly by the International Business Leaders Forum, the IFC, and the United Nations Global Compact.⁹³ However, very few firms in the extractive industries actually conduct human rights impact assessments prior to their foreign investments (United Nations, 2006, para. 31): only one firm in the oil sector – BP – is known to have made public the results of such an assessment.⁹⁴

For corporate standards to be effective, all companies must abide by them. Thus, a second challenge is to engage those major TNCs that have yet to abide by international standards, as well as junior companies and new TNCs from emerging economies, in dialogues about the implications of their investments on human rights. The fact that many TNCs from emerging economies are State-owned raises potential issues related to corporate governance and transparency (*WIR06*: 233). As many of these companies have only recently started to expand abroad, they have limited international experience and exposure to such issues. To the extent that legislation and the development of business standards in some key areas are at a nascent stage in their home countries, they will also have had little opportunity to learn before going overseas. The “new players”, whether State-owned or not, should derive long-term operational benefits from complying with basic human rights standards as part of wider policies for responsible investment. Attention to human rights compliance may be needed to defend themselves against accusations of complicity with various abuses. It may also help them obtain access to finance through the public offer of shares, while also lowering the risk of exposure to foreign direct liability litigation (*WIR06*: 235-237).

Home-country governments also have a duty to protect against human rights abuses committed abroad by their nationals and TNCs (see, for example, United Nations, 2007, para. 16).⁹⁵ However, only a few States surveyed by the Special Representative reported having policies, programmes or tools in place to deal with corporate human rights challenges, and only a small number had introduced human rights considerations into their investment promotion policies, export credit and investment insurance schemes, or bilateral trade and investment treaties (*Ibid.*, para. 17). Indeed, the behaviour of both developed and developing countries in support of firms – in particular oil companies – has repeatedly raised concerns by civil society.⁹⁶

Some States take human rights into account in their policies to support exports and outward FDI. For instance, the United Kingdom Export Credit Guarantees Department takes into account the contribution of an investment to sustainable development and to the promotion of human rights and good governance,⁹⁷ and the Swiss export credit insurance scheme considers the human rights issue when assessing projects. Human rights clauses have also systematically been included in trade agreements between the European Union and third countries since 1995.⁹⁸

Various *investment institutions* are starting to exert more pressure on TNCs to behave responsibly when investing in weakly governed States. Most notably, the Equator Principles feature several human rights elements (*WIR06*).⁹⁹ The Principles for Responsible Investment, an institutional-investor initiative in collaboration with other stakeholders and the United Nations, also offer guidance, by providing a framework for institutional investors – asset owners and investment managers – to incorporate environmental, social and governance issues into investment decision-making and ownership practices.¹⁰⁰ The work done by United Nations organizations in the area of investment promotion could also incorporate a human rights perspective. Finally, *civil society* can, and frequently does, act as a catalyst for further development of human rights awareness in extractive projects.

4. Enhancing transparency

In many countries there is a serious lack of information about the allocation of the revenue from extractive activities between TNCs and governments, and how governments spend this revenue (chapter V). Opaque revenue streams and associated corruption will reduce the resources available for investment in development. On the other hand, making the appropriate information available can enable a proper assessment of the impact of investments in these activities. Moreover, greater transparency can help reduce wasteful use of resources and corruption, improve macroeconomic management and enhance access to development finance. But it requires serious commitment not only on the part of host countries and TNCs, but also of home countries, civil society and international organizations.

An important first step for a *host country* is to remove legal obstacles to transparency. In many countries that value governmental accountability, information on revenue from extractive industries, like other revenues, is subject to rules regarding disclosure and revenues are included in the State

budget, which is published and audited. In several other countries, however, revenue is still treated as a State secret and foreign investors may be required to sign confidentiality or non-disclosure agreements. Such practices curtail the public's right to know what the government receives in revenue and can breed corruption. Adoption of rules and measures that ensure transparency regarding the accrual and use of revenues is critical for such host countries if they are to ensure maximum development gains from TNC activities in extractive industries.

TNCs can mitigate the problem of corruption by publishing what they pay to governments on a country-by-country basis, using international accounting standards. The information should include all net taxes, fees, royalties and other payments made to governments, at any level, or to local communities, including compensation payments and community development funding in the short term. TNCs that disclose their payments may face problems in the short term if their competitors do not adhere to the same standards. This may be used as an excuse to lower the standards of transparency, and provide an opportunity to continue opaque practices. Consequently, common standards agreed by all companies are needed to develop a more "level playing field" for revenue disclosure.

Home countries also need to be vigilant with regard to transparency, and should take action to curb bribery. Some countries have already undertaken investigations into corrupt practices by TNCs in foreign countries. But more needs to be done to curb these practices. Various *civil society organizations* are also contributing to raising awareness of the need for transparency. One of their most important initiatives is the *Publish What You Pay* campaign involving a coalition of over 300 non-governmental organizations (NGOs) worldwide. It calls for the mandatory disclosure of payments made by oil, gas and mining companies to all governments for the extraction of natural resources. The coalition also launched a campaign calling on resource-rich developing-country governments to publish full details of the revenues they earn.¹⁰¹ A further important step was taken in 2002 with the establishment of the Extractive Industries Transparency Initiative (EITI), which aims to improve transparency and accountability of both firms and authorities through the publication and verification of company payments and government revenues in the oil, gas and mining industries. Although the participation of countries is voluntary, when countries do commit to the initiative, the transparency provisions apply to all companies in

the country – foreign and domestic, large and small, private and State-owned (box VI.13).

5. Dealing with extractive-industry TNC investments in conflict situations

In a number of low-income countries, mineral wealth has contributed to political instability and even to armed conflicts (chapters III and V).¹⁰² Such situations pose a particular challenge to government policies as well as to corporate responsibility. Firms (including TNCs) may find themselves implicated in the domestic or international conflicts generated by competition for the control over resources. By operating in such countries, they may end up directly or indirectly providing assistance to some of the parties to conflicts.¹⁰³

Home countries and the *international community* can offer technical assistance to assist host countries in developing their institutional and legal capabilities. They can also help clarify under what conditions it would be appropriate for a company to enter, stay or abstain from investing/divesting. By implementing conflict-related human rights considerations into their FDI policies, they can either encourage foreign investors to adhere to certain standards when they invest, or discourage them from investing. In that respect, one of the most pressing issues that the international community has to tackle is the legitimate use of sanctions. A number of suggestions have emerged, in particular from the Stockholm Process, organized by the Government of Sweden, which merits further consideration by the United Nations Security Council and United Nations Member States.¹⁰⁴

Several multi-stakeholder initiatives have been established with the goal of reducing the risk of conflicts related to resource extraction and to set standards for corporate behaviour in conflict situations. Some of the most prominent ones are the Kimberley Process Certification Scheme (box VI.14) and the Voluntary Principles on Security and Human Rights. The Kimberley Process had its origin in the efforts to combat the use of "conflict diamonds" to fund the civil wars in Sierra Leone and Angola in the late 1990s. The Voluntary Principles provide guidance to companies on how to conduct comprehensive risk assessments with regard to security and human rights issues, and how to engage with public security forces (military and police), and with private security forces. These Principles are being increasingly embedded in company contracts, thereby also becoming part of the macro-legal framework.¹⁰⁵ These initiatives have been

Box VI.13. The EITI five years on: progress and prospects

The multi-stakeholder Extractive Industries Transparency Initiative (EITI) was first launched by the then British Prime Minister Tony Blair at the World Summit on Sustainable Development at Johannesburg in 2002. It was the outcome of lobbying by NGOs and the civil society campaign, *Publish What You Pay*. The international anti-corruption movement, Transparency International, also played an important role.

Its underlying concept is straightforward; it requires companies to publish what they spend and governments to publish what they receive, thus making taxes, royalties and signature bonuses public. The resulting transparency between companies and governments leads to greater accountability of governments to their citizens. When countries do commit to the initiative, the transparency provisions apply to all companies in the country – foreign and domestic, private and State-owned, large and small.

Since its inception, universal principles and the content of EITI have been agreed upon, and, as of May 2007, 22 developing countries^a had committed to implementing its principles and 27 oil, gas and mining companies had agreed to support the initiative. A process for quality assurance has also been put in place. Countries have agreed to have their implementation independently validated once every two years. An extensive technical support organization, financed in large part by a World Bank multi-donor trust fund, is available to aid the national implementation of the EITI principles.

Countries that sign up have to make a public declaration of commitment to the EITI, establish a multi-stakeholder working group (including civil society), and develop a work plan for national implementation. Subsequently, an implementing country will go through a preparatory, a disclosure and a dissemination process. A group of independent validators will also visit implementing countries once every two years and review progress made. To date, Azerbaijan, Ghana and Nigeria have made the most progress in implementing the EITI. In March 2007, Nigeria became the first country to adopt a law making revenue disclosure mandatory. Other countries have made commitments and are still in the early stages of implementation. Unless rapid progress is made, some countries are unlikely to be considered as implementing countries when they undergo validation procedures.

There are a number of ways in which the impact of the EITI could be further enhanced:

- More resource-rich host countries should endorse and commit to the process. To set a good example, key developed host countries should endorse and commit to the process.
- In June 2007, the EITI was formally endorsed by the G-8 at its summit in Heiligendamm, Germany. Endorsement by a larger number of individual home countries should also be encouraged, including by China, India, Malaysia and the Russian Federation, which are emerging as important sources of foreign investment in extractive industries.
- More companies should also sign up and commit to the EITI.
- Ways should be found of making institutional investors conform to the EITI criteria.

The coalition of countries, organizations and companies behind the EITI has made progress in devising principles and criteria, integrity measures and an institutional structure to oversee the initiative. These are now being put to the test and it remains to be seen whether the initiative will contribute significantly to greater development benefits from resource extraction.

Source: UNCTAD and the EITI secretariat.

^a The following countries have endorsed the EITI: Azerbaijan, Bolivia, Cameroon, Chad, Congo, the Democratic Republic of the Congo, Timor-Leste, Equatorial Guinea, Gabon, Ghana, Guinea, Kazakhstan, Kyrgyzstan, Mali, Mauritania, Mongolia, Niger, Nigeria, Peru, Sao Tome and Principe, Sierra Leone and Trinidad and Tobago.

described as “expressions of an emerging practice of voluntary global administrative rulemaking and implementation...in a number of areas where the intergovernmental system has not kept pace” (United Nations, 2007, para. 56). However, while voluntary initiatives are a welcome development, they need also to be backed by legislation. Guidance from governments and the international community is also clearly important.

TNCs, for their part, need to consider if it is appropriate to invest or stay in a country, or if they should abstain from investing in or divest from an existing project. In some cases, FDI into a conflict

zone can ignite or further fuel a conflict. In such cases, it may be desirable for TNCs to forego their investment intentions. Exact criteria for such cases need further analysis.

More TNCs in extractive industries need to participate in existing international initiatives. A review of the top TNCs in mining, oil and gas shows that only some of them are explicitly committed to the EITI, the United Nations Global Compact, the Voluntary Principles of Security and Human Rights and the Global Reporting Initiative (tables VI.2 and VI.3). TNCs from developing and transition economies have a particularly

Box VI.14. Conflict diamonds and the Kimberley Process

The Kimberley Process Certification Scheme (KPCS) has been operational since 2003, and now covers virtually all countries with diamond producing, trading and polishing activities.^a It has been endorsed by several United Nations General Assembly and Security Council resolutions, and compliance with its requirements has been used by the Security Council as a benchmark for the lifting of diamond sanctions imposed on countries such as Liberia and Côte d'Ivoire.

The KPCS requires that Kimberley Process certificates accompany all rough diamonds traded internationally. Such certificates are issued with the authority of participating governments to guarantee that diamonds in a given shipment are not of "conflict origin". Crucially, the scheme has to be implemented through binding legislation in participating countries, and supported by appropriate penalties for any infringements by individuals or companies. The national legislation of all countries that wish to participate in the scheme is examined to determine whether it in fact implements the necessary requirements. The KPCS is backed by a comprehensive statistical reporting and monitoring system.

The KPCS has developed mechanisms for dealing with non-compliance, with exclusion from the list of participants being the ultimate sanction.^b The starkest example of non-compliance has been that of the Democratic Republic of the Congo, which was expelled from the KPCS in July 2004 after it was found to have acted as a conduit for illicit diamonds from major diamond producers in the region. There have also been compliance issues in Brazil and in some West African countries. The link between participation and compliance has had a positive impact on the implementation of its core requirements. Following a plenary meeting in 2006 and the three-year review of the scheme, the KPCS started a second round of reviews. Large mining companies – especially De Beers – have played an active role, from lobbying governments to participate to themselves participating in peer reviews.^c

KPCS participants account for some 99.8% of global rough diamond production, and conflict diamonds now make up less than 0.2% of the international trade in these commodities.^d The Scheme has enabled previously war-torn diamond-producing countries, such as Sierra Leone or the Democratic Republic of the Congo, to increase their volume of legally exported rough diamonds.

But there are still loopholes in the system. In northern Côte d'Ivoire, for example, the small-scale production of conflict diamonds continues. There is also a need to bring the small-scale, artisanal diamond production, which is characteristic of many diamond-producing countries, fully into the legitimate "pipeline". Related social and environmental issues, such as conditions in artisanal diamond mines, which go beyond the KPCS's mandate, are being addressed, for example, by the Diamond Development Initiative^e and the World Bank's Communities and Small-Scale Mining initiative.

Remaining challenges notwithstanding, the KPCS stands as the first, and for the most part, successful, attempt to deal comprehensively with a resource-curse-related issue by imposing strict certification and regulatory requirements on an entire industry. Some of its technical provisions are applicable only to rough diamonds. Nevertheless, the KPCS could well prove to be a useful template for addressing similar issues in other high-value commodity sectors jeopardized by issues of conflict or weak governance.^f It is currently chaired by the European Community, with India due to take over as Chair in 2008.

Source: UNCTAD, based on information from the KPCS.

^a The KPCS has some 50 participants, including the European Community as a single participant on behalf of its 27 member States.

^b When it was launched in 2003, around one third of the countries that had initially signed up to the KPCS were expelled when they were found not to have implemented its provisions. Many of them rejoined after having adopted the necessary legislation.

^c The peer review teams are composed of about three government representatives, one industry representative and one NGO representative. Industry representatives have come from big mining companies, and NGOs have been represented mainly by Global Witness and Partnership Africa Canada.

^d The production of two diamond producing countries has been barred from entering the legitimate trade through the KPCS: Côte d'Ivoire, where there is still a conflict diamond situation, and Liberia.

^e See: www.pacweb.org.

^f Discussions on commodity certification have been part of the agenda of the Great Lakes Conference, and the issue of certifying exports of valuable minerals has also been taken up by the United Nations Security Council's expert panel on the arms embargo against the Democratic Republic of the Congo. In the forestry sector, a bilateral form of commodity certification has been launched by the EU.

low rate of participation in these initiatives. For example, judging from data published on the respective websites, none of the top oil and gas or metal mining TNCs from the Russian Federation participate in any of the listed initiatives, and the only Chinese oil TNC in table VI.3 is Sinopec (a Global Compact participant). Petrobras (Brazil), on

the other hand, is committed to the EITI, the Global Compact and the Global Reporting Initiative. Other TNCs from developing and transition economies should be encouraged to follow this example. Also, once a company commits to different standards and principles, it is important that it abides by them.

Table VI.2. Top mining TNCs participating in selected international initiatives, June 2007

Company ^b	Home country	EITI ^a	Global Compact	Voluntary Principles	Global Reporting Initiative
<i>Developed home economies</i>					
BHP Billiton Group	Australia	√	√	√	√
Barrick Gold	Canada	√	√		
Teck Cominco	Canada		√		
Glencore International	Switzerland				
Xstrata	Switzerland	√	√		
Anglo American	United Kingdom	√	√	√	√
Antofagasta	United Kingdom				
Rio Tinto	United Kingdom	√	√	√	
Newmont Mining	United States	√	√	√	√
Phelps Dodge	United States				
<i>Developing and transition home economies</i>					
Grupo México	Mexico				
Alrosa	Russian Federation				
Norilsk Nickel	Russian Federation				
Anglogold Ashanti	South Africa	√	√		√
Gold Fields	South Africa	√	√		
Harmony Gold Mining	South Africa				
Impala Platinum	South Africa				

Source: UNCTAD, based on information from websites of the EITI, Global Compact, Voluntary Principles and Global Reporting Initiative.

^a Freeport-McMoRan Cooper & Gold and Gold Fields are not listed on the EITI webpage. As members of the ICMM, however, they also support the EITI, according to information from the ICMM Secretariat.

^b Falconbridge, Inco and Placer Dome – which are included in table IV.7 – are not shown here as they have been taken over since 2005.

Table VI.3. Top oil TNCs participating in selected international initiatives, June 2007

Company	Home country	EITI	Global Compact	Voluntary Principles	Global Reporting Initiative
<i>Developed home economies</i>					
A.P. Moller-Maersk	Denmark				
Total	France	√	√		
ENI	Italy	√	√		
Inpex	Japan				
Nederlandse Aardolie Mij	Netherlands				
Norsk Hydro	Norway	√	√	√	
Statoil	Norway	√	√	√	√
Repsol-YPF	Spain	√			
British Petroleum	United Kingdom	√	√	√	√
Royal Dutch Shell	United Kingdom/ Netherlands	√	√	√	√
Chevron	United States	√		√	
ConocoPhillips	United States	√		√	
ExxonMobil	United States	√		√	
<i>Developing and transition home economies</i>					
Sonatrach	Algeria				
Petrobras	Brazil	√	√		√
CNOOC	China				
CNPC	China				
PetroChina	China				
Sinopec	China			√	
ONGC	India			√	
Petronas	Malaysia				
Gazprom	Russian Federation				
Lukoil	Russian Federation				
Tatneft	Russian Federation				

Source: UNCTAD, based on information from websites of the EITI, Global Compact, Voluntary Principles and Global Reporting Initiative.

G. Conclusions

The commodity price boom has presented many developing and transition economies with new opportunities to use their mineral resources in a way that promotes sustainable development. For mineral-rich LDCs, it represents an opportunity to make progress towards meeting the Millennium Development Goals by reducing poverty and embarking on a path of broader based sustainable growth. As domestic resources to exploit the mineral endowments are often insufficient in these and other low-income countries, TNCs tend to predominate (chapter IV). This is especially so in the case of large-scale mineral extraction. In order to maximize economic gains from TNC involvement, and to minimize adverse environmental, social and political impacts, concerted action by all relevant stakeholders is necessary, based on a consensus on coherent and sequenced policies. A number of recommendations for host- and home-country governments, the international community, civil society and TNCs emerge from the analysis in this chapter.

Host-country governments should assume the main responsibility for ensuring that tangible development benefits are derived from the extraction

of mineral deposits by providing an appropriate regulatory and institutional framework.

- Governments should formulate a clear vision of how and in what ways the country's mineral resources could contribute to sustainable development. An overall development strategy is essential to ensure coherent policy formulation and implementation. A governance framework based on the rule of law is critically important for effective policy-making. It should consider all relevant stakeholders – both current and future generations. Without such a framework, there is a serious risk that extractive activities – with or without TNC involvement – will bring few gains, if any, to the local population.
- Host-country governments also need to strengthen their ability and capacity to develop appropriate policies. This should involve collecting essential information on the country's mineral endowments (e.g. through geological surveys), and acquiring an understanding of global and regional developments concerning the relevant mineral. Well-informed governments are not only better able to design an appropriate institutional and regulatory framework, but also to negotiate with TNCs if and when this is required.

- Policies towards TNCs should be placed in the context of an overall development strategy, and should address such aspects as transfers of capital, knowledge and technology and access to global markets. Governments at both central and subnational levels also need a clear strategy of how to obtain, manage and use the revenue generated from mineral extraction.
- In designing and implementing policies, governments need to bear in mind the risk-revenue relationship. If a country needs inbound FDI, its business environment should be competitive enough to attract the desired TNCs while at the same time ensuring adequate revenues for the government. As witnessed by the many regulatory changes in recent years concerning the ownership and fiscal policies governing TNCs in extractive industries, finding the right balance is not easy.¹⁰⁶ The volatility of mineral prices adds to the complexity of decision-taking. To reduce the need for unilateral actions, countries may seek to develop frameworks that are robust over different phases of the business cycle. For example, in the case of revenue from mineral extraction, more countries might consider introducing some form of progressive taxation.
- There should be considerable emphasis on strengthening the capabilities of the domestic private sector. A strong domestic enterprise sector that can rely on government support to help improve its competitiveness can increase the chances of TNCs creating backward and forward linkages and learning opportunities for local firms.
- Host-country governments furthermore need to consider the environmental and social impacts of mineral exploitation activities and ensure that all stakeholders are given opportunities to influence the decision-making process.

Home-country governments can also influence the potential impact of their TNCs' investments abroad. A number of developed countries and more recently, also developing countries actively support their firms' overseas expansion sometimes with a view to securing access to strategically important resources.

- Home-country governments should promote the responsible behaviour of their TNCs' activities abroad. This is equally important if the home State also owns the TNC. More home countries should become involved in existing international initiatives related to the extractive industries, notably the EITI, to promote transparency. In some cases, TNCs might also be held accountable in their home countries for their overseas activities.¹⁰⁷

- Home-country governments may also assist the recipient economies in different ways by providing financial and technical assistance. Through its Oil for Development Initiative, Norway, for example, offers various forms of short- and long-term assistance to oil-rich developing countries, while South Africa provides assistance to a number of African countries in support of their extractive industries (see annex to this chapter). Home countries can share also their experiences and knowledge, for example by attending the meetings of the World Mines Ministers Forum and the Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development.¹⁰⁸

The *international community* can help promote greater development gains and address the adverse effects of resource extraction.

- International organizations can facilitate learning opportunities from studying and comparing the positive and negative experiences of different mineral-rich countries. This could be done at a regional context or in other forms, as illustrated by the 2007 Big Table (box VI.7). For example, it is worth exploring the scope for conducting regional geological surveys and for helping to establish regional mining schools in Africa.
- Despite ongoing efforts, there is scope for more technical assistance and capacity-building to help improve the management of mineral resources in low-income countries (see annex to chapter VI).
- The international community can be instrumental in the development of standards and guidelines and in promoting the use of existing tools to help ensure a more development-friendly outcome of TNC activities in mineral-rich countries, notably in weakly governed or authoritarian States. In very serious instances, the global community may have to explore the use of sanctions as a tool to protect human rights.

The role of *Civil Society* should also not be neglected. Trade unions can play an active role in promoting greater development gains from extractive activities. Moreover, international as well as local NGOs in the countries concerned can contribute useful views and expertise on economic, environmental and human rights issues. They can play an important role in monitoring the actions of both governments and companies, and draw attention to good and bad practices by any of the players. Indeed, a number of the recent international initiatives may not have emerged, had it not been for the advocacy and active role of civil society.

When engaging in resource extraction, the role of *TNCs*, first and foremost, should be to contribute to efficient production while, as a minimum, respecting the laws of the host

country. When mineral deposits are found in weakly governed or authoritarian States, foreign companies need to decide whether to invest there or not, since they may end up – directly or indirectly, or even unwittingly – supporting or strengthening the existing order. While there are no easy choices in this respect, a number of recent private-sector initiatives can provide guidance. However, as shown above, even among the largest mineral producers, the number of companies that have signed up to relevant international initiatives is still small. While such initiatives can be considered a necessary complement in countries where appropriate legislation and its enforcement are absent, the impact will be limited unless a large number of TNCs adhere to them and subsequently abide by their commitments.

So, to make the vast mineral resources located in some of the world's poorest countries a force for development, a concerted effort by all stakeholders is necessary. In the case of low-income countries, TNCs are likely to remain active players in this process. The policy challenge is to develop the appropriate legal and regulatory frameworks that create the proper incentives for local and foreign firms to produce efficiently while at the same time addressing the environmental impacts and respecting the interests of local communities and society at large. A win-win situation can be achieved if various minerals can be produced in the most efficient and environmentally friendly manner possible, while at the same time deploying the revenues generated for growth, poverty alleviation and sustainable development.

Notes

- 1 For a discussion on these changes, see McKern, 1993, Part Three.
- 2 See, for example, Acemoglu, Robinson and Verdier, 2004; Acemoglu and Robinson 2006; Renner, 2002; Shafer, 1994.
- 3 See the Summary Report from the Big Table 2007 – an initiative developed by the United Nations Economic Commission for Africa in collaboration with the African Development Bank to promote dialogue between African policy makers and their developed-country counterparts (ECA, 2007a).
- 4 For example, in 1938, Shell D'Arcy Petroleum Development Company (United Kingdom and the Netherlands) was granted a concession over the entire mainland of Nigeria. It was the only concessionaire and was therefore able to explore at its convenience until 1962, by which time it retained 15,000 square miles of the original area (Omorogbe, 2002: 553).
- 5 "Western firms feel a pinch from oil nationalism", *International Herald Tribune*, 8 May 2006.
- 6 For example, oil and gas industries are not covered by Investment Law No. 13 of 2000 in Qatar; Saudi Arabia includes these in a list of industries into which FDI is prohibited, and in Yemen Investment Law No. 22 of 2002 prohibits FDI in the exploration and extraction of oil, gas and other minerals (ESCWA, 2006).
- 7 Under this arrangement, the contractor funds all investments and receives remuneration from the State-owned company, NIOC, in the form of an allocated production share, and then transfers operation of the field to NIOC after a set number of years. See Country Analysis Briefs: Iran. Energy Information Administration. August 2006, at www.eia.doe.gov.
- 8 For example, Venezuela concluded 32 risk service agreements with TNCs during the 1990s which were recently transformed into joint ventures with the State-owned company, PDVSA. Brazil has concluded agreements for activities in selected areas, as have Colombia, Ecuador and Trinidad and Tobago. Argentina, Bolivia and Peru have privatized their oil firms and have opened up to FDI (ECLAC, 2002).
- 9 In Argentina, it is regulated at both the federal and provincial levels. In China, it is regulated by national and local laws, regulations and rules. Similarly, in Indonesia, it is regulated at the central, provincial, regional and municipal levels, and mining rights or authorizations may be granted and regulated at all levels of government (with different rules for different types of minerals) pursuant to centrally enacted mining laws and regulations.
- 10 Between 1985 and 1995, 96 countries revised or planned to revise their mining codes (Barberis, 1999: 16).
- 11 Reforms had already been implemented in Chile with a new mining code in 1983, offering increased investor protection and allowing for a more effective use of foreign investment incentives.
- 12 See Legislative Decree 708 and Supreme Decree 014-92 of the Ministry of Energy and Mines.
- 13 For example, in Brazil, at least two thirds of the mining employees must be Brazilian nationals and two thirds of the payroll must serve to pay those employees. In Chile, no less than 85% of the mining workers of employers with 25 or more employees must be Chilean. Mexico's Federal Labour Law provides that 90% of all hourly and salaried workers and employees must be of Mexican nationality. Companies operating in Peru are allowed to hire only up to 20% of foreign employees, provided that their salaries do not exceed 30% of the total payroll. In India, mining concession holders are restricted from employing persons other than Indian nationals in reconnaissance, prospecting and mining operations (Law Business Research, 2005).
- 14 In the United Republic of Tanzania, for example, in the 1990s large-scale mining companies were guaranteed stability for their long-term mining projects with respect to the range and applicable rates of royalties, taxes, duties, fees and other fiscal taxes and the manner in which liability thereof was calculated. Similar steps were taken in Chile and Peru.
- 15 This was also a major motive behind the main energy-related IIA – the Energy Charter Treaty (1994) – which seeks to increase the stability of the legal environment for energy investment in the transition economies of Central and Eastern Europe and the former Soviet Union (Wälde, 1996).
- 16 Most countries today offer national treatment to domestic and foreign investors with regard to mining rights, with some exceptions, such as the following. For example, in Ghana, small-scale gold mining is reserved solely for Ghanaians. In China, foreign parties are prohibited from exploration or securing mining rights to certain minerals, and are required to have a Chinese domestic partner in order to acquire exploration or mining rights to certain other minerals. In India, only Indian nationals or companies that are registered in India under the Companies Act (1956) are eligible to secure mineral concessions. However, 100% foreign ownership is now permitted for mining of all non-fuel and non-atomic minerals (PricewaterhouseCoopers, 2006). Indonesia's Mining Law grants mining rights or authorizations only to Indonesian

- individuals, companies and other legal entities. The deeds of establishment and articles of association of Indonesian-owned and controlled mining companies normally have prohibitions against foreign ownership (Law Business Research, 2005).
- 17 In Chile, for example, the economic crisis in 1982 added an urgent need to raise foreign currency, and the Constitutional Mining Law of 1982 and the Mining Code of 1983 sought to provide greatly improved rights and protection to foreign investors. However, it took time for Chile to attract FDI, as many foreign companies were reluctant to invest during the military regime, which ended in 1989.
- 18 See “Algeria agrees oil windfall tax”, *BBC News*, 15 October 2006, at <http://news.bbc.co.uk/go/pr/ft/-/2/hi/business/6053120.stm>.
- 19 “Bolivia: A lot of gas for partial takeover?”, *The International Review*, 9(1): 6–9, 2006; Patricia I. Vasquez, “Bolivia: full steam ahead”, *Energy Compass*, 2 February 2007.
- 20 “Bolivian official calls for 600% mining tax increase”, *Resource Investor*, 8 January 2007, <http://news.bbc.co.uk/go/pr/ft/-/2/hi/business/6053120.stm>.
- 21 See www.marketwatch.com, 5 February 2007.
- 22 See “DR Congo reviews 60 mining deals”, *BBC News*, 11 June 2007, at <http://news.bbc.co.uk/go/pr/ft/-/2/hi/africa/6739999.stm>.
- 23 The Government entered into a dispute with Occidental (United States), which in turn brought an action against the Government in connection with demands for the payment of a value added tax. The company claimed that Ecuador had expropriated its property, a claim that the arbitration tribunal dismissed (see *Occidental Exploration and Production Company v. The Republic of Ecuador* (Case No. UN3467) (7/1/2004); *Republic of Ecuador v. Occidental Exploration and Petroleum Company* [2005] EWHC 774 (Comm)). Similarly, in a separate claim brought to an arbitration tribunal by EnCana Corp. (Canada) also over tax payments, the tribunal decided that an expropriation had not occurred (See *EnCana Corporation v. Republic of Ecuador* LCIA Case No. 3481 (2/3/06)).
- 24 The taxes are effective when copper exceeds \$2,600 per ton on the London Metal Exchange and when the international gold price exceeds \$500 per ounce. A package of tax reforms was approved by parliament in July 2006 which reduced the overall corporate income tax from 30% to 25% and the value-added tax from 15% to 10% (EIU, 2006b).
- 25 See “Mongolia: Legal revisions pose investment risk”, *Oxford Analytica*, 12 July 2006 (www.oxan.com).
- 26 The mining royalty for exploiting mineral resources is to be calculated by applying a rate of 1% rate of the annual sales of concentrates of less than \$60 million, 2% for sales of \$60-120 million, and 3% for sales exceeding that amount.
- 27 According to the draft, foreign investors and Russian companies owned by them will not be admitted to bid in auctions for strategic deposits, nor are foreign-incorporated entities allowed to acquire more than a 50% stake in the strategic deposits or enterprises by any other method.
- 28 A recent example was the sale of Royal Dutch Shell’s majority stake in the Sakhalin-2 project to State-owned Gazprom in early 2007, so as to avoid the revocation of its licence as a result of negative environmental impacts (RIA Novosti, 2007c and d).
- 29 Draft Mineral and Petroleum Resources Royalty Bill presented 11 October 2006 by the National Treasury of the Government of South Africa, p. 23.
- 30 See Hydrocarbons Law of 2001, Article 22.
- 31 In February 2007, a draft bill was announced that would increase the State’s ownership of four Orinoco heavy oil projects from the present level of 40% to 60% (Upstream.com, 26 February 2007).
- 32 The budget contained an increase in the rate of ad valorem mineral royalty from 0.6% to 3%, a rise in the applicable rate of income tax from 25% to 30%, the application of 15% dividend withholding tax on previously exempt mining profit distributions and the curtailment of income tax holidays (PricewaterhouseCooper, 2007).
- 33 For example, Chad plans to establish a State-owned oil company and to renegotiate certain contracts and the Government of Equatorial Guinea has stated its intentions to renegotiate contracts (see “Global oil industry faces broad spectrum of political risk”, *AFX International Focus*, 19 September 2006 and “Africa: resources nationalism African-style”, *Energy Compass*, 12 August 2006).
- 34 See, for example, www.ukbudget.com/prebudget2005/northseaoiltax/pbr2005_northseaoiltaxation.cfm.
- 35 In addition to the OPEC renegotiations, others took place in Papua New Guinea (1967), Chile (1967-1971), Jamaica (1974), the Dominican Republic (1987, 1988), Peru (1985) and Colombia (1996) (Kolo and Wälde, 2004; Muchlinski, 1995).
- 36 This was the case in the major oil arbitrations involving Libyan Arab Jamahiriya in the early 1980s (Greenwood, 1982; and von Mehren and Kourides, 1981).
- 37 Joseph E. Stiglitz ‘Who owns Bolivia?’ *Daily Times*, 22 June 2006.
- 38 See, for example, Weiler, 2005; and Muchlinski, 2007.
- 39 An Egyptian contract is an example of a contract that disallows renegotiation: “(b) The rights and obligations of EGPC and ESSO under, and for the effective term of, this Agreement (as well as matters relating to the Joint Company subject to Article IV hereinabove) shall be governed by and in according to the provisions of this Agreement and can only be altered or amended by mutual agreement of the parties.” Egyptian General Petroleum Corporation – Esso: Concession Agreement for Petroleum Exploration and Production (12/14/74), Article XVI *Rules and Regulations* (b), 14 *International Legal Materials* 915, 931 (1975).
- 40 See: Federal Law on Production Sharing Agreements, Article 17(2), 35 *International Legal Materials* 1258, 1270 (1996).
- 41 Its membership includes 52 participants from Asia and Europe plus 19 observer countries from other regions. It offers protection to investment as part of the broader aim to promote open and competitive energy markets and security of energy supply, while respecting the principles of sustainable development and sovereignty over natural resources. It should be noted that Australia, Belarus, Iceland, Norway and the Russian Federation have not ratified the ECT. Belarus and the Russian Federation have, however, declared that they will apply it on a provisional basis.
- 42 See, for example, “ConocoPhillips draws attention in defying Venezuela over oil fields”, *Dow Jones Newswires*, 27 April 2007, at www.rigzone.com/news/article.asp?a_id=44479.
- 43 In theory, the optimal form of progressive taxation is one that taxes only the portion of investment proceeds that exceeds the minimum rate of return required by the investor to undertake an investment. Such taxes should not, in principle, distort investment decisions insofar as they do not alter the pre-tax merits of an investment.
- 44 Such studies are based on cash flow modelling of the entire array of fiscal impositions on an investment in order to derive a measure of how the net proceeds of an investment over its lifetime are apportioned between the government and the investor (see, for example, Otto et al., 2006; Johnston, 1994; Kemp, 1996).
- 45 A risk with progressive profit taxes is that taxpayers may seek to avoid the higher rates of tax by “gold-plating”, in which costs are incurred that would not otherwise have been expended.
- 46 Generally, the fiscal regime for the oil industry is usually more clearly defined.
- 47 Reasons for their failure included poor project management, lack of embeddedness in the local economy, tariff escalation and other trade barriers, weak local knowledge, lack of supporting infrastructure and lack of competition (Pedro, 2004: 13-14).
- 48 Local content levels are higher for onshore fields than for offshore fields (Heum et al., 2003: 18).
- 49 Some guidelines are very specific. For example, according to the Nigerian Content Development Policy: “From January 2006, all topsides of fixed (offshore and onshore) platforms weighing up to 5,000 tons, are to be fabricated in Nigeria” ... “fabrication of all piles, decks, anchors, buoys, jackets, bridges, flare booms and storage tanks are to be done in Nigeria” ... “all carbon steel pressure vessels of not more than 75mm shell thickness shall be fabricated in Nigeria” (Nigerian Content Development Short Term Directives, Rev 1 as of December 2005).

- 50 Egyptian General Petroleum Corporation – Esso: Concession Agreement for Petroleum Exploration and Production (12/14/74), Article XXIII (a)(1) and (2), 14 *International Legal Materials* 915, 934 (1975).
- 51 See www.lcrpt.com/showstory.asp?id=6057.
- 52 Atlantic Canada (www.neiti.org/Local%20Content%205-9-05%5B1%5D.pdf).
- 53 For example, under the Mining Sector Charter of South Africa, stakeholders undertake to give historically disadvantaged South Africans preferred supplier status, where possible, in the procurement of goods, services and consumables (Mintek, 2007).
- 54 TRIMs Agreement Article 2. This is likely to apply also to State contracts, as these agreements are legally binding instruments enforceable under domestic law or administrative rulings, and may contain advantages to investors that are made conditional upon the acceptance of those requirements. An investment contract that includes performance requirements prohibited under the TRIMs Agreement would be invalid, at least as far as the TRIMs part is concerned. This is because investors, like any private party, can only renounce their own rights.
- 55 For example, the United States and Canadian model BITs cover performance requirements related to both goods and services. See United States Model BIT 2004 Art. 8, and Canada Model BIT 2004, Art. 7 in UNCTAD, 2007a: 68-69. However, they permit the imposition of certain requirements as a condition of the receipt of an advantage.
- 56 For example, an analysis of the scope for enhanced local content development in the upstream oil and gas industry of Nigeria identified the following, among other areas: fabrication and construction; well construction and completion; modification, maintenance and operations; transportation; control systems; design and engineering; and consultancy work (Heum et al., 2003). This study considered local content development by both domestic and foreign companies.
- 57 For example, there may be a need to consider skills, critical mass and the overall business environment, in addition to the availability of reliable power supplies at competitive costs.
- 58 The Saudi Petrochemical Company, a joint venture between SABIC and Royal Dutch Shell, recently completed a \$1 billion expansion programme.
- 59 For example, while exports of crude oil or unprocessed metal products benefit from zero tariffs in developed countries, average tariffs on processed exports vary between 0.87% and 2.88% for metals, and between 0.39% and 3.17% for oil. The escalation is even more pronounced in some developing countries. In South Asia, for example, the average tariffs on unprocessed and processed metal products were 18.7% and 33.1%, respectively (UNCTAD, 2003b).
- 60 What is stipulated in the legislation may not always reflected in actual developments, however, partly due to weak local capacity of governments to enforce laws and regulations.
- 61 Article 92, Hydrocarbons Law No. 8/2006, of 3 November of the Republic of Equatorial Guinea.
- 62 Mines and Minerals Act, 1999 (Cap 66:01).
- 63 See, for example, South African Migration Project at www.queensu.ca/samp/migrationnews/article.php?Mig_News_ID=3119&Mig_News_Issue=17&Mig_News_Cat=8.
- 64 Examples include the Ecole Nationale Polytechnique in Algeria and the School of Mining Engineering at the Witwatersrand University in Johannesburg, South Africa.
- 65 Communication by the Canadian International Development Agency in July 2007.
- 66 Information provided by the Raw Materials Group.
- 67 In the United States, for example, as much as 70% of the public land is off-limits to mining and oil exploration in Canada about 17% of the land is off-limits to mining, and in Australia it is about 10% (Otto, 2006: 110).
- 68 However, this does not mean that all new mining codes have led to an improvement in environmental standards. Some States have even downgraded their environmental provisions. In Zambia, for example, the Government passed the Mines and Minerals Act in 1995, but according to the OECD (2002: 10), it “fails to address requirements such as environmental management adequately, as it is less stringent than the 1990 Environmental Act” (see also Campbell, 2006).
- 69 An environmental impact assessment requires examining questions such as whether the impact of a project is within the self-correcting capacity of the ecosystem, whether impact is short- or long-term, whether it is reversible or not, and whether the cost is worth the benefit.
- 70 Such plans regulate the termination of a project and should be designed to ensure, among other things, that future public health and safety are not compromised; environmental resources are not subject to physical and chemical deterioration, and that the site after the end of extraction can be restored. Early steps should be taken to commence a rehabilitation programme once the mining or oil drilling stops.
- 71 It is important to ensure that sufficient funding is available to restore a mining area, even if mining ceases unexpectedly and in an unplanned manner. To this end, various financial mechanisms, including reclamation bonds and insurance contracts, have been devised. However, a lack of capacity in the financial sector of developing countries has often slowed down the introduction of these mechanisms, however (see, for example, www.goodpracticemining.org).
- 72 In Kenya, for example, the main problems of environmental protection in the extractive industry have been the “conflict or lack of coordination between the various authorities’ regulation activities, lack of enforcement of existing rules and regulations due to the lack of budgetary allocation, bureaucratic inertia, lack of political will and corruption” (OECD, 2002: 18).
- 73 The Aarhus Convention links environmental and human rights. It establishes that sustainable development can be achieved only through the involvement of all stakeholders. It grants certain rights to the public and imposes on Parties and public authorities obligations regarding access to information and public participation and access to justice (see www.unecce.org/env/pp/).
- 74 See www.goodpracticemining.com.
- 75 Some observers have described oil TNCs’ environmental credentials as greatly exaggerated and their actions as “greenwash” (Utting and Ives, 2006: 15).
- 76 The IFC has also published a manual entitled *Doing Better Business Through Effective Public Consultation and Disclosure*. It contains, inter alia, guidelines for identifying consultation possibilities at different stages of a project, a checklist of objectives and actions for improving consultation and another checklist on techniques for public consultation and information disclosure. The checklists provide a range of tools that can be selected for application to specific situations (ECA, 2004: 14).
- 77 See www.equator-principles.com/. Current participants are: ABN Amro, Banco Bradesco, Banco do Brasil, Banco Espírito Santo Group, Banco Itaú, Banco Itaú BBA, Bank of America, Bank of Tokyo Mitsubishi, Barclays, BBVA, BMO Financial Group, Caja Navarra, Calyon, CIBC, Citigroup, Credit Suisse Grp, Dexia, Dresdner Bank, Eksport Kredit Fonden, FMO, HSBC, HVB Group, ING, JPMorgan Chase, KBC, Manulife Financial Corporation, Mediocredito Centrale, Millennium bcp, Mizuho Corporate Bank, Nedbank, Rabobank, Royal Bank of Canada, Royal Bank of Scotland, Scotiabank, Standard Chartered, Sumitomo Mitsui, Unibanco, Wells Fargo & Company, WestLB and Westpac.
- 78 In fact, some projects that were financed by banks subscribing to the Equator Principles, such as the Camisea natural gas pipeline project in Peru, have been criticized (see, for example, Amazon Watch at www.amazonwatch.org/amazon/PE/camisea/, for a detailed account of allegations related to negative impacts on biodiversity and on the local indigenous people). The greatest concern of the locals was found to be the reduction in the fish catch caused by spills. For related information, see www.oxfamamerica.org/newsandpublications/news_updates/archive2006/news_update.2006-07-25.6814983627.
- 79 These efforts range from the adoption of the Hours of Work (Coal Mines) Convention (No. 31) in 1931 to the Safety and Health in Mines Convention (No. 176), which was adopted in 1995 (see www.ilo.org/ilolex/cgi-lex/convde.pl?C176).
- 80 The ILO Tripartite Declaration of Principles concerning Multinational Enterprises and Social Policy calls on TNCs to respect, promote and uphold the principles concerning fundamental rights, irrespective of whether a country has

- ratified and implemented the ILO Declaration on Fundamental Principles and Rights at Work.
- 81 The right to freedom of association is recognized as a fundamental human right (see: Article 22(1) of the International Covenant on Civil and Political Rights 1966).
- 82 International framework agreements might contain specific obligations.
- 83 UNCTAD, 2007k.
- 84 Prior to this arrangement, the monetary gains from TNCs' extractive operations directly accrued to the central Government.
- 85 In Peru, for example, the revenues allocated to mining regions increased rapidly, from less than \$50 million in 2002 to more than \$500 million in 2006 (Vigila Perú, 2004 and 2006).
- 86 One study noted that "present arrangement[s] give little confidence that these funds can be spent efficiently and with a long-term view, or that examples of a local 'resource curse' can be prevented" (Dietsche et al., 2007b: 81).
- 87 At the same time, they cannot compensate for failures to address duties to remedy possible social or environmental damage (Idemudia, 2007).
- 88 This was done, for example, by the addition of a Human Rights Undertaking in the Baku-Tbilisi-Ceyhan investment agreement between the three host countries involved (Azerbaijan, Georgia and Turkey) and the consortium of oil and gas companies charged with the construction and operation of the pipeline (Leader, 2006).
- 89 For example United States courts have accepted that, in principle, a corporation can aid and abet a government in committing human rights violations and that an action may be brought against it under the Alien Tort Claims Act (Joseph, 2004; Muchlinski, 2007; Clapham, 2006). Adding to the risk is the uncertainty for firms as to where action against them will be filed or what precise standards will be applied since national standards on those issues vary considerably.
- 90 The OECD Guidelines recommend that firms should "respect the human rights of those affected by their activities consistent with the host government's obligations and commitments" (OECD, 2000, General Policies II.2).
- 91 See www.equator-principles.com.
- 92 See <https://hrca.humanrightsbusiness.org> and International Alert, http://www.international-alert.org/our_work/themes/extractive_industries.php.
- 93 See www.ifc.org/ifcext/enviro.nsf/Content/OurStories_SocialResponsibility_HumanRights.
- 94 See www.humanrightsimpact.org/hria-case-studies/item/case-study/32/.
- 95 The United Nations Committee on Economic, Social and Cultural Rights has suggested that States should take steps to "prevent their own citizens and companies" from violating rights in other countries (CESCR, general comment No. 15, para. 33 as cited in United Nations, 2007: 6).
- 96 Regarding civil-society concerns related to Chinese investments in Sudan, see, for example, Amnesty International, 2004 and ECOS, 2006. Regarding concerns expressed over United States diplomacy related to oil-rich African countries, see, for example, Catholic Relief Services, 2003.
- 97 See Department of Trade and Industry, Review of ECGD's Mission and Status, Cm 4790 (London, July 2000); and ECGD, ECGD's Business Principles (December 2000), available at: www.ecgd.gov.uk.
- 98 Promotion of Human Rights and Democratisation in the European Union's External Relations, at: http://ec.europa.eu/comm/external_relations/human_rights/intro/index.htm#6.
- 99 Fundamental labour rights, the health and safety of surrounding communities, avoidance of involuntary resettlement, the rights of indigenous peoples, and the protection of cultural heritage.
- 100 The Principles for Responsible Investment aim to help incorporate environmental, social and governance concerns into investment decision-making and ownership practices of institutional investors, and thereby improve long-term returns to beneficiaries. They were developed by a group of investment professionals representing 20 large institutional investors from 12 countries at the invitation of the United Nations Secretary-General, Kofi Annan in 2005. They were supported by a multi-stakeholder group of experts from the investment industry, intergovernmental and governmental organizations, civil society and academia. The process was coordinated by the United Nations Environment Programme Finance Initiative and the United Nations Global Compact (see: www.unpri.org).
- 101 The campaign was launched in 2002 by a coalition including Global Witness, the Catholic Agency for Overseas Development, Oxfam, Save the Children UK, Transparency International UK and George Soros, Chairman of the Open Society Institute. A number of national NGO coalitions are now associated with it, for example, in Australia, Azerbaijan, Cameroon, Chad, Congo, the Democratic Republic of the Congo, France, Georgia, Ghana, Indonesia, Kazakhstan, Kyrgyzstan, Liberia, Mauritania, the Netherlands, Nigeria, Norway, the United States and the United Kingdom.
- 102 The international community has recognized the link between natural resources and conflict. A number of United Nations investigations into resource-related conflicts in Angola, Sierra Leone, Liberia or the Democratic Republic of the Congo confirm this link. A report on Angola was the first in a series of reports on the topic (see United Nations documents S/2000/203, S/2005/699, S/2007/40, S/2001/1072, S/2001/357, S/2001/49, S/RES/1653, S/2001/1015 and S/2000/1195). In June 2007, the Security Council further recognized the role of natural resources in armed conflicts, and suggested that the mandates of United Nations peacekeeping operations should consider helping the governments of resource-rich countries to prevent their illegal exploitation from fuelling further violence. It also underlined the importance of commodity monitoring and certification schemes, and of strengthening contributions by existing sanctions committees and various groups and panels created by the Security Council (see www.un.org/News/Press/docs/2007/sc9060.doc.htm).
- 103 There is no internationally agreed instrument, either legally binding or voluntary on conducting business in unstable areas in a way that minimizes conflict risks and human right abuses.
- 104 See www.smartsanctions.se.
- 105 For example, they have been included in BP's agreements with the relevant governments in connection with the Baku-Tbilisi-Ceyhan pipeline, and in the contractual agreement with the Papuan police in Indonesia. They have also been included in training programmes for public and private security forces, for example in connection with Occidental Petroleum's activities in Colombia. The IFC incorporates them in its Performance Standards on Social and Environmental Sustainability, and the OECD in its Risk Awareness Tool for Multinational Enterprises in Weak Governance Zones (Source: UNCTAD, based on information provided by the Secretariate of the Voluntary Principles on Security and Human Rights).
- 106 At the 2007 Big Table there was a proposal to set up a study group comprising representatives from African research centres, the Economic Commission for Africa, the African Development Bank, the ICMM, the Commonwealth Secretariat and the OECD's Development Assistance Committee to review mining codes in Africa (see www.uneca.org/thebigtable/summary-report.htm).
- 107 For example, a United States mining company, Drummond, has been accused of conspiring to murder three union activists in Colombia, and is facing trial in its home country. See "US mining group faces trial over dead activists", *Financial Times*, 8 July 2007.
- 108 The World Mines Ministries Forum was first convened in Canada in 2000 as a venue for high-level dialogue, sharing of best-practices and capacity-building. Forums have been organized in 2002, 2004 and 2006 (see www.wmmf.org). The objective of the Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development is to enhance and promote the contribution of the mining, minerals and metals sector to sustainable development. Its functions are consultative and advisory, based on the principles of voluntary partnership. The Intergovernmental Forum meets to share experiences and information, to provide advice and, where appropriate, make recommendations for consideration by governments, intergovernmental bodies and others (see www.globaldialogue.info).

ANNEX TO CHAPTER VI

TECHNICAL ASSISTANCE IN THE EXTRACTIVE INDUSTRIES: SELECTED EXAMPLES

Throughout chapter VI, reference has been made to the importance of developing the capabilities of governments in host countries. Technical assistance by various donor institutions (bilateral, regional and multilateral) can play a useful role in this context. As highlighted by the non-exhaustive examples of technical assistance provided below, various efforts are already under way. There is, however, a need for additional resources as well as better monitoring of the effectiveness of existing assistance programmes. Key areas include strengthening policy and institutional frameworks, capacities of government agencies to address economic, social and environmental concerns, enhancing transparency, revenue management, and the development of more participatory and inclusive mechanisms in decision-making processes.

1. Multilateral institutions

UNCTAD disseminates information about good practices and experiences through a dedicated website (www.natural-resources.org/minerals). *UNCTAD* has helped put in place a regional network for Latin America and the Caribbean with a focus on mineral resources and related sustainable development issues. The network is operated by the Universidad Nacional Mayor de San Marcos in Lima, Peru (www.redlieds.org). A similar African network is expected to be launched during the course of 2007 in cooperation with Mintek (South Africa) and the Southern and Eastern Africa Mineral Centre. In addition, together with the United Nations Environment Programme (UNEP), the ICMM and the Department for International Development (DFID) of the United Kingdom, *UNCTAD* promotes best practices and policies related to environmental management and social issues related to mining.¹

With respect to energy, *UNCTAD* has developed training manuals on the use of financial instruments and hedging instruments. Activities have focused on Africa, with a view to assisting

member States in developing their oil and gas industries (upstream and downstream). Advice is offered on the financing of oil and gas investment, trade and procurement activities, and management of revenues.² Annually, *UNCTAD* organizes an oil and gas trade and finance conference in Africa that brings together major players from the private and public sectors. In the context of revenue transparency, *UNCTAD*'s Intergovernmental Working Group of Experts on International Standards of Accounting and Reporting has been developing and providing guidance on good practices and capacity-building to countries in a number of relevant areas of activity.³ Tailored programmes can be developed to assist government officials and other stakeholders in developing countries acquire the necessary capabilities to ensure accurate and transparent revenue disclosure relating specifically to the extractive industries.

With respect to non-fuel minerals, *UNCTAD* has also engaged in a cooperative project – the Resource Endowment Initiative – with the International Council on Mining and Metals (ICMM) to analyse how some countries and companies have successfully dealt with the “resource curse.”⁴ At the country level, a project concluded in 2007 in Peru sought to establish and apply a framework for multi-stakeholder assessments of development strategies and growth paths, and to identify viable employment opportunities for redundant mine workers, initiate actions to establish new economic activities and promote sustainable commodity production.⁵

The overarching objective of the *World Bank Group* (WBG) in extractive industries is to help ensure that oil, gas and mining contribute to the sustainable development of countries and communities. The Bank (through the International Bank for Reconstruction and Development and the International Development Association) focuses mainly on working with governments in the areas of policy advice, capacity-building and governance issues, including helping to ensure that revenues from extractive industries are used well

(occasionally supporting physical investment such as gas infrastructure). In recent years, the Bank has joined a number of global initiatives intended to address common extractive-industry issues. For example, it is helping more than 20 countries with the practical implementation of the Extractive Industries Transparency Initiative (EITI). Other initiatives include the Gas Flaring Reduction Partnership, which is intended to help overcome barriers to the reduction of gas flaring, and the Community and Small Scale Mining initiative, which addresses issues concerning small-scale mining.

The *International Finance Corporation* (IFC) and the *Multilateral Insurance Guarantee Agency* (MIGA), also part of the World Bank Group, selectively support private sector investment projects through a range of financial products such as loans and equity investments and political risk insurance. Both institutions aim to help investors enhance the sustainable impact of the projects they support by encouraging greater transparency about project activities, including requiring the publication of all payments made to governments. They also work with investors to broaden the development impacts of projects, for example through linkage programmes intended to extend the range and development of local suppliers to mines and oil developments.

The *Commonwealth Secretariat's* Special Advisory Services Division has assisted many Commonwealth Governments to reform and modernize the regulation of their oil, gas and mineral industries. The goal of this assistance is to help governments develop regulatory and fiscal regimes that are investor-friendly, but which nonetheless secure them a fair share of the financial benefits that can arise from oil, gas and mining activity while respecting the need for robust environmental and social safeguards. In the oil and gas industry, assistance has been provided to the Governments of Ghana (to implement reforms of upstream petroleum regulations, Namibia (on reforms of regulatory and institutional arrangements), the United Republic of Tanzania (on petroleum and energy agreements) and Belize (on establishing a transparent system for managing petroleum revenues through a dedicated fund). In the mining industry, assistance in the development and drafting of major legislative reforms in the mining sector have contributed to the Mines and Minerals Act of Botswana and the Minerals and Quarries Act 2005 of the Gambia. The Minerals Commission of Ghana has been assisted in the development of mining regulations, and the Governments of Kenya and Swaziland have received technical support for the reforming of sector policies and legislation.

2. Regional institutions

The *African Development Bank* (AfDB) has been active in the extractive industries for nearly three decades, through its lending and non-lending operations. It has provided various forms of related technical assistance to 11 African countries (amounting to \$680 million), mainly focused on the restructuring and capacity-building operations of State-owned enterprises or the extractive industry as a whole.⁶ Recent reform programmes have stressed pro-poor public expenditures and job creation for vulnerable groups, particularly in the zones where the extraction activities take place. Increased attention is being given to the promotion of better governance, transparency and accountability. Some projects have addressed the social and environmental aspects of extractive-industry development. Consistent with its commitment to transparency, accountability and good governance, the African Development Bank has endorsed the EITI principles and criteria and holds an observer seat on the new EITI Board. In January 2007, it organized the Big Table 2007 jointly with the United Nations Economic Commission for Africa (box VI.7).

The AfDB is in the process of establishing an African Legal Support Facility which will be able to provide technical support in preparing appropriate laws and regulations for extractive industries; review existing legislation to ensure that budget, revenue, taxation and related laws provide for proper public disclosures; offer training workshops for legal and financial advisers to strengthen their negotiating capacities; and give technical legal support in contract negotiations. The AfDB, the World Bank and the Norwegian Agency for Development Co-operation have agreed to increase collaboration in the areas of EITI implementation and small-scale mining, and to support the creation of a geological data base.

Over the past decade the *Asian Development Bank* has undertaken 16 technical assistance projects (worth \$9.8 million) related to reform of extractive industries in six countries: Bangladesh, China, India, Indonesia, Papua New Guinea and Sri Lanka. The Bank has also provided regional technical assistance to study gas transmission and natural gas pipelines in the Central Asian region. During the past decade the *Inter-American Development Bank* has provided six grants worth \$1.8 million for two countries (Ecuador, Uruguay) and for four regional operations to strengthen regulatory frameworks and harmonize markets in the oil and gas sectors. Most of the activities were in connection with loans for gas transportation.

3. Bilateral donor support

Canada has extensive expertise in natural resource development and management, and has supported programmes that have contributed to sustainable mining, oil and gas development, especially in Latin America. During the period 1996–2006, the Canadian International Development Agency (CIDA) provided mineral resources and mining-related assistance amounting to about \$137 million, distributed equally between the oil and gas industry and metal mining. Almost two thirds of this assistance was provided to Bolivia, Pakistan, Peru and South Africa. These investments have included a number of programmes geared towards institutional capacity-building and cooperation, technology transfer, training and consultancy services.⁷ CIDA supports the EITI.

The Government of *France* promotes capacity-building in the extractive industries mainly through training and technical assistance notably to Francophone countries. Under the supervision of the Centre d'Etudes Supérieures Des Matières Premières (CESMAT), training is provided by Ecole Des Mines de Paris and the College of Geology in Nancy to mining-company executives and to public officials in mineral-producing countries. Technical assistance is provided by the Bureau de Recherches Géologiques et Minières (BRGM) in areas such as the development of knowledge of mineral resources and production techniques. Countries that have benefited from French support in these areas include

Burundi, the Central African Republic, Gabon, Guinea, Malawi, Senegal and Thailand.

Norway offers various forms of short- and long-term assistance to petroleum-rich developing countries through its Oil for Development Initiative.⁸ During the period 1994–2004, Norway provided petroleum-related assistance amounting to approximately \$70 million to more than 30 developing countries, 85% of which went to 10 countries: Angola, Bangladesh, Eritrea, Mozambique, Namibia, Nigeria, the Philippines, the United Republic of Tanzania, Timor-Leste and Viet Nam. The assistance focused on competence- and capacity-building on petroleum resources, financial administration and the environment, but did not involve transfers of funds. It provided seminars and exchange programmes aimed at sharing Norwegian experiences, as well as comprehensive and long-term tailored support to selected countries in the form of extensive training and institutional cooperation.⁹ In the next few years, the Oil for Development Initiative is set to expand.¹⁰

South Africa offers various forms of assistance related to extractive industries in several African countries. The Department of Minerals and Energy provides pro bono technical assistance; PetroSA also offers technical assistance within the framework of various joint ventures with domestic oil companies for the exploration or development of the oil and gas sectors in their countries. The Diamond Board helps developing countries to upgrade their systems in order to become compliant with the Kimberley Process Certification Scheme.

Notes

¹ See www.goodpracticemining.com.

² Outside Africa, in-depth advice and training has been provided to GAIL (India) Ltd., one of Asia's leading natural gas companies, on how to improve its financial management by incorporating risk analysis and management in its strategy.

³ These areas include qualification requirements for professional accountants, corporate governance disclosure, accounting and financial reporting of environmental costs and liabilities, as well as accounting and financial reporting by small and medium-sized enterprises.

⁴ Four country case studies, on Chile, Ghana, Peru and the United Republic of Tanzania, form the basis of the project and have been summarized in a separate report (ICMM et al., 2006).

⁵ The project was carried out in cooperation with the Government of the province of Espinar, the local mining company BHP Billiton Tintaya (since July 2006 Xstrata Tintaya) and the Universidad San Agustín in Arequipa.

⁶ For example, the Bank has assisted in the restructuring of large State mining industries in Guinea, Mauritania, Tunisia and Zambia. It has also provided technical assistance in the form of capacity-building programmes and the funding of feasibility studies to countries such as the Democratic Republic of the Congo, Ethiopia, Mauritania, Mozambique, Rwanda, Senegal and Uganda.

⁷ In Bolivia and Peru, CIDA has contributed to the development of effective regulatory frameworks to ensure that investments in

mining, oil and gas contribute to poverty reduction, in addition to promoting stakeholder consultations, better environmental, health and safety management, and responsible enterprise practices.

⁸ A number of Norwegian public and private institutions are involved in the implementation of the programme, including the Norwegian Petroleum Directorate, the Norwegian Pollution Control Authority, the Petroleum Safety Authority, Norway, and the International Programme for Petroleum Management and Administration. Personnel from ministries and from consultancy firms also participate. The content of each programme is tailored to the specific requests of each country.

⁹ An evaluation of Norwegian petroleum-related assistance from the early 1980s until July 2006 was recently carried out using case studies of four countries: Mozambique, Bangladesh, Timor-Leste and Angola (NORAD, 2007). It concluded that support had been successful on petroleum-related technical capacity-building issues but that less emphasis had been put on downstream issues, petroleum economics, health, safety and the environment. The assistance had been more successful in "new" petroleum-producing countries than in the more mature ones.

¹⁰ Its current long-term assistance is focused on the following countries: Angola, Bolivia, Iraq, Madagascar, Mozambique, Nigeria, Sudan, Timor-Leste, Uganda and Viet Nam. Short-term activities will be offered to a number of other countries.

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ANNEXES



Annex table A.I.1. Number of greenfield FDI projects, by investor/destination, 2002-2006

Partner region/economy	World as destination					World as source				
	2002	2003	2004	2005	2006	2002	2003	2004	2005	2006
	By source					By destination				
Total world	5 703	9 443	10 145	10 442	11 813	5 703	9 443	10 145	10 442	11 813
Developed countries	4 929	7 846	8 652	8 906	9 841	2 762	3 941	4 309	4 662	5 197
Europe	2 559	4 008	4 557	4 811	5 529	1 844	2 737	3 153	3 622	3 961
European Union	2 393	3 765	4 213	4 479	5 118	1 802	2 647	3 057	3 527	3 844
Austria	91	150	207	223	281	12	81	99	103	82
Belgium	48	78	93	123	135	63	66	109	159	110
Cyprus	9	5	9	5	21	10	8	6	6	15
Czech Republic	16	20	17	22	38	95	144	144	149	174
Denmark	57	104	136	152	138	25	74	92	79	65
Estonia	15	19	6	23	44	33	30	43	63	54
Finland	71	106	105	185	183	18	30	32	35	41
France	327	491	553	613	629	140	161	233	489	582
Germany	478	862	899	1 029	1 201	134	276	264	270	332
Greece	65	72	43	39	50	27	42	58	28	28
Hungary	23	26	25	12	19	214	216	222	205	233
Ireland	49	49	45	66	87	95	137	131	193	140
Italy	178	275	350	306	253	73	114	130	140	138
Latvia	13	18	10	11	24	39	44	29	85	109
Lithuania	14	16	11	55	65	36	42	23	77	59
Luxembourg	7	15	25	27	28	4	12	14	4	9
Malta	2	3	1	3	3	4	3	3	8	15
Netherlands	168	239	299	235	310	45	105	100	110	129
Poland	11	14	25	28	37	91	154	234	270	325
Portugal	25	51	40	19	25	40	60	71	28	44
Slovakia	-	2	5	-	3	44	65	87	117	114
Slovenia	27	46	28	41	48	13	23	22	20	25
Spain	143	172	255	149	196	154	223	254	153	241
Sweden	119	216	256	269	280	68	109	137	103	119
United Kingdom	437	716	770	844	1 020	325	428	520	633	669
Other developed Europe	166	243	344	332	411	42	90	96	95	117
Iceland	4	6	14	15	29	1	5	1	1	5
Liechtenstein	-	7	2	4	3	2	-	-	1	-
Norway	39	62	82	91	99	7	27	25	21	19
Switzerland	123	168	246	222	280	32	58	70	72	93
North America	1 770	2 727	2 859	3 093	3 193	639	836	821	766	900
Canada	162	325	300	419	242	219	243	224	205	177
United States	1 608	2 402	2 559	2 674	2 951	420	593	597	561	723
Other developed countries	600	1 111	1 236	1 002	1 119	279	368	335	274	336
Australia	65	145	113	140	152	139	181	139	110	126
Bermuda	14	23	17	22	53	1	1	-	-	2
Greenland	-	2	-	1	-	1	2	1	2	-
Israel	40	39	58	59	105	8	17	17	24	35
Japan	474	884	1 033	767	783	106	134	157	121	146
New Zealand	7	18	15	13	26	24	33	21	17	27
Developing economies	699	1 424	1 302	1 335	1 745	2 362	4 491	4 845	4 473	5 218
Africa	45	66	48	71	75	170	330	278	459	442
North Africa	3	17	8	25	27	75	130	111	205	199
Algeria	-	4	-	-	1	15	21	19	45	50
Egypt	2	9	6	13	17	23	40	34	45	51
Libyan Arab Jamahiriya	-	2	-	2	-	2	4	7	15	11
Morocco	1	1	-	4	5	23	38	37	57	46
Sudan	-	-	-	-	-	3	10	5	10	15
Tunisia	-	1	2	6	4	9	17	9	33	26
Other Africa	42	49	40	46	48	95	200	167	254	243
West Africa	-	1	4	7	3	27	59	34	75	60
Benin	-	-	-	-	-	-	1	-	-	-
Burkina Faso	-	-	-	-	-	-	1	1	3	-
Cape Verde	-	-	-	-	-	1	-	-	-	-
Côte d'Ivoire	-	-	1	3	1	-	1	-	2	2
Gambia	-	-	-	-	-	-	-	-	1	2
Ghana	-	-	1	-	-	2	16	5	16	11

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Annex table A.I.1. Number of greenfield FDI projects, by investor/destination region, 2002-2006 (continued)

Partner region/economy	World as destination					World as source				
	2002	2003	2004	2005	2005	2002	2003	2004	2005	2005
	By source					By destination				
Guinea	-	-	-	-	-	4	2	3	3	3
Guinea-Bissau	-	-	-	-	-	-	1	-	-	-
Liberia	-	-	-	-	-	-	-	-	2	-
Mali	-	-	-	-	-	-	-	-	3	3
Mauritania	-	-	-	-	-	1	2	1	3	4
Niger	-	-	-	-	-	-	1	-	-	1
Nigeria	-	1	2	3	2	17	27	20	38	26
Senegal	-	-	-	-	-	2	3	3	2	5
Sierra Leone	-	-	-	-	-	-	4	1	2	2
Togo	-	-	-	1	-	-	-	-	-	1
Central Africa	-	-	-	1	-	6	8	4	18	14
Burundi	-	-	-	-	-	-	1	-	-	-
Cameroon	-	-	-	1	-	2	2	1	1	1
Chad	-	-	-	-	-	1	-	-	-	-
Congo	-	-	-	-	-	-	1	1	-	-
Congo, Democratic Republic of	-	-	-	-	-	1	3	2	10	7
Equatorial Guinea	-	-	-	-	-	1	2	-	-	3
Gabon	-	-	-	-	-	-	-	-	4	3
Rwanda	-	-	-	-	-	-	-	-	2	-
São Tomé and Príncipe	-	-	-	-	-	-	-	-	1	-
East Africa	7	4	1	6	5	15	35	41	49	50
Djibouti	-	-	-	-	-	-	-	-	1	3
Eritrea	-	-	-	-	-	-	1	1	4	1
Ethiopia	-	-	-	-	-	-	2	1	1	3
Kenya	-	3	1	4	3	4	12	15	13	13
Madagascar	-	-	-	-	2	-	4	3	4	3
Mauritius	5	1	-	1	-	6	4	7	4	1
Reunion	-	-	-	-	-	-	-	-	-	1
Seychelles	-	-	-	-	-	1	-	2	3	-
Somalia	-	-	-	-	-	-	-	1	-	1
Uganda	2	-	-	1	-	2	5	5	8	17
United Republic of Tanzania	-	-	-	-	-	2	7	6	11	7
Southern Africa	35	44	35	32	40	47	98	88	112	119
Angola	1	-	2	-	-	6	15	16	18	15
Botswana	-	-	-	-	1	3	5	5	6	3
Lesotho	-	-	-	-	-	-	1	-	-	-
Mozambique	-	-	-	-	-	2	6	4	-	6
Namibia	-	-	-	-	1	1	3	5	7	4
South Africa	30	36	32	32	38	31	60	51	63	74
Swaziland	-	-	-	-	-	-	-	2	2	-
Zambia	-	-	-	-	-	4	5	4	14	15
Zimbabwe	4	8	1	-	-	-	3	1	2	2
Latin America and the Caribbean	75	131	158	81	121	565	799	801	558	559
South and Central America	72	124	146	74	103	528	748	750	527	526
South America	62	94	109	62	82	367	534	558	363	319
Argentina	15	15	19	2	16	44	64	74	41	48
Bolivia	-	-	-	-	-	10	9	14	2	7
Brazil	20	40	40	34	37	175	290	259	169	145
Chile	12	20	17	11	12	38	61	56	37	38
Colombia	4	4	15	-	2	26	43	47	46	30
Ecuador	-	1	-	1	1	11	9	21	4	4
Guyana	-	1	-	-	-	-	-	1	3	3
Paraguay	-	-	-	-	-	1	3	2	-	-
Peru	4	3	14	3	1	26	30	31	29	22
Suriname	-	-	-	-	-	1	2	-	-	-
Uruguay	2	3	1	-	-	12	5	10	7	6
Venezuela	5	7	3	11	13	23	18	43	25	16
Central America	10	30	37	12	21	161	214	192	164	207
Costa Rica	-	-	1	-	-	7	13	7	11	20
El Salvador	-	1	1	-	-	6	4	7	4	5
Guatemala	-	-	-	1	-	3	5	3	1	2

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Annex table A.I.1. Number of greenfield FDI projects, by investor/destination region, 2002-2006 (continued)

Partner region/economy	World as destination					World as source				
	2002	2003	2004	2005	2005	2002	2003	2004	2005	2005
	By source					By destination				
Honduras	-	-	4	1	2	4	7	5	2	2
Mexico	10	29	29	10	19	132	170	158	137	170
Nicaragua	-	-	-	-	-	3	8	1	1	3
Panama	-	-	2	-	-	6	7	11	8	5
Caribbean	3	7	12	7	18	37	51	51	31	33
Antigua and Barbuda	-	1	-	-	-	1	-	-	-	-
Aruba	-	-	-	-	-	-	1	-	1	-
Bahamas	-	2	2	1	1	2	3	1	2	-
Barbados	-	-	-	-	-	2	-	1	-	-
Cayman Islands	-	1	1	3	12	1	-	-	1	2
Cuba	-	1	-	-	-	4	6	5	5	1
Dominican Republic	-	1	1	1	-	7	11	9	7	7
Guadeloupe	-	-	-	-	-	-	1	-	-	1
Haiti	-	-	-	-	-	1	-	-	1	2
Jamaica	1	-	4	-	4	3	5	4	2	2
Martinique	-	-	-	-	-	-	1	-	-	1
Puerto Rico	1	1	4	-	-	12	19	29	7	12
Saint Lucia	-	-	-	1	-	-	1	-	-	-
Trinidad and Tobago	1	-	-	1	1	4	3	2	5	5
Asia and Oceania	579	1 227	1 096	1 183	1 549	1 627	3 362	3 766	3 456	4 217
Asia	579	1 227	1 096	1 183	1 547	1 624	3 355	3 759	3 454	4 213
West Asia	110	208	178	239	429	232	422	410	505	698
Bahrain	5	2	5	2	11	24	24	17	27	49
Iran, Islamic Republic of	2	2	8	7	8	10	29	23	10	9
Iraq	1	-	-	1	-	-	32	5	8	4
Jordan	-	6	2	6	12	4	15	11	23	31
Kuwait	8	14	15	14	43	4	7	21	11	21
Lebanon	6	4	8	11	16	8	20	23	11	17
Oman	-	1	1	-	-	10	11	14	14	37
Palestinian Territory	-	-	-	-	1	-	-	-	-	5
Qatar	3	3	12	9	20	14	22	27	24	43
Saudi Arabia	7	14	20	20	58	21	31	37	57	97
Syrian Arab Republic	1	1	-	-	-	2	8	6	24	16
Turkey	54	109	65	66	51	45	71	66	67	84
United Arab Emirates	22	49	41	103	209	88	146	156	226	282
Yemen	1	3	1	-	-	2	6	4	3	3
South, East and South-East Asia	469	1 019	918	944	1 118	1 392	2 933	3 349	2 949	3 515
East Asia	262	562	483	506	581	747	1 635	1 876	1 564	1 689
China	36	108	101	138	132	584	1 307	1 550	1 235	1 378
Korea, Democratic People's Republic of	-	-	-	-	-	-	1	-	-	2
Hong Kong, China	44	128	101	96	112	59	90	128	126	152
Macao, China	-	1	-	-	-	2	3	6	8	4
Mongolia	-	-	1	-	-	2	6	2	8	3
Korea, Republic of	117	181	171	183	215	59	113	106	119	84
Taiwan Province of China	65	144	109	89	122	41	115	84	68	66
South Asia	93	185	208	232	301	281	510	739	683	1 039
Afghanistan	-	-	-	-	-	3	6	4	5	3
Bangladesh	1	1	-	4	2	9	17	7	7	10
Bhutan	-	-	-	-	-	-	-	-	-	2
India	90	176	202	217	291	246	453	696	590	981
Maldives	-	-	-	-	-	1	-	-	-	5
Nepal	-	-	-	-	-	1	1	1	-	1
Pakistan	2	6	3	6	4	13	23	20	69	27
Sri Lanka	-	2	3	5	4	8	10	11	12	10
South-East Asia	114	272	227	206	236	364	788	734	702	787
Brunei Darussalam	-	-	-	2	-	1	2	2	4	-
Cambodia	-	-	-	-	-	1	5	7	6	5

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Annex table A.I.1. Number of greenfield FDI projects, by investor/destination region, 2002-2006 (concluded)

Partner region/economy	World as destination					World as source				
	2002	2003	2004	2005	2005	2002	2003	2004	2005	2005
	By source					By destination				
Timor-Leste	-	-	-	-	-	-	1	-	1	-
Indonesia	4	9	9	9	5	31	62	59	77	93
Lao People's Democratic Republic	-	-	-	-	-	-	5	3	8	8
Malaysia	42	83	77	73	71	79	186	125	94	123
Myanmar	-	-	-	-	-	1	5	1	-	2
Philippines	2	31	14	6	9	29	74	75	65	60
Singapore	56	90	102	85	98	108	155	175	159	189
Thailand	4	36	18	19	36	60	161	126	117	111
Viet Nam	6	23	7	12	17	54	132	161	171	196
Oceania	-	-	-	-	2	3	7	7	2	4
Fiji	-	-	-	-	-	-	3	-	-	1
Micronesia, Federated States of	-	-	-	-	1	-	-	-	-	1
New Caledonia	-	-	-	-	-	2	-	3	1	-
Papua New Guinea	-	-	-	-	-	1	4	4	1	2
Samoa	-	-	-	-	1	-	-	-	-	-
South-East Europe and CIS	75	173	191	201	227	579	1 011	991	1 307	1 398
South-East Europe	21	21	39	27	33	300	352	409	550	784
Albania	2	-	1	-	-	12	9	7	13	11
Bosnia and Herzegovina	1	-	1	2	-	15	28	19	26	17
Bulgaria	1	10	15	6	6	77	97	108	140	286
Croatia	5	3	11	6	7	33	44	41	46	37
Romania	3	5	9	13	13	113	116	177	261	362
Serbia and Montenegro	7	2	2	-	7	42	48	50	53	46
TFY Rep. of Macedonia	2	1	-	-	-	8	10	7	11	25
CIS	54	152	152	174	194	279	659	582	757	614
Armenia	-	1	-	2	1	2	16	6	12	8
Azerbaijan	1	4	1	4	2	9	25	26	20	13
Belarus	-	-	6	2	7	1	15	11	11	21
Georgia	1	-	1	-	-	4	4	6	11	10
Kazakhstan	-	3	7	12	5	6	36	30	29	24
Kyrgyzstan	-	2	-	1	-	-	6	1	3	3
Moldova, Republic of	-	-	-	-	-	5	8	14	13	6
Russian Federation	51	120	109	139	156	200	429	382	512	386
Tajikistan	-	-	-	-	-	-	6	4	6	2
Turkmenistan	-	-	-	-	-	5	13	3	1	-
Ukraine	1	22	28	14	23	28	71	84	125	124
Uzbekistan	-	-	-	-	-	19	30	15	14	17

Source: UNCTAD, based on information from OCO consulting, LOCOMONITOR website (www.locomonitor.com).

Note: The database includes new FDI projects and expansions of existing projects both announced and realized. Because of non-availability of data on the value of most projects, only the number of cases can be used. Data from this database are available from 2002 onwards only.

Annex table A.I.2. Number of greenfield FDI projects, by sector/industry, 2002-2006

Sector/industry	2002	2003	2004	2005	2006
Primary	267	568	374	469	492
Energy	267	568	374	469	492
Manufacturing	3 319	5 682	6 121	6 011	6 369
Food, beverages and tobacco	432	710	772	693	744
Food and drink	420	685	757	676	734
Tobacco	12	25	15	17	10
Textiles	275	419	588	409	498
Wood and wood products	129	229	202	203	183
Wood products	65	105	96	100	73
Paper and packaging	64	124	106	103	110
Chemicals and chemical products	394	722	716	607	649
Pharmaceuticals	117	208	203	200	195
Biotechnology	54	64	86	90	85
Chemicals	223	450	427	317	369
Plastics and rubber	149	273	302	328	341
Building materials, ceramics and glass	81	169	182	191	214
Metals/mining	234	472	411	598	469
Machinery and industrial goods	159	351	441	474	565
Electrical and electronic equipment	571	998	1 107	1 194	1 160
Electronic components	136	229	273	307	313
Semiconductors	132	218	245	183	224
Telecom equipment	121	173	184	292	282
Consumer electronics	122	249	228	236	195
Business machines and equipment	60	129	177	176	146
Motor vehicles and other transport equipment	661	942	970	905	955
Automotive equipment	254	377	354	328	331
Auto components	283	425	446	404	406
Other transport equipment	23	41	51	49	57
Aerospace	101	99	119	124	161
Consumer products	234	397	430	409	591
Services	2 117	3 193	3 650	3 962	4 952
Hotels, tourism and leisure	352	525	480	406	480
Telecom services	138	170	180	238	275
Financial services	384	638	643	793	1 101
Business activities	1 170	1 732	2 211	2 400	2 918
Real estate	127	236	226	262	487
Business services	221	374	458	493	692
IT and software	646	908	1 160	1 172	1 232
Logistics and distribution	176	214	367	473	507
Health care	73	128	136	125	178
Total	5 703	9 443	10 145	10 442	11 813

Source: UNCTAD, based on information from OCO consulting, LOCOMonitor website (www.locomonitor.com).

Annex table A.1.3. Cross-border M&A deals with values of over \$1 billion completed in 2006

Rank	Value (\$billion)	Target company	Target nation	Target industry	Acquiring company	Acquiring nation	Acquiring industry
1	32.2	Arcelor SA	Luxembourg	Steel works, blast furnaces, and rolling mills	Mittal Steel Co NV	Netherlands	Steel works, blast furnaces, and rolling mills
2	31.7	O2 PLC	United Kingdom	Radiotelephone communications	Telefónica SA	Spain	Telephone communications, except radiotelephone
3	21.8	BAA PLC	United Kingdom	Airports and airport terminal services	Airport Development	Spain	Special purpose finance company
4	17.4	Falconbridge Ltd	Canada	Ferroalloy ores, except vanadium	Xstrata PLC	Switzerland	Bituminous coal underground mining
5	17.2	Inco Ltd	Canada	Ferroalloy ores, except vanadium	Cia Vale do Rio Doce SA	Brazil	Iron ores
6	14.1	BOC Group PLC	United Kingdom	Industrial gases	Linde AG	Germany	General industrial machinery and equipment
7	13.6	Lucent Technologies Inc	United States	Telephone & telegraph apparatus	Alcatel SA	France	Communications equipment, nec
8	10.6	TDC A/S	Denmark	Telephone communications, except radiotelephone	Nordic Telephone Co ApS	United States	Telephone communications, except radiotelephone
9	10.0	Winterthur Schweizerische	Switzerland	Life insurance	AXA SA	France	Life insurance
10	9.6	VNU NV	Netherlands	Periodicals: publishing, or publishing & printing	Valcon Acquisition BV	United States	Special purpose finance company
11	9.5	Philips Semiconductors	Netherlands	Semiconductors and related devices	Investor Group ^a	United States	Investors, nec
12	8.7	Glamis Gold Ltd	United States	Gold ores	Goldcorp Inc	Canada	Gold ores
13	7.8	GE Insurance Solutions Corp	United States	Fire, marine, and casualty insurance	Swiss Reinsurance Co	Switzerland	Life insurance
14	7.4	IVAX Corp	United States	Pharmaceutical preparations	Teva Pharma Inds Ltd	Israel	Pharmaceutical preparations
15	6.9	Peninsular & Oriental Steam	United Kingdom	Deep sea foreign transportation of freight	Thunder FZE	United Arab Emirates	Marine cargo handling
16	6.2	Chiron Corp	United States	Biological products, except diagnostic substances	Novartis AG	Switzerland	Pharmaceutical preparations
17	6.0	Foersaerings AB Skandia	Sweden	Life insurance	Old Mutual PLC	United Kingdom	Investment advice
18	5.9	Banca Nazionale del Lavoro SpA	Italy	Banks	BNP Paribas SA	France	Banks
19	5.8	Altana Pharma AG	Germany	Pharmaceutical preparations	Nycomed A/S	Denmark	Investors, nec
20	5.7	Hilton International Co	United Kingdom	Hotels and motels	Hilton Hotels Corp	United States	Hotels and motels
21	5.4	KarstadQuelle AG	Germany	Operators of nonresidential buildings	Whitehall Street Fund	United States	Management investment offices, open-end
22	5.4	Westinghouse Electric Co LLC	United States	Electric services	Investor Group ^a	Japan	Investors, nec
23	5.2	Banca Nazionale del Lavoro SpA	Italy	Banks	BNP Paribas SA	France	Banks
24	5.1	KION Group	Germany	Industrial trucks, tractors, trailers, & stackers	Investor Group	United States	Investors, nec
25	5.0	Iscar Ltd	Israel	Cutting tools and machine tool accessories	Berkshire Hathaway Inc	United States	Fire, marine, and casualty insurance
26	4.9	Brambles Industries PLC	United Kingdom	Equipment rental and leasing, nec	Brambles Industries Ltd	Australia	Equipment rental and leasing, nec
27	4.9	Engelhard Corp	United States	Chemicals and chemical preparations, nec	BASF AG	Germany	Industrial organic chemicals, nec
28	4.8	ATI Technologies Inc	Canada	Prepackaged software	AMD	United States	Semiconductors and related devices
29	4.8	SANEF	France	Highway and street construction	Investor Group	Spain	Investors, nec
30	4.7	Dofasco Inc	Canada	Steel works, blast furnaces, and rolling mills	Arcelor SA	Luxembourg	Steel works, blast furnaces, and rolling mills
31	4.7	Banca Comerciala Romana	Romania	Banks	Erste Bank der	Austria	Banks
32	4.6	Spirit Group Ltd	United Kingdom	Drinking places (alcoholic beverages)	Punch Taverns PLC	United Kingdom	Eating places
33	4.6	GTECH Holdings Corp	United States	Prepackaged software	Lottomatica SpA	Italy	Amusement and recreation svcs
34	4.6	TELSIM Mobil Telekomunikasyon	Turkey	Radiotelephone communications	Vodafone Group PLC	United Kingdom	Radiotelephone communications
35	4.4	Banca Antonveneta SpA	Italy	Banks	ABN AMRO Bank NV	Netherlands	Banks
36	4.4	Hutchison Port Holdings Ltd	Hong Kong, China	Marine cargo handling	PSA Corp Ltd	Singapore	Regulation and administration of transportation
37	4.2	Reebok International Ltd	United States	Rubber and plastics footwear	Adidas-Salomon AG	Germany	Rubber and plastics footwear
38	4.1	PagesJaunes Groupe SA	France	Miscellaneous publishing	Mediamuaire	France	Investment offices, nec
39	4.0	Renal Care Group Inc	United States	Kidney dialysis centers	Fresenius Medical Care AG & Co	Germany	Electromedical and electrotherapeutic apparatus
40	3.9	General Healthcare Group PLC	United Kingdom	General medical and surgical hospitals	Investor Group	South Africa	Investors, nec
41	3.7	Telefónica Publicidad	Spain	Miscellaneous publishing	Yell Group PLC	United Kingdom	Miscellaneous publishing
42	3.6	Fairmont Hotels & Resorts Inc	Canada	Hotels and motels	Nova Scotia Ltd	Saudi Arabia	Investors, nec
43	3.5	Airbus SAS	France	Aircraft	EADS NV	Germany	Aircraft
44	3.5	OAO Udmurtneft	Russian Federation	Crude petroleum and natural gas	Sinopec	China	Petroleum refining
45	3.4	Houghton Mifflin Co	United States	Books: publishing, or publishing & printing	HM Rivergroup PLC	Ireland	Investors, nec
46	3.3	Avio SpA	Italy	Aircraft engines and engine parts	Cinven Group Ltd	United Kingdom	Investors, nec
47	3.2	Select Service Partner	Sweden	Eating places	Moto Investments Ltd	United Kingdom	Special purpose finance company

Annex table A.I.3. Cross-border M&A deals with values of over \$1 billion completed in 2006 (continued)

Rank	Value (\$ billion)	Target company	Target nation	Target industry	Acquiring company	Acquiring nation	Acquiring industry
48	3.1	Maverick Tube Corp	United States	Steel pipes and tubes	Tenaris SA	Argentina	Steel pipes and tubes
49	3.1	Kerzner International Ltd	Bahamas	Hotels and motels	Investor Group	United States	Investors, nec
50	3.1	PanAmSat Holding Corp	United States	Communications services, nec	Intelsat Ltd	Bermuda	Communications services, nec
51	3.0	Viridian Group PLC	United Kingdom	Electricity services	Electricinvest Acquisitions	United Kingdom	Special purpose finance company
52	3.0	Seven Network Ltd-Television	Australia	Television broadcasting stations	Kohberg Kravis Roberts & Co Ltd	United States	Investors, nec
53	3.0	Pilkington PLC	United Kingdom	Glass products, made of purchased glass	Nippon Sheet Glass Co Ltd	Japan	Flat glass
54	3.0	Lafarge North America	United States	Cement, hydraulic	Lafarge SA	France	Cement, hydraulic
55	2.9	VenFin Ltd	South Africa	Radiotelephone communications	Vodafone Group PLC	United Kingdom	Radiotelephone communications
56	2.9	Trizec Properties Inc	United States	Real estate investment trusts	Investor Group	Canada	Investors, nec
57	2.8	Finansbank AS	Turkey	Banks	National Bank of Greece SA	Greece	Banks
58	2.8	AmerUS Group Co	United States	Life insurance	Aviva PLC	United Kingdom	Life insurance
59	2.7	NNPC-OML 130	Nigeria	Crude petroleum and natural gas	CNOOC Ltd	China	Crude petroleum and natural gas
60	2.7	Immeo Wohnen Service GmbH	Germany	Real estate agents and managers	FDL	France	Real estate agents and managers
61	2.7	Emporiki Bank SA	Greece	Banks	Credit Agricole SA	France	Banks
62	2.6	Casema NV	Netherlands	Cable and other pay television services	Investor Group	United States	Investors, nec
63	2.6	Banco Pactual SA	Brazil	Security brokers, dealers, and flotation companies	UBS AG	Switzerland	Banks
64	2.6	Pakistan Telecom Co Ltd	Pakistan	Telephone communications, except radiotelephone	ETISALAT	United Arab Emirates	Telephone communications, except radiotelephone
65	2.6	Dreyers Grand Ice Cream Inc	United States	Ice cream and frozen desserts	Dreyers Grand Ice Cream Inc	United States	Ice cream and frozen desserts
66	2.6	Banca Antonveneta SpA	Italy	Banks	ABN AMRO Bank NV	Netherlands	Banks
67	2.6	Weather Investments Srl	Italy	Special purpose finance company	Naguib Sawiris	Egypt	Investors, nec
68	2.5	Waste Recycling Group PLC	United Kingdom	Refuse systems	Fomento de Construcciones	Spain	Residential construction, nec
69	2.5	DT Group A/S	Denmark	Lumber and other building materials dealers	Wolseley PLC	United Kingdom	Plumbing & heating equipment & supplies(hydraulics)
70	2.5	AWAS	United States	Airports and airport terminal services	Terra Firma Capital Partners	United Kingdom	Investors, nec
71	2.5	Wind Telecomunicazioni SpA	Italy	Telephone communications, except radiotelephone	Weather Investments Srl	Egypt	Special purpose finance company
72	2.4	DenizBank Financial Services	Turkey	Banks	Dexia Participation Belgique	Belgium	Banks
73	2.4	PLIVA dd	Croatia	Pharmaceutical preparations	Barr Pharmaceuticals Inc	United States	Pharmaceutical preparations
74	2.4	Western Geco	United Kingdom	Metal mining services	Schlumberger Ltd	France	Crude petroleum and natural gas
75	2.4	Sovereign Bancorp Inc, PA	United States	Offices of bank holding companies	Santander Central Hispano SA	Spain	Banks
76	2.3	Capio AB	Sweden	General medical and surgical hospitals	Opica AB	Sweden	Special purpose finance company
77	2.3	Tunisie-Telecoms	Tunisia	Telephone communications, except radiotelephone	Investor Group	United Arab Emirates	Investors, nec
78	2.3	Finansbank AS	Turkey	Banks	National Bank of Greece SA	Greece	Banks
79	2.2	Unilever PLC-European food bus.	United Kingdom	Frozen specialties, nec	Permira Beteiligungsberatung	Germany	Investors, nec
80	2.2	Texas Regional Bancshares	United States	Banks	BBVA SA	Spain	Banks
81	2.1	Marconi Corp.	United Kingdom	Telephone & telegraph apparatus	LM Ericsson Telefon AB	Sweden	Telephone & telegraph apparatus
82	2.1	Woba Dresden GmbH	Germany	Real estate agents and managers	Fortress Investment Group LLC	United States	Investors, nec
83	2.1	Eircom Group PLC	Ireland	Telephone communications, except radiotelephone	BCM Ireland Holdings Ltd	Ireland	Investors, nec
84	2.1	Verizon Dominicana	Dominican Republic	Telephone communications, except radiotelephone	America Movil SA de CV	Mexico	Radiotelephone communications
85	2.1	BlackRock Ventures Inc	Canada	Crude petroleum and natural gas	Shell Canada Ltd	Canada	Crude petroleum and natural gas
86	2.0	Nations Energy Co Ltd	Canada	Crude petroleum and natural gas	CITIC Group Ltd	China	Investors, nec
87	1.9	Mobi63	Serbia and Montenegro	Radiotelephone communications	Telenor ASA	Norway	National government agency
88	1.9	Hudson United Bancorp	United States	State banks	TD Banknorth Inc	United States	State banks
89	1.9	TNT NV-Logistics Division	Netherlands	Courier services, except by air	Apollo Management LP	United States	Management investment offices, open-end
90	1.9	Marfin Financial Group SA	Greece	Security brokers, dealers, and flotation companies	Cyprus Popular Bank Ltd	Cyprus	Banks
91	1.9	TNT-Arvil SpA	Italy	Courier services, except by air	Apollo Management LP	United States	Management investment offices, open-end

Annex table A.I.3. Cross-border M&A deals with values of over \$1 billion completed in 2006 (continued)

Rank	Value (\$ billion)	Target company	Target nation	Target industry	Acquiring company	Acquiring nation	Acquiring industry
92	1.9	MTU Motoren- und Turbinen	Germany	Motor vehicle parts and accessories	EQT Partners AB	Sweden	Investors, nec
93	1.9	Shin Corp PCL	Thailand	Telephone communications, except radiotelephone	Investor Group	Singapore	Investors, nec
94	1.8	Shin Corp PCL	Thailand	Telephone communications, except radiotelephone	Investor Group	Singapore	Investors, nec
95	1.8	Fraklin SA	France	Truck rental and leasing	CVC Capital Partners Ltd	United Kingdom	Investors, nec
96	1.8	Grupo Banistimo SA	Panama	Banks	HSBC	United Kingdom	Banks
97	1.8	Diagnostic Products Corp	United States	In vitro and in vivo diagnostic substances	Siemens Medical Solutions Inc	United States	Electromedical and electrotherapeutic apparatus
98	1.8	Sequana Capital SA	France	Paper mills	Sequana Capital SA	France	Paper mills
99	1.8	Heritage Ppty Invest Trust Inc	United States	Real estate investment trusts	Centro Properties Group	Australia	Real estate investment trusts
100	1.7	Goldfish Bank Ltd	United Kingdom	Banks	Morgan Stanley	United States	Security brokers, dealers, and flotation companies
101	1.7	Carbones del Cerrejon SA	Colombia	Bituminous coal and lignite surface mining	Xstrata PLC	Switzerland	Bituminous coal underground mining
102	1.7	Virgin Mobile	United Kingdom	Radiotelephone communications	NTL Inc	United States	Telephone communications, except radiotelephone
103	1.6	tele.ring Telekom Service GmbH	Austria	Telephone communications, except radiotelephone	T-Mobile Austria	Austria	Telephone communications, except radiotelephone
104	1.6	HSB Nordbank AG	Germany	Banks	Investor Group	United States	Investors, nec
105	1.6	Marine Harvest Invest BV	Netherlands	Animal aquaculture	Pan Fish ASA	Norway	Animal aquaculture
106	1.6	Tommy Hilfiger Corp	Hong Kong, China	Men's shirts and nightwear	Apax Europe VI Fund	United Kingdom	Investment offices, nec
107	1.6	Intrawest Corp	Canada	Amusement and recreation services	Fortress Investment Group LLC	United States	Investors, nec
108	1.6	Summit Real Estate Invest. Trust	Canada	Real estate investment trusts	ING Real Estate Canada Trust	Canada	Real estate investment trusts
109	1.6	M-Systems Flash Disk Pioneers	Israel	Semiconductors and related devices	SanDisk Corp	United States	Computer storage devices
110	1.6	SANEF	France	Highway and street construction	Investor Group	Spain	Investors, nec
111	1.5	Royal Group Technologies Ltd	Canada	Laminated plastics plate, sheet and profile shapes	Georgia Gulf Corp	United States	Industrial inorganic chemicals, nec
112	1.5	Excel Coal Ltd	Australia	Bituminous coal and lignite surface mining	Peabody Energy Corp	United States	Bituminous coal and lignite surface mining
113	1.5	Qentri Parcs UK	United Kingdom	Land subdividers and developers, except cemeteries	Blackstone Group LP	United States	Investors, nec
114	1.5	HQI Transelec Chile SA	Chile	Electric services	Investor Group	United States	Investors, nec
115	1.5	NS Group Inc	United States	Steel works, blast furnaces, and rolling mills	IPSCO Inc	Canada	Steel works, blast furnaces, and rolling mills
116	1.5	Eastern Multimedia Co Ltd	Taiwan Province of China	Cable and other pay television services	Cartlyle Group LLC	United States	Investment offices, nec
117	1.5	UPC France SA	France	Cable and other pay television services	Investor Group	United Kingdom	Investors, nec
118	1.5	Scania AB	Sweden	Motor vehicles and passenger car bodies	MAN AG	Germany	Truck and bus bodies
119	1.5	GATX Corp (Aircraft Leasing)	United States	Equipment rental and leasing, nec	Macquarie Aircraft Leasing Ltd	Australia	Investors, nec
120	1.4	PanAfrican Energy Corp	Mauritius	Crude petroleum and natural gas	Adax Petroleum Corp	Canada	Crude petroleum and natural gas
121	1.4	EnCana Corp-Ecuador Assets	Ecuador	Crude petroleum and natural gas	Andes Petroleum Co	China	Crude petroleum and natural gas
122	1.4	East Asiatic Co (Singapore) Pte	Singapore	Canned specialties	Koninklijke Numico NV	Netherlands	Crude petroleum and natural gas products
123	1.4	PetroKazakhstan Inc	Canada	Crude petroleum and natural gas	KazMunayGas JSC	Kazakhstan	Crude petroleum and natural gas
124	1.3	Cleanaway Australia	Australia	Refuse systems	Kohlberg Kravis Roberts & Co	United States	Investors, nec
125	1.3	MobiTel	Sudan	Radiotelephone communications	MTC Kuwait	Kuwait	Radiotelephone communications
126	1.3	Vincor International Inc	Canada	Wines, brandy, and brandy spirits	Constellation Brands Inc	United States	Wines, brandy, and brandy spirits
127	1.3	KanAm Intl-Office Portfolio	France	Operators of nonresidential buildings	Mines de la Lucette	France	Real estate investment trusts
128	1.3	Pioneer Natural Resources Co	United States	Crude petroleum and natural gas	Marubeni Offshore Production (USA)	United States	Crude petroleum and natural gas
129	1.3	Ashland Paving & Constr Inc	United States	Asphalt paving mixtures and blocks	Oldcastle Materials Inc	United States	Construction machinery and equipment
130	1.3	SR Technics Switzerland SA	Switzerland	Aircraft	Investor Group	United Arab Emirates	Investors, nec
131	1.3	Sanofi-Aventis SA-insulin	Germany	Pharmaceutical preparations	Pfizer Inc	United States	Pharmaceutical preparations
132	1.3	Eiffage SA	France	Residential construction, nec	Sacyr Vallehermoso SA	Spain	Residential construction, nec
133	1.3	Travelodge Hotels Ltd	United Kingdom	Hotels and motels	Dubai International Capital	United Arab Emirates	Investors, nec
134	1.3	Finanziaria di Sviluppo SpA	Italy	Personal credit institutions	Credit Agricole SA	France	Banks
135	1.3	South East Water PLC	United Kingdom	Water supply	Haslings Funds Management Ltd	Australia	Investment advice
136	1.3	MOL Foldgazellato Rt	Hungary	Petroleum and petroleum products wholesalers, nec	E. ON Ruhrgas International	Germany	Crude petroleum and natural gas

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Annex table A.I.3. Cross-border M&A deals with values of over \$1 billion completed in 2006 (concluded)

Rank	Value (\$ billion)	Target company	Target nation	Target industry	Acquiring company	Acquiring nation	Acquiring industry
137	1.3	Axa Financial Center	United States	Operators of nonresidential buildings	Hudson Waterfront Associates	Hong Kong, China	Land subdividers and developers, except cemeteries
138	1.2	Bank of America (Asia) Ltd	Hong Kong, China	Banks	China Construction Bank Corp	China	Banks
139	1.2	Vodafone Sverige AB	Sweden	Radiotelephone communications	Telenor ASA	Norway	National government agency
140	1.2	Doncasters PLC	United Kingdom	Aircraft parts equipment	Dubai International Capital	United Arab Emirates	Investors, nec
141	1.2	BSN Medical GmbH & Co KG	Germany	Electromedical and electrotherapeutic apparatus	Montagu Private Equity Ltd	United Kingdom	Investors, nec
142	1.2	HVB Spitziska Banka dd	Croatia	Banks	Societe Generale SA	France	Banks
143	1.2	Hardman Resources Ltd	Australia	Crude petroleum and natural gas	Tullow Oil PLC	United Kingdom	Crude petroleum and natural gas
144	1.2	com hem AB	Sweden	Cable and other pay television services	Investor Group	United States	Investors, nec
145	1.2	Quilmes Industrial SA	Argentina	Malt beverages	AmBev	Brazil	Malt beverages
146	1.2	280 Park Ave, New York, NY	United States	Operators of nonresidential buildings	Isithmar PJSC	United Arab Emirates	Investors, nec
147	1.2	Orkla Media AS	Norway	Newspapers: publishing, or publishing & printing	Mecom Group plc	United Kingdom	Books: publishing, or publishing & printing
148	1.2	Intermagnetics General Corp	United States	Electromedical and electrotherapeutic apparatus	Philips Electronic	Netherlands	Household audio and video equipment
149	1.2	Pirelli/MS-Mortgage(5)	Italy	Real estate agents and managers	Calyon/Pirelli Re	Italy	Real estate agents and managers
150	1.2	OYL Industries Bhd	Malaysia	Refrigeration and heating equipment	Daikin Industries Ltd	Japan	Refrigeration and heating equipment
151	1.2	Hsinchu International Bank	Taiwan Province of China	Banks	Standard Chartered Bank PLC	United Kingdom	Banks
152	1.1	Body Shop International PLC	United Kingdom	Perfumes, cosmetics, and other toilet preparations	L'Oréal SA	France	Perfumes, cosmetics, and other toilet preparations
153	1.1	AEP Texas Central Co-Coletto	United States	Electric services	International Power PLC	United Kingdom	Electric services
154	1.1	Akeler Holdings SA	Luxembourg	Land subdividers and developers, except cemeteries	Arlington Business Parks	United Kingdom	Real estate investment trusts
155	1.1	Bax Global Inc	United States	Air transportation, nonscheduled	Deutsche Bahn AG	Germany	Railroads, line-haul operating
156	1.1	Cleanaway Ltd	United Kingdom	Refuse systems	Veolia ES Holdings PLC	United Kingdom	Irrigation systems
157	1.1	Slovenske Elektroarne as	Slovakia	Electric services	Enel SPA	Italy	Electric services
158	1.1	United Biscuits-European Business	Spain	Cookies and crackers	Kraft Foods Inc	United States	Dry, condensed, and evaporated dairy products
159	1.1	Punch Taverns PLC	United Kingdom	Eating places	Orchid Pubs Ltd	United Kingdom	Special purpose finance company
160	1.1	Petrol Ofisi AS	Turkey	Petroleum refining	OMV AG	Austria	Crude petroleum and natural gas
161	1.1	555 California Owners LLC	United States	Operators of nonresidential buildings	Hudson Waterfront Associates	Hong Kong, China	Land subdividers and developers, except cemeteries
162	1.1	WL Homes LLC	United States	Land subdividers and developers, except cemeteries	EMAAR Properties PJSC	United Arab Emirates	Land subdividers and developers, except cemeteries
163	1.0	Deutsch Group	United States	Current-carrying wiring devices	Investor Group	France	Investors, nec
164	1.0	Cora	France	Grocery stores	Louis Delhaize SA	Belgium	Grocery stores
165	1.0	Merry Hill	United Kingdom	Operators of nonresidential buildings	Queensland Investment Corp	Australia	Investors, nec
166	1.0	Coles Myer-Myer department store business	Australia	Department stores	Investor Group	United States	Investors, nec
167	1.0	Boart Longyear	United States	Special industry machinery, nec	Resources Services Holdings	Australia	Special purpose finance company
168	1.0	Western Silver Corp	Canada	Silver ores	Glamis Gold Ltd	United States	Gold ores
169	1.0	Burns Philip & Co Ltd	Australia	Cookies and crackers	Rank Group Ltd	New Zealand	Investors, nec
170	1.0	Corus Group PLC-Aluminium	Germany	Aluminum rolling and drawing, nec	Aleris International Inc	United States	Scrap and waste materials
171	1.0	Geac Computer Corp Ltd	Canada	Computer integrated systems design	Golden Gate Capital	United States	Investors, nec
172	1.0	Motorola Inc ^a automotive electronics	United States	Radio & TV broadcasting & communications equipment	Continental AG	Germany	Tires and inner tubes

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

^a The main acquirer was Toshiba Corp.

Note: Whenever separate transactions were made involving the same companies, they are considered as different deals. Such is the case in the following: Banca Nazionale del Lavoro SpA with BNP Paribas SA, SANEF with an investor group, Banca Antonveneta SpA with ABN AMRO Bank NV, Finansbank AS with National Bank of Greece SA and Shim Corp PCL with an investor group.

Annex A.I.4. Selected large 50 cross-border M&As involving collective investment funds^a, completed in 2006

Value in \$ million	Target company	Target country	Industry of the target company	Financial investors	Investors' country
9 476	Philips Semiconductors	Netherlands	Semiconductors and related devices	Investor Group	United States
5 753	Altana Pharma AG	Germany	Pharmaceutical preparations	Nycomed A/S ^b	Denmark
3 640	Fairmont Hotels & Resorts Inc	Canada	Hotels and motels	Nova Scotia Ltd	Saudi Arabia
3 360	Houghton Mifflin Co	United States	Books: publishing, or publishing & printing	HM Rivergroup PLC	Ireland
3 314	Avio SpA	Italy	Aircraft engines and engine parts	Cinven Group Ltd	United Kingdom
3 025	Seven Network Ltd-Television,	Australia	Television broadcasting stations	Kohlberg Kravis Roberts & Co	United States
2 581	Weather Investments Srl	Italy	Special purpose finance company	Naguib Sawiris	Egypt
2 500	AWAS	United States	Airports and airport terminal services	Terra Firma Capital Partners	United Kingdom
2 202	Unilever PLC-European Frozen	United Kingdom	Frozen specialties, nec	Permira Beteiligungsberatung	Germany
2 085	Woba Dresden GmbH	Germany	Real estate agents and managers	Fortress Investment Group LLC	United States
2 083	Eircom Group PLC	Ireland	Telephone communications, except radiotelephone	BCM Ireland Holdings Ltd	Ireland
1 956	Nations Energy Co Ltd	Canada	Crude petroleum and natural gas	CITIC Group Ltd	China
1 893	MTU Motoren- und Turbinen	Germany	Motor vehicle parts and accessories	EQT Partners AB	Sweden
1 783	Fraikin SA	France	Truck rental and leasing, without drivers	CVC Capital Partners Ltd	United Kingdom
1 580	Intrawest Corp	Canada	Amusement and recreation svcs	Fortress Investment Group LLC	United States
1 528	Center Parcs UK-Parks(4)	United Kingdom	Land subdividers and developers, except cemeteries	Blackstone Group LP	United States
1 460	GATX Corp-Aircraft Leasing	United States	Equipment rental and leasing, nec	Macquarie Aircraft Leasing Ltd	Australia
1 346	Cleanaway Australia	Australia	Refuse systems	Kohlberg Kravis Roberts & Co	United States
1 270	Travelodge Hotels Ltd	United Kingdom	Hotels and motels	Dubai International Capital	United Arab Emirates
1 241	Doncasters PLC	United Kingdom	Aircraft parts,equipment	Dubai International Capital	United Arab Emirates
1 238	BSN Medical GmbH & Co KG	Germany	Electromedical and electrotherapeutic apparatus	Montagu Private Equity Ltd	United Kingdom
1 200	280 Park Ave,New York,NY	United States	Operators of nonresidential buildings	Istithmar PJSC	United Arab Emirates
1 030	Merry Hill	United Kingdom	Operators of nonresidential buildings	Queensland Investment Corp	Australia
1 006	Burns Philp & Co Ltd	Australia	Cookies and crackers	Rank Group Ltd	New Zealand
1 003	Geac Computer Corp Ltd	Canada	Computer integrated systems design	Golden Gate Capital	United States
850	Flextronics Software Sys Ltd	India	Computer related services,nec	Kohlberg Kravis Roberts & Co	United States
825	Korea Exchange Bank	Korea, Republic of	Banks	Lone Star Funds	United States
825	Undisclosed US Toll Roads	United States	Highway and street construction	Macquarie Infrastructure	United States
818	Paroc Group Oy AB	Finland	Mineral wool	Arcapita Ltd	United Kingdom
810	Mey Icki Sanayi Ltd	Turkey	Malt beverages	Texas Pacific Group Inc	United States
782	Hospitality Europe BV	Netherlands	Hotels and motels	Blackstone Group LP	United States
765	Aearo Technologies Inc	United States	Manufacturing industries, nec	Permira Beteiligungsberatung	Germany
751	Kokudo Corp	Japan	Amusement and recreation svcs	Cerberus Asia Capital Mgmt LLC	United States
750	Rank Group PLC-Deluxe Film Bus	United Kingdom	Services allied to motion picture distribution	DX III Holdings Corp	United Kingdom
717	Aon Warranty Group Inc	United States	Insurance carriers, nec	Onex Partners LP	Canada
705	Cellnet Technology Inc	United States	Communications services, nec	Bayard Group	Australia
630	Dorna Sports SL	Spain	Advertising agencies	Bridgepoint Capital Ltd	United Kingdom
617	EurotaxGlass's Intl AG	Switzerland	Computer related services,nec	Candover Investments PLC	United Kingdom
614	Sara Lee Corp-Meats Business	Netherlands	Meat packing plants	Groupe Smithfield SL	France
594	Adelphi	United Kingdom	Operators of nonresidential buildings	Istithmar PJSC	United Arab Emirates
591	Riverdeep Holdings Ltd	United States	Books: publishing, or publishing & printing	HM Rivergroup PLC	Ireland
590	Asia Commercial Bank Ltd	Hong Kong, China	Banks	JCG Holdings Ltd	Hong Kong, China
586	Kabel Deutschland GmbH & Co KG	Germany	Cable and other pay television services	Providence Equity Partners LLC	United States
575	Hyatt Regency Hotels & Tourism	Greece	Hotels and motels	BC Partners Ltd	United Kingdom
517	CCC Information Services Group	United States	Computer programming services	Investcorp International Inc	United States
512	HellermannTyton	United States	Telephone&telegraph apparatus	Doughty Hanson & Co Ltd	United Kingdom
490	Aster City Cable Sp Zoo	Poland	Cable and other pay television services	MEP	United Kingdom
473	Wehkamp	Netherlands	Misc personal services	Industri Kapital AB	Sweden
460	JP Morgan Chase & Co-Comml	United States	Operators of nonresidential buildings	Real Estate Opportunity Fund	Canada
420	Air Serv Holdings LLC	United States	Service industry machines, nec	Macquarie Capital Alliance	Australia

Source: UNCTAD cross-border M&As database.

^a Private equity funds as well as other funds such as hedge funds are included. They are defined here to include funds managed by firms in the following industries: investment advice, investment offices not elsewhere classified, management investment offices and investors not elsewhere classified.

^b Private equity firm Avista Capital Partners (United States) partly paid the transaction costs.

Annex table A.I.5. Number of parent corporations and foreign affiliates, by region and economy, latest year available
(Number)

Region/economy	Year	Parent corporations based in economy ^a	Foreign affiliates located in economy ^a	Region/economy	Year	Parent corporations based in economy ^a	Foreign affiliates located in economy ^a
Developed economies		58 239^b	259 942^b	Guinea	2004	..	31
Europe		48 053^b	222 952^b	Guinea-Bissau	2006	..	4
European Union		43 824^b	211 806^b	Liberia	2006	1	21
Austria	2005	1 048	2 721 ^c	Mali	2006	1	18
Belgium	2003	991 ^d	2 341 ^d	Mauritania	2006	1 ^x	10
Cyprus	2005	1 650	4 800	Niger	2006	.. ^x	181
Czech Republic	1999	660 ^e	71 385 ^f	Nigeria	2006	3	171
Denmark	1998	9 356	2 305 ^{g,h}	Senegal	2006	4 ^x	68
Estonia	2006	859	2 858	Sierra Leone	2006	.. ^x	11
Finland	2005	950	3 445 ^{c,g}	Togo	2006	3 ^x	15
France	2002	1 267	10 713	Central Africa		7^b	256^b
Germany	2005	5 855	9 193	Burundi	2006	..	4
Greece	2005	240	790	Cameroon	2006	1	87
Hungary	2005	..	26 019 ⁱ	Central African Republic	2006	1	6
Ireland	2001	39 ^j	1 225 ^k	Chad	2006	..	10
Italy	2005	5 750 ^l	7 181 ^l	Congo	2006	2	57
Luxembourg	2005	38 ^m	717 ^m	Congo, Democratic Republic of	2006	1 ^x	8
Latvia	2006	19	603	Equatorial Guinea	2006	..	14
Lithuania	2005	237	2 877	Gabon	2006	..	57
Malta	2006	64	196	Rwanda	2004	2	13
Netherlands	2006	4 788 ⁿ	12 993	East and Southern Africa		545^b	1 799^b
Poland	2001	58 ^j	14 469 ^o	East Africa		292^b	733^b
Portugal	2005	1 300	3 000 ^p	Comoros	2004	..	1
Slovakia	2006	437	2 780	Djibouti	2006	.. ^x	4
Slovenia	2000	..	1 617 ^q	Ethiopia	2006	.. ^x	24
Spain	2006	1 598 ^r	9 255	Kenya	2006	21	175
Sweden	2002	4 260 ^s	4 656 ^c	Madagascar	2006	..	58
United Kingdom	2005	2 360	13 667	Mauritius	2006	48	98
Other developed Europe		4 229^b	11 146^b	Seychelles	2006	16	22
Gibraltar	2006	249	117	Somalia	2006	..	1
Iceland	2000	18	55	Uganda	2006	3	55
Norway	2004	1 346	5 105 ^t	United Republic of Tanzania	2001	204	295
Switzerland	2006	2 616 ^u	5 869	Southern Africa		253^b	1 066^b
North America		3 857^b	28 332^b	Angola	2006	1	91
Canada	1999	1 439	3 725 ^c	Botswana	2006	5	31
United States	2002	2 418	24 607	Lesotho	2006	1	6
Other developed countries		6 329^b	8 658^b	Malawi	2006	..	32
Australia	2006	1 380	1 991	Mozambique	2006	.. ^x	89
Israel	2006	169	145	Namibia	2006	2	36
Japan	2005	4 563 ^v	4 500 ^w	South Africa	2006	218	641
New Zealand	2004	217 ^e	2 022	Swaziland	2002	12	61
				Zambia	2004	11	13
				Zimbabwe	2006	3	66
Developing economies		18 521^b	406 967^b	Latin America and the Caribbean		2 037^b	37 728^b
Africa		736^b	6 406^b	South and Central America		772^b	35 492^b
North Africa		156^b	3 519^b	South America		455^b	8 151^b
Algeria	2006	..	84	Argentina	2006	97	1 588
Egypt	2004	10	271	Bolivia	2004	..	287
Morocco	2006	4	348	Brazil	2006	165	3 549
Sudan	2006	.. ^x	13	Chile	2006	90 ^y	723
Tunisia	2006	142 ^h	2 803	Colombia	2006	60 ^u	568
Other Africa		580^b	2 887^b	Ecuador	2006	13	268
West Africa		28^b	832^b	Guyana	2002	4 ^h	56
Benin	2006	..	20	Paraguay	2006	2	58
Burkina Faso	2006	..	26	Peru	2004	10 ^{b,z}	329
Côte d'Ivoire	2006	10	166	Suriname	2006	1	16
Gambia	2006	..	13	Uruguay	2002	..	164 ^{aa}
Ghana	2006	5	77	Venezuela	2004	13	545
				Central America		317^b	27 341^b

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Annex table A.I.5. Number of parent corporations and foreign affiliates, by region and economy, latest year available (concluded)
(Number)

Region/economy	Year	Parent corporations based in economy ^a	Foreign affiliates located in economy ^a	Region/economy	Year	Parent corporations based in economy ^a	Foreign affiliates located in economy ^a
Belize	2006	15	18	South Asia		655^b	4 142^b
Costa Rica	2006	31	227	Afghanistan	2006	..	5
El Salvador	2003	..	304	Bangladesh	2006	7	40
Guatemala	2006	25	194	Bhutan	1997	..	2
Honduras	2004	4	253	India	2006	587 ^{ai}	1 796
Mexico	2002	..	25 708	Maldives	2006	2	6
Nicaragua	2006	2	76	Nepal	2006	.. ^x	18
Panama	2006	240	561	Pakistan	2001	59 ^{aj}	582
				Sri Lanka	2004	..	1 693
The Caribbean and other America		1 265^b	2 236^b	South-East Asia		318^b	33 865^b
Antigua and Barbuda	2006	6	40	Brunei Darussalam	2006	2	39
Aruba	2006	6	34	Cambodia	2002	..	23 ^{ak}
Bahamas	2006	176	196	Indonesia	2004	313 ^{al}	721
Barbados	2006	34	177	Lao People's Democratic Republic	2004	..	161 ^{am}
Bermuda	2006	460	509	Malaysia	1999	..	15 567 ^{an}
British Virgin Islands	2006	4	6	Myanmar	2006	..	25
Cayman Islands	2006	340	624	Philippines	2004	..	311
Dominica	2006	1	14	Singapore	2002	..	14 052 ^{ao}
Dominican Republic	2006	8	191	Thailand	1998	..	2 721
Grenada	2006	1	15	Viet Nam	2006	3	245
Haiti	2006	1	14				
Jamaica	2006	12	99	Oceania		15^b	440^b
Netherlands Antilles	2006	197	204	Fiji	2002	2	151 ^e
Saint Kitts and Nevis	2006	14	12	Kiribati	2005	5	23
Saint Lucia	2006	1	32	New Caledonia	2006	..	3
Saint Vincent and the Grenadines	2006	4	8	Papua New Guinea	2004	..	208
Trinidad and Tobago	2004	..	61	Samoa	2006	3 ^x	11
				Solomon Islands	2006	.. ^x	20
Asia and Oceania		15 748^b	362 833^b	Tonga	2006	..	5
Asia		15 733^b	362 393^b	Vanuatu	2006	5	19 ^{ap}
West Asia		2 052^b	16 542^b	South-East Europe and the CIS		1 651^b	110 738^b
Bahrain	2006	32	101	South-East Europe		537^b	99 956^b
Iran, Islamic Republic of	2006	46	57 ^{ab}	Albania	2006	..	16
Jordan	2006	15	56	Bosnia and Herzegovina	2006	8	75
Kuwait	2006	35	57	Bulgaria	2000	26 ⁱ	7 153 ^{aq}
Lebanon	2006	33	101	Croatia	2006	428	2 532
Oman	2004	92 ^{ac}	49	Romania	2002	20 ^j	89 911 ^{ar}
Qatar	2006	10	48	Serbia and Montenegro	2006	55	263
Saudi Arabia	2006	67	184	TFY Rep. of Macedonia	2002	..	6
Syrian Arab Republic	2006	3	14				
Turkey	2006	1 624	14 955	CIS		1 114^b	10 782^b
United Arab Emirates	2006	89	916	Armenia	2004	..	347
Yemen	2002	6 ^x	4	Azerbaijan	2006	2	53
				Belarus	2006	5	52
South, East and South-East Asia		13 681^b	345 851^b	Georgia	1998	..	190 ^{as}
East Asia		12 708^b	307 844^b	Kazakhstan	2006	153	1 873
China	2005	3 429 ^{ad}	280 000 ^{ae}	Kyrgyzstan	1998	..	4 004 ^{at}
Hong Kong, China	2005	1 167 ^{af}	9 075	Moldova, Republic of	2002	951	2 670
Korea, Republic of	2006	7 460 ^{ag}	13 311	Russian Federation	2004	..	1 176
Macao, China	2004	46	1 024	Ukraine	2004	1	367
Mongolia	1998	..	1 400	Uzbekistan	2006	2	50
Taiwan Province of China	2005	606 ^{ah}	3 034				
				World		78 411	777 647

Source: UNCTAD, based on national sources.

- ^a 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 annex B) are noted below. The data for Afghanistan, Albania, Algeria, Angola, Antigua and Barbuda, Argentina, Aruba, Azerbaijan, Bahamas, Bahrain, Bangladesh, Barbados, Belarus, Belize, Benin, Bermuda, Bosnia and Herzegovina, Botswana, Brazil, British Virgin Islands, Brunei Darussalam, Burkina Faso, Burundi, Cameroon, Cayman Islands, Central African Republic, Chad, Chile, Colombia, Congo, Costa Rica, Côte d'Ivoire, Democratic Republic of the Congo, Djibouti, Dominica, Dominican Republic, Ecuador, Equatorial Guinea, Ethiopia, Gabon, Gambia, Ghana, Gibraltar, Grenada, Guatemala, Guinea-Bissau, Haiti, India, Islamic Republic of Iran, Israel (foreign affiliates), Jamaica, Jordan, Kenya, Kuwait, Latvia, Lebanon, Lesotho, Liberia, Madagascar, Malawi, Maldives, Mali, Malta, Mauritania, Mauritius, Morocco, Mozambique, Myanmar, Namibia, Nepal, the Netherlands, the Netherlands Antilles, New Caledonia, New Zealand, Nicaragua, Niger, Nigeria, Panama, Paraguay, Qatar, Saint Lucia, Saint Kitts and Nevis, Saint Vincent and the Grenadines, Samoa, Saudi Arabia, Serbia and Montenegro, Senegal, Seychelles, Sierra Leone, Slovakia, Solomon Islands, Somalia, South Africa, Spain, Sudan, Suriname, Switzerland, Syrian Arab Republic, Togo, Tonga, Uganda, the United Arab Emirates, Uzbekistan, Vanuatu, Viet Nam, Western Samoa and Zimbabwe are from the *Who Owns Whom* database (<https://solutions.dnb.com/wow>). For Argentina, Bermuda, Israel and South Africa, the data for parent corporations based in the economy refer to only those that have affiliates abroad and affiliates in the home economy. Therefore, the data for the number of parent corporations are underestimated in those four countries.
- ^b Data cover only the countries listed.
- ^c Majority-owned foreign affiliates.
- ^d Provisional figures by Banque Nationale de Belgique (2003).
- ^e As of 1997.
- ^f Of this number, 53,775 are wholly foreign-owned affiliates; includes joint ventures.
- ^g Directly and indirectly foreign-owned affiliates (subsidiaries and associates), excluding branches.
- ^h As of 1999.
- ⁱ Source: Hungary Statistics Office.
- ^j As of 1994.
- ^k Refers to the number of foreign-owned affiliates in Ireland in manufacturing and services activities that receive assistance from the Investment and Development Authority (IDA).
- ^l Based on Istituto nazionale per il Commercio Estero "Italia Multinazionale 2005, Le partecipazioni italiane all'estero ed estere in Italia," 2005.
- ^m Excludes special purpose entities (i.e. holding companies).
- ⁿ Data first referred to October 1993, from 2006 extracted from the Who Owns Whom database.
- ^o Cumulative number of companies with foreign capital share which participated in the statistical survey.
- ^p As of 2002.
- ^q Source: Bank of Slovenia.
- ^r Data refers to 1998; includes those Spanish parent companies which are controlled, at the same time, by a direct investor. From 2006 extracted from the Who Owns Whom database.
- ^s Data provided by Sveriges Riksbank; includes those Swedish parent companies that are controlled, at the same time, by a direct investor.
- ^t Data refer to Norwegian non-financial joint-stock companies with foreign shareholders owning more than 10 per cent of the total shares in 1998.
- ^u As of 1995. From 2006 extracted from the Who Owns Whom database.
- ^v Source: Bank of Japan.
- ^w Source: Bank of Japan.
- ^x As of 2001, from 2006 extracted from the Who Owns Whom database.
- ^y Estimated by Comité de Inversiones Extranjeras 1998, from 2006 extracted from the Who Owns Whom database.
- ^z Less than 10.
- ^{aa} Number of enterprises included in the Central Bank survey (all sectors).
- ^{ab} Source: Ministry of Economic Affairs and Finance.
- ^{ac} As of May 1995.
- ^{ad} Source: Ministry of Commerce (MOFCOM).
- ^{ae} Source: Ministry of Commerce (MOFCOM) 2003.
- ^{af} Number of regional headquarters.
- ^{ag} As of 1999. Data refer to the number of investment projects abroad.
- ^{ah} Number of approved new investment projects abroad in 1998.
- ^{ai} Data refer to the number of approved FDI projects as of 2003; from 2006 extracted from the Who Owns Whom database.
- ^{aj} As of 1998.
- ^{ak} Data refer to the number of approved foreign investment projects, including joint-venture projects with local investors. Wholly owned Cambodian projects are excluded.
- ^{al} As of 1996.
- ^{am} Number of projects licensed since 1988 up to end 2004.
- ^{an} May 1999. Refers to companies with foreign equity stakes of at least 51%. Of these, 3,787 are wholly-owned foreign affiliates.
- ^{ao} Number of wholly-owned foreign affiliates.
- ^{ap} Data refer to the number of projects implemented as of 2002.
- ^{aq} The data refer to registered investment projects between 1992 and 2000; source: Bulgarian Foreign Investment Agency.
- ^{ar} Data refer to the cumulative number of companies with FDI as at end December 2002.
- ^{as} Number of cases of approved investments of more than \$100,000 registered during the period January 1996 up to March 1998.
- ^{at} Joint-venture companies established in the economy.

Note: The data can differ significantly from previous years, as data become available for countries that were not covered before, as definitions change, or as older data are updated.

Annex table A.I.6. Country rankings by Inward FDI Performance Index, Inward FDI Potential Index and Outward FDI Performance Index, 2004-2006^a

Economy	Inward FDI Performance Index			Inward FDI Potential Index			Outward FDI Performance Index		
	2004	2005	2006	2004	2005	2006	2004	2005	2006
Albania	53	61	60	82	84	..	83	84	81
Algeria	101	113	110	63	61	..	73	79	80
Angola	5	30	139	81	79	..	71	59	60
Argentina	90	82	83	66	64	..	74	56	54
Armenia	34	37	39	78	77	..	88	83	85
Australia	50	129	115	18	18	..	23	122	112
Austria	98	84	105	27	27	..	20	22	23
Azerbaijan	1	1	12	73	65	..	4	5	9
Bahamas	32	21	18	51	56	..	..	..	..
Bahrain	30	23	11	32	32	..	8	9	10
Bangladesh	122	119	121	117	119	..	100	105	103
Belarus	111	117	122	49	47	..	121	106	104
Belgium	10	11	10	15	16	..	6	7	5
Benin	104	103	109	137	136	..	104	113	115
Bolivia	49	138	134	87	86	..	92	97	96
Botswana	27	46	65	67	71	..	36	41	74
Brazil	74	85	93	72	70	..	41	49	36
Brunei Darussalam	2	2	51	50	50	..	44	47	62
Bulgaria	8	8	7	62	60	..	118	75	63
Burkina Faso	126	128	132	131	127	..	113	117	117
Cameroon	63	91	101	112	115	..	116	103	..
Canada	106	107	79	4	4	..	17	19	21
Chile	26	27	30	52	51	..	30	29	31
China	52	62	69	33	30	..	64	61	58
Colombia	80	41	40	100	97	..	42	28	34
Congo	43	17	29	98	99	..	78	85	87
Congo, Democratic Republic of	95	130	131	140	140	..	109	110	111
Costa Rica	48	52	46	70	72	..	66	86	73
Côte d'Ivoire	96	97	99	129	134	..	110	114	118
Croatia	35	40	36	53	55	..	34	45	50
Cyprus	18	24	22	40	43	..	14	17	20
Czech Republic	29	31	32	39	38	..	51	63	51
Denmark	141	123	112	20	19	..	124	43	35
Dominican Republic	41	53	59	64	66	..	115	116	100
Ecuador	38	43	50	107	104	..	106	109	106
Egypt	102	68	33	79	81	..	79	81	77
El Salvador	89	87	92	99	105	..	117	62	70
Estonia	17	7	9	34	34	..	24	21	16
Ethiopia	25	38	61	128	131	..	..	..	..
Finland	70	90	96	13	14	..	40	73	57
France	87	78	74	16	15	..	19	16	17
Gabon	71	57	67	105	102	..	122	123	123
Gambia	12	14	13	108	114	..	..	..	..
Georgia	16	16	15	97	95	..	76	124	124
Germany	110	124	125	8	6	..	49	40	33
Ghana	99	100	91	110	110	..	91	92	113
Greece	123	126	114	36	36	..	54	57	42
Guatemala	125	127	126	102	103	..	50	55	86
Guinea	91	75	75	132	137	..	108	118	116
Guyana	40	32	20	101	108	..	98	107	105
Haiti	135	131	104	139	139	..	..	..	..
Honduras	54	50	56	111	113	..	67	66	66
Hong Kong, China	7	4	2	14	11	..	3	3	2
Hungary	45	42	38	37	41	..	33	31	27
Iceland	46	12	4	11	10	..	5	1	1
India	117	121	113	83	85	..	60	65	56
Indonesia	136	106	95	103	100	..	48	42	41
Iran, Islamic Republic of	138	135	133	58	58	..	114	95	76
Ireland	13	141	141	10	13	..	7	10	8
Israel	88	69	42	26	26	..	22	23	15
Italy	109	112	106	28	29	..	38	35	29
Jamaica	21	20	23	93	89	..	39	36	46
Japan	137	136	137	23	24	..	43	44	43
Jordan	51	19	8	61	59	..	105	111	109
Kazakhstan	14	28	26	55	49	..	125	127	126
Kenya	132	134	135	123	124	..	93	96	88
Korea, Republic of	116	115	123	17	17	..	46	52	52
Kuwait	140	137	136	41	37	..	126	34	11
Kyrgyzstan	44	51	43	106	101	..	25	26	28
Latvia	56	48	31	44	42	..	52	46	47
Lebanon	9	9	14	68	75	..	53	51	55
Libyan Arab Jamahiriya	115	96	81	43	40	..	123	119	114

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Annex table A.I.6. Country rankings by Inward FDI Performance Index, Inward FDI Potential Index and Outward FDI Performance Index, 2004-2006^a (concluded)

Economy	Inward FDI Performance Index			Inward FDI Potential Index			Outward FDI Performance Index		
	2004	2005	2006	2004	2005	2006	2004	2005	2006
Lithuania	67	67	48	38	39	..	47	38	40
Luxembourg	4	5	1	5	5	..	1	2	3
Madagascar	93	94	80	136	133	..	112	115	..
Malawi	124	116	111	133	138	..	94	87	92
Malaysia	62	64	62	35	35	..	28	30	22
Mali	47	63	71	118	118	..	95	104	107
Malta	23	10	6	47	54	..	16	20	120
Mexico	73	74	82	54	53	..	59	53	49
Moldova, Republic of	36	34	28	84	82	..	87	90	97
Mongolia	19	15	25	75	78	..	..	..	..
Morocco	66	44	55	90	92	..	81	76	59
Mozambique	24	54	84	96	98	..	107	112	108
Myanmar	85	79	97	86	94	..	..	..	..
Namibia	42	45	47	85	87	..	119	121	121
Nepal	139	139	138	138	135	..	..	..	..
Netherlands	68	59	85	12	12	..	9	6	6
New Zealand	72	83	58	30	31	..	103	125	122
Nicaragua	33	39	44	114	112	..	75	88	79
Niger	129	125	127	130	129	..	85	98	94
Nigeria	78	73	66	88	83	..	63	72	71
Norway	112	98	100	7	7	..	21	14	18
Oman	100	88	88	57	57	..	45	48	53
Pakistan	114	104	89	127	126	..	89	91	89
Panama	37	25	17	60	63	..	2	4	7
Papua New Guinea	105	111	129	126	120	..	111	101	93
Paraguay	130	120	116	104	107	..	82	82	78
Peru	79	77	70	91	88	..	84	78	67
Philippines	107	109	102	71	74	..	55	60	65
Poland	59	60	57	45	44	..	69	54	44
Portugal	76	71	86	42	45	..	18	18	24
Qatar	61	66	68	9	9	..	56	50	48
Romania	31	26	21	77	76	..	86	94	98
Russian Federation	92	89	87	24	22	..	26	25	30
Rwanda	133	133	130	124	130	..	..	..	..
Saudi Arabia	127	92	63	29	28	..	72	67	64
Senegal	108	122	128	109	116	..	62	93	95
Sierra Leone	82	55	54	134	125	..	90	120	119
Singapore	6	6	5	2	2	..	13	12	13
Slovakia	11	29	27	46	52	..	65	64	61
Slovenia	58	95	103	31	33	..	31	32	32
South Africa	128	105	120	74	73	..	61	58	38
Spain	57	80	94	25	25	..	12	13	14
Sri Lanka	103	108	108	120	123	..	80	80	83
Sudan	20	13	19	125	122	..	..	..	102
Suriname	3	3	3	95	91	..	..	..	..
Sweden	64	76	53	6	8	..	10	11	12
Switzerland	83	101	90	21	21	..	11	8	4
Syrian Arab Republic	118	102	98	89	93	..	57	71	72
Taiwan Province of China	131	132	119	19	20	..	27	27	26
Tajikistan	22	33	16	121	109	..	..	..	..
TFY Rep. of Macedonia	86	86	64	115	106	..	99	99	99
Thailand	60	49	52	59	62	..	70	70	69
Togo	75	72	76	122	128	..	120	126	125
Trinidad and Tobago	15	22	35	48	46	..	35	33	37
Tunisia	77	81	41	65	68	..	97	100	90
Turkey	119	99	73	69	69	..	68	68	68
Uganda	69	70	77	113	117	..	..	..	..
Ukraine	84	35	37	56	48	..	102	77	91
United Arab Emirates	28	18	24	22	23	..	32	24	25
United Kingdom	94	47	34	3	3	..	15	15	19
United Republic of Tanzania	65	65	72	119	121	..	101	108	110
United States	120	118	117	1	1	..	29	37	39
Uruguay	81	56	45	94	90	..	77	74	82
Uzbekistan	113	114	118	116	111	..	..	..	..
Venezuela	97	93	124	76	67	..	37	39	45
Viet Nam	55	58	78	80	80	..	..	89	84
Yemen	121	140	140	92	96	..	58	69	75
Zambia	39	36	49	135	132	..	..	..	..
Zimbabwe	134	110	107	141	141	..	96	102	101

Source: UNCTAD.

Note: Covering 141 economies. The potential index is based on 12 economic and policy variables.

^a Three-year moving averages, using data for the three previous years, including the year in question.

Annex table A.I.7. Bilateral FDI relationships ranked between 51 and 100,^a 1985, 1995, 2005
(Billions of dollars)

Rank	Home country	Host country	Bilateral FDI stock		
			1985 ^b	1995 ^b	2005 ^b
51	United States	Ireland	..	..	35
52	Bermuda	Hong Kong, China	..	26	35
53	United Kingdom	Ireland	..	..	34
54	Australia	United Kingdom	6	11	32
55	Luxembourg	Netherlands	0.2	2	31
56	Sweden	Finland	..	2	31
57	Switzerland	Germany	5	19	31
58	France	Netherlands	1	5	30
59	United Kingdom	Singapore	2	7	28
60	United States	Hong Kong, China	1	15	27
61	British Virgin Islands	United States	1	7	27
62	Switzerland	United Kingdom	8	12	26
63	Korea, Republic of	China	..	6	26
64	France	Italy	..	8	26
65	Singapore	China	..	9	26
66	United Kingdom	Italy	..	7	25
67	Finland	Sweden	1	2	25
68	United States	Singapore	3	11	25
69	Sweden	United States	2	10	25
70	United States	Brazil	8	11	25
71	France	Canada	1	4	24
72	Canada	United Kingdom	6	4	24
73	Luxembourg	Italy	..	5	24
74	Japan	United Kingdom	4	9	24
75	Germany	Austria	..	8	24
76	Japan	Singapore	2	13	22
77	Switzerland	Netherlands	3	11	22
78	Ireland	United States	..	5	22
79	Italy	France	3	14	22
80	United States	Italy	..	9	21
81	Australia	New Zealand	..	9	21
82	United Kingdom	Canada	6	10	21
83	Hungary	United States	-	-	20
84	Switzerland	Italy	..	12	20
85	Barbados	United States	..	1	19
86	United States	Denmark	..	3	19
87	Netherlands	Czech Republic	..	3	19
88	Netherlands	Singapore	0.4	3	17
89	Japan	Hong Kong, China	0.3	14	17
90	Japan	Thailand	1	5	16
91	Germany	Hungary	..	2	16
92	United States	Chile	2	6	16
93	Germany	Switzerland	..	7	16
94	Spain	France	0.4	3	16
95	Germany	Italy	..	6	15
96	Austria	Germany	0.5	4	15
97	Ireland	Netherlands	-	4	15
98	France	Switzerland	..	9	14
99	Japan	Germany	2	11	14
100	Germany	Sweden	0.1	2	14

Source: UNCTAD, FDI/TNC database (www.unctad.org/fdistatistics).

^a For the top 50, see table I.9.

^b Or latest year available.

Note: Countries are ranked by the value of inward FDI stock in 2005 as reported by the host economy.

Annex table A.I.8. FDI intensity of selected major developed and developing home economies with various host economies, 1995^a and 2005^a

Host economy	Home economy														
	United States			Japan			United Kingdom			France			Germany		
	1995	2005	1995	2005	1995	2005	1995	2005	1995	2005	1995	2005	1995	2005	
Canada	2.8	2.6	Thailand	3.5	7.7	Sweden	0.6	1.6	Germany	1.3	1.4	Austria	4.5	4.1	
Switzerland	1.0	2.3	Philippines	2.4	6.1	Australia	2.2	1.5	Italy	1.8	1.4	Hungary	2.2	2.8	
Japan	1.9	2.2	Taiwan Province of China	3.2	5.3	United States	2.0	1.5	Japan	0.1	1.3	Czech Republic	4.2	2.1	
Strong relationship	1.8	1.5	Korea, Republic of	4.7	4.4	France	1.3	1.3	United Kingdom	0.9	1.2	Luxembourg	4.5	2.0	
Malaysia	0.5	1.3	China	2.2	4.0	Singapore	1.0	1.3	United States	0.9	1.1	Lithuania	2.7	1.5	
Australia	1.3	1.3	Malaysia	2.6	3.4	Portugal	1.4	1.2	Switzerland	2.1	1.0	France	1.2	1.4	
Philippines	1.4	1.2	Singapore	2.3	3.2	Netherlands	1.5	1.2	Netherlands			Netherlands	1.1	1.4	
Sweden	0.7	1.1	United States	2.4	3.2				United States			United States	0.9	1.2	
Korea, Republic of	1.1	1.1	Australia	1.4	1.8				United Kingdom			United Kingdom	0.7	1.1	
Taiwan Province of China	1.2	1.1							Switzerland			Switzerland	1.3	1.0	
Denmark	0.5	1.0	Hong Kong, China	2.4	1.0	Panama	0.1	1.0	Canada	0.5	0.8	Korea, Republic of	0.6	0.9	
Netherlands	0.9	0.9	United Kingdom	0.5	0.8	Italy	1.0	1.0	Netherlands	0.6	0.8	Malaysia	0.2	0.9	
Bangladesh	0.3	0.9	Germany	0.8	0.8	Austria	0.4	0.9	Czech Republic	1.1	0.8	Sweden	0.7	0.9	
Panama	1.7	0.8	Netherlands	0.4	0.6	Germany	0.6	0.8	Portugal	2.0	0.7	Slovenia	1.5	0.8	
Weak relationship	0.7	0.8	Canada	0.5	0.6	Norway	0.5	0.7	Argentina	0.8	0.7	Italy	0.9	0.7	
China	2.1	0.7	France	0.3	0.5	Denmark	1.1	0.7	Poland	1.8	0.5	Poland	3.3	0.7	
Colombia	0.6	0.7	New Zealand	0.5	0.5	Chile	0.7	0.6	Luxembourg	1.3	0.5	Slovakia	3.8	0.7	
Peru	1.0	0.7	Indonesia	6.1	0.5	Malaysia	0.4	0.6	Venezuela	0.5	0.4	Japan	0.7	0.6	
Germany	0.7	0.7	Italy	0.2	0.4	New Zealand	1.1	0.6	Brazil	0.7	0.4	Portugal	1.0	0.6	
Singapore	0.8	0.6	Brazil	0.8	0.3	Indonesia	0.8	0.6	Austria	0.5	0.4	Finland	0.5	0.5	

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Annex table A.I.8. FDI intensity of selected major developed and developing home economies with various host economies, 1995^a and 2005^a (concluded)

Host economy	Home economy								
	China		Korea, Republic of		Malaysia				
	1995	2005	1995	2005	1995	2005			
Strong relationship	Hong Kong, China	62.5	55.3	Lao People's Democratic Republic	23.5	46.9	Cambodia	80.3	40.2
	Mongolia	18.8	39.6	China	15.9	23.3	Lao People's Democratic Republic	1.5	34.0
	Cambodia	2.1	27.3	Sri Lanka	46.7	21.2	Sri Lanka	4.5	11.5
	Lao People's Democratic Republic	1.1	12.5	Bangladesh	34.8	16.7	Indonesia	2.3	10.8
	Sri Lanka	1.8	9.6	Viet Nam	28.5	15.4	Bangladesh	52.8	7.2
	Myanmar	0.3	7.2	Cambodia	1.0	15.3	Viet Nam	7.4	4.3
	Indonesia	0.5	5.9	Mongolia	20.0	12.8	Singapore	10.9	3.6
	Kazakhstan	0.7	4.3	Indonesia	16.2	11.3	Taiwan Province of China	2.0	3.1
	Peru	3.6	1.7	Philippines	3.8	4.9	United Republic of Tanzania	34.6	2.8
	Viet Nam	0.6	1.1	Panama	3.8	4.3	Myanmar	18.2	2.8
Weak relationship	United Republic of Tanzania	5.3	0.9	Japan	0.1	0.9	Hong Kong, China	3.6	0.7
	Bangladesh	0.3	0.6	Peru	0.0	0.8	Netherlands	0.1	0.1
	Malaysia	1.0	0.6	Malaysia	11.3	0.7	Chile	0.1	0.1
	Pakistan	0.4	0.3	Hong Kong, China	7.4	0.7	Canada	0.1	0.1
	Chile	0.8	0.3	Australia	0.1	0.5	United States	0.2	0.1
	Thailand	0.3	0.2	United Kingdom	0.5	0.4	Japan	0.0	0.0
	Japan	0.0	0.2	Brazil	0.0	0.3			
	Singapore	0.6	0.1	Canada	0.2	0.2			
	Canada	0.2	0.1	Chile	0.2	0.2			
	Germany	0.1	0.1	Colombia	0.1	0.1			

Source: UNCTAD.

Note: Ranking is based on the intensity ratios for 2005. Economies with an intensity ratio of more than 1 are categorized as having a strong relationship, and those with a ratio of less than 1 as having a weak relationship. In both categories selected economies are listed. The FDI intensity ratio is calculated as follows:

FDI intensity ratio = $FDI_{ij} / Exp_{FDI_{ij}}$, where FDI_{ij} is the actual amount of FDI stock from country i to j , and $Exp_{FDI_{ij}}$ is the expected amount of FDI stock from country i to j . See box I.3 for an explanation of how the expected amount of FDI is calculated.

^a Or latest year available.

Annex table A.I.9. Estimated world inward FDI stock, by sector and industry, 1990 and 2005
(Millions of dollars)

Sector/industry	1990			2005			
	Developed economies	Developing economies	World	Developed economies	Developing economies	South- East Europe and CIS	World
Primary	139 013	27 847	166 860	551 202	201 559	37 717	790 478
Agriculture, hunting, forestry and fishing	3 180	4 194	7 374	8 341	8 707	1 231	18 279
Mining, quarrying and petroleum	135 833	21 792	157 625	539 421	179 259	36 486	755 166
Unspecified primary	-	1 861	1 861	3 440	13 593	-	17 033
Manufacturing	584 069	144 996	729 065	2 196 968	716 624	61 927	2 975 519
Food, beverages and tobacco	64 173	9 901	74 075	222 375	39 938	10 331	272 644
Textiles, clothing and leather	21 356	5 067	26 424	86 740	13 475	1 217	101 432
Wood and wood products	18 433	4 536	22 968	59 889	17 793	2 952	80 634
Publishing, printing and reproduction of recorded media	13 810	543	14 353	42 963	247	85	43 295
Coke, petroleum products and nuclear fuel	49 995	3 011	53 005	51 283	32 137	7 524	90 944
Chemicals and chemical products	113 790	44 256	158 046	480 966	87 649	3 050	571 665
Rubber and plastic products	11 876	1 758	13 634	42 566	8 733	653	51 951
Non-metallic mineral products	15 484	2 721	18 205	60 633	13 957	3 724	78 315
Metal and metal products	46 159	14 450	60 609	200 067	35 812	19 189	255 068
Machinery and equipment	48 757	9 460	58 218	137 988	27 845	1 979	167 812
Electrical and electronic equipment	65 290	16 727	82 017	195 130	88 023	1 286	284 439
Precision instruments	10 814	457	11 271	74 863	4 037	167	79 067
Motor vehicles and other transport equipment	43 103	7 681	50 784	268 979	38 772	2 698	310 449
Other manufacturing	17 612	2 826	20 438	94 766	14 400	328	109 494
Unspecified secondary	43 416	21 602	65 018	177 762	293 806	6 743	478 310
Services	713 721	155 123	868 844	4 683 574	1 339 703	87 484	6 110 761
Electricity, gas and water	6 505	2 641	9 146	170 537	52 655	3 607	226 798
Construction	15 296	5 047	20 343	58 572	18 961	2 547	80 080
Trade	187 282	24 331	211 614	870 989	182 738	16 779	1 070 507
Hotels and restaurants	19 379	3 764	23 142	69 141	21 592	1 805	92 538
Transport, storage and communications	15 070	12 197	27 267	406 639	131 111	17 669	555 418
Finance	271 612	87 431	359 043	1 515 866	341 036	20 654	1 877 556
Business activities	103 363	14 045	117 407	1 068 893	516 536 ^a	23 320	1 608 749 ^a
Public administration and defence	-	54	54	19 194	321	17	19 532
Education	86	-	86	3 300	91	108	3 499
Health and social services	910	-	910	7 845	749	41	8 635
Community, social and personal service activities	12 233	18	12 251	76 698	6 213	680	83 591
Other services	65 528	3 905	69 432	66 248	36 389	16	102 653
Unspecified tertiary	16 458	1 690	18 148	349 653	31 309	242	381 205
Private buying and selling of property	-	-	-	6 210	-	-	6 210
Unspecified	9 662	4 767	14 429	108 101	48 668	8 230	164 998

Source: UNCTAD.

^a A considerable share of investment in this industry is in Hong Kong (China), which accounted for 77% of developing economies and 25% of the world total in 2005. Hong Kong (China) data include holding companies.

Note: The world total was extrapolated on the basis of data covering 54 countries in 1990 and 82 countries in 2005, or latest year available. They account for about four-fifths of world inward FDI stock in 1990 and 2005. Only countries for which data for the three main sectors were available were included. The distribution share of each industry of these countries was applied to estimate the world total in each sector and industry. As a result, the sum of the sectors for each group of economies is different from the totals shown in annex table B.2. In the case of some countries where only approval data are available, the actual data were estimated by applying the implementation ratio of realized FDI to approved FDI to the latter (56% in 1994 for Japan, 10% in 1990 and 7% in 1999 for Lao People's Democratic Republic, 72% in 2005 for Malaysia, 44% in 2002 for Mongolia, 39% in 1990 and 35% in 2005 for Myanmar, 41% in 1990 and 35% in 1999 for Nepal, 62% in 1995 for Sri Lanka, 73% in 1990 and 66% in 2005 for Taiwan Province of China). The world total in 1990 includes the countries of South-East Europe and CIS, although data by sector and industry are not available for that region.

Annex table A.I.10 Estimated world outward FDI stock, by sector and industry, 1990 and 2005
(Millions of dollars)

Sector/industry	1990			2005			
	Developed economies	Developing economies	World	Developed countries	Developing economies	South-East Europe and CIS	World
Primary	161 564	2 219	163 783	584 093	35 365	- 890	618 569
Agriculture, hunting, forestry and fishing	5 245	319	5 564	4 257	1 575	87	5 918
Mining, quarrying and petroleum	156 319	1 900	158 219	577 362	33 791	- 977	610 176
Unspecified primary	-	-	-	2 474	-	-	2 474
Manufacturing	793 573	6 452	800 025	2 655 294	117 426	1 562	2 774 283
Food, beverages and tobacco	75 603	446	76 049	298 755	2 510	178	301 442
Textiles, clothing and leather	19 550	191	19 741	132 192	3 264	1	135 458
Wood and wood products	21 490	91	21 580	81 710	2 062	52	83 823
Publishing, printing and reproduction of recorded media	2 265	-	2 265	15 629	36	-	15 664
Coke, petroleum products and nuclear fuel	39 322	-	39 322	35 715	3	20	35 738
Chemicals and chemical products	150 917	810	151 727	559 999	3 568	892	564 458
Rubber and plastic products	14 544	103	14 647	33 741	2 168	1	35 909
Non-metallic mineral products	13 119	189	13 309	35 253	829	83	36 164
Metal and metal products	66 350	87	66 437	266 304	1 538	247	268 090
Machinery and equipment	42 040	22	42 063	108 933	513	3	109 450
Electrical and electronic equipment	97 505	1 040	98 545	240 602	9 036	3	249 641
Precision instruments	13 529	-	13 529	50 752	267	-	51 019
Motor vehicles and other transport equipment	60 255	10	60 265	427 360	1 305	52	428 717
Other manufacturing	34 823	78	34 901	64 189	712	31	64 932
Unspecified secondary	142 260	3 385	145 645	304 161	89 616	-	393 777
Services	834 927	11 623	846 550	6 264 020	830 740	802	7 095 562
Electricity, gas and water	9 618	-	9 618	96 465	6 814	440	103 718
Construction	18 242	169	18 410	73 133	8 668	- 706	81 095
Trade	139 907	1 914	141 821	631 073	107 249	65	738 387
Hotels and restaurants	7 127	-	7 127	96 197	8 611	14	104 822
Transport, storage and communications	39 761	506	40 267	557 362	53 630	216	611 208
Finance	399 951	7 230	407 180	2 208 900	176 692	211	2 385 803
Business activities	55 111	1 310	56 421	2 127 245	454 253 ^a	563	2 582 061 ^a
Public administration and defence	-	-	-	4 030	-	-	4 030
Education	431	-	431	423	3	-	427
Health and social services	856	-	856	1 229	-	-	1 229
Community, social and personal service activities	3 426	-	3 426	19 508	1 687	-	21 195
Other services	110 456	484	110 940	94 806	12 608	-	107 414
Unspecified tertiary	50 041	10	50 051	353 649	525	-	354 174
Private buying and selling of property	-	-	-	1 711	-	-	1 711
Unspecified	4 139	716	4 855	66 959	21 538	179	88 676

Source: UNCTAD.

^a A considerable share of investment in this industry is in Hong Kong (China), which accounted for 87% of developing economies and 15% of the world total in 2005. Hong Kong (China) data include holding companies.

Note: The world total was extrapolated on the basis of data covering 25 countries in 1990 and 45 countries in 2005, or latest year available. They account for 77% and 87% of world outward FDI stock respectively in 1990 and in 2005. Only countries for which data for the three main sectors were available were included. The distribution share of each industry of these countries was applied to estimate the world total in each sector and industry. As a result, the sum of the sectors for each group of economies is different from the totals shown in annex table B.2. Approval data were used for Taiwan Province of China. For 1990, the world total includes the countries of South-East Europe and CIS although data by sector and industry were not available for that region. Moreover, as major home developing economies were not covered due to lack of data, the respective shares for developing economies were underestimated in that year.

Annex table A.I.11. Estimated world inward FDI flows, by sector and industry, 1989-1991 and 2003-2005
(Millions of dollars)

Sector/industry	1989-1991			2003-2005			
	Developed countries	Developing economies	World	Developed countries	Developing economies	South-East Europe and CIS	World
Primary	9 016	3 839	12 855	69 084	16 843	5 022	90 949
Agriculture, hunting, forestry and fishing	- 6	602	597	457	1 855	125	2 437
Mining, quarrying and petroleum	8 985	3 237	12 221	68 758	14 988	4 897	88 643
Unspecified primary	37	-	37	- 131	-	0	- 131
Manufacturing	47 289	16 346	63 634	83 743	82 116	7 982	173 841
Food, beverages and tobacco	4 799	2 438	7 237	9 369	5 396	765	15 531
Textiles, clothing and leather	2 093	243	2 336	5 040	1 236	119	6 395
Wood and wood products	1 987	237	2 223	- 618	516	522	420
Publishing, printing and reproduction of recorded media	862	-	862	2 253	107	8	2 369
Coke, petroleum products and nuclear fuel	- 1 079	310	- 770	821	730	1 470	3 021
Chemicals and chemical products	10 145	2 198	12 343	17 308	4 473	359	22 140
Rubber and plastic products	924	30	954	1 655	317	105	2 076
Non-metallic mineral products	1 285	223	1 508	3 273	636	1 092	5 002
Metal and metal products	3 934	1 257	5 192	14 488	1 279	844	16 611
Machinery and equipment	4 804	2 911	7 715	4 633	5 825	626	11 084
Electrical and electronic equipment	3 496	954	4 450	5 482	4 143	77	9 702
Precision instruments	829	-	829	1 598	83	33	1 714
Motor vehicles and other transport equipment	3 537	307	3 844	6 938	1 937	262	9 137
Other manufacturing	2 313	810	3 124	5 969	1 192	14	7 175
Unspecified secondary	7 359	4 427	11 787	5 535	54 244	1 685	61 463
Services	82 806	11 325	94 131	315 929	106 141	13 430	435 500
Electricity, gas and water	819	1 172	1 991	20 302	4 719	452	25 473
Construction	476	565	1 041	3 014	2 417	375	5 806
Trade	16 316	2 476	18 793	36 096	16 956	3 613	56 664
Hotels and restaurants	3 562	910	4 471	3 060	1 857	189	5 105
Transport, storage and communications	1 665	1 199	2 864	30 903	11 504	1 558	43 964
Finance	30 062	2 461	32 524	91 792	32 680	2 866	127 338
Business activities	17 123	1 491	18 614	93 345	27 710 ^a	3 930	124 986 ^a
Public administration and defence	2 295	0	2 295	608	-	125	734
Education	7	4	11	40	54	- 5	89
Health and social services	67	23	89	25	157	22	204
Community, social and personal service activities	2 253	6	2 259	764	1 925	67	2 755
Other services	7 258	550	7 807	27 641	2 472	2	30 115
Unspecified tertiary	904	468	1 371	8 338	3 692	237	12 267
Private buying and selling of property	113	-	113	6 879	-	1	6 880
Unspecified	8 008	4 358	12 366	34 661	7 670	1 155	43 487

Source: UNCTAD.

^a A considerable share of investment in this industry is in Hong Kong (China), which accounted for 43% of developing economies and 9% of the world total during 2003-2005. Hong Kong (China) data include holding companies.

Note: The world total was extrapolated on the basis of data covering 69 countries in 1989-1991 and 97 countries in 2003-2005, or the latest three-year period average available. They account for 88 and 92 per cent of world inward FDI flows respectively in the periods 1989-1991 and 2003-2005. Only countries for which data for the three main sectors were available were included. The distribution share of each industry of these countries was applied to estimate the world total in each sector and industry. As a result, the sum of the sectors for each group of economies is different from the totals shown in annex table B.1. Approval data were used for Israel (1994 instead of 1989-1991), Mongolia (1991-1993 instead of 1989-1991) and Mozambique (2003-2005). In the case of some countries, the actual data was estimated by applying the implementation ratio of realized FDI to approved FDI to the latter: Bangladesh (2% in 1989-1991), Cambodia (9% in 1994-1995), China (47% in 1989-1991), Indonesia (15% in 1989-1991), Islamic Republic of Iran (69% in 1993-1995 and 22% in 2001-2003), Japan (20% in 1989-1991 and 25% in 2003-2004), Jordan (74% in 2001-2003), Kenya (7% in 1992-1994), Lao People's Democratic Republic (1% in 1989-1991), Malaysia (52% in 1989-1991), Mauritius (72% in 1995), Mexico (93% in 1988-1990), Mongolia (54% in 2003-2005), Myanmar (70% in 1989-1991), Nepal (30% in 1989-1991 and 53% in 1996-1998), Papua New Guinea (20% in 1993-1995 and 36% in 1996-1998), Solomon Islands (1% in 1994-1995 and 3% in 1996), Sri Lanka (47% in 1995 and 69% in 2002-2004), Taiwan Province of China (65% in 1989-1991 and 34% in 2003-2005), Turkey (40% in 1989-1991) and Zimbabwe (23% in 1993-1995). The world total in 1989-1991 includes the countries of South-East Europe and the CIS, although data by sector and industry are not available for that region.

Annex table A.I.12. Estimated world outward FDI flows, by sector and industry, 1989-1991 and 2003-2005
(Millions of dollars)

Sector/industry	1989-1991			2003-2005			
	Developed countries	Developing economies	World	Developed countries	Developing economies	South-East Europe and CIS	World
Primary	9 833	290	10 123	43 598	3 944	- 455	47 086
Agriculture, hunting, forestry and fishing	465	45	510	2 278	221	11	2 511
Mining, quarrying and petroleum	9 235	245	9 480	41 634	3 723	- 467	44 890
Unspecified primary	133	-	133	- 315	-	-	- 315
Manufacturing	79 760	3 478	83 238	156 435	11 201	268	167 903
Food, beverages and tobacco	12 188	249	12 438	20 271	115	41	20 427
Textiles, clothing and leather	1 940	177	2 118	2 497	284	-	2 781
Wood and wood products	4 522	74	4 595	2 341	30	3	2 373
Publishing, printing and reproduction of recorded media	137	-	137	2 330	-	1	2 331
Coke, petroleum products and nuclear fuel	2 933	-	2 933	3 865	504	2	4 371
Chemicals and chemical products	13 029	1 131	14 161	46 378	292	92	46 763
Rubber and plastic products	1 068	127	1 196	1 782	43	-	1 825
Non-metallic mineral products	635	164	799	1 470	51	25	1 546
Metal and metal products	6 407	243	6 650	17 836	122	86	18 044
Machinery and equipment	7 410	25	7 435	12 154	88	3	12 246
Electrical and electronic equipment	10 567	865	11 432	8 025	1 512	2	9 539
Precision instruments	575	-	575	10 447	74	-	10 521
Motor vehicles and other transport equipment	4 047	-	4 047	7 735	157	1	7 893
Other manufacturing	7 543	9	7 552	5 369	79	- 1	5 448
Unspecified secondary	6 758	413	7 171	13 933	7 849	14	21 795
Services	110 261	2 016	112 277	433 121	38 365	- 132	471 354
Electricity, gas and water	1 019	-	1 019	9 964	1 189	-	11 153
Construction	2 238	97	2 335	6 737	487	- 233	6 991
Trade	14 168	317	14 485	68 734	7 760	34	76 527
Hotels and restaurants	403	3	407	3 314	556	5	3 875
Transport, storage and communications	6 746	57	6 802	35 027	1 393	- 45	36 375
Finance	43 557	1 174	44 731	173 275	9 266	47	182 588
Business activities	29 246	17	29 262	108 550	15 864 ^a	55	124 469 ^a
Public administration and defence	-	-	-	163	-	6	169
Education	17	-	17	- 96	-	-	- 96
Health and social services	- 109	-	- 109	- 89	10	-	- 79
Community, social and personal service activities	499	-	499	2 684	6	-	2 690
Other services	8 521	343	8 864	16 890	1 326	-	18 216
Unspecified tertiary	3 956	8	3 964	7 968	507	-	8 475
Private buying and selling of property	495	-	495	3 056	-	-	3 056
Unspecified	12 053	335	12 388	63 283	5 459	52	68 795

Source: UNCTAD.

^a A considerable share of investment in this industry is in Hong Kong (China), which accounted for 84% of developing economies and 11% of the world total during 2003-2005. Hong Kong (China) data include holding companies.

Note: The world total was extrapolated on the basis of data covering 27 countries in 1989-1991 and 46 countries in 2003-2005, or the latest three-year period average available. They account for over 90 per cent of world outward FDI flows in the periods 1989-1991 and 2003-2005. Only countries for which data for the three main sectors were available were included. The distribution share of each industry of these countries was applied to estimate the world total in each sector and industry. As a result, the sum of the sectors for each group of economies is different from the totals shown in annex table B.1. Approval data were used for Taiwan Province of China. In the case of Japan, the actual data were estimated by applying the implementation ratio of realized FDI to approved FDI to the latter: 75% in 1989-1991 and 85% in 2003-2004. The world total in 1989-1991 includes the countries of South-East Europe and the CIS, although data by sector and industry are not available for that region.

Annex table A.I.13. The world's top 100 non-financial TNCs, ranked by foreign assets, 2005^a
(Millions of dollars and number of employees)

Ranking by: Foreign assets	TNI ^b	II ^c	Corporation	Home economy	Industry ^d	Assets		Sales		Employment		TNI ^b (Per cent)		No. of affiliates		II ^c
						Foreign ^e	Total	Foreign ^f	Total	Foreign	Total	Foreign	Total	Foreign	Total	
1	70	42	General Electric	United States	Electrical & electronic equipment	412 692	673 342	59 815	149 702	155 000	316 000	50.1	1184	1527	77.5	
2	85	94	Vodafone Group PLC	United Kingdom	Telecommunications	196 396	220 499	39 497	52 428	51 052	61 672	82.4	77	210	36.7	
3	86	72	General Motors	United States	Motor vehicles	175 254	476 078	65 288	192 604	194 000	335 000	42.9	91	158	57.6	
4	16	61	British Petroleum Company PLC	United Kingdom	Petroleum expl./ref./distr.	161 174	206 914	200 293	263 621	78 100	96 200	79.4	417	602	69.3	
5	29	80	Royal Dutch/Shell Group	United Kingdom, Netherlands	Petroleum expl./ref./distr.	151 324 ^g	219 516	184 047 ^g	306 731	92 000	109 000	71.1	507	964	52.6	
6	38	43	ExxonMobil	United States	Petroleum expl./ref./distr.	143 860	208 335	248 402	358 955	52 920	84 000	67.1	256	331	77.3	
7	64	95	Toyota Motor Corporation	Japan	Motor vehicles	131 676	244 391	117 721	186 177	107 763	285 977	51.6	141	391	36.1	
8	79	56	Ford Motor	United States	Motor vehicles	119 131	269 476	80 325	177 089	160 000 ^h	300 000	47.6	201	285	70.5	
9	27	55	Total	France	Petroleum expl./ref./distr.	108 098	125 717	132 960	178 300	64 126	112 877	72.5	401	567	70.7	
10	94	36	Électricité de France	France	Electricity, gas and water	91 478	202 431	26 060	63 578	17 801 ⁱ	161 560	32.4	218	276	79.0	
11	73	51	France Télécom	France	Telecommunications	87 186	129 514	25 634	61 071	82 034	203 008	49.9	175	243	72.0	
12	51	54	Volkswagen	Germany	Motor vehicles	82 579	157 621	85 896	118 646	165 849	345 214	57.6	199	279	71.3	
13	63	74	RWE Group	Germany	Electricity, gas and water	82 569	128 060	23 390	52 081	42 349	85 928	52.9	248	432	57.4	
14	53	88	Chevron Corp.	United States	Petroleum expl./ref./distr.	81 225	125 833	99 970	193 641	32 000	59 000	56.8	106	234	45.3	
15	77	73	E.ON	Germany	Electricity, gas and water	80 941	149 900	29 148	83 177	45 820	79 947	48.8	367	639	57.4	
16	24	52	Suez	France	Electricity, gas and water	78 400	95 085	39 565	51 670	96 741	157 639	73.5	440	613	71.8	
17	87	59	Deutsche Telekom AG	Germany	Telecommunications	78 378	151 461	31 659	74 230	75 820	243 695	41.8	266	382	69.6	
18	40	47	Siemens AG	Germany	Electrical & electronic equipment	66 854	103 754	64 447	96 002	296 000	461 000	65.3	877	1177	74.5	
19	12	70	Honda Motor Company Limited	Japan	Motor vehicles	66 682	89 923	69 791	87 686	126 122	144 785	80.3	141	243	58.0	
20	11	17	Hutchison Whampoa	Hong Kong, China	Diversified	61 607	77 018	24 721	31 101	165 590 ^j	200 000	80.8	75	83	90.4	
21	67	38	Procter & Gamble	United States	Diversified	60 251	135 695	38 760	68 222	69 835	138 000	50.6	269	345	78.0	
22	47	37	Sanofi-Aventis	France	Pharmaceuticals	58 999 ^k	102 638	18 901 ^l	34 013	69 186	97 181	61.4	142	181	78.5	
23	89	77	ConocoPhillips	United States	Petroleum expl./ref./distr.	55 906	106 999	48 568	179 442	15 931	35 591	41.4	68	125	54.4	
24	60	32	BMW AG	Germany	Motor vehicles	55 308	88 316	44 404	58 105	25 924 ^m	105 798	54.5	142	175	81.1	
25	49	96	Nissan Motor Company Limited	Japan	Motor vehicles	53 747	97 661	59 771	83 440	89 336	183 356	58.5	54	172	31.4	
26	95	85	Daimler Chrysler	United States, Germany	Motor vehicles	51 342	238 813	76 981	186 530	103 184	382 724	29.9	286	591	48.4	
27	6	8	Nestlé SA	Switzerland	Food & beverages	51 112 ⁿ	78 602	72 071	73 258	245 777	253 000	86.8	471	502	93.8	
28	68	39	Pfizer Inc	United States	Pharmaceuticals	49 909	117 565	24 634	51 298	64 701 ⁿ	106 000	50.5	81	104	77.9	
29	76	58	ENI	Italy	Petroleum expl./ref./distr.	46 804	99 312	50 914	91 820	32 073	72 258	49.0	132	189	69.8	
30	57	15	IBM	United States	Electrical & electronic equipment	45 662	105 748	56 183	91 134	195 406	329 373	54.7	380	420	90.5	
31	99	65	Telecom Italia Spa	Italy	Telecommunications	45 494 ^o	113 714	7 678	37 261	13 497	85 484	25.5	69	104	66.3	
32	93	84	Mitsubishi Corporation	Japan	Wholesale trade	44 827	88 558	29 648	168 744	18 322	53 738	34.1	236	484	48.8	
33	45	30	Fiat Spa	Italy	Motor vehicles	44 672	73 971	41 678	57 965	96 595	173 695	62.6	406	497	81.7	
34	3	20	Roche Group	Switzerland	Pharmaceuticals	44 564	52 731	28 161	28 564	60 358	68 218	90.5	151	174	86.8	
35	100	23	Deutsche Post AG	Germany	Transport and storage	41 847	203 590	27 585	55 537	17 857 ^p	348 642	25.1	705	837	84.2	
36	97	28	Walmart Stores	United States	Retail	41 474	138 187	62 719	312 427	500 000	1 800 000	26.0	80	97	82.5	
37	90	76	Mitsui & Company Limited	Japan	Wholesale trade	40 335	72 927	15 491 ^q	36 422	8 587	40 993	39.6	242	437	55.4	
38	30	97	Anglo American	United Kingdom	Mining & quarrying	39 433 ^r	51 890	19 343 ^r	34 472	155 000 ^r	195 000	70.5	155	504	30.8	
39	50	46	Sony Corporation	Japan	Electrical & electronic equipment	38 559	90 230	46 216	66 158	96 900	158 500	57.9	233	310	75.2	
40	25	22	Compagnie de Saint-Gobain SA	France	Non-metallic mineral products	36 525	48 321	30 185	43 726	137 837	186 266	72.9	851	1006	84.6	

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Annex table A.I.13. The world's top 100 non-financial TNCs, ranked by foreign assets, 2005^a (continued)
(Millions of dollars and number of employees)

Ranking by: Foreign assets	TNI ^b	II ^c	Corporation	Home economy	Industry ^d	Assets		Sales		Employment		TNI ^b (Per cent)		No. of affiliates	
						Foreign ^e	Total	Foreign ^f	Total	Foreign	Total	Foreign	Total	Foreign	Total
41	54	14	Hewlett-Packard	United States	Electrical & electronic equipment	36 243	77 317	56 148	86 696	85 962	150 000	56.3	249	275	90.5
42	23	5	GlaxoSmithKline	United Kingdom	Pharmaceuticals	34 659	46 802	36 237	39 436	56 729 ^g	100 728	74.1	125	132	94.7
43	48	91	Carrefour	France	Retail	33 998	54 778	48 471	92 778	301 474	436 474	61.1	187	420	44.5
44	5	49	Philips Electronics	Netherlands	Electrical & electronic equipment	32 926	40 105	36 534	37 854	133 116	159 226	87.4	337	456	73.9
45	35	10	Novartis	Switzerland	Pharmaceuticals	32 146	57 732	31 846	32 212	47 365 ^g	90 924	68.9	277	302	91.7
46	58	83	Repsol YPF SA	Spain	Petroleum expl./ref./distr.	32 075	54 224	33 309	59 809	17 696	35 909	54.7	63	127	49.6
47	55	40	BASF AG	Germany	Chemicals	31 272	50 030	31 938	53 234	35 325	80 945	55.4	360	463	77.8
48	88	24	Altria Group	United States	Tobacco	30 530	107 949	54 951	97 854	81 670 ^h	199 000	41.8	212	252	84.1
49	9	34	Lafarge SA	France	Non-metallic mineral products	30 158	33 039	16 919	19 888	55 541 ⁱ	80 146	81.9	338	423	79.9
50	74	64	Renault SA	France	Motor vehicles	30 075	81 026	34 576	51 482	56 673	126 584	49.7	135	201	67.2
51	78	87	Endesa	Spain	Electric services	28 394 ^o	65 574	11 149 ^o	22 702	14 470 ^o	27 204	48.5	87	185	47.0
52	56	48	Bayer AG	Germany	Pharmaceuticals/chemicals	27 850	43 494	19 245	34 103	41 800 ^o	93 700	55.0	337	455	74.1
53	71	35	Telefonica SA	Spain	Telecommunications	27 556	86 667	22 414	47 178	147 236	207 641	50.1	197	249	79.1
54	72	60	Vivendi Universal	France	Diversified	26 930	52 686	9 051	24 265	20 889	34 031	49.9	133	192	69.3
55	98	53	Petronas - Petrolim Nasional Bhd	Malaysia	Petroleum expl./ref./distr.	26 350	73 203	12 995 ^o	44 353	4 016	33 944	25.7	167	234	71.4
56	52	68	Veolia Environnement SA	France	Water supply	25 937	43 005	16 179	31 440	164 222	271 153	57.4	520	873	59.6
57	42	26	Unilever	United Kingdom, Netherlands	Diversified	25 734 ^o	46 637	29 218 ^o	49 407	157 000 ^o	206 000	63.5	171	206	83.0
58	28	99	BAE Systems PLC	United Kingdom	Transport equipment	25 632	34 820	15 429	20 062	65 360	100 100	71.9	80	298	26.8
59	10	18	SabMiller PLC	United Kingdom	Consumer goods/brewers	23 051 ^o	26 776	12 049 ^o	15 307	42 150 ^o	53 772	81.1	135	150	90.0
60	83	79	Marubeni Corporation	Japan	Wholesale trade	23 043	39 018	8 068	27 788	12 058 ^o	27 377	44.0	180	341	52.8
61	2	16	Liberty Global Inc	United States	Telecommunications	22 377	23 379	5 016 ^o	5 151	20 855 ^o	21 600	96.5	114	126	90.5
62	4	75	WPP Group PLC	United Kingdom	Business services	22 199	24 761	8 313	9 784	62 929	70 936	87.8	573	1000	57.3
63	15	3	Cemex Sab De CV	Mexico	Non-metallic mineral products	21 793	26 439	12 088	14 961	39 630	52 674	79.5	535	554	96.6
64	41	29	BHP Billiton Group	Australia	Mining & quarrying	21 548	48 516	28 646	32 153	19 148	33 184	63.7	79	96	82.3
65	21	33	Volvo	Sweden	Motor vehicles	21 412	32 322	30 270	32 331	54 790	81 860	75.6	286	332	80.1
66	96	86	Hitachi Limited	Japan	Electrical & electronic equipment	21 219	85 240	24 051	83 763	113 220	355 879	28.5	356	752	47.3
67	20	1	Inbev SA	Belgium	Consumer goods/brewers	21 218	27 906	9 834	14 516	64 273 ⁿ	77 366	75.6	113	115	98.3
68	65	45	Dow Chemical Company	United States	Chemicals	21 116	45 934	28 783	46 307	19 767 ⁿ	42 413	51.6	205	270	75.9
69	59	41	United Technologies Corporation	United States	Transport equipment	20 862	45 925	22 074	42 725	148 874	222 200	54.7	365	470	77.7
70	19	81	Ahold Koninklijke	Netherlands	Retail	20 685	23 694	43 318	55 415	116 956 ^o	168 588	78.3	62	118	52.5
71	14	71	AES Corporation	United States	Electricity, gas and water	20 576	29 432	8 751	11 086	26 900	30 000	79.5	63	109	57.8
72	31	82	McDonalds Corp.	United States	Food & beverages	19 469	29 989	13 505	20 460	328 380	421 000	69.6	68	130	52.3
73	26	50	Coca-Cola Company	United States	Beverages	19 438 ^h	29 427	16 404 ^h	23 104	44 600	55 000	72.7	61	83	73.5
74	46	31	British American Tobacco	United Kingdom	Tobacco	19 207	32 776	10 611	16 978	35 885	55 364	62.0	195	240	81.3
75	13	12	Alcan Inc.	Canada	Metal and metal products	19 182	26 638	17 313	20 320	52 000	63 000	79.9	221	243	90.9
76	1	7	Thomson Corporation	Canada	Media	18 999	19 436	8 403	8 703	39 413 ⁱ	40 500	97.2	180	191	94.2
77	32	93	Diageo Plc	United Kingdom	Beverages	18 568	25 296	14 504	17 259	11 816 ^o	22 966	69.6	119	316	37.7
78	80	63	Johnson & Johnson	United States	Pharmaceuticals	18 521	58 025	22 137	50 514	70 560 ^k	115 600	45.6	171	252	67.9
79	34	44	Lvmh Moët-Hennessy Louis Vuitton SA	France	Luxury goods	18 474 ⁱ	33 226	14 725	17 323	40 100	59 214	69.4	343	449	76.4
80	37	67	Bertelsmann	Germany	Retail	18 353	27 161	15 663	22 280	56 399	88 516	67.2	386	627	61.6

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**Annex table A.I.13. The world's top 100 non-financial TNCs, ranked by foreign assets, 2005^a (concluded)
(Millions of dollars and number of employees)**

Ranking by: Foreign assets	TNI ^b	II ^c	Corporation	Home economy	Industry ^d	Assets		Sales		Employment		No. of affiliates			
						Foreign ^e	Total	Foreign ^f	Total	Foreign	Total	Foreign	Total		
						(Per cent)	(Per cent)	(Per cent)	(Per cent)	(Per cent)	(Per cent)	(Per cent)	(Per cent)		
81	62	92	Metro AG	Germany	Retail	18 337	34 072	37 080	69 396	112 291	214 937	53.2	289	740	39.1
82	36	4	Singapore Telecommunications Limited	Singapore	Telecommunications	18 000	20 748	5 556	7 906	8 832	19 500	67.4	99	104	95.2
83	18	9	GRH PLC	Ireland	Lumber and other building materials dealers	17 950	19 013	16 545	17 995	33 785 ^g	66 466	79.1	596	637	93.6
84	61	66	Thyssenkrupp AG	Germany	Metal and metal products	17 908	42 531	36 598	54 624	98 791	185 932	54.1	413	652	63.3
85	84	78	Matsushita Electric Industrial Company	Japan	Electrical & electronic equipment	17 891	67 747	37 904	78 715	189 531	334 402	43.7	288	541	53.2
86	43	6	Holcim Limited	Switzerland	Non-metallic mineral products	17 649 ^h	28 972	9 371 ^h	14 855	39 443 ^h	59 901	63.3	283	300	94.3
87	81	19	Samsung Electronics	Republic of Korea	Electrical & electronic equipment	17 481	74 834	62 100	79 017	27 664 ⁱ	80 594	45.4	76	86	88.4
88	22	13	Nokia	Finland	Telecommunications	17 264	26 410	42 169	42 581	33 268	56 896	74.3	108	119	90.8
89	17	57	L'Air Liquide Groupe	France	Chemicals	17 160	19 292	10 181	12 995	25 130	35 900	79.1	222	317	70.0
90	44	2	Mittal Steel Company NV	Netherlands	Metal and metal products	16 962 ^j	31 042	25 744 ^k	28 132	96 088 ^l	224 286	63.0	509	524	97.1
91	7	62	Cadbury Schweppes PLC	United Kingdom	Food & beverages	16 940	18 948	9 874	11 846	51 121	58 581	86.7	149	218	68.3
92	75	11	LG Corp.	Republic of Korea	Electrical & electronic equipment	16 609	50 611	38 419	60 805	40 689	79 000	49.2	42	46	91.3
93	69	25	Abbott Laboratories	United States	Pharmaceuticals	16 475	29 141	9 631	22 338	30 442 ^m	59 735	50.2	125	150	83.3
94	39	90	Telenor ASA	Norway	Telecommunications	16 244	18 348	5 497	10 711	16 700	27 600	66.8	79	177	44.6
95	92	98	Duke Energy Corporation	United States	Electricity, gas and water	15 943	33 696	10 641	26 155	83 700	129 000	51.0	120	202	59.4
96	66	69	Alcoa	United States	Metal and metal products	15 887	42 624	15 706	60 690	12 516	25 644	37.3	59	132	44.7
97	91	89	Statoil Asa	Norway	Petroleum expl./ref./distr.	15 770 ⁿ	18 440	8 420	11 929	57 895	110 000	69.6	91	106	85.8
98	33	21	Jardine Matheson Holdings Ltd	Hong Kong, China	Diversified	15 582	45 103	8 078	16 421	8 422	19 843	42.1	25	120	20.8
99	86	100	National Grid Transco	United Kingdom	Energy	15 550	35 841	8 412	18 756	23 468 ^o	49 732	45.1	81	98	82.7
100	82	27	Wyeth	United States	Pharmaceuticals	15 550	35 841	8 412	18 756	23 468 ^o	49 732	45.1	81	98	82.7

Source: UNCTAD/Eurasium University database.

^a All data are based on the companies' annual reports unless otherwise stated. Data on affiliates are based on the Dun and Bradstreet's Who Owns Whom database.

^b TNI, the Transnationality Index, is calculated as the average of the following three ratios: foreign assets to total assets, foreign sales to total sales and foreign employment to total employment.

^c II, the 'Internationalization Index', is calculated as the number of foreign affiliates divided by the number of all affiliates (Note: Affiliates counted in this table refer to only majority-owned affiliates).

^d Industry classification for companies follows the United States Standard Industrial Classification as used by the United States Securities and Exchange Commission (SEC).

^e In a number of cases, companies reported only partial foreign assets. In these cases, the ratio of the partial foreign assets to the partial (total) assets was applied to calculate the total foreign assets. In all cases, the resulting figures were sent for confirmation to the companies.

^f Foreign sales are based on the origin of the sales, unless otherwise stated.

^g Data for outside Europe.

^h Data for outside North America.

ⁱ Foreign employment data are calculated by applying the share of foreign employment in total employment of the previous year to total employment of 2005.

^j Foreign employment data are calculated by applying the share of both foreign assets in total assets and foreign sales in total sales to total employment of 2005.

^k Foreign employment data are calculated by applying the average of the shares of foreign employment in total employment of all companies in the same industry (omitting the extremes) to total employment.

^l Foreign assets data are calculated by applying the share of foreign assets in total assets of the previous year to total assets of 2005.

^m Total trading transactions were used to estimate foreign sales.

ⁿ Data for outside Western Europe.

^o Data for outside Spain and Portugal.

^p Foreign sales data are calculated by applying the share of foreign sales in total sales of the previous year to total sales of 2005.

^q Data for outside Other Americas.

^r Operating investments were used to estimate foreign assets

^s Data for outside Other Europe.

^t Data for outside United States and Puerto Rico.

^u Data for outside Hong Kong and Mainland China.

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

Annex table A.I.14. The top 100 non-financial TNCs from developing countries, ranked by foreign assets, 2005^a
(Millions of dollars and number of employees)

Ranking by: Foreign assets	TNI ^b	II ^c	Corporation	Home economy	Industry ^d	Assets		Sales		Employment		TNI ^b (Per cent)		No. of affiliates	
						Foreign ^e	Total	Foreign ^f	Total	Foreign	Total	Foreign	Total	Foreign	Total
1	19	12	Hutchison Whampoa Limited	Hong Kong, China	Diversified	61 607	77 018	24 721	31 101	165 5909	200 000	80.8	75	83	90.4
2	83	33	Petronas - Petrolim Nasional Bhd	Malaysia	Petroleum expl./ref./distr.	26 350 ^h	73 203	12 995 ^f	44 353	4 016	33 944	25.7	167	234	71.4
3	20	3	Cemex S.A.	Mexico	Non-metallic mineral products	21 793	26 439	12 088	14 961	39 630	52 674	79.5	535	554	96.6
4	30	4	Singtel Ltd.	Singapore	Telecommunications	18 000	20 748	5 556	7 906	8 8329	19 500	67.4	99	104	95.2
5	52	17	Samsung Electronics Co., Ltd.	Republic of Korea	Electrical & electronic equipment	17 481	74 834	62 100	79 017	27 6649	80 549	45.4	76	86	88.4
6	46	10	LG Corp.	Republic of Korea	Electrical & electronic equipment	16 609	50 611	38 419	60 805	40 689	79 000	49.2	42	46	91.3
7	28	18	Jardine Matheson Holdings Ltd ^l	Hong Kong, China	Diversified	15 770	18 440	8 420	11 929	57 895	110 000	69.6	91	106	85.8
8	90	80	CITIC Group ^k	China	Diversified	14 891	99 059	2 109	8 042	15 9159	93 3239	19.4	13	49	26.5
9	89	21	Hyundai Motor Company	Republic of Korea	Motor vehicles	13 015	64 688	18 676	58 156	5 0389	54 115	20.5	20	24	83.3
10	59	67	Formosa Plastic Group	Taiwan Province of China	Chemicals	12 807	57 910	9 708	37 664	61 626	82 380	40.9	11	30	36.7
11	60	75	China Ocean Shipping (Group) Company ^k	China	Transport and storage	10 657	18 105	8 463	15 227	4 230	69 549	40.2	40	134	29.9
12	84	62	Petróleos de Venezuela	Venezuela	Petroleum expl./ref./distr.	8 534	60 305	32 773	63 736	5 373	49 180	25.5	30	65	46.2
13	98	76	Petroleo Brasileiro S.A. - Petrobras	Brazil	Petroleum expl./ref./distr.	8 290	78 461	3 892	58 403	6 4229	53 933	9.7	30	102	29.4
14	73	79	CLP Holdings	Hong Kong, China	Electricity, gas and water	6 039	13 145	1 299	4 977	1 758	6 059	33.7	3	11	27.3
15	37	51	CapitaLand Limited	Singapore	Real Estate	6 017	10 926	1 984	2 586	7 6399	15 444	60.4	64	119	53.8
16	50	66	América Móvil	Mexico	Telecommunications	5 814	21 340	7 708	16 901	23 521	34 650	46.9	13	32	40.6
17	76	63	China State Construction Engineering Corp. ^k	China	Construction	5 578	13 083	3 400	14 338	26 100	119 000	29.4	40	87	46.0
18	64	88	Companhia Vale do Rio Doce	Brazil	Mining & quarrying	5 545	22 569	11 662	15 113	2 9379	38 828	36.4	6	41	14.6
19	94	96	Oil And Natural Gas Corporation	India	Petroleum and natural gas	5 459	20 641	1 626	16 798	4 122	34 722	16.0	2	37	5.4
20	42	26	Hon Hai Precision Industries	Taiwan Province of China	Electrical & electronic equipment	5 436	13 972	10 577	27 756	178 0079	210 932	53.8	35	44	79.5
21	67	40	Sasol Limited	South Africa	Industrial chemicals	5 368	13 847	5 351	10 947	5 067	30 004	35.1	16	26	61.5
22	99	97	China National Petroleum Corporation ^k	China	Petroleum expl./ref./distr.	5 287 ^h	143 767	6 505 ^f	85 959	22 000	1 167 129	4.4	5	98	5.1
23	87	50	Teléfonos de México S.A. de C.V.	Mexico	Telecommunications	5 025	23 195	3 553	15 119	15 277	75 484	21.8	29	52	55.8
24	34	11	Flextronics International Ltd. ^l	Singapore	Electrical & electronic equipment	5 009	10 958	6 707	15 288	96 695	99 000	62.4	125	138	90.6
25	69	25	Kia Motors	Republic of Korea	Motor vehicles	4 984	15 851	8 353	20 329	10 296 ^m	32 745	34.7	13	16	81.3
26	47	69	YTL Corp. Berhad	Malaysia	Utilities	4 832	7 658	660	1 306	1 9519	6 295	48.2	55	155	35.5
27	49	83	Sinochem Corp. ^k	China	Petroleum expl./ref./distr.	4 820	8 375	18 711	22 646	311	21 048	47.2	35	165	21.2
28	18	54	Benq Corp.	Taiwan Province of China	Computer and related activities	4 711	5 066	3 577	5 381	16 495	19 765	81.0	7	14	50.0
29	81	90	New World Development Co., Ltd.	Hong Kong, China	Diversified	4 622	14 726	615	3 084	16 636 ^m	53 000	27.6	8	65	12.3
30	15	55	Star Cruises ^l	Hong Kong, China	Transport	4 557	5 411	1 590	1 955	16 674	19 800	83.3	2	4	50.0
31	85	70	Quanta Computer Inc	Taiwan Province of China	Computer and related activities	4 451	11 561	613	14 588	14 895 ^l	44 687	25.3	2	6	33.3
32	27	31	Orient Overseas International Ltd ^l	Hong Kong, China	Transport and storage	4 435	4 815	1 673	4 696	5 206	6 115	71.0	30	41	73.2
33	56	87	Metalurgica Gerdau S.A.	Brazil	Metal and metal products	4 158	9 390	4 809	9 083	8 814	25 253	44.0	4	22	18.2
34	25	43	China Resources Enterprises	Hong Kong, China	Petroleum expl./ref./distr.	3 998	5 864	4 250	7 037	85 000	90 000	74.3	6	10	60.0
35	7	56	Asia Food & Properties	Singapore	Food and beverages	3 916	4 177	1 499	1 518	34 7679	45 000	89.9	2	4	50.0
36	45	41	MTN Group Limited	South Africa	Telecommunications	3 896	7 085	1 787	4 302	4 594	8 630	49.9	16	26	61.5
37	17	9	Shangri-La Asia Limited	Hong Kong, China	Hotels	3 887	4 263	654	842	14 2459	18 400	82.1	49	53	92.5
38	31	13	Sappi Limited	South Africa	Paper	3 671	5 708	3 697	5 018	8 7179	15 618	64.6	34	38	89.5
39	13	60	Galaxy Entertainment Group Limited	Hong Kong, China	Leisure	3 265	3 404	103	167	3 783 ^m	3 944	84.5	25	53	47.2
40	5	57	Guangdong Investment Limited	Hong Kong, China	Diversified	3 245	3 746	656	677	3 235	3 470	92.3	10	20	50.0

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Annex table A.I.14. The top 100 non-financial TNCs from developing countries, ranked by foreign assets, 2005^a (continued)
(Millions of dollars and number of employees)

Ranking by: Foreign assets	TNI ^b	II ^c	Corporation	Home economy	Industry ^d	Assets		Sales		Employment		TNI ^b (Per cent)		No. of affiliates	
						Foreign ^e	Total	Foreign ^f	Total	Foreign	Total	Foreign	Total	Foreign	Total
41	48	44	Steinhoff International holdings	South Africa	Domestic appliances	3 220	5 037	2 262	5 097	18 000	50 000	48.1	6	10	60.0
42	43	53	Lenovo Group	China	Computer and related activities	3 147	5 071	8 456	13 357	5 300	19 500	50.8	18	34	52.9
43	68	15	Taiwan Semiconductor Manufacturing Co Lt	Taiwan Province of China	Computer and related activities	2 745	15 450	4 643	8 115	6 224	21 950	35.1	8	9	88.9
44	61	24	Compal Electronics Inc	Taiwan Province of China	Machinery and equipment	2 732	4 673	161	8 081	15 318 ^m	26 207	39.6	9	11	81.8
45	78	99	China National Offshore Oil Corp. ^k	China	Petroleum and natural gas	2 716	14 221	3 775	8 606	567	2 696	28.0			
46	66	77	Gold Fields Limited	South Africa	Metal and metal products	2 672	4 821	900	2 309	6 155	54 622	35.2	2	7	28.6
47	95	92	Telekom Malaysia Berhad	Malaysia	Telecommunications	2 464	10 895	513	3 688	34 771	15.1	7	70	10.0	
48	35	64	Fraser & Neave Limited	Singapore	Food & beverages	2 321	5 377	1 601	2 566	11 693 ^o	15 134	60.9	60	134	44.8
49	53	84	Keppel Corporation Limited	Singapore	Diversified	2 319	6 258	1 586	3 418	12 173	23 625	45.0	49	247	19.8
50	38	34	Acer Inc.	Taiwan Province of China	Electrical & electronic equipment	2 254	5 223	5 060	10 223	5 532 ^o	6 554	59.0	45	67	67.2
51	86	98	FEMSA-Fomento Económico Mexicano	Mexico	Food & beverages	2 218	11 691	1 761	9 796	30 611	90 731	23.6	7	147	4.8
52	36	19	TCL Corporation	China	Electrical & electronic equipment	2 179	3 767	4 282	6 402	37 892 ^m	65 506	60.9	28	33	84.8
53	2	23	First Pacific Company Limited	Hong Kong, China	Electrical & electronic equipment	2 147	2 347	1 986	1 986	46 668 ^o	46 693	97.1	28	34	82.4
54	82	74	San Miguel Corporation	Philippines	Food & beverages	2 145	6 379	1 374	4 273	4 118 ^o	26 500	27.1	6	20	30.0
55	58	93	Bertolotto Ltd	South Africa	Diversified	2 079	4 523	2 594	9 135	25 963	25 963	40.9	3	30	10.0
56	21	7	Yue Yuen Industrial Holdings Limited	Hong Kong, China	Textiles and leather	2 034	3 133	2 293	3 155	264 781 ^o	265 000	79.2	47	50	94.0
57	26	39	Neptune Orient Lines Ltd. ^l	Singapore	Transport and storage	2 034	4 815	5 799	7 271	10 863	11 853	71.2	65	104	62.5
58	40	81	City Developments Limited ^l	Singapore	Hotels	1 957	6 547	811	1 427	11 872	14 086	57.0	33	127	26.0
59	14	14	Beijing Enterprises Holdings Ltd.	Hong Kong, China	Diversified	1 938	2 538	1 455	1 458	30 248 ^m	39 600	84.2	49	55	89.1
60	54	73	Sime Darby Berhad	Malaysia	Diversified	1 899	4 295	3 205	4 933	6 337 ^o	24 916	44.9	75	243	30.9
61	9	42	Li & Fung Limited ⁿ	Hong Kong, China	Wholesale trade	1 898	1 969	6 931	7 174	5 064	7 629	86.5	70	115	60.9
62	33	71	Orascom Construction	Egypt	Construction	1 892	3 107	1 329	1 983	24 354 ^m	40 000	62.9	1	3	33.3
63	65	86	Misc Corp. Berhad	Malaysia	Transport	1 764	7 020	1 672	2 848	2 241 ^m	8 916	36.3	6	32	18.8
64	24	29	Techronic Industries Company Limited	Hong Kong, China	Machinery and equipment	1 643	2 628	2 884	2 884	13 786 ^m	22 053	75.0	14	19	73.7
65	32	6	TPV Technology Limited ^l	Hong Kong, China	Wholesale trade	1 622	3 054	4 311	5 054	10 944	20 609	63.8	16	17	94.1
66	72	65	Swire Pacific Limited	Hong Kong, China	Business services	1 598	16 080	1 441	2 443	21 044 ^o	63 500	34.0	32	74	43.2
67	80	47	United Microelectronics Corporation	Taiwan Province of China	Electrical & electronic equipment	1 543	10 399	2 742	4 701	1 186 ^o	12 000	27.7	7	12	58.3
68	75	94	Naspers Limited	South Africa	Media	1 421	2 741	587	2 483	2 050 ^o	12 607	30.6	1	11	9.1
69	44	35	Delta Electronics Inc.	Taiwan Province of China	Electrical & electronic equipment	1 392	2 491	749	2 460	2 915 ^o	4 450	50.6	8	12	66.7
70	11	37	Esprit Holdings Limited ^l	Hong Kong, China	Textiles and leather	1 378	1 658	2 727	3 012	6 981	8 400	85.6	31	47	66.0
71	6	100	Cofo International Ltd ^k	China	Food & beverages	1 372	1 400	2 004	2 179	5 417	6 507	91.1	v		
72	88	1	Chunghwa Picture Tubes	Taiwan Province of China	Computer and related activities	1 324	7 512	843	3 145	4 043 ^m	22 945	20.7	6	6	100.0
73	23	45	Cheng Shin Rubber Industries Company	Taiwan Province of China	Rubber tyres	1 287	1 669	808	1 135	11 943 ^m	15 486	75.2	3	5	60.0
74	29	8	Slats Chippac Limited	Singapore	Diversified	1 280	2 393	1 144	1 157	7 031 ^m	13 142	68.6	14	15	93.3
75	74	68	CMC Magnetics Corp.	Taiwan Province of China	Computer and related activities	1 278	2 918	113	1 017	3 242 ^m	7 400	32.9	4	11	36.4
76	8	22	China Merchants Holdings International	Hong Kong, China	Diversified	1 276	1 458	334	383	2 720	2 973	88.7	20	24	83.3

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Annex table A.1.14. The top 100 non-financial TNCs from developing countries, ranked by foreign assets, 2005^a (concluded)
(Millions of dollars and number of employees)

Ranking by: Foreign assets	Corporation		Home economy	Industry ^d	Assets		Sales		Employment		TNI ^b (Per cent)		No. of affiliates		
	TNI ^b	II ^c			Foreign ^e	Total	Foreign ^f	Total	Foreign	Total	Foreign	Total	Foreign	Total	
77	3	48	Tianjin Development Holdings Limited	Hong Kong, China	Diversified	1 265	1 339	289	289	3 591 ^m	3 800	96.3	15	26	57.7
78	51	30	Advanced Semiconductor Engineering Inc	Taiwan Province of China	Computer and related activities	1 255	3 996	2 047	2 558	8 272	29 039	46.6	11	15	73.3
79	39	89	Gruma S.A. de C.V.	Mexico	Food & beverages	1 231	2 484	1 682	2 475	9 337	16 582	57.9	6	47	12.8
80	91	59	Imperial Holdings	South Africa	Motor vehicles	1 206	5 938	1 745	8 554	6 434	39 412	19.0	35	71	49.3
81	55	27	Noble Group Limited ^l	Hong Kong, China	Wholesale trade	1 193	2 849	5 978	11 790	502	1 200	44.8	26	33	78.8
82	63	28	Yang Ming Marine Transport Corporation	Taiwan Province of China	Transport	1 173	2 787	775	2 979	1 309 ⁿ	3 111	36.7	34	46	73.9
83	96	58	PCCW Limited	Hong Kong, China	Telecommunications	1 160	6 872	243	2 902	2 116 ^p	14 108	13.4	2	4	50.0
84	12	72	Unimicron Technology	Taiwan Province of China	Electrical & electronic equipment	1 150	1 206	548	858	12 510 ⁿ	13 117	84.9	1	3	33.3
85	77	61	Bluestar Group Limited	South Africa	Business services	1 134	3 303	3 562	10 149	13 691	89 737	28.2	60	129	46.5
86	71	85	Grupo Imsa	Mexico	Metal and metal products	1 118	3 316	1 549	3 635	3 154 ^q	12 010	34.2	4	21	19.0
87	79	78	Grupo Bimbo S.A. de CV	Mexico	Food & beverages	1 117	3 436	1 503	5 205	17 801 ^r	81 000	27.8	21	74	28.4
88	57	36	Wistron Corp.	Taiwan Province of China	Machinery and equipment	1 112	1 981	706	5 271	10 157 ^m	18 095	41.9	8	12	66.7
89	92	91	Genting Berhad	Malaysia	Hotels	1 101	4 892	70	1 443	4 500 ⁿ	20 000	16.6	14	124	11.3
90	1	20	Datatec Limited ^o	South Africa	Computer and related activities	1 084	1 142	2 897	2 976	2 530	2 440	98.7	47	56	83.9
91	70	38	Sembcorp Industries Limited	Singapore	Diversified	1 083	4 398	2 379	4 452	3 029 ⁿ	12 300	34.2	35	54	64.8
92	93	95	Reliance Industries Limited	India	Chemicals	1 069	21 496	6 505	17 838	97 ^p	12 540	16.4	4	51	7.8
93	62	5	Mitac International Corp.	Taiwan Province of China	Computer and related activities	952	1 858	335	2 582	12 277 ^m	23 977	38.5	18	19	94.7
94	97	52	China Minmetals Corp. ^k	China	Metal and metal products	950	5 786	2 514	14 540	733	34 141	12.0	44	82	53.7
95	100	82	PTT Public Company Limited	Thailand	Petroleum expl./ref./distr.	945	15 837	293	22 659	277	7 843	3.6	9	39	23.1
96	10	16	Road King Infrastructure Limited	Hong Kong, China	Transport	926	947	6	10	280 ⁿ	286	86.2	8	9	88.9
97	4	2	Want Want Holdings Ltd.	Singapore	Food & beverages	925	976	648	688	24 764 ^p	25 687	95.1	126	129	97.7
98	16	46	Asia Aluminum Holdings Limited	Hong Kong, China	Metal and metal products	909	1 215	427	440	31 407 ^m	42 000	82.2	12	20	60.0
99	41	49	China Travel International Investment Ho	Hong Kong, China	Tourism	886	1 805	518	734	4 925	10 037	56.2	33	59	55.9
100	22	32	Elliegroup Computer System Com.	Taiwan Province of China	Computer and related activities	885	998	727	1 212	12 087	13 631	79.1	5	7	71.4

Source: UNCTAD/Erasmus University database.

^a All data are based on the companies' annual reports unless otherwise stated. Data of affiliates are from the *Who Owns Whom* database.

^b TNI is calculated as the average of the following three ratios: foreign assets to total assets, foreign sales to total sales and foreign employment to total employment.

^c II, the "Internationalization Index", is calculated as the number of foreign affiliates divided by the number of all affiliates (Note: Affiliates counted in this table refer to only majority-owned affiliates).

^d Industry classification for companies follows the United States Standard Industrial Classification as used by the United States Securities and Exchange Commission (SEC).

^e In a number of cases, companies reported only partial foreign assets. In these cases, the ratio of the partial foreign assets to the partial (total) assets was applied to calculate the total foreign assets.

^f Foreign sales are based on the origin of the sales. In a number of cases companies reported sales only by destination.

^g Foreign employment data are calculated by applying the share of foreign employment in total employment of the previous year to total employment of 2005.

^h Foreign assets data are calculated by applying the share of foreign assets in total assets of the previous year to total assets of 2005.

ⁱ Foreign sales data are calculated by applying the share of foreign sales in total sales of the previous year to total sales of 2005.

^j Data for foreign activities are outside Hong Kong and mainland China.

^k Data were obtained from the company in response to an UNCTAD survey.

^l Data for foreign activities are outside Asia.

^m Foreign employment data are calculated by applying the average of the shares of foreign employment in total employment of all companies in the same industry (omitting the extremes) to total employment.

ⁿ Domestic assets are present as "Australasia".

^o Data for foreign activities are outside Africa.

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

Annex table A.I.15. The top 50 financial TNCs ranked by the Geographical Spread Index, 2005^a
(Millions of dollars, number of employees)

Rank 2005	GSI	Rank 2004	GSI	Financial TNCs	Home economy	Assets		Employees		Affiliates		
						Total	Total	Total	Number of foreign affiliates	II	Number of host countries	
1	66.0	2	64.7	Citigroup Inc	United States	1 494 037	307 000	641	377	58.8	74	
2	61.7	1	64.0	GE (General Electric) Capital Corporation	United States	475 273	77 500	1 425	1 085	76.1	50	
3	60.5	4	58.6	Allianz SE	Germany	1 133 770	177 625	776	580	74.7	49	
4	60.1	3	60.5	UBS AG	Switzerland	1 572 710	69 569	393	338	86.0	42	
5	58.4	6	58.5	Generali Group	Italy	397 308	61 561	311	259	83.3	41	
6	57.5	9	53.6	HSBC Holdings PLC	United Kingdom	1 498 028	268 471	1 148	717	62.5	53	
7	57.3	7	57.2	Zurich Financial Services	Switzerland	297 905	52 010	312	301	96.5	34	
8	56.9	5	58.6	BNP Paribas	France	1 482 838	101 917	700	454	64.9	50	
9	56.5	8	54.4	Unicredit Group	Italy	920 878	138 815	1 059	1 024	96.7	33	
10	56.0	12	51.5	AXA Group	France	665 091	78 800	645	518	80.3	39	
11	54.2	10	53.1	Societe Generale	France	999 795	100 186	460	270	58.7	50	
12	53.9	13	51.0	Credit Suisse Group	Switzerland	1 011 504	63 523	314	268	85.4	34	
13	51.5	14	47.8	ABN Amro Holding NV	Netherlands	1 035 814	98 080	1 177	665	56.5	47	
14	49.5	11	51.8	Deutsche Bank AG	Germany	987 961	63 427	678	438	64.6	38	
15	47.2	..	..	GMAC (General Motors) Financial Services	United States	320 516	33 900	283	166	58.7	38
16	42.9	15	43.7	Grupo Santander Central Hispano SA	Spain	943 896	128 408	475	302	63.6	29	
17	42.3	19	40.0	American International Group Inc (AIG)	United States	853 370	97 000	381	162	42.5	42	
18	41.8	20	40.0	ING Groep NV	Netherlands	1 364 208	115 300	802	379	47.3	37	
19	41.5	17	41.9	Credit Agricole SA	France	1 244 385	62 112	365	161	44.1	39	
20	37.3	..	..	Bank Of Nova Scotia	Canada	265 126	46 631	77	51	66.2	21
21	36.5	..	..	Standard Chartered Bank	United Kingdom	214 415	43 899	117	65	55.6	24
22	35.8	..	..	Skandinaviska Enskilda Banken	Sweden	237 295	18 948	171	122	71.3	18
23	34.8	23	34.7	KBC Groupe SA	Belgium	383 748	51 622	228	162	71.1	17	
24	34.8	..	..	Natexis Banque Populaire	France	198 017	12 973	228	81	35.5	34
25	34.7	25	34.5	Banca Intesa	Italy	320 974	57 632	131	83	63.4	19	
26	34.6	24	34.6	Royal Bank Of Canada	Canada	396 993	..	180	135	75.0	16	
27	34.4	18	40.2	Merrill Lynch & Company Inc	United States	681 015	54 600	156	84	53.8	22	
28	34.3	27	30.6	Morgan Stanley	United States	898 523	53 218	205	127	62.0	19	
29	34.2	21	36.0	JP Morgan Chase & Company	United States	1 198 942	168 847	382	179	46.9	25	
30	33.5	..	..	Nomura Holdings Inc	Japan	321 380	14 344	120	64	53.3	21
31	33.1	30	30.1	Barclays	United Kingdom	923 671	113 300	521	146	28.0	39	
32	31.0	33	27.8	Mitsubishi UFJ Financial Group	Japan	1 009 517	43 948	101	57	56.4	17	
33	30.8	31	28.6	Manulife Financial Corp.	Canada	322 171	20 000	82	60	73.2	13	
34	30.7	26	30.8	BBV Argentaria SA	Spain	455 580	94 681	208	89	42.8	22	
35	30.0	41	23.4	Dexia	Belgium-lux	599 746	19 891	183	103	56.3	16	
36	29.8	29	30.3	Goldman Sachs Group Inc	United States	705 500	22 425	132	69	52.3	17	
37	29.8	28	30.3	Nordea Bank AB	Sweden	384 302	28 925	124	100	80.6	11	
38	29.6	32	28.1	Aviva	United Kingdom	440 400	54 791	520	217	41.7	21	
39	28.1	39	24.5	Aegon NV	Netherlands	367 005	27 159	385	202	52.5	15	
40	27.6	..	..	Bank Of China Limited	China	585 518	209 265	45	43	95.6	8
41	27.0	34	27.6	Commerzbank AG	Germany	518 688	33 056	256	104	40.6	18	
42	26.5	..	..	Canadian Imperial Bank Of Commerce	Canada	236 843	37 308	70	49	70.0	10
43	25.6	35	26.4	Danske Bank A/S	Denmark	384 527	19 128	73	48	65.8	10	
44	25.0	..	..	Svenska Handelsbanken AB	Sweden	198 595	9 413	67	28	41.8	15
45	25.0	37	25.7	Sumitomo Mitsui Financial Group	Japan	928 602	40 683	77	37	48.1	13	
46	24.8	45	19.5	Fortis NV	Belgium	858 138	57 088	74	38	51.4	12	
47	24.8	40	23.6	Royal Bank Of Scotland Group	United Kingdom	776 827	137 000	1 229	260	21.2	29	
48	23.7	42	22.5	Prudential Financial Inc	United States	417 776	38 853	109	47	43.1	13	
49	23.6	36	26.0	Mizuho Financial Group	Japan	1 332 057	45 180	93	40	43.0	13	
50	21.7	43	21.7	Prudential Group	United Kingdom	352 524	31 661	240	63	26.3	18	

Source: UNCTAD.

^a All data are based on the companies' annual reports unless otherwise stated. Data on affiliates are based on the Dun and Bradstreet's, *Who Owns Whom* database.

^b GSI, the "Geographical Spread Index", is calculated as the square root of the Internationalization Index multiplied by the number of host countries.

^c II, the "Internationalization Index", is calculated as the number of foreign affiliates divided the number of all affiliates (Note: Affiliates counted in this table refer to only majority-owned affiliates).

Annex table A.I.16. The top 100 TNCs ranked by the number of host countries and the Geographical Spread Index, 2005

Rank	Corporation	Home economy	Number of host countries	GSI ^a	Rank	Corporation	Home economy	Number of host countries	GSI ^a
1	Deutsche Post AG	Germany	103	93.1	51	Cemex SA	Mexico	35	58.1
2	Royal Dutch/Shell Group	United Kingdom, Netherlands	96	71.1	52	ENI	Italy	35	49.4
3	Nestlé SA	Switzerland	94	93.9	53	Bertelsmann	Germany	34	45.7
4	Siemens AG	Germany	85	79.6	54	Honda Motor Company Limited	Japan	34	44.9
5	BASF AG	Germany	84	80.8	55	Unilever	United Kingdom/Netherlands	33	52.3
6	Bayer AG	Germany	76	75.0	56	Wyeth	United States	33	52.2
7	Procter & Gamble	United States	72	74.9	57	BMW AG	Germany	33	51.7
8	IBM	United States	66	77.3	58	Volkswagen	Germany	33	48.5
9	Philips Electronics	Netherlands	62	67.7	59	Toyota Motor Corporation	Japan	33	34.5
10	Total	France	62	66.2	60	Mittal Steel Company NV	Netherlands	32	55.7
11	British Petroleum Company PLC	United Kingdom	62	65.3	61	Samsung Electronics	Republic of Korea	32	53.2
12	WPP Group PLC	United Kingdom	59	58.1	62	Vivendi Universal	France	32	47.1
13	Abbott Laboratories	United States	57	68.9	63	Deutsche Telekom AG	Germany	31	46.4
14	Nokia	Finland	56	71.3	64	General Motors	United States	31	42.2
15	Altria Group	United States	56	68.6	65	Flextronics International Ltd.	Singapore	30	52.1
16	Novartis	Switzerland	55	71.0	66	Coca-Cola Company	United States	30	46.9
17	General Electric	United States	55	65.3	67	Renault SA	France	30	44.9
18	Mitsui & Company Limited	Japan	55	55.2	68	McDonalds Corp.	United States	30	39.6
19	Mitsubishi Corporation	Japan	55	49.6	69	Metro AG	Germany	30	34.2
20	Roche Group	Switzerland	53	67.8	70	Anglo American	United Kingdom	30	30.4
21	France Télécom	France	53	61.8	71	Alcoa	United States	28	40.8
22	Veolia Environnement SA	France	53	56.2	72	SABMiller PLC	United Kingdom	27	49.3
23	Hewlett-Packard	United States	52	68.6	73	Thomson Corporation	Canada	25	48.5
24	Compagnie de Saint-Gobain SA	France	52	66.3	74	AES Corporation	United States	25	38.0
25	Volvo	Sweden	52	64.5	75	Inbev SA	Belgium	24	48.6
26	Thyssenkrupp AG	Germany	52	57.4	76	LG Corp.	Republic of Korea	24	48.4
27	Johnson & Johnson	United States	51	58.8	77	Telefónica SA	Spain	24	43.5
28	ExxonMobil	United States	50	62.2	78	Carrefour	France	24	32.7
29	Daimler Chrysler	United States, Germany	50	49.2	79	Telenor ASA	Norway	24	32.7
30	Lafarge SA	France	47	61.3	80	Singtel Ltd.	Singapore	24	24.5
31	Lvmh Moët-Hennessy Louis Vuitton SA	France	47	59.9	81	Acer Inc.	Taiwan Province of China	23	39.3
32	L'Air Liquide Groupe	France	46	56.7	82	Telecom Italia Spa	Italy	21	37.3
33	Sanofi-Aventis	France	45	59.4	83	RWE Group	Germany	21	34.7
34	Cadbury Schweppes PLC	United Kingdom	45	55.4	84	Nissan Motor Company Limited	Japan	21	25.7
35	Hitachi Limited	Japan	45	46.1	85	Neptune Orient Lines Ltd.	Singapore	20	35.3
36	Fiat Spa	Italy	43	59.3	86	ConocoPhillips	United States	20	33.0
37	Matsushita Electric Industrial Company	Japan	43	47.8	87	E.ON	Germany	19	33.0
38	United Technologies Corporation	United States	42	57.1	88	Statoil Asa	Norway	19	29.1
39	Sony Corporation	Japan	42	56.2	89	Vodafone Group PLC	United Kingdom	19	26.4
40	Marubeni Corporation	Japan	42	47.1	90	Lukoil	Russian Federation	19	26.1
41	Holcim Limited	Switzerland	40	61.4	91	Electricite De France	France	18	37.7
42	Alcan Inc.	Canada	40	60.3	92	Repsol YPF SA	Spain	17	24.0
43	Dow Chemical Company	United States	40	55.1	93	CRH PLC	Ireland	16	38.7
44	Pfizer Inc	United States	39	55.1	94	Lenovo Group	China	15	37.6
45	Ford Motor	United States	39	52.4	95	Hutchison Whampoa	Hong Kong (China)	15	36.8
46	Chevron Corp.	United States	39	42.0	96	BAE Systems PLC	United Kingdom	15	20.1
47	Suez	France	38	52.2	97	Orient Overseas International Ltd	Hong Kong (China)	14	32.0
48	GlaxoSmithKline	United Kingdom	36	58.4	98	Endesa	Spain	14	25.6
49	British American Tobacco	United Kingdom	36	54.1	99	Liberty Global Inc	United States	13	34.3
50	Diageo Plc	United Kingdom	36	36.8	100	Hon Hai Precision Industries	Taiwan Province of China	13	32.1

Source: UNCTAD.

^a The GSI (Geographical Spread Index) is defined as the square root of the Internationalization Index (the number of foreign affiliates divided by the total number of affiliates) multiplied by the number of host countries.

Annex table A.IV.1. Inward FDI in extractive industries, flows and stocks, selected economies, various years
(Millions of dollars)

Host economy	Stocks			Flows		
	1990	2000	2005	1988-1990	1998-2000	2003-2005
Developed countries						
European Union						
Austria	..	266	508 ^a	..	12	6
Belgium	..	..	..	..	2 ^b	- 48
Cyprus	..	..	19 ^c	..	6	30
Czech Republic	..	401	252	..	114	1
Denmark	..	555 ^d	..	..	..	..
Estonia	..	12	45	..	3	6
France	..	340	924 ^a	26	44	95
Germany	44	1 198	4 768	5	76	252
Greece	..	..	..	..	..	- 105
Hungary	..	61	50	..	2	- 9
Italy	1 385 ^e	2 197	20 578	..	- 4	5 514
Latvia	..	8	26	..	- 0.3	6
Lithuania	..	25	55	..	2	4
Netherlands	20 368	44 103	77 341	1 723	1 655	5 621
Poland	..	276	99	..	31	7
Portugal	..	141	166 ^f	..	- 1	28
Slovakia	..	40	83	..	..	1
Slovenia	..	..	3	..	..	..
Spain	..	..	..	..	65	191
Sweden	..	..	..	1 ^h	120	5
United Kingdom	46 611	38 782	140 734	4 660	6 216	34 004
North America						
Canada	18 747	25 917	70 319	581	6 053	8 645
United States	12 038	11 954	23 705	2 058	2 492	4 179
Other developed countries						
Australia	..	16 551	43 435	..	1 543	2 895
Iceland	7	5	..	1	1	- 0.1
Japan	..	..	2	..	..	0.3
Norway	7 076	8 137	17 549 ^a	..	- 234	171 ⁱ
Developing countries						
Africa						
Botswana	..	1 453	1 176 ^f	..	..	..
Egypt	..	..	..	..	..	7 ⁱ
Ethiopia	..	..	..	..	14	..
Madagascar	..	..	60 ^a	..	..	..
Morocco	..	..	935 ^a	..	28	31
Mozambique	..	..	..	..	..	3 ^j
Nigeria	543	10 466	20 384	543	1 023	2 240
South Africa	..	12 095	26 604	..	..	..
Swaziland	6 ^o	5	12	..	..	..
Tunisia	..	..	..	54	192	254
United Republic of Tanzania	..	814	1 057 ^g	..	151	..
Zambia	..	231	241 ^g	..	..	..
Latin America and the Caribbean						
Argentina	818 ^k	17 657	14 719 ^a	5	7 302	1 040 ⁱ
Bolivia	575	..	3 330 ^f	28	439	283 ^j
Brazil	936	2 017	..	..	382	1 371
Chile	3 161	15 272	19 975	643	1 347	521
Colombia	1 584	2 002	4 553 ^c	50	54	2 026
Dominican Republic	..	..	195	..	..	55
Ecuador	..	..	..	111	679	1 062
El Salvador	..	..	2	..	2	2 ^m
Guyana	..	..	..	..	11 ^l	..
Honduras	..	..	..	..	32	25
Jamaica	..	..	..	..	89	106
Mexico	..	..	..	40 ⁿ	129	79
Nicaragua	..	..	..	..	17 ^l	..
Peru	487	1 788	2 324	3	153	139
Trinidad and Tobago	63	549	766 ⁱ
Venezuela	4	10 181	12 926 ^c	1	1 710	1 373 ^o

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Annex table A.IV.1. Inward FDI in extractive industries, flows and stocks, selected economies, various years (concluded)
(Millions of dollars)

Host economy	Stocks			Flows		
	1990	2000	2005	1988-1990	1998-2000	2003-2005
Asia and Oceania						
Bangladesh	..	572	994	..	115	111
Cambodia ^a	..	41	41 ^c	..	10	..
China	..	..	3 853 ^j	1 ^j	573	599
India	6	95 ^p	..	1	..	12
Indonesia ^a	..	9 369 ^p	..	116	81	287
Iran, Islamic Republic of	..	..	..	..	1 017	117 ^q
Jordan	..	..	2 844	..	..	..
Korea, Republic of ^b	15	74 ^p	..	1	11	2
Lao People's Democratic Republic	52 ^j	139 ^r	..	17 ^j	11	2 ^g
Malaysia	44	..	..	..	700	1 000 ^o
Mongolia ^a	..	86	182 ^c	..	39	164
Myanmar ^d	426	2 880	3 170	213	25	80
Oman	..	..	1 533 ^f	..	..	..
Pakistan	147	518	1 069 ^a	88	64	123 ^o
Papua New Guinea	1 291	1 196 ^p	..	..	173	..
Philippines	853	1 414	1 734 ^a	28	144	- 2
Singapore	- 25	- 11 ^p	..	..	..	..
Syrian Arab Republic	..	..	6 920 ^g	..	..	..
Taiwan Province of China ^a	13	20	71	..	1	4
Thailand	..	518 ^g	1 006 ^a	29	- 98	- 26 ^j
Turkey	..	262	1 972	22 ^j	9 ^j	43
Viet Nam	410 ^l	3 809	5 788 ^c	137 ^j	337	876 ^o
South-East Europe and CIS						
Albania	..	..	- 14	..	..	..
Armenia	..	31	181	..	10	51
Azerbaijan	..	..	..	..	392	560 ^o
Bulgaria	..	23	80	..	2	11
Croatia	..	131	389	..	39	84
Georgia	..	1 ^s	..	..	..	..
Kazakhstan	..	7 037	12 777	..	903	662
Romania	..	..	1 890	..	..	600
Russian Federation	..	2 431	12 872	..	637	2 832
The former Yugoslav Republic of Macedonia	..	9	46	..	3	9
Ukraine	..	..	310	..	..	- 10 ^t

Source: UNCTAD, FDI/TNC database.

^a 2004.

^b Average 1996-1998.

^c 2002.

^d 1996.

^e 1988.

^f 2003.

^g 2001.

^h Average 1987-1989.

ⁱ Average 2002-2004.

^j Approval data.

^k 1989.

^l Average 1997-1999.

^m 2005.

ⁿ Average 1986-1987.

^o Average 2001-2002.

^p 1997.

^q Average 2002-2003.

^r 1999.

^s 1998.

^t Average 2003-2004.

Annex table A.IV.2. Outward FDI in extractive industries, flows and stocks, selected economies, various years
(Millions of dollars)

Home economy	Stocks			Flows		
	1990	2000	2005	1988-1990	1998-2000	2003-2005
Developed countries						
European Union						
Austria	294	196	2 551 ^a	..	33	36
Belgium	..	..	..	..	36 ^b	- 76
Cyprus	..	..	1 ^c	..	..	- 0.1 ^d
Czech Republic	..	0.2	81	..	- 14 ^e	11
Denmark	..	34 ^f	..	..	..	..
France	..	13 243	15 070 ^a	1 072	34	636
Germany	2 398	2 920	3 486	246	279	587
Greece	..	..	..	..	..	12
Hungary	..	23	475	..	0.2	6
Italy	3 581 ^g	12 743	37 309	..	1 040	3 821
Netherlands	32 654	51 045	162 125	2 487	2 127	39 305
Poland	..	53	9	..	8	1
Portugal	..	281	41 ^h	..	- 6	0.1
Slovakia	..	24	56	..	..	- 2
Slovenia	..	..	0.1	..	..	..
Spain	..	..	..	..	- 38	838
Sweden	..	..	..	29	360	506
United Kingdom	42 150	84 308	90 284	3 097	23 853	2 364
North America						
Canada	6 336	16 790	46 773	1 458	4 683	10 174
United States	29 606	61 648	99 409	- 962	5 087	8 425
Other developed countries						
Australia	..	4 795	7 496	..	70	1 238
Israel	..	..	..	..	0.1	..
Japan	..	..	7 759	1 195 ⁱ	820 ^j	1 368 ^d
Norway	2 556	11 780	24 162 ^a	..	- 135	1 034 ^j
Developing countries						
Africa						
Morocco	..	90 ^c	113 ^a	..	..	..
Nigeria	57	1 326	2 192	57 ^k	79	207
Swaziland	1 ^g	..	..	..	..	..
Latin America and the Caribbean						
Brazil	..	1 559 ^l	3 358	..	..	..
Chile	940	4 532	10 139	147 ^k	691	922
Colombia	2	4	..	..	1	- 16 ^m
Asia and Oceania						
China	..	..	8 652	..	..	1 614
India	3 ⁿ	..	..	..	..	..
Korea, Republic of	442	1 428	2 734	17	95	355
Taiwan Province of China ^h	-	35	680	..	1	52 ^d
Thailand	..	..	..	-	0.1	5 ^j
Turkey	..	10 ^l	27	..	..	2
South-East Europe and CIS						
Bulgaria	..	..	..	..	..	1
Croatia	..	20 ^c	30	..	0.2	4
Kazakhstan	..	2	- 837	..	..	- 400
Russian Federation	..	1 ^o	..	..	..	..
The former Yugoslav Republic of Macedonia	..	..	..	..	..	1 ^d

Source: UNCTAD, FDI/TNC database.

^a 2004.

^b Average 1996-1998.

^c 2002.

^d 2005.

^e 2000.

^f 1996.

^g 1988.

^h 2003.

ⁱ Approval data.

^j Average 2002-2004.

^k 1990.

^l 2001.

^m Average 2001-2002.

ⁿ 1987.

^o 1999.

Annex table A.IV.3. Cross-border M&A purchases in extractive activities, by industry, 1990-2006
(Millions of dollars)

Acquiring industry	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Extractive industries	12 929	15 417	9 239	7 250	5 341	3 479	2 806	7 733	12 597	15 770	16 310	65 522	26 868	15 618	23 456	27 684	23 345	16 823	105 310	81 455
Petroleum	12 351	13 215	7 855	5 931	4 609	819	510	3 152	4 967	11 582	10 736	61 578	19 899	8 278	17 723	18 526	19 440	12 773	99 324	26 665
Crude petroleum and natural gas	12 276	12 652	7 626	5 549	4 583	668	413	2 986	4 953	8 720	10 334	61 427	19 797	8 270	17 369	18 226	19 375	12 341	98 708	26 226
Natural gas liquids	-	-	-	-	-	-	58	-	-	-	-	-	90	2	-	-	-	-	-	-
Drilling oil and gas wells	75	563	229	382	26	151	97	108	14	2 862	402	151	12	6	353	300	65	432	615	439
Mining and quarrying	579	2 202	1 384	1 319	732	2 660	2 296	4 582	7 631	4 189	5 575	3 944	6 969	7 340	5 733	9 158	3 905	4 050	5 987	54 790
Mining of coal	-	339	100	169	4	1 057	461	592	36	195	228	774	1 263	339	628	85	28	581	2 192	21 666
Bituminous coal and lignite surface mining	-	339	100	160	4	1 67	445	592	-	195	129	-	1 263	339	626	85	11	581	2 184	1 728
Bituminous coal underground mining	-	-	-	10	-	890	-	-	-	-	99	400	-	-	3	-	18	-	8	19 939
Anthracite mining	-	-	-	-	-	-	16	-	36	-	-	374	-	-	-	-	-	-	-	-
Mining of metal ores	579	1 833	1 185	675	617	1 598	1 766	3 812	6 403	3 814	3 310	2 866	4 565	6 825	4 648	8 828	3 776	3 154	3 468	32 074
Iron ores	-	-	60	228	-	41	-	2 344	2	19	436	-	1 365	3 400	65	-	18	-	1 131	17 588
Copper ores	-	1 604	18	36	20	432	1 346	1 030	5 249	3	49	11	181	111	88	121	97	178	132	765
Lead and zinc ores	-	-	119	20	-	-	-	25	10	-	248	10	4	-	-	-	22	-	98	140
Gold ores	579	229	988	292	282	907	308	328	587	3 286	1 218	1 772	2 762	2 053	2 881	8 651	3 039	2 521	1 060	12 130
Silver ores	-	-	-	7	-	-	53	36	189	18	265	57	-	9	-	7	2	37	1	111
Ferroalloy ores, except vanadium	-	-	-	32	-	166	-	-	87	11	859	-	203	22	-	13	445	221	239	1 025
Miscellaneous metal ores, nec	-	-	-	61	314	52	59	49	280	477	237	1 016	50	1 230	1 613	37	155	198	807	315
Other mining and quarrying	-	30	99	475	112	5	69	178	1 192	180	2 037	305	1 141	176	457	245	100	314	327	1 050
Dimension stone	-	-	-	1	-	-	8	42	14	-	-	-	-	-	-	-	3	5	-	-
Crushed and broken stone, nec	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	-	-	-
Construction sand and gravel	-	-	62	-	-	-	-	-	-	-	26	-	235	1	6	207	64	100	-	231
Clay, ceramic, and refractory minerals, nec	-	-	-	9	-	-	-	53	5	-	-	-	-	-	-	12	-	30	5	1
Diamonds	-	-	-	-	-	-	-	11	2	-	10	-	-	151	-	6	-	128	9	-
Potash, soda, and borate minerals	-	-	-	-	-	-	-	-	1 115	150	1 723	-	-	-	129	-	5	-	-	130
Chemical and fertilizer mineral mining, nec	-	-	-	180	-	-	27	-	2	-	-	-	-	7	109	4	16	3	8	72
Miscellaneous nonmetallic minerals, except fuels	-	-	-	56	-	5	4	7	7	19	92	846	17	153	15	13	48	70	538	-
Crushed and broken limestone	-	-	-	4	-	-	24	65	7	21	-	213	60	-	-	-	-	-	-	-
Uranium-radium-vanadium ores	-	30	37	137	104	-	-	-	-	-	128	-	-	-	-	2	-	-	-	235
Industrial sand	-	-	-	87	-	-	6	-	-	-	131	-	-	-	61	-	-	-	-	-
Crushed and broken granite	-	-	-	-	-	-	-	-	15	-	-	-	-	-	-	-	-	1	-	-
Kaolin and ball clay	-	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

Annex table A.IV.4. 50 largest cross-border M&As sales in oil and gas and mining,^a 1987-2006
(Billion dollars)

Rank	Year	Value (\$ billion)	Shares acquired	Acquired company	Host economy	Target industry	Acquiring company	Home economy
1	2005	74 349	100	Royal Dutch Shell	United Kingdom	Crude petroleum and natural gas	Royal Dutch Petroleum	Netherlands
2	1998	48 174	100	Amoco	United States	Crude petroleum and natural gas	BP	United Kingdom
3	2006	17 396	80.2	Falconbridge	Canada	Nickel and base metals	Xstrata	Switzerland
4	2006	17 150	86.6	Inco	Canada	Nickel and base metals	CVRD	Brazil
5	1999	13 400	100	YPF SA	Argentina	Crude petroleum and natural gas	Repsol	Spain
6	2001	11 511	100	Billiton	United Kingdom	Miscellaneous metal ores, nec	BHP Billiton	Australia
7	2001	11 078	60.2	De Beers Consolidated Mines	South Africa	Miscellaneous nonmetallic minerals	Anglo American	United Kingdom
8	1999	11 000	100	Petrofina	Belgium	Crude petroleum and natural gas	Total	France
9	2006	8 670	100	Glamis Gold	United States	Gold	Goldcorp	Canada
10	2003	7 600	50	TNK	Russian Federation	Crude petroleum and natural gas	BP	United Kingdom
11	2001	6 305	100	Gulf Canada Resources	Canada	Crude petroleum and natural gas	Conoco	United States
12	2002	6 192	100	Enterprise Oil	United Kingdom	Crude petroleum and natural gas	Royal Dutch Petroleum	Netherlands
13	2003	5 302	100	Pechiney	France	Primary production of aluminum	Alcan Aluminium	Canada
14	1995	4 653	100	CRA Ltd-Assets	Australia	Iron ores	Rio Tinto	United Kingdom
15	2001	4 562	100	Anderson Exploration	Canada	Crude petroleum and natural gas	Devon Energy	United States
16	2000	4 400	100	Alusuisse Group	Switzerland	Primary production of aluminum	Alcan Aluminium	Canada
17	2005	4 141	100	PetroKazakhstan	Canada	Crude petroleum and natural gas	CNPC	China
18	1989	4 126	100	Texaco Canada	Canada	Crude petroleum and natural gas	Imperial Oil (Exxon)	United States
19	2001	3 976	100	LASMO	United Kingdom	Drilling oil and gas wells	ENI	Italy
20	1988	3 616	100	Dome Petroleum	Canada	Crude petroleum and natural gas	BP Amoco	United Kingdom
21	2006	3 500	49.9	Udmurtneft	Russian Federation	Crude petroleum and natural gas	Sinopec	China
22	1998	3 449	100	Norcen Energy Resources	Canada	Crude petroleum and natural gas	Union Pacific	United States
23	2005	3 398	100	Aggregate Industries	United Kingdom	Construction sand and gravel	Holcim	Switzerland
24	2005	3 138	100	Kerr-McGee Corp.	United States	Crude petroleum and natural gas	AP Moller	Denmark
25	2002	2 822	100	Franco-Nevada Mining Corp.	Canada	Gold	Newmont Mining	United States
26	2002	2 765	100	VAW Aluminium AG (VIAG)	Germany	Primary production of aluminum	Norsk Hydro	Norway
27	2002	2 700	49	Slovensky Plenarenky Priemysel	Slovakia	Crude petroleum and natural gas	Gazprom, Ruhrgas and GdF	France
28	2006	2 692	45	NNPC-OML 130	Nigeria	Crude petroleum and natural gas	CNOOC	China
29	1999	2 539	100	Poco Petroleum	Canada	Crude petroleum and natural gas	Burlington Resources	United States
30	2005	2 448	100	Spinnaker Exploration	United States	Crude petroleum and natural gas	Norsk Hydro	Norway
31	1996	2 432	100	Magma Copper	United States	Copper	BHP	Australia
32	2004	2 338	100	Tom Brown	United States	Crude petroleum and natural gas	EnCana	Canada
33	2001	2 295	100	Homestake Mining	United States	Gold	Barrick Gold	Canada
34	2005	2 284	100	Precision Drilling Corp.	Canada	Drilling oil and gas wells	Weatherford International	United States
35	1999	2 200	100	Asarco Inc	United States	Miscellaneous metal ores, nec	Grupo México	Mexico
36	2002	2 215	100	Normandy Mining	Australia	Gold	Newmont Mining	United States
37	1996	2 100	100	Hemlo Gold (Noranda)	Canada	Gold	Battle Mountain Gold Co	United States
38	2000	2 090	100	North Ltd.	Australia	Gold	Rio Tinto	United Kingdom
39	2003	2 057	100	MIM Holdings	Australia	Bituminous coal and lignite surface mining	Xstrata	Switzerland
40	2006	2 057	100	BlackRock Ventures	Canada	Crude petroleum and natural gas	Royal Dutch Shell	United Kingdom
41	2001	2 025	100	Canadian Hunter Exploration	Canada	Crude petroleum and natural gas	Burlington Resources	United States
42	2002	2 006	100	E ON AG	Germany	Crude petroleum and natural gas	Petro-Canada	Canada
43	2005	2 000	100	EnCana	Canada	Crude petroleum and natural gas	Statoil	Norway
44	2005	2 000	100	Nelson Resources	Canada	Crude petroleum and natural gas	Lukoil	Russian Federation
45	2006	1 956	100	Nations Energy	Canada	Crude petroleum and natural gas	CITIC Group	China
46	1988	1 952	21.3	BP Amoco	United Kingdom	Crude petroleum and natural gas	KIO (Kuwait)	Kuwait
47	1995	1 844	100	Maxus Energy	United States	Crude petroleum and natural gas	YPF SA	Argentina
48	2005	1 800	100	Unocal Corp	United States	Crude petroleum and natural gas	Pogo Producing Co.	United States
49	2003	1 766	35	Egyptian LNG of Edison	Italy	Natural gas liquids	Petronas	Malaysia
50	2006	1 712	33.3	Carbones del Cerrejón (Glencore)	Switzerland	Bituminous coal and lignite surface mining	Xstrata	Switzerland

Source: UNCTAD, cross-border M&A database, and data from the Raw Materials Group.

^a Includes primary production of aluminium.

Annex table A.IV.5. Top 25 metal mining companies, 1995

Rank ^a	Company name	Country	State ownership (%)	Share of the value of world production (%)	Cumulative (%)
1	Anglo American	South Africa	-	5.0	5.0
2	RTZ Corporation	United Kingdom	-	4.4	9.3
3	Broken Hill	Australia	-	2.5	15.0
4	Codelco	Chile	100	2.2	17.2
5	CVRD	Brazil	76	2.1	19.3
6	Norilsk Nickel	Russian Federation	49	1.8	21.1
7	Gencor	South Africa	-	1.5	22.6
8	Phelps Dodge	United States	-	1.3	23.9
9	Gold Fields	South Africa	-	1.2	25.1
10	Freeport McMoran	United States	-	1.2	26.3
11	Asarco	United States	-	1.1	27.4
12	Noranda	Canada	-	1.1	28.5
13	Barrick Gold	Canada	-	1.0	29.6
14	Inco	Canada	-	1.0	30.6
15	Cyprus Amax Minerals	United States	-	1.0	31.6
16	WMC	Australia	-	1.0	32.6
17	Placer Dome	Canada	-	0.9	33.5
18	KGHM Polska Miedz	Poland	100	0.8	34.3
19	Ashton Mining	Australia	47	0.8	35.1
20	Grupo México	Mexico	-	0.7	36.5
21	Magma Copper	United States	-	0.6	37.7
22	Homestake Mining	United States	-	0.6	38.3
23	Newmont Mining	United States	-	0.6	38.9
24	Normandy Poseidon	Australia	-	0.6	39.5
25	Bureau de Recherches et de Participations Minières Morocco		100	0.6	40.1

Source: UNCTAD, based on data from the Raw Materials Group.

^a The ranking is based on total production and includes diamond production.

Annex table A.IV.6. Top 10 producers of selected minerals, 2005

Iron ore	Home country	Total production (Mt)	Foreign production (Mt)	Share of foreign production (%)	Zinc	Total production (kt)	Foreign production (kt)	Share of foreign production (%)	
CVRD	Brazil	241	-	-	Teck Cominco	Canada	658	654	99.5
Rio Tinto	United Kingdom	122	122	100.0	Zinifex	Australia	590	-	-
BHP Billiton	Australia	112	15	13.3	Glencore	Switzerland	569	569	100.0
National Mineral Development Corp	India	48	-	-	Vedanta	United Kingdom	460	460	100.0
Cleveland Cliffs	United States	32	6	17.1	Falconbridge	Canada	454	62	13.7
Anglo American	United Kingdom	31	31	100.0	Anglo American	United Kingdom	394	394	100.0
Mitsui & Co	Japan	27	27	100.0	Xstrata	Switzerland	362	362	100.0
LKAB	Sweden	23	-	-	Boliden	Sweden	310	196	63.3
US Steel	United States	20	-	-	Volcan	Peru	292	-	-
Smart Group	Ukraine	13	-	-	Industrias Peñoles	Mexico	200	-	-

Copper	Home country	Total production (kt)	Foreign production (kt)	Share of foreign production (%)	Gold	Total production (t)	Foreign production (t)	Share of foreign production (%)	
Codelco	Chile	1 846	-	-	Newmont	United States	208	131	63.0
BHP Billiton	Australia	1 275	1 064	83.5	Anglogold Ashanti	South Africa	194	110	56.7
Phelps Dodge	United States	1 009	392	38.8	Barrick	Canada	168	156	92.6
Grupo Mexico	Mexico	863	524	60.7	Gold Fields	South Africa	140	55	39.3
Rio Tinto	United Kingdom	800	800	100.0	Placer Dome	Canada	120	102	85.0
Anglo American	United Kingdom	663	663	100.0	Freeport McMoran	United States	87	87	100.0
Freeport McMoran	United States	660	660	100.0	Harmony	South Africa	79	7	8.9
KGHM	Poland	560	-	-	Navoi Mining	Uzbekistan	60	-	-
Norilsk Nickel	Russian Fed.	464	-	-	Buenaventura	Peru	55	-	-
Falconbridge	Canada	462	372	80.5	Rio Tinto	United Kingdom	51	51	100.0

Nickel	Home country	Total production (kt)	Foreign production (kt)	Share of foreign production (%)
Norilsk Nickel	Russian Federation	241	-	-
Inco	Canada	191	56	29.3
BHP Billiton	Australia	153	53	34.6
Falconbridge	Canada	80	29	36.1
Eramet-SLN	France	60	60	100.0
Cubaniquel	Cuba	56	-	-
Anatam	Indonesia	55	-	-
Anglo American	United Kingdom	45	45	100.0
Lionore	Canada	29	29	100.0
Glencore	Switzerland	28	28	100.0

Source: UNCTAD, based on data from the Raw Materials Group.

DEFINITIONS AND SOURCES

A. General definitions

1. Transnational corporations

Transnational corporations (TNCs) 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% or more of the ordinary shares or voting power for an incorporated enterprise, or its equivalent for an unincorporated enterprise, is normally considered as the threshold for the control of assets.¹ A foreign affiliate is an incorporated or unincorporated enterprise in which an investor, who is a resident in another economy, owns a stake that permits a lasting interest in the management of that enterprise (an equity stake of 10% for an incorporated enterprise, or its equivalent for an unincorporated enterprise). In *WIR*, subsidiary enterprises, associate enterprises and branches – defined below – are all referred to as foreign affiliates or affiliates.

- A subsidiary is an incorporated enterprise in the host country in which another entity directly owns more than half of the shareholder's voting power, and has the right to appoint or remove a majority of the members of the administrative, management or supervisory body.
- An associate is an incorporated enterprise in the host country in which an investor owns a total of at least 10%, but not more than half, of the shareholders' voting power.
- A branch is 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; or (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 by 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).² 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.

Flows of FDI comprise capital provided (either directly or through other related enterprises) by a foreign direct investor to an enterprise, or capital received from an investing enterprise by a foreign direct investor. FDI has three components: 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. FDI flow and stock data used in *WIR* 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 investment, and they include, inter alia, subcontracting, management contracts, turnkey arrangements, franchising, licensing and product-sharing. Data on these forms of transnational corporate activity are usually not separately identified in the balance-of-payments statistics. These statistics, however, usually present data on royalties and licensing fees, defined as “receipts and payments of residents and non-residents for: (i) the authorized use of intangible non-produced, non-financial assets and proprietary rights such as trademarks, 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.”²³

B. Availability, limitations and estimates of FDI data presented in the *WIR*

FDI data have a number of limitations. This section therefore spells out how UNCTAD collects and reports such data. These limitations need to be kept in mind also when dealing with the size of TNC activities and their impact.

1. FDI flows

Annex table B.1, as well as data in 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 (outward FDI) or net increases in liabilities

(inward FDI) 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 an opposite sign in the balance of payments). In the annex tables, as well as in the tables in the text, the opposite signs are reversed for practical purposes in the case of FDI *outflows*. Hence, FDI flows with a negative sign in *WIR* indicate that at least one of the three components of FDI (equity capital, reinvested earnings or intra-company loans) is negative and is not offset by positive amounts of the other components. These are instances of reverse investment or disinvestment.

UNCTAD regularly collects published and unpublished national official FDI data flows directly from central banks, statistical offices or national authorities on an aggregated and disaggregated basis for its FDI/TNC database (www.unctad.org/fdistatistics). These data constitute the main source for the reported data on FDI. The data are further complemented by data obtained from: (i) other international organizations such as the International Monetary Fund (IMF), the World Bank and the Organisation for Economic Co-operation and Development (OECD); (ii) regional organizations such as the ASEAN Secretariat, the European Bank for Reconstruction and Development (EBRD), Banque Centrale des Etats de l'Afrique de l'Ouest, Banque des Etats de l'Afrique Centrale and the Eastern Caribbean Central Bank; and (iii) UNCTAD's own estimates.

For those economies for which data were not available from national official sources, or for those for which data were not available for the entire period of 1980-2006 covered in the *World Investment Report 2007 (WIR07)*, data from the IMF were obtained using the IMF's *International Financial Statistics* and *Balance of Payments Statistics Online*, June 2007. If the data were not available from the above IMF data source, data from the IMF's *Country Report*, under Article IV of the IMF's Articles of Agreements, were also used.

For those economies for which data were not available from national official sources and the IMF, or for those for which data were not available for the entire period of 1980-2006, data from the World Bank's *World Development Indicators Online* were used. This report covers data up to 2006.

Data from the EBRD's *Transition Report 2007* were utilized for those economies in the Commonwealth of Independent States for which data were not available from one of the above-mentioned sources.

Furthermore, data on the FDI outflows of OECD countries, as presented in its publication, *Geographical Distribution of Financial Flows to*

Developing Countries, and as obtained from its online databank, were used as a proxy for FDI inflows. As these OECD data are based on FDI outflows to developing economies from the member countries of the Development Assistance Committee (DAC) of the OECD,⁴ inflows of FDI to developing economies may be underestimated.

Finally, in those economies 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 by:

- a. annualizing the data, if they are only partially available (monthly or quarterly) from either national official sources or the IMF;
- b. using the mirror data of FDI of major economies as proxy;
- c. using national and secondary information sources;
- d. using data on cross-border mergers and acquisitions (M&As) and their growth rates; and
- e. using specific factors.

A more detailed methodology for each economy on data collection, reporting and estimates for *WIR07* is provided in the WIR home page, www.unctad.org/wir. Longer time-series data are also available on its site or on the FDI statistics home page, www.unctad.org/fdistatistics.

2. FDI stocks

Annex table B.2, as well as some tables in the text, presents data on FDI stocks at book value or historical cost, reflecting prices at the time when the investment was made.

As in the case of flow data, UNCTAD regularly collects published and unpublished national official FDI stock data as well directly from central banks, statistical offices or national authorities on an aggregated and disaggregated basis for its FDI/TNC database (www.unctad.org/fdistatistics). These data constitute the main source for the reported data on FDI. These data are further complemented by data obtained from (i) other international organizations such as the IMF; (ii) regional organizations such as the ASEAN Secretariat; and (iii) UNCTAD's own estimates.

For those economies for which data were not available from national official sources, or for those for which data were not available for the entire period of 1980-2006 covered in the *WIR07*, data from the IMF were obtained using the IMF's *Balance of Payments Statistics Online*, June 2007. Finally, in those economies for which data were not available from either of the above-mentioned sources, estimates were made by either adding up FDI flows

over a period of time, or adding or subtracting flows to an FDI stock that had been obtained for a particular year from national official sources, or the IMF data series on assets and liabilities of direct investment, or by using the mirror data of FDI stock of major economies as a proxy.

A more detailed methodology for each economy on data collection, reporting and estimates for *WIR07* is provided in the WIR home page, www.unctad.org/wir. Longer time-series data are also available on its site or on the FDI statistics home page, www.unctad.org/fdistatistics.

C. Data revisions and updates

All FDI data and estimates in *WIR* are continuously revised and updated. Because of ongoing revisions, FDI data reported in *WIR* may differ from those reported in earlier Reports or other publications of UNCTAD or any other international or regional organizations. In particular, recent FDI data are being revised in many economies according to the fifth edition of the *Balance of Payments Manual of the IMF*. Because of this, the data reported in last year's Report may have been completely or partly changed in this Report.

D. Data verification

In compiling data for this year's Report, requests were made to national official sources of all economies for verification and confirmation of the latest data revisions and accuracy. In addition, websites of national official sources were consulted. This verification process continued until 13 June 2007. Any revisions made after this process may not be reflected in the Report. Below is a list of economies for which data were checked using either of these methods. For the economies which are not mentioned below, the UNCTAD secretariat could not have the data verified or confirmed by their respective governments.

E. Definitions and sources of the data in annex tables B.3

Annex table B.3 shows the ratio of inward and outward FDI flows to gross fixed capital formation and inward and outward FDI stock to GDP. All of these data are in current prices.

The data on GDP were obtained from the UNCTAD *GlobStat* database, the IMF's CD-ROM on *International Financial Statistics*, May 2007 and the IMF's *World Economic Outlook*, April 2007. For some economies, such as Taiwan Province of China, data are complemented by official sources.

Communiqué	<i>Number of economies: 138</i>
Albania, Algeria, Angola, Argentina, Armenia, Aruba, Australia, Austria, Bahrain, Banque Centrale de l'Afrique de l'Ouest (Benin, Burkina Faso, Côte d'Ivoire, Guinea-Bissau, Mali, Niger, Senegal and Togo), Barbados, Belgium, Bhutan, Bosnia and Herzegovina, Botswana, Brunei Darussalam, Bulgaria, Cambodia, Cape Verde, Canada, Chile, Colombia, Costa Rica, Croatia, Cyprus, Czech Republic, Denmark, Djibouti, Dominican Republic, Eastern Caribbean Central Bank (Anguilla, Antigua and Barbuda, Dominica, Grenada, Montserrat, Saint Kitts and Nevis, Saint Lucia and Saint Vincent and the Grenadines), Ecuador, Egypt, El Salvador, Estonia, Fiji, Finland, Gambia, Georgia, Germany, Ghana, Greece, Guatemala, Guyana, Haiti, Honduras, Hong Kong (China), Hungary, Iceland, India, Islamic Republic of Iran, Iraq, Ireland, Israel, Italy, Jamaica, Japan, Jordan, Kazakhstan, Kenya, Republic of Korea, Kuwait, Kyrgyzstan, Latvia, Lebanon, Lesotho, Libyan Arab Jamahiriya, Lithuania, Luxembourg, Macao (China), Madagascar, Malaysia, Malawi, Maldives, Malta, Mauritius, Mexico, Republic of Moldova, Montenegro, Morocco, Mozambique, Namibia, Netherlands Antilles, New Zealand, Nicaragua, Norway, Oman, Palestinian Territory, Pakistan, Paraguay, Peru, the Philippines, Poland, Portugal, Romania, Russian Federation, Rwanda, Saudi Arabia, Seychelles, Slovakia, Slovenia, Singapore, Solomon Islands, South Africa, Spain, Sri Lanka, Suriname, Swaziland, Sweden, Switzerland, Syrian Arab Republic, Tajikistan, TFY Republic of Macedonia, Thailand, Tonga, Trinidad and Tobago, Tunisia, Turkey, Uganda, the United Kingdom, United Republic of Tanzania, Venezuela, Viet Nam, Zambia and Zimbabwe	
Websites consulted in the preparation of WIR07	<i>Number of economies: 152</i>
Albania, Argentina, Armenia, Aruba, Australia, Austria, Azerbaijan, Bahamas, Bahrain, Bangladesh, Banque Centrale des Etats de l'Afrique de l'Ouest (Benin, Burkina Faso, Côte d'Ivoire, Guinea-Bissau, Mali, Niger, Senegal and Togo), Banque des Etats de l'Afrique Centrale (Cameroon, Central African Republic, Chad, Congo, Equatorial Guinea and Gabon), Belarus, Belgium, Belize, Bolivia, Bosnia and Herzegovina, Botswana, Brazil, Bulgaria, Canada, Cape Verde, Chile, China, Colombia, Comoros, Costa Rica, Croatia, Cyprus, Czech Republic, Denmark, Djibouti, Dominican Republic, Eastern Caribbean Central Bank (Anguilla, Antigua and Barbuda, Dominica, Grenada, Montserrat, Saint Kitts and Nevis, Saint Lucia and Saint Vincent and the Grenadines), Ecuador, Egypt, El Salvador, Estonia, Ethiopia, Fiji, Finland, France, Gambia, Georgia, Germany, Ghana, Greece, Haiti, Honduras, Hong Kong (China), Hungary, Iceland, India, Indonesia, Ireland, Israel, Italy, Jamaica, Japan, Jordan, Kazakhstan, Kenya, Kuwait, Republic of Korea, Kyrgyzstan, Latvia, Lebanon, Libyan Arab Jamahiriya, Lithuania, Luxembourg, Macao (China), Madagascar, Malaysia, Malawi, Maldives, Malta, Mauritania, Mauritius, Mexico, Republic of Moldova, Mongolia, Montenegro, Morocco, Mozambique, Namibia, Nepal, Netherlands, Netherlands Antilles, New Zealand, Norway, Oman, Pakistan, Panama, Papua New Guinea, Paraguay, Peru, the Philippines, Poland, Portugal, Romania, Russian Federation, Rwanda, Samoa, Serbia, Seychelles, Singapore, Slovakia, Slovenia, Solomon Islands, South Africa, Spain, Sri Lanka, Sudan, Sweden, Switzerland, Taiwan Province of China, Tajikistan, TFY Republic of Macedonia, Thailand, Tonga, Trinidad and Tobago, Tunisia, Turkey, Uganda, Ukraine, United Arab Emirates, the United Kingdom, the United States, United Republic of Tanzania, Uruguay, Vanuatu, Venezuela and Yemen	

The data on gross fixed capital formation were obtained from the UNCTAD *GlobStat* database and the IMF's CD-ROM on *International Financial Statistics*, May 2007. For some economies, for which data are not available for the period 1980-2006, or part of it, data are complemented by data on gross capital formation. These data are further complemented by data obtained from: (i) national official sources; and (ii) World Bank data on gross fixed capital formation or gross capital formation, obtained from *World Development Indicators Online*.

Figures exceeding 100% may result from the fact that, for some economies, the reported data on gross fixed capital formation do not necessarily reflect the value of capital formation accurately, and that FDI flows do not necessarily translate into capital formation.

Data on FDI are from annex tables B.1-B.2. Longer time-series data are available on WIR home page, www.unctad.org/wir or FDI statistics home page, www.unctad.org/fdistatistics.

F. Definitions and sources of the data on cross-border M&As in annex tables B.4-B.7

FDI is a balance-of-payments concept involving the cross-border transfer of funds. Cross-border M&A statistics shown in the Report are based on information reported by Thomson Financial. In some cases, these include M&As between foreign affiliates and firms located in the same host economy. Such M&As conform to the FDI definition as far as the equity share is concerned. However, the data also include purchases via domestic and international

capital markets, which should not be considered as FDI flows. Although it is possible to distinguish types of financing used for M&As (e.g. syndicated loans, corporate bonds, venture capital), it is not possible to trace the origin or country-sources of the funds used. Therefore, the data used in the Report include the funds not categorized as FDI.

FDI flows are recorded on a net basis (capital account credits less debits between direct investors and their foreign affiliates) in a particular year. On the other hand, M&A data are expressed as the total transaction amount of particular deals, and not as differences between gross acquisitions and divestments abroad by firms from a particular country. Transaction amounts recorded in the UNCTAD M&A statistics are those at the time of closure of the deals, and not at the time of announcement. The M&A values are not necessarily paid out in a single year.

Cross-border M&As are recorded in both directions of transactions. That is, 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 (annex tables B.4 and B.5). Data showing cross-border M&A activities on an industry basis are also recorded as sales and purchases. Thus, if a food company acquires a chemical company, this transaction is recorded in the chemical industry in the columns on M&As by industry of seller, it is also recorded in the food industry in the columns on M&As by industry of purchaser (annex tables B.6 and B.7).

G. Definitions and sources of the data on operations of foreign affiliates in annex tables B.8-B.18

These annexes present selected data (number of firms, assets, number of employees, wages and salaries, sales, value added, gross product, profits, export, import, R&D expenditure, employment in R&D and royalty receipts and payments) on the inward and outward operations of foreign affiliates as follows:

- Inward operations refer to the activities of foreign affiliates in the host economy (business enterprises in which there is an FDI relationship in the host country).
- Outward operations refer to the activities of foreign affiliates of home-based TNCs abroad (business enterprises located abroad in which the home-based TNC has an FDI relationship).

UNCTAD regularly collects published and unpublished national official data on the operation of foreign affiliates and TNCs directly from central banks, statistical offices or national authorities on a disaggregated basis for its FDI/TNC database (www.unctad.org/fdistatistics) and its publication *World Investment Directory*.

Longer time-series data are available on the *WIR* home page, at: www.unctad.org/wir or the FDI statistics home page, at: www.unctad.org/fdistatistics.

Notes

¹ In some countries, an equity stake threshold of other than 10% is still used. In the United Kingdom, for example, a stake of 20% or more was the threshold used until 1997.

² This general definition of FDI is based on OECD, *Detailed Benchmark Definition of Foreign Direct Investment*, third edition (OECD, 1996), and International Monetary Fund, *Balance of Payments Manual*, fifth edition (IMF, 1993).

³ International Monetary Fund, op. cit.: 40.

⁴ Includes Australia, Austria, Belgium, Canada, Commission of the European Communities, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, the United Kingdom and the United States.

Annex table B.1. FDI flows, by region and economy, 2004-2006
(Millions of dollars)

Region/economy	FDI inflows			FDI outflows		
	2004	2005	2006	2004	2005	2006
World	742 143	945 795	1 305 852	877 301	837 194	1 215 789
Developed economies	418 855	590 311	857 499	745 970	706 713	1 022 711
Europe	209 203	494 980	566 389	394 468	691 217	668 698
European Union	204 245	486 409	530 976	359 920	608 799	572 440
Austria	3 890	9 045	248	8 301	10 023	4 087
Belgium	43 558	33 918	71 997	34 018	31 731	63 005
Cyprus	1 090	1 214	1 492	694	482	732
Czech Republic	4 974	11 658	5 957	1 014	- 19	1 556
Denmark	- 10 442	13 103	7 032	- 10 364	15 030	8 181
Estonia	971	2 879	1 674	268	627	1 105
Finland	3 003	4 507	3 706	- 1 079	4 477	9
France	32 560	81 063	81 076	56 735	120 971	115 036
Germany	- 9 195	35 867	42 870	14 828	55 515	79 427
Greece	2 101	607	5 363	1 029	1 451	4 167
Hungary	4 506	7 619	6 098	1 119	2 327	3 016
Ireland	- 10 608	- 31 132	12 811	18 069	13 568	22 101
Italy	16 815	19 971	39 159	19 262	41 822	42 035
Latvia	637	724	1 634	103	127	146
Lithuania	773	1 032	1 812	263	343	276
Luxembourg	5 823	7 246	29 309	6 620	9 521	2 248
Malta	403	582	1 757	- 2	- 25	3
Netherlands	2 123	41 456	4 371	26 571	142 925	22 692
Poland	12 890	9 602	13 922	793	3 024	4 266
Portugal	2 327	3 965	7 371	7 845	2 078	3 508
Slovakia	3 031	2 107	4 165	- 21	157	368
Slovenia	827	496	363	551	568	740
Spain	24 761	25 020	20 016	60 532	41 829	89 679
Sweden	11 463	10 169	27 231	21 754	26 540	24 600
United Kingdom	55 963	193 693	139 543	91 019	83 708	79 457
Other developed Europe	4 957	8 571	35 414	34 547	82 418	96 258
Gibraltar	194 ^a	365 ^a	685 ^a	..	..	..
Iceland	848	3 082	3 734	2 957	7 057	4 432
Norway	2 544	6 391	5 906	5 316	21 052	10 321
Switzerland	1 372	- 1 266	25 089	26 274	54 309	81 505
North America	135 462	129 947	244 435	301 657	5 806	261 857
Canada	- 364	28 922	69 041	43 690	33 542	45 243
United States	135 826	101 025	175 394	257 967	- 27 736	216 614
Other developed economies	74 191	- 34 616	46 675	49 846	9 690	92 155
Australia	36 007	- 35 160	24 022	10 813	- 33 172	22 347
Bermuda	25 501 ^a	- 8 689 ^a	6 803 ^a	4 442 ^a	- 4 702 ^a	3 952 ^a
Israel	2 040	4 792	14 301	4 544	2 931	14 399
Japan	7 816	2 775	- 6 506	30 951	45 781	50 266
New Zealand	2 827	1 666	8 055	- 905	- 1 148	1 191
Developing economies	283 030	314 316	379 070	117 336	115 860	174 389
Africa	18 018	29 648	35 544	2 059	2 272	8 186
North Africa	6 616	13 528	23 324	167	464	834
Algeria	882	1 081	1 795	258	57	35
Egypt	2 157	5 376	10 043	159	92	148
Libyan Arab Jamahiriya	357	1 038	1 734	- 286	128	141
Morocco	1 070	2 946	2 898	32	174	468
Sudan	1 511	2 305	3 541	..	..	9
Tunisia	639	782	3 312	4	13	33
Other Africa	11 402	16 120	12 221	1 892	1 808	7 352
West Africa	3 743	4 997	6 841	532	591	551
Benin	64	53	63 ^a	- 1	-	- 1 ^a
Burkina Faso	14	34	26 ^a	- 9	-	- 2 ^a
Cape Verde	20	76	122	-	-	- ^a
Côte d'Ivoire	283	312	253 ^a	- 26 ^a	- 7	- 6 ^a
Gambia	49	45	70	..	..	..
Ghana	139	145	435	- 1 ^a	..	..
Guinea	98	102 ^a	108 ^a	- 1 ^a	- 5 ^a	..
Guinea-Bissau	2	9	42 ^a	- 8	1	- 4 ^a
Liberia	237 ^a	- 479 ^a	- 82 ^a	304 ^a	437 ^a	346 ^a
Mali	101	224	185 ^a	1	- 1	1 ^a
Mauritania	392	864	- 3	4 ^a	2 ^a	..
Niger	20	30	20 ^a	7	- 4	2 ^a
Nigeria	2 127	3 403	5 445	261	200	228
Saint Helena	- 1 ^a	- ^a	- ^a
Senegal	77	45	58 ^a	13	- 8	5 ^a

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Annex table B.1. FDI flows, by region and economy, 2004-2006 (continued)
(Millions of dollars)

Region/economy	FDI inflows			FDI outflows		
	2004	2005	2006	2004	2005	2006
Sierra Leone	61	59	43 ^a	..	- 8	3 ^a
Togo	59	77	57 ^a	- 13	- 15	- 20 ^a
Central Africa	2 712	3 716	3 786	- 20	- 19	- 19
Burundi	-	1	290 ^a	..	..	..
Cameroon	319	225	309 ^a	..	..	..
Central African Republic	25	29	24 ^a	..	..	..
Chad	495	613	700 ^a	..	..	..
Congo	- 13	724	344 ^a	5	4 ^a	3 ^a
Congo, Democratic Republic of	10 ^a	- 79 ^a	180 ^a	- ^a	..	..
Equatorial Guinea	1 651	1 873	1 656 ^a	..	..	..
Gabon	219	321	268 ^a	- 25	- 23 ^a	- 23 ^a
Rwanda	8	11	15	..	..	..
São Tomé and Príncipe	- 2 ^a	- 1 ^a	- ^a	..	..	..
East Africa	1 318	1 205	1 789	44	65	42
Comoros	1	1 ^a	1 ^a	..	..	..
Djibouti	39	22	108	..	..	..
Eritrea	- 8 ^a	- 3 ^a	4 ^a	..	..	..
Ethiopia	545	221	364	..	..	..
Kenya	46	21	51	4	10	24
Madagascar	95	86	230	..	..	..
Mauritius	14	42	105	32	48	10
Seychelles	38	86	146	8	7	8
Somalia	- 5 ^a	24 ^a	96 ^a	..	..	..
Uganda	222	257	307	..	..	..
United Republic of Tanzania	331	448	377	..	..	-^a
Southern Africa	3 629	6 202	- 195	1 337	1 171	6 779
Angola	1 449	- 1 303	- 1 140	35	219	93 ^a
Botswana	392	281	274	- 29	56	21
Lesotho	53	57	57	-	..	..
Malawi	22	27	30	2	1	1 ^a
Mozambique	245	108	154	- ^a	-	-
Namibia	226	348	327	- 22	- 13	- 12
South Africa	799	6 251	- 323	1 352	930	6 674
Swaziland	71	- 50	36	- 1	- 24	2
Zambia	364	380	350	..	..	..
Zimbabwe	9	103	40	-	1	-
Latin America and the Caribbean	94 290	75 541	83 753	27 762	35 743	49 132
South and Central America	63 391	68 387	69 383	18 918	20 256	43 680
South America	37 980	45 279	45 019	12 660	11 942	36 720
Argentina	4 584	5 008	4 809	442	1 151	2 008
Bolivia	65	- 239	240	3	3	3
Brazil	18 146	15 066	18 782	9 807	2 517	28 202
Chile	7 173	6 960	7 952	1 563	2 209	2 876
Colombia	3 084	10 255	6 295	142	4 662	1 098
Ecuador	1 160	1 646	2 087	1 ^a	2 ^a	2 ^a
Falkland Islands (Malvinas)	..	..	-^a	..	..	..
Guyana	30	77	102	- ^a	..	..
Paraguay	38	98	130	6	6	16
Peru	1 599	2 579	3 467	59 ^a	174 ^a	428 ^a
Suriname	286	399	323	..	..	..
Uruguay	332	847	1 374	18	36	- 2
Venezuela	1 483	2 583	- 543	619	1 183	2 089
Central America	25 411	23 108	24 364	6 258	8 313	6 960
Belize	112	127	73	-	1	1
Costa Rica	794	861	1 469	61	- 43	98
El Salvador	376	518	204	- 53	217	- 50
Guatemala	155	227	354	18 ^a	42 ^a	13 ^a
Honduras	325	372	385	26	22	22
Mexico	22 396	19 736	19 037	4 432	6 474	5 758
Nicaragua	250	241	282	8 ^a	7 ^a	3 ^a
Panama	1 004	1 027	2 560	1 767 ^a	1 594 ^a	1 115 ^a
Caribbean	30 899	7 154	14 370	8 843	15 487	5 452
Anguilla	92	100	113	..	..	..
Antigua and Barbuda	95	133	207	- ^a	- ^a	..
Aruba	152	128	326	-	- 1	- 2
Bahamas	443	564	706	..	..	..
Barbados	- 12	62	36 ^a	4	9	5 ^a
British Virgin Islands	17 606 ^a	- 8 013 ^a	6 463 ^a	4 878 ^a	8 174 ^a	2 964 ^a

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Annex table B.1. FDI flows, by region and economy, 2004-2006 (continued)
(Millions of dollars)

Region/economy	FDI inflows			FDI outflows		
	2004	2005	2006	2004	2005	2006
Cayman Islands	9 659 ^a	10 931 ^a	2 878 ^a	3 862 ^a	6 771 ^a	1 950 ^a
Cuba	4 ^a	2 ^a	- 1 ^a	- ^a	- 2 ^a	- ^a
Dominica	27	33	34	..	..	..
Dominican Republic	909	1 023	1 183	- 10 ^a	27 ^a	- ^a
Grenada	66	86	119	..	..	..
Haiti	6	26	160	..	..	..
Jamaica	602	682	850	60	101	108
Montserrat	3	1	1	..	..	..
Netherlands Antilles	41	83	47	22	65	56
Puerto Rico	24 ^a	36 ^a	18 ^a	..	..	..
Saint Kitts and Nevis	53	104	203	..	..	..
Saint Lucia	81	82	119	..	..	..
Saint Vincent and the Grenadines	66	42	85	..	..	..
Trinidad and Tobago	998	940	788	25	341	370
Turks and Caicos Islands	- 15 ^a	108 ^a	36 ^a	2 ^a	1 ^a	1 ^a
Asia and Oceania	170 722	209 127	259 773	87 516	77 845	117 072
Asia	169 999	208 744	259 434	87 461	77 747	117 067
West Asia	20 839	41 554	59 902	8 078	13 413	14 053
Bahrain	865	1 049	2 915	1 036	1 123	980
Iran, Islamic Republic of	282	360	901	68 ^a	452 ^a	386 ^a
Iraq	300	515	272 ^a	..	..	..
Jordan	651	1 532	3 121	-	-	-
Kuwait	24	250	110	2 526	5 142	7 892
Lebanon	1 993	2 751	2 794	213	122	71
Oman	229	900	952	250	114	247
Palestinian Territory	49	47	38 ^a	- 51	9	2 ^a
Qatar	1 199 ^a	1 152 ^a	1 786 ^a	192 ^a	352 ^a	379 ^a
Saudi Arabia	1 942	12 097	18 293	709 ^a	1 183 ^a	753 ^a
Syrian Arab Republic	275	500	600	48 ^a	61 ^a	55 ^a
Turkey	2 883	9 803	20 120	859	1 078	934
United Arab Emirates	10 004	10 900	8 386 ^a	2 208	3 750	2 316 ^a
Yemen	144	- 302	- 385	21 ^a	26 ^a	36 ^a
South, East and South-East Asia	149 160	167 190	199 531	79 383	64 333	103 014
East Asia	106 314	116 253	125 774	62 924	49 836	74 099
China	60 630	72 406	69 468	5 498	12 261	16 130
Hong Kong, China	34 032	33 618	42 892	45 716	27 201	43 459
Korea, Democratic People's Republic of	197 ^a	50 ^a	135 ^a	2 ^a	..	..
Korea, Republic of	8 980	7 050	4 950	4 658	4 298	7 129
Macao, China	484	1 322	739 ^a	- 95	47	- 18 ^a
Mongolia	93	182	167	..	..	..
Taiwan Province of China	1 898	1 625	7 424	7 145	6 028	7 399
South Asia	7 601	9 866	22 274	2 247	2 579	9 820
Afghanistan	1 ^a	4 ^a	2 ^a	..	..	..
Bangladesh	460	692	625	6	2	8 ^a
Bhutan	3	9	6	..	..	..
India	5 771	6 676	16 881	2 179	2 495	9 676
Maldives	15	9	14	..	..	..
Nepal	-	2	- 7	..	..	..
Pakistan	1 118	2 201	4 273	56	44	107
Sri Lanka	233	272	480	6	38	29
South-East Asia	35 245	41 071	51 483	14 212	11 918	19 095
Brunei Darussalam	334	289	434	4 ^a	35 ^a	38 ^a
Cambodia	131	381	483	10	6	8
Indonesia	1 896	8 337	5 556	3 408	3 065	3 418
Lao People's Democratic Republic	17	28	187	..	..	..
Malaysia	4 624	3 965	6 060	2 061	2 972	6 041
Myanmar	251	236	143	..	..	..
Philippines	688	1 854	2 345	579	189	103
Singapore	19 828	15 004	24 207	8 074	5 034	8 626
Thailand	5 862	8 957	9 751	76	552	790
Timor-Leste	3 ^a	- ^a	3 ^a	..	..	..
Viet Nam	1 610	2 021	2 315	..	65	70 ^a
Oceania	723	383	339	55	99	5
Cook Islands	- 1 ^a	1 ^a	- ^a	2 ^a	- ^a	- ^a
Fiji	94	- 4	103	3	10	-
French Polynesia	6	8	- ^a	9	16	1 ^a
Kiribati	19	1 ^a	12 ^a	..	..	..
Marshall Islands	513 ^a	305 ^a	19 ^a	25 ^a	33 ^a	- 18 ^a
Micronesia, Federated States of	..	- ^a

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Annex table B.1. FDI flows, by region and economy, 2004-2006 (concluded)
(Millions of dollars)

Region/economy	FDI inflows			FDI outflows		
	2004	2005	2006	2004	2005	2006
Nauru	1 ^a	1 ^a	1 ^a	..	..	..
New Caledonia	27	- 7	82 ^a	11	31	19 ^a
Niue	- ^a	- 1 ^a	- ^a	4 ^a	1 ^a	- ^a
Palau	7 ^a	1 ^a	1 ^a	..	- 2 ^a	..
Papua New Guinea	26	34	32	-	6	1
Samoa	2	- 4	- 2 ^a	-	2	1 ^a
Solomon Islands	6	19	19	-	2	-
Tokelau	..	- ^a	- ^a	..	..	..
Tonga	5	17	11	..	..	..
Tuvalu	- ^a	- ^a	- ^a	..	..	..
Vanuatu	18	13	61 ^a	1	1	1 ^a
South-East Europe and CIS	40 258	41 169	69 283	13 995	14 620	18 689
South-East Europe	13 388	15 123	26 348	222	588	563
Albania	338	277	325	14	4	11
Bosnia and Herzegovina	668	521	423	2	1	-
Bulgaria	3 452	3 862	5 172	- 217	308	156
Croatia	1 227	1 790	3 556	350	240	212
Romania	6 517	6 483	11 394	70	- 30	38
Serbia and Montenegro	1 029	2 090	5 128	3	62	146
Serbia	966	1 609	4 499	..	58	112
Montenegro	63	482	628	3	4	34
TFY Rep. of Macedonia	157	100	351	1	3	-
CIS	26 871	26 045	42 934	13 772	14 032	18 126
Armenia	219	258	343	2	7	3
Azerbaijan	3 535	1 679	- 601	1 205	1 221	705
Belarus	164	305	354	1	3	3
Georgia	499	450	1 076	10	- 89	- 18
Kazakhstan	4 157	1 977	6 143	- 1 279	- 146	- 412
Kyrgyzstan	175	43	182	44	-	-
Moldova, Republic of	149	199	222	3	-	- 1
Russian Federation	15 444	12 766	28 732	13 782	12 763	17 979
Tajikistan	272	54	385	..	..	..
Turkmenistan	354 ^a	418 ^a	731 ^a	..	..	..
Ukraine	1 715	7 808	5 203	4	275	- 133
Uzbekistan	187 ^a	88 ^a	164 ^a	..	..	..
Memorandum						
All developing economies, excluding China	222 400	241 910	309 602	111 838	103 599	158 259
Developing economies and South-East Europe and CIS (transition economies)	323 288	355 484	448 353	131 331	130 481	193 078
Least developed countries ^b	9 320	7 326	9 375	374	658	487
Major petroleum exporters ^c	25 037	44 917	48 558	11 383	17 479	19 493
Major exporters of manufactures ^d	185 738	195 759	241 916	91 084	71 100	134 248
Euro Zone	117 159	231 531	318 296	252 729	475 912	447 993
EU-15, 1995	174 143	448 496	492 102	355 139	601 189	560 231
New EU members (10)	30 103	37 913	38 874	4 782	7 610	12 208

Source: UNCTAD, FDI/TNC database.

^a Estimates. For details, see "Definitions and Sources" in annex B.

^b Least developed countries are: Afghanistan, Angola, Bangladesh, Benin, Bhutan, Burkina Faso, Burundi, Cambodia, Cape Verde, Central African Republic, Chad, Comoros, Democratic Republic of the Congo, Djibouti, Equatorial Guinea, Eritrea, 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, São Tomé and Príncipe, Senegal, Sierra Leone, Solomon Islands, Somalia, Sudan, Timor-Leste, Togo, Tuvalu, Uganda, United Republic of Tanzania, Vanuatu, Yemen and Zambia.

^c Major petroleum exporters are: Algeria, Angola, Bahrain, Brunei Darussalam, Congo, Gabon, Indonesia, Islamic Republic of Iran, Iraq, Kuwait, Libyan Arab Jamahiriya, Netherlands Antilles, Nigeria, Oman, Qatar, Saudi Arabia, Syrian Arab Republic, Trinidad and Tobago, United Arab Emirates, Venezuela and Yemen.

^d Major exporters of manufactures are: Brazil, China, Hong Kong (China), India, Republic of Korea, Malaysia, Mexico, the Philippines, Singapore, Taiwan Province of China, Thailand and Turkey.

Annex table B.2. FDI stock, by region and economy, 1990, 2000, 2006
(Millions of dollars)

Region/economy	FDI inward stock			FDI outward stock		
	1990	2000	2006	1990	2000	2006
World	1 779 198	5 810 189	11 998 838	1 815 213	6 209 455	12 474 261
Developed economies	1 414 394	4 031 327	8 453 853	1 669 230	5 328 937	10 710 199
Europe	796 883	2 293 833	5 717 202	885 062	3 329 489	7 107 823
European Union	749 838	2 180 717	5 434 329	808 014	3 050 357	6 428 665
Austria	10 972	30 431	77 700	4 747	24 821	77 310
Belgium and Luxembourg	58 388	195 219	..	40 636	179 773	..
Belgium	..	..	603 432	..	..	462 032
Cyprus	.. ^{a,b}	2 910 ^a	10 194	8 ^a	560 ^a	3 992
Czech Republic	1 363 ^a	21 644	77 460	..	738	5 058
Denmark	9 192	73 574	138 410	7 342	73 106	150 082
Estonia	..	2 645	12 664	..	259	3 613
Finland	5 132	24 272	64 173	11 227	52 109	90 878
France	86 845	259 776	782 825	110 126	445 091	1 080 204
Germany	111 231	271 611	502 376 ^a	151 581	541 861	1 005 078 ^a
Greece	5 681 ^a	14 113	37 009	2 882 ^a	6 094	17 521
Hungary	569	22 870	81 760	197	1 280	12 693
Ireland	37 989 ^a	127 089	179 041 ^a	14 942 ^a	27 925	124 967 ^a
Italy	59 998	121 170	294 790	60 184	180 275	375 756
Luxembourg	..	23 492	73 030 ^a	..	7 927	35 658 ^a
Latvia	..	2 084	7 532	..	24	447
Lithuania	..	2 334	10 939	..	29	1 183
Malta	465 ^a	2 385	5 675 ^a	..	203	910 ^a
Netherlands	68 731	243 733	451 491 ^a	106 899	305 461	652 633 ^a
Poland	109	34 227	103 616 ^a	408 ^a	1 018	10 705 ^a
Portugal	10 571	32 043	85 520	900	19 793	54 850
Slovakia	282 ^a	4 746	30 327	..	374	1 282
Slovenia	665 ^a	2 893	7 452	258	768	3 942
Spain	65 916	156 348	443 275	15 652	167 719	507 970
Sweden	12 636	93 970	218 373	50 720	123 230	262 951
United Kingdom	203 905	438 631	1 135 265	229 307	897 845	1 486 950
Other developed Europe	47 045	113 116	282 873	77 047	279 132	679 158
Gibraltar	263 ^a	529 ^a	1 930 ^a	..	..	..
Iceland	146	497	7 540	76	664	13 190
Norway	12 391	25 285	66 285	10 884	46 308	120 568
Switzerland	34 245	86 804	207 119	66 087	232 161	545 401
North America	507 754	1 469 583	2 174 274	515 328	1 553 886	2 833 039
Canada	112 843	212 716	385 187	84 807	237 639	449 035
United States	394 911	1 256 867	1 789 087	430 521	1 316 247	2 384 004
Other developed economies	109 758	267 912	562 377	268 840	445 562	769 337
Australia	73 644	111 138	246 173	30 507	85 385	226 764
Bermuda	13 849 ^a	59 006 ^a	97 985 ^a	29 306 ^a	64 152 ^a	46 186 ^a
Israel	4 476	22 551	47 469	1 188	9 091	34 014
Japan	9 850	50 322	107 633	201 441	278 442	449 567
New Zealand	7 938	24 894	63 116	6 398 ^a	8 491	12 806
Developing economies	364 683	1 707 639	3 155 856	145 793	858 921	1 600 305
Africa	59 518	153 221	315 128	19 832	44 271	60 012
North Africa	23 420	45 568	115 796	1 836	3 292	4 945
Algeria	1 521 ^a	3 497 ^a	10 151 ^a	183 ^a	249 ^a	721 ^a
Egypt	11 043 ^a	19 955	38 925	163 ^a	655	1 116
Libyan Arab Jamahiriya	678 ^a	451 ^a	3 755 ^a	1 321 ^a	1 942 ^a	1 677 ^a
Morocco	2 508 ^a	8 722 ^a	29 795	155 ^a	412 ^a	1 343
Sudan	55 ^a	1 398 ^a	11 391 ^a	..	..	..
Tunisia	7 615	11 545	21 779	15	33	88
Other Africa	36 098	107 652	199 332	17 996	40 980	55 066
West Africa	13 994	33 252	56 666	1 804	6 730	8 952
Benin	.. ^{a,b}	213	347 ^a	2 ^a	11	19 ^a
Burkina Faso	39 ^a	28	101 ^a	4 ^a	-	5 ^a
Cape Verde	4 ^a	173 ^a	433 ^a	1 ^a	7 ^a	8 ^a
Côte d'Ivoire	975 ^a	2 483	4 155 ^a	6 ^a	9	43 ^a
Gambia	157	216	442 ^a	..	..	..
Ghana	319 ^a	1 493 ^a	2 497 ^a	..	..	..
Guinea	69 ^a	263 ^a	686 ^a	..	7 ^a	7 ^a
Guinea-Bissau	8 ^a	38 ^a	98 ^a	..	..	..^{a,b}
Liberia	2 732 ^a	3 247 ^a	3 306 ^a	453 ^a	2 188 ^a	3 237 ^a
Mali	229 ^a	132	1 057 ^a	22 ^a	63 ^a	84 ^a

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Annex table B.2. FDI stock, by region and economy, 1990, 2000, 2006 (continued)
(Millions of dollars)

Region/economy	FDI inward stock			FDI outward stock		
	1990	2000	2006	1990	2000	2006
Mauritania	59 ^a	146 ^a	1 644 ^a	3 ^a	4 ^a	9 ^a
Niger	286 ^a	45	120 ^a	54 ^a	117 ^a	116 ^a
Nigeria	8 539 ^a	23 786 ^a	40 251 ^a	1 207 ^a	4 132 ^a	5 254 ^a
Senegal	258 ^a	295	416 ^a	47 ^a	117 ^a	157 ^a
Sierra Leone	225 ^a	266 ^a	343 ^a	..	..	..
Togo	268 ^a	427 ^a	771 ^a	5 ^a	76 ^a	17 ^a
Central Africa	3 988	6 003	23 220	374	651	552
Burundi	30 ^a	47 ^a	337 ^a	- ^a	2 ^a	2 ^a
Cameroon	1 044 ^a	1 600 ^a	3 511 ^a	150 ^a	254 ^a	260 ^a
Central African Republic	95 ^a	104 ^a	211 ^a	18 ^a	43 ^a	45 ^a
Chad	250 ^a	577 ^a	4 482 ^a	37 ^a	70 ^a	70 ^a
Congo	575 ^a	1 889 ^a	3 467 ^a	..	..	..
Congo, Democratic Republic of	546 ^a	617 ^a	1 086 ^a	..	..	..
Equatorial Guinea	25 ^a	1 131 ^a	9 018 ^a	- ^a	.. ^{a,b}	3 ^a
Gabon	1 208 ^a	.. ^{a,b}	794 ^a	167 ^a	280 ^a	169 ^a
Rwanda	213 ^a	253 ^a	297 ^a	2 ^a	3 ^a	3 ^a
São Tomé and Príncipe	- ^a	11 ^a	16 ^a	..	..	..
East Africa	1 701	7 112	15 835	166	372	567
Comoros	17 ^a	21 ^a	26 ^a	1 ^a	1 ^a	1 ^a
Djibouti	13 ^a	40 ^a	230	..	..	..
Eritrea	..	337 ^a	384 ^a	..	..	..
Ethiopia	124 ^a	933 ^a	3 133 ^a	..	..	..
Kenya	668 ^a	931 ^a	1 164 ^a	99 ^a	115 ^a	163 ^a
Madagascar	107 ^a	141	504	1 ^a	10 ^a	6 ^a
Mauritius	168 ^a	672 ^a	900 ^a	1 ^a	132 ^a	227 ^a
Seychelles	213	448	906	64	114	169
Somalia	.. ^{a,b}	4 ^a	118 ^a	..	..	..
Uganda	6 ^a	807	2 362	..	..	..
United Republic of Tanzania	388 ^a	2 778	6 109	..	..	..
Southern Africa	16 414	61 286	103 611	15 651	33 226	44 995
Angola	1 025 ^a	7 977 ^a	10 993	1 ^a	2 ^a	364 ^a
Botswana	1 309	1 827	958	447	517	747
Lesotho	83 ^a	330 ^a	594 ^a	- ^a	2 ^a	2 ^a
Malawi	228 ^a	358	536	..	8 ^a	16 ^a
Mozambique	882 ^a	1 934	4 775	1 ^a	.. ^{a,b}	.. ^{a,b}
Namibia	2 047	1 265	2 768	80	45	56
South Africa	9 207	43 462	77 038 ^a	15 004	32 333	43 499 ^a
Swaziland	336	537	748	38	87	69
Zambia	1 022 ^a	2 360 ^a	3 780 ^a	..	..	..
Zimbabwe	277 ^a	1 238 ^a	1 423 ^a	80 ^a	234 ^a	242 ^a
Latin America and the Caribbean	104 599	481 017	908 575	59 730	204 306	387 944
South and Central America	96 533	404 800	763 335	56 998	113 150	218 993
South America	68 038	289 678	499 487	50 329	94 075	161 465
Argentina	8 778 ^a	67 601	58 604	6 057 ^a	19 276	24 047
Bolivia	1 026	5 188	4 826	7 ^a	29	90
Brazil	37 243	103 015	221 914 ^c	41 044 ^a	51 946 ^a	87 049 ^c
Chile	10 067	45 753	80 732	1 149	11 154	26 787
Colombia	3 500	10 991	44 773	402	2 989	9 960
Ecuador	1 626	7 081	16 134	16 ^a	158 ^a	167 ^a
Falkland Islands (Malvinas)	- ^a	58 ^a	75 ^a	..	..	..
Guyana	45 ^a	756 ^a	1 091 ^a	..	1 ^a	2 ^a
Paraguay	418 ^a	1 325	1 610	134 ^a	214	172
Peru	1 330	11 062	19 356	112	505	1 476
Suriname	.. ^{a,b}	.. ^{a,b}	608 ^a	..	..	..
Uruguay	671 ^a	2 088	4 366 ^a	186 ^a	126 ^a	156 ^a
Venezuela	3 865	35 480	45 398	1 221	7 676	11 579
Central America	28 496	115 122	263 848	6 668	19 075	57 528
Belize	89 ^a	300 ^a	684 ^a	20 ^a	43 ^a	45 ^a
Costa Rica	1 324 ^a	2 709	6 780	44 ^a	86	263
El Salvador	212	1 973	4 376	56 ^a	74	278
Guatemala	1 734	3 420	4 852	..	69 ^a	536 ^a
Honduras	293	1 392	2 989	..	..	..
Mexico	22 424	97 170	228 601	2 672 ^a	8 273	35 144
Nicaragua	145 ^a	1 414 ^a	2 743 ^a	..	22 ^a	86 ^a
Panama	2 275	6 744	12 821	3 876 ^a	10 507 ^a	21 176 ^a

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Annex table B.2. FDI stock, by region and economy, 1990, 2000, 2006 (continued)
(Millions of dollars)

Region/economy	FDI inward stock			FDI outward stock		
	1990	2000	2006	1990	2000	2006
Caribbean	8 066	76 217	145 240	2 732	91 157	168 951
Anguilla	11 ^a	234 ^a	646 ^a	..	..	..
Antigua and Barbuda	290 ^a	644 ^a	1 450 ^a	..	..	..
Aruba	145 ^a	469	1 300	490 ^a	683 ^a	689 ^a
Bahamas	586 ^a	1 606 ^a	3 966 ^a	612 ^a	1 385 ^a	1 385 ^a
Barbados	171	308	488 ^a	23	41	60 ^a
British Virgin Islands	126 ^a	32 093 ^a	56 214 ^a	875 ^a	67 132 ^a	123 512 ^a
Cayman Islands	1 749 ^a	25 585 ^a	50 091 ^a	648 ^a	20 788 ^a	40 395 ^a
Cuba	2 ^a	74 ^a	78 ^a	..	..	..
Dominica	66 ^a	282 ^a	449 ^a	..	..	..
Dominican Republic	572	1 673 ^a	5 606	..	112 ^a	76 ^a
Grenada	70 ^a	364 ^a	845 ^a	..	..	..
Haiti	149 ^a	95	310	..	2 ^a	2 ^a
Jamaica	790 ^a	3 317 ^a	7 264 ^a	42 ^a	709 ^a	1 257 ^a
Montserrat	40 ^a	84 ^a	92 ^a	..	..	..
Netherlands Antilles	408 ^a	277 ^a	597 ^a	21 ^a	11 ^a	155 ^a
Saint Kitts and Nevis	160 ^a	505 ^a	1 114 ^a	..	..	..
Saint Lucia	316 ^a	825 ^a	1 339 ^a	..	..	..
Saint Vincent and the Grenadines	48 ^a	500 ^a	804 ^a	..	..	..
Trinidad and Tobago	2 365 ^a	7 280 ^a	12 440 ^a	21 ^a	293 ^a	1 419 ^a
Turks and Caicos Islands	2 ^a	4 ^a	147 ^a	..	..	..
Asia and Oceania	200 566	1 073 401	1 932 153	66 231	610 344	1 152 349
Asia	198 053	1 069 188	1 926 949	66 180	610 045	1 151 970
West Asia	45 839	68 851	242 603	7 504	13 861	42 973
Bahrain	552	5 906	11 402	719	1 752	6 039
Iran, Islamic Republic of	2 039 ^a	2 449 ^a	4 543 ^a	..	572 ^a	1 171 ^a
Iraq	.. ^{a,b}	.. ^{a,b}	1 051 ^a	..	..	..
Jordan	1 466 ^a	3 135	16 349	16 ^a	.. ^{a,b}	.. ^{a,b}
Kuwait	37 ^a	608	778	3 662	1 677	4 616
Lebanon	53 ^a	4 988 ^a	18 291 ^a	43 ^a	586 ^a	1 034 ^a
Oman	1 706 ^a	2 506 ^a	3 881 ^a	10 ^a	32 ^a	854 ^a
Palestinian Territory	..	932 ^a	1 111 ^a	..	970 ^a	1 715 ^a
Qatar	63 ^a	1 912 ^a	7 593 ^a	..	74 ^a	1 082 ^a
Saudi Arabia	21 894 ^a	17 577	51 828	1 873 ^a	2 578 ^a	5 211 ^a
Syrian Arab Republic	5 934 ^a	7 259 ^a	9 039	4 ^a	105 ^a	455 ^a
Turkey	11 194 ^a	19 209	79 075	1 157 ^a	3 668	8 866
United Arab Emirates	751 ^a	1 061 ^a	37 098 ^a	14 ^a	1 938 ^a	11 830 ^a
Yemen	180	1 336	562 ^a	5 ^a	12 ^a	198 ^a
South, East and South-East Asia	152 214	1 000 338	1 684 346	58 676	596 185	1 108 997
East Asia	84 065	708 511	1 191 291	49 032	509 636	923 403
China	20 691 ^a	193 348	292 559	4 455 ^a	27 768 ^a	73 330
Hong Kong, China	45 073 ^a	455 469	769 029	11 920 ^a	388 380	688 974
Korea, Democratic People's Republic of	572 ^a	1 044 ^a	1 565 ^a	..	..	..
Korea, Republic of	5 186	38 086	70 974	2 301	26 833	46 760
Macao, China	2 809 ^a	2 801 ^a	5 903 ^a	..	..	429 ^a
Mongolia	.. ^a	182 ^a	876 ^a	..	..	..
Taiwan Province of China	9 735 ^a	17 581	50 386 ^a	30 356 ^a	66 655	113 910 ^a
South Asia	4 984	28 406	72 862	423	2 503	14 198
Afghanistan	12 ^a	17 ^a	27 ^a	..	..	..
Bangladesh	706 ^a	2 162	4 133 ^a	46 ^a	69	102 ^a
Bhutan	2 ^a	4 ^a	28 ^a	..	..	..
India	1 657 ^a	17 517	50 680	124 ^a	1 859	12 964
Maldives	25 ^a	118 ^a	194 ^a	..	..	..
Nepal	12 ^a	72 ^a	120 ^a	..	..	..
Pakistan	1 892	6 919	14 753 ^a	245	489	934 ^a
Sri Lanka	679 ^a	1 596	2 927	8 ^a	86 ^a	198 ^a
South-East Asia	63 165	263 421	420 192	9 220	84 045	171 396
Brunei Darussalam	33 ^a	3 868 ^a	9 861 ^a	..	447 ^a	632 ^a
Cambodia	38 ^a	1 580	2 954	..	193	271
Indonesia	8 855 ^a	24 780 ^a	19 056 ^a	86 ^a	6 940 ^a	17 350 ^a
Lao People's Democratic Republic	13 ^a	556 ^a	856 ^a	..	21 ^a	20 ^a
Malaysia	10 318	52 747 ^a	53 575 ^a	753	15 878 ^a	27 830 ^a
Myanmar	281 ^d	3 865 ^d	5 005 ^a	..	..	..
Philippines	3 268	12 810	17 120 ^a	155	1 597	2 104 ^a
Singapore	30 468	112 633	210 089 ^a	7 808	56 766	117 580 ^a

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Annex table B.2. FDI stock, by region and economy, 1990, 2000, 2006 (concluded)
(Millions of dollars)

Region/economy	FDI inward stock			FDI outward stock		
	1990	2000	2006	1990	2000	2006
Thailand	8 242	29 915	68 058	418	2 203	5 608
Timor-Leste	.. ^a	72 ^a	167 ^a	..	..	..
Viet Nam	1 650 ^a	20 596	33 451 ^a	..	..	..
Oceania	2 513	4 213	5 204	51	298	379
Cook Islands	14 ^a	34 ^a	35 ^a	..	..	..
Fiji	284	388	430 ^a	25 ^a	35	55 ^a
French Polynesia	69 ^a	139 ^a	203 ^a	..	..	46 ^a
Kiribati	.. ^a	69 ^a	147 ^a	..	..^a	..
New Caledonia	70 ^a	129 ^a	406 ^a	..	..	..
Niue	..	..^a	7 ^a	..	..	..
Northern Mariana Islands	304 ^a	767 ^a	767 ^a	..	..	..
Palau	..	97 ^a	120 ^a	..	..	..
Papua New Guinea	1 582	2 007 ^a	2 280 ^a	26 ^a	263 ^a	265 ^a
Samoa	9 ^a	53 ^a	52 ^a	..	..	..
Solomon Islands	70 ^a	150 ^a	178 ^a	..	..	..
Tokelau	..	..^a	1 ^a	..	..	..
Tonga	1 ^a	15 ^a	51 ^a	..	..	..
Tuvalu	..	..^{a,b}	25 ^a	..	..	..
Vanuatu	110 ^a	366 ^a	504 ^a	..	..	14 ^a
South-East Europe and CIS	121	71 222	389 130	191	21 597	163 756
South-East Europe	112	16 052	108 374	191	1 185	3 278
Albania	..	568 ^a	1 284 ^a	..	82 ^a	110 ^a
Bosnia and Herzegovina	..	756	4 748	..	40 ^a	43 ^a
Bulgaria	112 ^a	2 704	20 707	124 ^a	85	343
Croatia	..	3 518	26 812	..	825	2 407
Romania	..	6 951	41 001	66	136	278
Serbia and Montenegro	..	1 015 ^a	11 385	..	..	35
Serbia	..	1 015 ^a	10 094 ^a	..	..	..
Montenegro	..	..	1 291	..	..	35
TFY Rep. of Macedonia	..	540	2 437 ^a	..	16	62 ^a
CIS	9	55 170	280 756	-	20 413	160 479
Armenia	9 ^a	583	1 705	..	1 ^a	13
Azerbaijan	..	3 735	13 275 ^a	..	5 ^a	4 391 ^a
Belarus	..	1 306	2 734	..	24	19
Georgia	..	725	3 367	..	..	..^{a,b}
Kazakhstan	..	10 078	32 476	..	16	.. ^{a,b}
Kyrgyzstan	..	432	593	..	33	3
Moldova, Republic of	..	449	1 284	..	23	29
Russian Federation	..	32 204	197 682 ^a	..	20 141	156 824 ^a
Tajikistan	..	136 ^a	645	..	..	..
Turkmenistan	..	949 ^a	3 124 ^a	..	..	..
Ukraine	..	3 875	22 514 ^a	..	170	334 ^a
Uzbekistan	..	699 ^a	1 356 ^a	..	..	..
Memorandum						
All developing economies, excluding China	343 992	1 514 291	2 857 831	141 338	831 153	1 526 809
Developing economies and South-East Europe and CIS (transition economies)	364 803	1 778 861	3 539 519	145 984	880 518	1 763 895
Least developed countries ^e	10 874	38 160	85 408	703	3 027	4 774
Major petroleum exporters ^f	62 197	149 645	286 497	10 515	30 712	70 757
Major exporters of manufactures ^g	205 498	1 149 500	2 112 059	103 164	651 827	1 220 119
Euro Zone	463 065	1 280 586	3 594 662	479 139	1 771 149	4 484 857
EU-15, 1995	747 186	2 081 979	5 086 710	807 143	3 045 103	6 384 839
New EU members (10)	2 651	98 738	347 619	871	5 253	43 826

Source: UNCTAD, FDI/TNC database.

^a Estimates. For details, see "Definitions and Sources" in annex B.

^b Negative stock value. However, this value is included in the regional and global total.

^c As of September 2006.

^d On a fiscal year basis.

^e Least developed countries include: Afghanistan, Angola, Bangladesh, Benin, Bhutan, Burkina Faso, Burundi, Cambodia, Cape Verde, Central African Republic, Chad, Comoros, Democratic Republic of the Congo, Djibouti, Equatorial Guinea, Eritrea, 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, São Tomé and Príncipe, Senegal, Sierra Leone, Solomon Islands, Somalia, Sudan, Timor-Leste, Togo, Tuvalu, Uganda, United Republic of Tanzania, Vanuatu, Yemen and Zambia.

^f Major petroleum exporters include: Algeria, Angola, Bahrain, Brunei Darussalam, Congo, Gabon, Indonesia, Islamic Republic of Iran, Iraq, Kuwait, Libyan Arab Jamahiriya, Netherlands Antilles, Nigeria, Oman, Qatar, Saudi Arabia, Syrian Arab Republic, Trinidad and Tobago, United Arab Emirates, Venezuela and Yemen.

^g Major exporters of manufactures include: Brazil, China, Hong Kong (China), India, Republic of Korea, Malaysia, Mexico, the Philippines, Singapore, Taiwan Province of China, Thailand and Turkey.

Annex table B.3. FDI flows as a percentage of gross fixed capital formation, 2004-2006, and FDI stocks as a percentage of gross domestic product, 1990, 2000, 2006, by region and economy
(Per cent)

Region/economy	FDI flows as a percentage of gross fixed capital formation			FDI stocks as a percentage of gross domestic product		
	2004	2005	2006	1990	2000	2006
World						
inward	8.5	10.4	12.6	8.4	18.3	24.8
outward	10.1	9.2	11.8	8.7	19.7	26.1
Developed economies						
inward	6.6	9.3	11.8	8.2	16.4	24.2
outward	11.8	11.1	14.1	9.7	21.7	30.7
Europe						
inward	7.9	17.6	18.3	10.6	26.1	38.0
outward	14.9	24.6	21.7	11.8	37.8	47.3
European Union						
inward	8.1	18.2	18.1	10.5	26.0	38.0
outward	14.2	22.8	19.5	11.4	36.4	44.9
Austria						
inward	6.3	14.2	0.4	6.6	15.7	24.2
outward	13.5	15.7	6.1	2.9	12.8	24.0
Belgium and Luxembourg						
inward	..	..	..	27.1	77.4	..
outward	..	..	..	18.9	71.3	..
Belgium						
inward	64.7	46.2	89.4	..	..	153.2
outward	50.5	43.2	78.3	..	..	117.3
Cyprus						
inward	36.9	37.9	42.5	.. ^a	31.3	56.0
outward	23.5	15.0	20.9	0.1	6.0	21.9
Czech Republic						
inward	17.2	36.1	16.8	..	38.9	54.8
outward	3.5	- 0.1	4.4	..	1.3	3.6
Denmark						
inward	- 21.5	24.5	11.5	6.8	46.0	50.3
outward	- 21.4	28.1	13.3	5.4	45.7	54.5
Estonia						
inward	30.5	79.8	30.1	..	48.3	77.2
outward	8.4	17.4	19.9	..	4.7	22.0
Finland						
inward	8.6	12.2	9.2	3.7	20.1	30.5
outward	- 3.1	12.1	-	8.1	43.2	43.1
France						
inward	8.2	19.4	17.9	7.0	19.6	35.0
outward	14.3	28.9	25.4	8.9	33.5	48.3
Germany						
inward	- 1.9	7.5	8.3	6.5	14.3	17.4
outward	3.1	11.6	15.4	8.9	28.5	34.7
Greece						
inward	4.0	1.1	9.0	6.6	12.2	15.1
outward	2.0	2.7	7.0	3.4	5.3	7.2
Hungary						
inward	19.7	30.1	24.8	1.6	48.6	73.0
outward	4.9	9.2	12.3	0.5	2.7	11.3
Ireland						
inward	- 23.6	- 57.4	21.3	79.4	131.9	81.2
outward	40.2	25.0	36.7	31.2	29.0	56.7
Italy						
inward	4.7	5.5	10.2	5.3	11.0	15.9
outward	5.4	11.5	10.9	5.3	16.4	20.3
Luxembourg						
inward	84.6	97.8	386.2	..	..	176.1
outward	96.2	128.5	29.6	..	..	86.0
Latvia						
inward	16.9	15.9	23.7	..	27.0	37.5
outward	2.7	2.8	2.1	..	0.3	2.2
Lithuania						
inward	15.8	18.7	26.3	..	20.4	36.7
outward	5.4	6.2	4.0	..	0.3	4.0

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Annex table B.3. FDI flows as a percentage of gross fixed capital formation, 2004-2006, and FDI stocks as a percentage of gross domestic product, 1990, 2000, 2006, by region and economy (continued)
(Per cent)

Region/economy	FDI flows as a percentage of gross fixed capital formation			FDI stocks as a percentage of gross domestic product		
	2004	2005	2006	1990	2000	2006
Malta						
inward	36.5	48.3	145.4	18.9	62.9	92.1
outward	- 0.2	- 2.1	0.3	..	5.4	14.8
Netherlands						
inward	1.8	34.1	3.3	22.4	63.1	68.2
outward	22.6	117.7	17.1	34.8	79.0	98.5
Poland						
inward	29.3	18.1	20.5	0.2	20.5	30.6
outward	1.8	5.7	6.3	0.6	0.6	3.2
Portugal						
inward	5.9	10.0	17.2	14.0	28.4	43.9
outward	19.8	5.3	8.2	1.2	17.6	28.2
Slovakia						
inward	29.9	17.1	28.6	..	23.4	55.0
outward	- 0.2	1.3	2.5	..	1.8	2.3
Slovenia						
inward	10.6	5.9	3.8	..	15.1	20.0
outward	7.0	6.7	7.7	..	4.0	10.6
Spain						
inward	8.5	7.6	5.4	12.5	26.9	36.2
outward	20.9	12.7	24.2	3.0	28.9	41.5
Sweden						
inward	20.4	16.7	39.5	5.2	38.8	56.8
outward	38.6	43.6	35.7	20.9	50.9	68.4
United Kingdom						
inward	16.1	52.9	33.9	20.6	30.4	47.8
outward	26.1	22.9	19.3	23.2	62.2	62.6
Other developed Europe						
inward	3.8	5.9	23.1	13.0	26.5	38.5
outward	27.7	59.2	64.1	21.4	65.8	93.1
Iceland						
inward	27.3	67.3	71.7	2.3	5.7	46.4
outward	95.1	154.0	85.1	1.2	7.6	81.1
Norway						
inward	5.5	11.6	9.4	10.7	15.1	19.8
outward	11.6	38.1	16.4	9.4	27.7	36.0
Switzerland						
inward	1.8	- 1.6	30.6	14.4	34.9	54.7
outward	34.6	68.6	99.6	27.9	93.4	144.1
North America						
inward	5.6	5.7	8.5	8.0	13.9	15.0
outward	12.6	0.3	9.1	8.1	14.7	19.5
Canada						
inward	- 0.2	12.3	25.3	19.7	29.8	30.4
outward	21.9	14.3	16.6	14.8	33.3	35.4
United States						
inward	6.2	4.9	6.8	6.8	12.8	13.5
outward	11.7	- 1.4	8.3	7.4	13.4	18.0
Other developed economies						
inward	5.9	- 2.7	3.6	3.2	5.1	10.5
outward	4.0	0.8	7.1	7.9	8.5	14.3
Australia						
inward	21.6	- 19.2	11.9	23.7	27.8	32.6
outward	6.5	- 18.1	11.1	9.8	21.4	30.0
Bermuda						
inward	3 006.0	- 1 134.8	842.9	684.8	1 675.4	2 273.0
outward	523.7	- 614.1	489.7	1 449.0	1 821.5	1 071.4
Israel						
inward	9.9	22.5	58.9	7.9	18.6	33.8
outward	22.0	13.7	59.3	2.1	7.5	24.2
Japan						
inward	0.7	0.3	- 0.6	0.3	1.1	2.5
outward	3.0	4.4	4.8	6.7	6.0	10.3

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Annex table B.3. FDI flows as a percentage of gross fixed capital formation, 2004-2006, and FDI stocks as a percentage of gross domestic product, 1990, 2000, 2006, by region and economy (continued)
(Per cent)

Region/economy	FDI flows as a percentage of gross fixed capital formation			FDI stocks as a percentage of gross domestic product		
	2004	2005	2006	1990	2000	2006
New Zealand						
inward	12.2	6.4	33.7	18.2	47.3	60.8
outward	-3.9	-4.4	5.0	14.7	16.1	12.3
Developing economies						
inward	12.9	12.6	13.8	9.6	25.6	26.7
outward	5.5	4.7	6.4	4.2	13.3	13.9
Africa						
inward	12.6	17.8	19.6	11.7	25.5	29.5
outward	1.7	1.6	5.1	4.4	8.1	6.3
North Africa						
inward	10.8	18.9	30.5	12.7	18.0	29.2
outward	0.3	0.7	1.1	1.1	1.4	1.4
Algeria						
inward	4.2	4.2	6.6	2.5	6.4	8.9
outward	1.2	0.2	0.1	0.3	0.5	0.6
Egypt						
inward	15.0	29.9	50.2	28.0	20.0	36.4
outward	1.1	0.5	0.7	0.4	0.7	1.0
Libyan Arab Jamahiriya						
inward	11.7	28.3	44.8	2.3	1.3	7.5
outward	-9.4	3.5	3.6	4.6	5.7	3.3
Morocco						
inward	8.7	23.1	21.5	9.7	26.2	52.0
outward	0.3	1.4	3.5	0.6	1.2	2.3
Sudan						
inward	39.7	44.8	65.3	0.3	12.1	30.3
outward	..	..	0.2	..	..	..
Tunisia						
inward	10.1	12.2	48.6	61.8	59.4	71.0
outward	0.1	0.2	0.5	0.1	0.2	0.3
Other Africa						
inward	13.8	16.9	11.7	11.1	31.0	29.6
outward	2.8	2.4	8.7	6.5	13.5	9.3
West Africa						
inward	22.6	26.8	34.6	13.5	31.9	30.2
outward	3.3	3.7	3.4	1.9	6.9	5.2
Benin						
inward	8.1	6.3	7.1	.. ^a	9.0	7.3
outward	-0.2	-	-0.1	0.1	0.4	0.4
Burkina Faso						
inward	1.2	2.7	1.9	1.2	1.2	1.7
outward	-0.8	-	-0.2	0.1	-	0.1
Cape Verde						
inward	6.5	22.4	26.7	1.2	32.0	36.1
outward	-	-	-	0.4	1.2	0.6
Côte d'Ivoire						
inward	19.1	18.9	14.5	8.2	23.2	24.0
outward	-1.7	-0.4	-0.3	0.1	0.1	0.2
Gambia						
inward	49.5	38.2	56.8	47.0	51.3	87.3
outward	..	..	..	..	..	..
Ghana						
inward	5.9	6.0	17.0	5.1	30.0	19.4
outward	-	..	..	..	..	..
Guinea						
inward	18.1	23.2	23.3	2.4	8.4	20.7
outward	-0.2	-1.1	..	..	0.2	0.2
Guinea-Bissau						
inward	3.1	14.3	65.7	3.4	17.6	32.2
outward	-13.9	1.1	-5.9	..	..	..^a
Liberia						
inward	355.4	-951.7	-153.9	710.6	578.8	531.4
outward	456.9	867.1	652.3	117.8	390.0	520.4

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Annex table B.3. FDI flows as a percentage of gross fixed capital formation, 2004-2006, and FDI stocks as a percentage of gross domestic product, 1990, 2000, 2006, by region and economy (continued)
(Per cent)

Region/economy	FDI flows as a percentage of gross fixed capital formation			FDI stocks as a percentage of gross domestic product		
	2004	2005	2006	1990	2000	2006
Mali						
inward	9.5	19.1	15.0	9.1	5.0	17.1
outward	0.1	- 0.1	0.1	0.9	2.4	1.4
Mauritania						
inward	220.4	392.8	- 1.5	5.8	15.7	61.7
outward	2.3	0.9	..	0.2	0.5	0.4
Niger						
inward	4.3	5.6	3.6	11.4	2.7	3.4
outward	1.5	- 0.8	0.3	2.2	7.0	3.3
Nigeria						
inward	38.4	49.3	74.8	13.8	35.3	34.9
outward	4.7	2.9	3.1	2.0	6.1	4.6
Senegal						
inward	4.2	2.3	2.8	4.5	6.7	4.5
outward	0.7	- 0.4	0.2	0.8	2.7	1.7
Sierra Leone						
inward	29.1	24.4	16.9	22.7	41.8	24.1
outward	..	- 3.1	1.1	..	..	..
Togo						
inward	13.6	17.3	12.1	16.5	32.1	34.9
outward	- 2.9	- 3.3	- 4.3	0.3	5.7	0.8
Central Africa						
inward	26.3	37.4	35.7	10.4	20.9	36.3
outward	- 0.5	- 0.6	- 0.6	1.4	3.2	1.2
Burundi						
inward	-	0.5	127.8	2.6	6.6	37.0
outward	..	..	..	-	0.3	0.3
Cameroon						
inward	13.0	8.2	10.7	7.3	17.2	19.1
outward	..	..	..	1.0	2.7	1.4
Central African Republic						
inward	45.3	39.8	32.0	7.4	11.5	14.2
outward	..	..	..	1.4	4.8	3.0
Chad						
inward	32.5	50.5	54.7	16.2	41.7	68.5
outward	..	..	..	2.4	5.1	1.1
Congo						
inward	- 1.3	57.7	26.0	20.6	58.7	46.9
outward	0.5	0.3	0.3	..	..	..
Congo, Democratic Republic of						
inward	0.8	- 9.5	20.5	5.9	11.7	12.7
outward	-	..	..	..	..	..
Equatorial Guinea						
inward	91.5	125.7	105.5	19.0	93.0	98.7
outward	..	..	..	0.2	.. ^a	-
Gabon						
inward	12.3	18.2	14.4	22.0	.. ^a	8.7
outward	- 1.4	- 1.3	- 1.2	3.0	5.6	1.9
Rwanda						
inward	2.1	2.3	3.1	8.4	14.6	12.4
outward	..	..	..	0.1	0.2	0.1
São Tomé and Príncipe						
inward	- 7.3	- 2.4	- 1.7	0.7	24.7	20.6
outward	..	..	..	..	..	..
East Africa						
inward	11.1	8.2	11.5	4.8	15.2	20.8
outward	1.1	1.2	0.5	1.0	1.7	1.6
Comoros						
inward	2.1	2.8	2.2	6.8	10.1	6.3
outward	0.4	0.5	0.3
Djibouti						
inward	28.0	23.2	107.6	2.8	7.2	30.0
outward

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Annex table B.3. FDI flows as a percentage of gross fixed capital formation, 2004-2006, and FDI stocks as a percentage of gross domestic product, 1990, 2000, 2006, by region and economy (continued)
(Per cent)

Region/economy	FDI flows as a percentage of gross fixed capital formation			FDI stocks as a percentage of gross domestic product		
	2004	2005	2006	1990	2000	2006
Eritrea						
inward	-3.7	-1.2	1.4	..	53.3	33.1
outward	..	..	..	..	..	..
Ethiopia						
inward	30.1	8.9	13.9	1.5	14.4	23.5
outward	..	..	..	..	..	..
Kenya						
inward	1.8	0.6	1.3	6.0	7.3	5.0
outward	0.2	0.3	0.6	0.9	0.9	0.7
Madagascar						
inward	11.3	7.0	17.8	3.5	3.6	9.2
outward	..	..	..	-	0.3	0.1
Mauritius						
inward	1.0	3.0	6.8	6.5	14.8	13.9
outward	2.2	3.4	0.7	0.1	2.9	3.5
Seychelles						
inward	47.8	105.3	169.4	57.8	72.5	121.0
outward	9.6	9.1	9.3	17.3	18.4	22.6
Somalia						
inward	-1.1	5.4	20.6	.. ^a	0.2	5.1
outward	..	..	..	..	..	..
Uganda						
inward	12.2	12.7	14.3	0.2	14.1	25.0
outward	..	..	..	..	..	..
United Republic of Tanzania						
inward	13.6	15.8	12.6	8.3	29.8	47.8
outward	..	..	-	..	..	..
Southern Africa						
inward	8.3	11.9	-0.3	11.2	36.7	30.0
outward	3.2	2.4	12.0	11.1	20.3	13.5
Angola						
inward	80.4	-40.1	-33.3	10.0	87.4	25.1
outward	2.0	6.8	2.7	-	-	0.8
Botswana						
inward	19.2	12.4	15.4	37.5	37.4	9.8
outward	-1.4	2.5	1.2	12.8	10.6	7.6
Lesotho						
inward	9.6	11.0	10.4	13.4	38.4	36.4
outward	-	..	..	-	0.2	0.1
Malawi						
inward	12.5	13.5	14.4	13.0	20.5	23.9
outward	0.9	0.5	0.4	..	0.5	0.7
Mozambique						
inward	19.6	7.1	9.6	32.6	50.5	65.4
outward	-	-	-	-	-	-
Namibia						
inward	15.7	22.2	19.8	87.5	37.0	43.8
outward	-1.5	-0.8	-0.7	3.4	1.3	0.9
South Africa						
inward	2.3	15.4	-0.7	8.2	32.7	30.2
outward	3.9	2.3	14.1	13.4	24.3	17.1
Swaziland						
inward	16.1	-10.3	7.1	38.5	38.7	28.4
outward	-0.3	-5.0	0.5	4.4	6.3	2.6
Zambia						
inward	27.3	21.2	18.5	27.3	72.9	34.5
outward	..	..	..	..	..	..
Zimbabwe						
inward	10.7	176.4	65.1	3.2	22.0	25.7
outward	-	1.9	-	0.9	4.2	4.4
Latin America and the Caribbean						
inward	24.1	16.1	15.0	9.3	23.9	30.2
outward	7.2	7.7	8.9	5.6	10.4	13.2

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Annex table B.3. FDI flows as a percentage of gross fixed capital formation, 2004-2006, and FDI stocks as a percentage of gross domestic product, 1990, 2000, 2006, by region and economy (continued)
(Per cent)

Region/economy	FDI flows as a percentage of gross fixed capital formation			FDI stocks as a percentage of gross domestic product		
	2004	2005	2006	1990	2000	2006
South and Central America						
inward	17.0	15.3	12.9	9.1	21.1	26.6
outward	5.1	4.5	8.2	5.4	5.9	7.7
South America						
inward	17.1	16.0	13.1	8.9	22.8	26.0
outward	5.7	4.2	10.7	6.6	7.4	8.4
Argentina						
inward	15.6	12.7	9.6	6.2	23.8	27.4
outward	1.5	2.9	4.0	4.3	6.8	11.2
Bolivia						
inward	5.9	-20.4	19.5	21.1	61.8	44.6
outward	0.3	0.3	0.2	0.1	0.4	0.8
Brazil						
inward	16.0	10.7	10.5	8.5	17.1	20.8
outward	8.6	1.8	15.8	9.4	8.6	8.2
Chile						
inward	39.2	28.4	28.3	30.0	60.8	55.4
outward	8.5	9.0	10.2	3.4	14.8	18.4
Colombia						
inward	17.1	41.9	22.2	7.3	13.1	33.1
outward	0.8	19.0	3.9	0.8	3.6	7.4
Ecuador						
inward	16.5	20.6	24.8	14.5	44.4	39.9
outward	-	-	-	0.1	1.0	0.4
Guyana						
inward	11.9	28.8	36.4	11.3	106.1	125.4
outward	0.1	..	..	..	0.1	0.2
Paraguay						
inward	2.9	6.0	7.8	8.5	18.7	19.1
outward	0.5	0.4	1.0	2.7	3.0	2.0
Peru						
inward	12.8	17.2	18.9	4.5	20.7	20.7
outward	0.5	1.2	2.3	0.4	0.9	1.6
Suriname						
inward	76.7	79.8	61.3	.. ^a	.. ^a	28.8
outward	..	..	..	..	..	..
Uruguay						
inward	22.3	39.1	44.5	8.0	10.4	22.6
outward	1.2	1.7	-0.1	2.2	0.6	0.8
Venezuela						
inward	7.7	10.6	-2.1	8.2	30.3	25.0
outward	3.2	4.9	8.2	2.6	6.6	6.4
Central America						
inward	17.0	14.0	12.8	9.6	17.7	27.8
outward	4.2	5.0	3.6	2.4	3.0	6.1
Belize						
inward	59.7	50.5	27.5	22.0	36.0	56.4
outward	-	0.4	0.2	4.9	5.2	3.7
Costa Rica						
inward	22.9	22.7	36.7	18.2	17.0	31.7
outward	1.8	-1.1	2.5	0.6	0.5	1.2
El Salvador						
inward	15.3	19.8	6.8	4.4	15.0	23.6
outward	-2.2	8.3	-1.7	1.2	0.6	1.5
Guatemala						
inward	3.9	4.7	5.9	22.7	17.7	13.7
outward	0.4	0.9	0.2	..	0.4	1.5
Honduras						
inward	16.3	19.1	16.7	9.6	23.1	32.1
outward	1.3	1.1	1.0
Mexico						
inward	16.7	13.3	11.1	8.5	16.7	27.2
outward	3.3	4.4	3.4	1.0	1.4	4.2

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Annex table B.3. FDI flows as a percentage of gross fixed capital formation, 2004-2006, and FDI stocks as a percentage of gross domestic product, 1990, 2000, 2006, by region and economy (continued)
(Per cent)

Region/economy	FDI flows as a percentage of gross fixed capital formation			FDI stocks as a percentage of gross domestic product		
	2004	2005	2006	1990	2000	2006
Nicaragua						
inward	24.7	20.2	22.4	4.0	36.2	51.1
outward	0.8	0.6	0.2	..	0.6	1.6
Panama						
inward	42.7	39.5	93.4	37.4	58.0	74.9
outward	75.2	61.3	40.7	63.8	90.4	123.7
Caribbean						
inward	170.0	31.7	60.7	13.4	85.1	104.8
outward	58.0	80.3	27.4	15.3	169.9	199.6
Anguilla						
inward	179.1	189.5	202.6	19.9	216.4	390.9
outward	..	..	..	..	..	..
Antigua and Barbuda						
inward	23.3	31.0	45.7	74.0	96.7	150.7
outward	-	-	..	..	..	..
Aruba						
inward	24.0	17.9	43.4	17.5	25.2	54.3
outward	-	-0.1	-0.3	59.1	36.8	28.8
Bahamas						
inward	26.6	32.2	38.2	18.5	32.1	63.7
outward	..	..	..	19.3	27.7	22.3
Barbados						
inward	-2.2	10.1	5.6	10.0	12.0	14.4
outward	0.7	1.5	0.7	1.4	1.6	1.8
British Virgin Islands						
inward	8 383.6	-3 439.0	2 631.6	116.2	4 093.5	5 487.0
outward	2 322.8	3 508.1	1 206.8	807.1	8 562.8	12 056.0
Cayman Islands						
inward	2 811.0	3 060.8	764.6	247.0	1 933.9	2 983.8
outward	1 124.0	1 896.1	517.9	91.6	1 571.4	2 406.3
Cuba						
inward	0.1	-	-	-	0.2	0.2
outward	-	-	-	..	..	..
Dominica						
inward	35.1	47.4	45.1	39.5	104.6	149.7
outward	..	..	..	..	..	..
Dominican Republic						
inward	20.7	17.9	19.6	8.1	8.5	17.7
outward	-0.2	0.5	-	..	0.6	0.2
Grenada						
inward	42.6	49.9	65.4	31.9	89.0	159.7
outward	..	..	..	..	..	..
Haiti						
inward	1.3	5.2	30.4	5.7	2.7	6.9
outward	..	..	..	..	0.1	-
Jamaica						
inward	21.7	20.4	24.1	18.5	42.0	68.8
outward	2.2	3.0	3.1	1.0	9.0	11.9
Montserrat						
inward	13.1	6.1	3.6	59.5	241.4	206.5
outward	..	..	..	..	..	..
Netherlands Antilles						
inward	5.7	11.1	6.0	20.6	9.9	17.8
outward	3.1	8.8	7.2	1.1	0.4	4.6
Saint Kitts and Nevis						
inward	30.4	51.0	94.3	100.6	153.4	228.7
outward	..	..	..	..	..	..
Saint Lucia						
inward	50.4	45.6	62.7	73.1	116.8	143.5
outward	..	..	..	..	..	..
Saint Vincent and the Grenadines						
inward	46.4	24.6	47.1	24.3	149.2	172.4
outward

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Annex table B.3. FDI flows as a percentage of gross fixed capital formation, 2004-2006, and FDI stocks as a percentage of gross domestic product, 1990, 2000, 2006, by region and economy (continued)
(Per cent)

Region/economy	FDI flows as a percentage of gross fixed capital formation			FDI stocks as a percentage of gross domestic product		
	2004	2005	2006	1990	2000	2006
Trinidad and Tobago						
inward	54.1	35.2	28.0	46.7	89.3	62.4
outward	1.4	12.8	13.1	0.4	3.6	7.1
Turks and Caicos Islands						
inward	- 9.9	48.6	15.2	1.5	1.4	24.4
outward	1.2	0.6	0.5	..	..	..
Asia and Oceania						
inward	10.3	11.3	12.9	9.2	26.5	24.9
outward	5.3	4.2	5.8	3.3	15.4	15.1
Asia						
inward	10.3	11.3	12.9	9.1	26.5	24.9
outward	5.4	4.2	5.9	3.3	15.4	15.2
West Asia						
inward	10.4	16.7	21.7	9.6	9.4	16.6
outward	4.1	5.4	5.1	2.2	1.9	3.0
Bahrain						
inward	36.4	37.4	98.7	12.8	74.1	71.0
outward	43.5	40.1	33.2	16.8	22.0	37.6
Iran, Islamic Republic of						
inward	0.7	0.8	1.9	2.1	2.2	2.1
outward	0.2	1.0	0.8	..	0.5	0.6
Iraq						
inward	16.2	23.0	11.5	.. ^a	.. ^a	3.0
outward	..	..	..	..	..	..
Jordan						
inward	23.0	51.3	99.1	36.5	37.1	114.2
outward	-	-	-	0.4	.. ^a	.. ^a
Kuwait						
inward	0.2	1.6	0.7	0.2	1.6	0.8
outward	23.9	32.3	47.0	19.8	4.4	4.8
Lebanon						
inward	52.0	74.8	72.1	1.9	29.9	80.9
outward	5.6	3.3	1.8	1.5	3.5	4.6
Oman						
inward	5.3	16.7	16.8	14.6	12.6	10.8
outward	5.8	2.1	4.4	0.1	0.2	2.4
Palestinian Territory						
inward	4.4	4.4	3.4	..	22.6	25.2
outward	- 4.5	0.8	0.2	..	23.6	38.9
Qatar						
inward	13.8	8.1	12.0	0.9	10.8	14.4
outward	2.2	2.5	2.5	..	0.4	2.1
Saudi Arabia						
inward	4.5	24.0	32.1	20.9	9.3	14.9
outward	1.6	2.3	1.3	1.8	1.4	1.5
Syrian Arab Republic						
inward	5.6	9.3	10.6	53.2	36.9	28.7
outward	1.0	1.1	1.0	-	0.5	1.4
Turkey						
inward	5.4	13.8	23.7	7.4	9.6	19.6
outward	1.6	1.5	1.1	0.8	1.8	2.2
United Arab Emirates						
inward	45.2	42.4	31.0	2.2	1.5	22.0
outward	10.0	14.6	8.6	-	2.7	7.0
Yemen						
inward	5.3	- 11.5	- 13.9	4.6	13.8	3.0
outward	0.8	1.0	1.3	0.1	0.1	1.1
South, East and South-East Asia						
inward	10.2	10.4	11.5	9.0	30.3	26.8
outward	5.5	4.0	6.0	3.6	18.4	18.0
East Asia						
inward	10.0	10.0	10.1	9.2	33.8	29.1
outward	5.9	4.3	6.0	5.5	24.5	22.7

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Annex table B.3. FDI flows as a percentage of gross fixed capital formation, 2004-2006, and FDI stocks as a percentage of gross domestic product, 1990, 2000, 2006, by region and economy (continued)
(Per cent)

Region/economy	FDI flows as a percentage of gross fixed capital formation			FDI stocks as a percentage of gross domestic product		
	2004	2005	2006	1990	2000	2006
China						
inward	8.0	8.8	8.0	5.4	17.9	11.1
outward	0.7	1.5	1.9	1.2	2.6	2.8
Hong Kong, China						
inward	96.4	90.4	103.9	58.6	269.9	405.7
outward	129.5	73.1	105.3	15.5	230.1	363.5
Korea, Democratic People's Republic of						
inward	..	..	..	3.9	9.8	12.1
outward	..	..	..	..	..	..
Korea, Republic of						
inward	4.5	3.0	1.9	2.0	7.4	8.0
outward	2.3	1.9	2.8	0.9	5.2	5.3
Macao, China						
inward	29.0	42.8	15.4	86.1	45.9	41.3
outward	-5.7	1.5	-0.4	..	..	3.0
Mongolia						
inward	17.9	30.8	26.7	-	19.2	31.2
outward	..	..	..	..	..	..
Taiwan Province of China						
inward	2.8	2.3	10.3	5.9	5.5	14.2
outward	10.5	8.5	10.3	18.3	20.7	32.0
South Asia						
inward	3.5	4.4	9.3	1.2	4.7	6.5
outward	1.1	1.2	4.2	0.1	0.4	1.3
Afghanistan						
inward	0.1	0.3	0.2	0.3	0.6	0.3
outward	..	..	..	..	..	..
Bangladesh						
inward	3.0	4.6	3.9	2.2	4.4	6.3
outward	-	-	0.1	0.1	0.1	0.2
Bhutan						
inward	0.8	1.4	0.9	0.7	1.0	2.8
outward	..	..	..	..	..	..
India						
inward	3.2	3.6	8.7	0.5	3.8	5.7
outward	1.2	1.4	5.0	-	0.4	1.5
Maldives						
inward	5.4	4.6	6.4	11.6	19.0	21.4
outward	..	..	..	..	..	..
Nepal						
inward	-	0.2	-0.4	0.3	1.3	1.5
outward	..	..	..	..	..	..
Pakistan						
inward	7.5	13.1	24.1	3.6	9.8	11.4
outward	0.4	0.3	0.6	0.5	0.7	0.7
Sri Lanka						
inward	4.7	4.4	6.2	8.5	9.8	10.9
outward	0.1	0.6	0.4	0.1	0.5	0.7
South-East Asia						
inward	19.6	19.8	20.9	17.8	44.3	39.5
outward	8.7	5.8	7.8	2.7	15.1	17.3
Brunei Darussalam						
inward	64.1	48.8	69.5	0.9	89.6	86.2
outward	0.8	5.8	6.1	..	10.3	5.5
Cambodia						
inward	11.4	32.3	38.9	2.2	43.1	41.6
outward	0.9	0.5	0.7	..	5.3	3.8
Indonesia						
inward	3.4	12.3	6.4	7.0	15.0	5.2
outward	6.2	4.5	3.9	0.1	4.2	4.8
Lao People's Democratic Republic						
inward	3.9	5.8	37.1	1.4	32.1	24.9
outward	1.2	0.6

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Annex table B.3. FDI flows as a percentage of gross fixed capital formation, 2004-2006, and FDI stocks as a percentage of gross domestic product, 1990, 2000, 2006, by region and economy (continued)
(Per cent)

Region/economy	FDI flows as a percentage of gross fixed capital formation			FDI stocks as a percentage of gross domestic product		
	2004	2005	2006	1990	2000	2006
Malaysia						
inward	19.1	15.2	20.1	23.4	58.4	36.0
outward	8.5	11.4	20.1	1.7	17.6	18.7
Myanmar						
inward	22.3	18.8	10.8	5.4	53.1	38.5
outward	..	..	..	..	..	..
Philippines						
inward	4.9	12.6	14.1	7.4	17.1	14.6
outward	4.1	1.3	0.6	0.3	2.1	1.8
Singapore						
inward	77.5	57.6	79.5	82.6	121.5	159.0
outward	31.5	19.3	28.3	21.2	61.2	89.0
Thailand						
inward	14.0	17.5	16.5	9.7	24.4	33.0
outward	0.2	1.1	1.3	0.5	1.8	2.7
Timor-Leste						
inward	3.0	0.1	2.4	0.2	22.7	47.0
outward	..	..	..	..	..	..
Viet Nam						
inward	10.6	11.5	12.5	25.5	66.1	54.8
outward	..	0.4	0.4	..	..	..
Oceania						
inward	21.4	10.0	8.6	20.4	26.5	23.0
outward	1.6	2.7	0.1	1.1	5.4	2.8
Cook Islands						
inward	-2.8	2.5	-0.1	24.1	42.6	18.1
outward	10.2	0.2	1.5	..	..	..
Fiji						
inward	18.6	-0.7	17.7	21.2	23.0	14.4
outward	0.5	1.9	-	1.8	2.1	1.8
French Polynesia						
inward	1.0	1.1	-	2.4	4.3	3.6
outward	1.4	2.3	0.2	..	..	0.8
Kiribati						
inward	65.6	2.5	36.7	1.4	146.5	244.4
outward	..	..	..	..	..	..
Marshall Islands						
inward	834.8	483.2	29.3	..	..	..
outward	40.3	52.0	-27.8	..	..	..
Nauru						
inward	4.5	4.5	4.9	..	..	..
outward	..	..	..	..	..	..
New Caledonia						
inward	2.7	-0.6	7.5	2.8	4.3	8.9
outward	1.1	3.0	1.7	..	..	..
Palau						
inward	12.6	1.7	2.1	..	82.7	92.5
outward	..	-4.2	..	..	..	..
Papua New Guinea						
inward	3.3	3.2	2.9	48.2	51.9	52.6
outward	-	0.6	0.1	0.8	6.8	6.1
Samoa						
inward	5.5	-7.6	-3.3	4.5	23.1	14.2
outward	1.0	4.3	2.9	..	..	..
Solomon Islands						
inward	10.9	32.6	31.3	33.5	44.5	55.5
outward	-	2.8	0.6	..	..	..
Tonga						
inward	14.6	52.4	31.0	0.7	9.8	22.6
outward
Tuvalu						
inward	0.3	-0.1	0.1 ^a	90.5
outward

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Annex table B.3. FDI flows as a percentage of gross fixed capital formation, 2004-2006, and FDI stocks as a percentage of gross domestic product, 1990, 2000, 2006, by region and economy (continued)
(Per cent)

Region/economy	FDI flows as a percentage of gross fixed capital formation			FDI stocks as a percentage of gross domestic product		
	2004	2005	2006	1990	2000	2006
Vanuatu						
inward	27.9	19.8	86.2	71.8	149.5	130.2
outward	1.2	1.1	1.1	..	..	3.7
South-East Europe and CIS						
inward	20.7	16.1	20.8	0.2	16.3	25.3
outward	7.6	6.1	6.1	0.3	5.3	11.2
South-East Europe						
inward	33.2	28.2	36.4	0.2	18.8	42.2
outward	0.6	1.1	0.7	0.3	1.5	1.5
Albania						
inward	9.4	7.0	7.8	..	15.3	14.6
outward	0.4	0.1	0.3	..	2.2	1.3
Bosnia and Herzegovina						
inward	37.6	28.4	21.9	..	16.7	41.7
outward	0.1	0.1	-	..	0.9	0.4
Bulgaria						
inward	68.3	63.0	62.6	0.5	21.5	65.8
outward	-4.3	5.0	1.9	0.6	0.7	1.1
Croatia						
inward	13.0	17.0	27.9	..	19.1	63.5
outward	3.7	2.3	1.7	..	4.5	5.7
Romania						
inward	39.9	28.5	37.9	-	18.8	33.6
outward	0.4	-0.1	0.1	0.2	0.4	0.2
Serbia and Montenegro						
inward	..	..	..	..	..	32.0
outward	..	..	..	..	..	..
Serbia						
inward	..	..	..	..	..	32.0
outward	..	..	..	..	..	..
TFY Rep. of Macedonia						
inward	16.4	9.7	32.4	..	15.0	39.0
outward	0.1	0.3	-	..	0.4	1.0
CIS						
inward	17.7	13.3	17.1	..	15.7	21.9
outward	9.3	7.3	7.4	..	6.2	12.9
Armenia						
inward	27.2	19.0	16.4	..	30.5	26.6
outward	0.3	0.5	0.1	..	-	0.2
Azerbaijan						
inward	72.0	30.7	-9.6	..	70.8	66.9
outward	24.6	22.3	11.2	..	0.1	22.1
Belarus						
inward	2.6	4.0	3.4	..	12.5	7.4
outward	-	-	-	..	0.2	0.1
Georgia						
inward	33.6	24.0	54.5	..	23.8	43.0
outward	0.6	-4.8	-0.9	..	..	..^a
Kazakhstan						
inward	36.9	11.9	27.6	..	55.1	42.0
outward	-11.4	-0.9	-1.9	..	0.1	.. ^a
Kyrgyzstan						
inward	54.4	11.3	45.7	..	31.5	21.0
outward	13.6	-	-	..	2.4	0.1
Moldova, Republic of						
inward	27.1	28.0	29.7	..	34.8	39.6
outward	0.6	-	-0.1	..	1.8	0.9
Russian Federation						
inward	14.3	9.2	16.3	..	12.4	20.2
outward	12.8	9.2	10.2	..	7.8	16.0
Tajikistan						
inward	136.5	27.5	126.9	..	15.6	23.0
outward

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Annex table B.3. FDI flows as a percentage of gross fixed capital formation, 2004-2006, and FDI stocks as a percentage of gross domestic product, 1990, 2000, 2006, by region and economy (concluded)
(Per cent)

Region/economy	FDI flows as a percentage of gross fixed capital formation			FDI stocks as a percentage of gross domestic product		
	2004	2005	2006	1990	2000	2006
Turkmenistan						
inward	27.0	24.3	40.2	..	22.8	14.3
outward	..	..	..	..	..	..
Ukraine						
inward	11.7	43.0	21.0	..	12.4	21.1
outward	-	1.5	-0.5	..	0.5	0.3
Uzbekistan						
inward	7.0	3.0	5.4	..	5.1	8.4
outward	..	..	..	..	..	..
Memorandum						
All developing economies, excluding China						
inward	15.4	14.5	16.4	10.0	27.1	31.0
outward	8.0	6.4	8.6	4.5	15.4	17.2
Developing economies and South-East Europe and CIS (transition economies)						
inward	13.5	12.9	14.5	9.4	25.1	26.5
outward	5.6	4.8	6.4	4.1	12.8	13.6
Least developed countries ^b						
inward	28.1	18.2	22.6	9.6	29.1	31.4
outward	2.8	4.9	2.1	1.5	5.6	3.3
Major petroleum exporters ^c						
inward	14.6	12.4	14.1	7.9	21.5	20.4
outward	0.7	1.4	1.1	1.7	3.9	2.5
Major exporters of manufactures ^d						
inward	16.4	12.0	10.8	8.5	16.9	23.6
outward	5.7	3.1	9.7	6.2	5.1	6.4
Euro Zone (of EU)						
inward	6.0	11.3	14.4	8.5	21.6	34.3
outward	13.0	23.3	20.2	8.8	29.9	42.7
EU-15, 1995						
inward	7.3	17.8	17.8	10.7	25.9	37.6
outward	14.8	23.9	20.3	11.5	37.9	47.2
New EU members (10)						
inward	23.2	25.4	22.1	0.3	28.5	44.9
outward	3.7	5.1	6.9	0.6	1.5	5.7

Source: UNCTAD, FDI/TNC database.

^a Negative stock value. However, this value is included in the regional and global total.

^b Least developed countries are: Afghanistan, Angola, Bangladesh, Benin, Bhutan, Burkina Faso, Burundi, Cambodia, Cape Verde, Central African Republic, Chad, Comoros, Democratic Republic of the Congo, Djibouti, Equatorial Guinea, Eritrea, 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, São Tomé and Príncipe, Senegal, Sierra Leone, Solomon Islands, Somalia, Sudan, Timor-Leste, Togo, Tuvalu, Uganda, United Republic of Tanzania, Vanuatu, Yemen and Zambia.

^c Major petroleum exporters are: Algeria, Angola, Bahrain, Brunei Darussalam, Congo, Gabon, Indonesia, Islamic Republic of Iran, Iraq, Kuwait, Libyan Arab Jamahiriya, Netherlands Antilles, Nigeria, Oman, Qatar, Saudi Arabia, Syrian Arab Republic, Trinidad and Tobago, United Arab Emirates, Venezuela and Yemen.

^d Major exporters of manufactures are: Brazil, China, Hong Kong (China), India, Republic of Korea, Malaysia, Mexico, the Philippines, Singapore, Taiwan Province of China, Thailand and Turkey.

Annex table B.4. Value of cross-border M&As, by region/economy of seller/purchaser, 2004-2006
(Millions of dollars)

Region/economy	Sales			Purchases		
	2004	2005	2006	2004	2005	2006
World	380 598	716 302	880 457	380 598	716 302	880 457
Developed economies	317 431	604 882	727 955	341 682	627 064	752 482
Europe	185 809	445 126	451 288	176 095	413 405	483 637
European Union	178 772	429 146	432 144	164 677	386 757	426 656
Austria	1 787	5 934	3 859	5 810	5 125	9 872
Belgium	2 345	7 851	2 859	9 309	6 035	7 276
Cyprus	-	24	298	-	137	2 210
Czech Republic	558	11 160	1 586	360	635	968
Denmark	5 893	8 928	15 079	4 703	11 728	8 145
Estonia	18	2 428	3	-	3	3
Finland	3 232	2 894	2 726	2 712	2 973	3 046
France	20 132	32 178	39 948	14 994	46 332	73 710
Germany	35 868	63 122	55 270	18 613	41 600	47 484
Greece	1 455	1 295	6 490	74	408	6 590
Hungary	453	3 203	2 858	317	501	1 526
Ireland	2 878	2 420	3 302	3 554	3 510	8 939
Italy	10 953	41 076	35 490	5 167	34 361	12 429
Luxembourg	72	8 013	35 471	558	9 391	7 320
Latvia	-	4	11	-	2	-
Lithuania	102	61	363	5	16	180
Malta	431	-	517	52	-	115
Netherlands	13 321	29 014	31 979	9 130	95 024	53 220
Poland	1 275	2 014	2 719	216	688	516
Portugal	1 233	1 856	2 733	3 105	647	1 002
Slovakia	432	178	1 434	232	3	-
Slovenia	168	148	18	59	59	32
Spain	7 143	23 601	13 971	32 492	23 520	77 504
Sweden	10 916	10 054	22 632	5 906	13 523	12 851
United Kingdom	58 107	171 689	150 527	47 307	90 535	91 717
Other developed Europe	7 038	15 980	19 144	11 418	26 648	56 981
Andorra	-	-	-	38	-	-
Gibraltar	92	4	-	-	13	404
Guernsey	-	98	4	775	10	581
Iceland	365	3	34	1 952	1 738	2 323
Isle of Man	4	452	-	3	78	323
Jersey	-	69	254	5	121	24
Monaco	198	-	156	-	4	-
Norway	1 603	7 969	4 993	3 080	8 242	9 499
San Marino	-	146	-	-	-	-
Switzerland	4 776	7 241	13 703	5 564	16 442	43 827
North America	101 574	132 574	242 680	144 068	170 556	208 302
Canada	19 635	27 014	70 506	34 047	22 505	37 014
United States	81 939	105 560	172 174	110 022	147 551	171 288
Other developed countries	30 047	27 183	33 987	21 519	43 603	60 543
Australia	15 128	12 051	16 391	10 492	32 261	31 351
Bermuda	1 580	6 532	946	1 883	725	3 821
Israel	171	2 053	9 215	4 003	1 446	9 071
Japan	8 875	2 512	2 599	3 787	8 131	14 479
New Zealand	4 292	4 033	4 836	1 354	1 041	1 820
Developing economies	53 120	94 101	127 372	37 925	82 426	122 941
Africa	4 595	10 509	17 569	2 718	15 505	11 208
North Africa	443	2 982	6 319	111	14 423	5 489
Algeria	25	-	18	-	-	-
Egypt	254	1 326	1 219	61	14 423	5 200
Libyan Arab Jamahiriya	-	-	1	50	-	-
Morocco	25	1 579	618	-	-	289
Sudan	136	-	2 138	-	-	-
Tunisia	3	77	2 325	-	-	-
Other Africa	4 153	7 527	11 250	2 607	1 082	5 719
West Africa	1 685	52	3 233	0	29	21
Burkina Faso	4	-	289	-	-	-
Côte d'Ivoire	-	-	54	-	-	-
Ghana	1 509	9	43	0	-	-
Guinea	-	0	2	-	-	-
Liberia	-	-	-	-	6	-
Mali	13	-	1	-	-	-

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Annex table B.4. Cross-border M&As, by region/economy of seller/purchaser, 2004-2006 (continued)
(Millions of dollars)

Region/economy	Sales			Purchases		
	2004	2005	2006	2004	2005	2006
Mauritania	147	-	5	-	-	-
Nigeria	10	43	2 838	-	-	21
Senegal	-	-	-	-	23	-
Sierra Leone	2	-	1	-	-	-
Central Africa	74	47	74	0	-	-
Chad	-	-	-	0	-	-
Congo	-	-	48	-	-	-
Congo, Democratic Republic of	-	36	26	-	-	-
Gabon	65	-	-	-	-	-
Rwanda	9	12	-	-	-	-
East Africa	285	396	2 081	272	496	558
Kenya	265	32	2	-	12	-
Madagascar	-	16	1	-	-	-
Mauritius	19	94	1 745	22	370	553
Mayotte	1	-	-	-	-	-
Reunion	-	254	-	-	-	-
Seychelles	-	-	-	-	115	6
Uganda	-	-	334	250	-	-
United Republic of Tanzania	-	0	-	-	-	-
Southern Africa	2 108	7 031	5 863	2 334	557	5 139
Angola	-	-	1	-	-	-
Botswana	70	-	57	-	-	-
Mozambique	-	-	34	-	-	-
Namibia	16	5	181	14	-	-
South Africa	1 935	7 001	5 582	2 320	528	5 138
Swaziland	33	-	-	-	-	-
Zambia	48	25	4	-	29	-
Zimbabwe	7	-	4	-	-	1
Latin America and the Caribbean	23 704	24 143	37 562	14 604	13 320	31 944
South and Central America	21 067	21 290	29 229	11 551	9 752	30 245
South America	13 148	16 432	24 662	9 488	6 910	25 851
Argentina	285	2 696	2 918	103	2 308	3 402
Bolivia	-	-	265	-	-	-
Brazil	6 639	5 800	10 035	9 124	3 848	20 445
Chile	1 720	711	3 080	95	300	465
Colombia	1 421	6 056	4 005	28	258	621
Ecuador	848	-	1 484	-	-	1
Falkland Islands (Malvinas)	-	-	-	-	123	-
Peru	710	1 057	2 673	18	75	917
Uruguay	60	29	180	-	-	-
Venezuela	1 465	85	22	120	-	-
Central America	7 919	4 858	4 567	2 063	2 842	4 394
Belize	57	-	-	5	-	-
Costa Rica	20	59	294	81	-	302
El Salvador	295	220	173	-	-	-
Guatemala	175	10	124	-	-	32
Mexico	6 403	4 066	2 024	1 973	2 813	4 040
Nicaragua	206	-	18	-	-	-
Panama	763	503	1 934	4	29	20
Caribbean	2 638	2 852	8 334	3 053	3 568	1 699
Antigua and Barbuda	40	64	90	-	-	-
Aruba	715	1	468	-	-	-
Bahamas	4	-	3 077	810	8	189
Barbados	33	-	999	-	108	-
British Virgin Islands	237	526	21	1 527	74	162
Cayman Islands	9	489	49	13	2 902	211
Dominican Republic	-	-	2 087	-	-	-
Jamaica	324	-	-	-	1	196
Martinique	-	-	196	-	-	-
Netherlands Antilles	-	29	10	332	-	11
Puerto Rico	1 251	1 745	1 248	370	454	775
Saint Lucia	6	-	-	-	-	-
Trinidad and Tobago	18	-	-	-	-	155
Turks and Caicos Islands	-	-	90	-	-	0
United States Virgin Islands	-	-	-	-	21	-
Asia and Oceania	24 820	59 450	72 240	20 604	53 601	79 789
Asia	24 768	59 266	71 579	20 598	53 570	79 438
West Asia	575	14 134	17 857	1 280	18 221	32 426
Bahrain	-	85	-	-	554	1 658
Iran, Islamic Republic of	77	-	-	-	-	-

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Annex table B.4. Cross-border M&As, by region/economy of seller/purchaser, 2004-2006 (concluded)
(Millions of dollars)

Region/economy	Sales			Purchases		
	2004	2005	2006	2004	2005	2006
Iraq	9	-	-	-	-	-
Jordan	-	89	566	9	-	-
Kuwait	317	-	13	845	3 640	1 452
Lebanon	-	236	-	7	-	1 522
Oman	20	116	-	-	33	5
Qatar	-	-	-	192	352	127
Saudi Arabia	-	-	21	78	53	4 898
Syrian Arab Republic	7	-	1 158	-	-	577
Turkey	132	13 395	15 303	108	8 806	584
United Arab Emirates	14	213	80	40	4 783	21 604
Yemen	-	-	716	-	-	-
South, East and South-East Asia	24 193	45 132	53 723	19 319	35 349	47 012
East Asia	16 743	25 811	28 271	5 207	16 834	24 178
China	6 768	8 253	6 724	1 125	5 279	14 904
Hong Kong, China	3 936	9 472	12 811	2 963	10 470	7 817
Korea, Republic of	5 638	6 542	2 772	409	451	923
Macao, China	-	695	290	-	0	-
Mongolia	3	93	2	-	-	-
Taiwan Province of China	398	756	5 672	710	634	533
South Asia	2 218	4 564	10 099	877	2 649	4 743
Bangladesh	60	143	330	-	-	-
India	1 760	4 210	6 716	863	2 649	4 740
Pakistan	398	207	3 049	14	-	-
Sri Lanka	-	5	4	-	-	3
South-East Asia	5 232	14 757	15 353	13 235	15 866	18 092
Brunei Darussalam	5	-	0	-	-	112
Cambodia	1	-	43	0	-	-
Indonesia	1 269	6 763	554	491	5 878	295
Lao People's Democratic Republic	85	71	-	-	-	-
Malaysia	638	1 454	2 811	816	1 678	2 985
Philippines	733	328	160	105	1 971	226
Singapore	1 190	5 802	7 303	11 638	6 106	14 216
Thailand	1 236	338	4 314	185	233	247
Viet Nam	74	0	166	-	-	10
Oceania	53	184	661	5	31	351
Fiji	-	1	13	4	-	-
Guam	-	-	9	-	-	-
Marshall Islands	6	-	-	-	4	-
New Caledonia	1	150	-	-	3	-
Niue	-	6	-	-	-	-
Northern Marina Islands	33	-	-	-	-	-
Papua New Guinea	13	27	636	2	23	261
Vanuatu	-	-	3	-	-	-
Transition economies	10 047	17 318	25 130	991	6 812	5 034
South-East Europe	5 294	6 254	14 315	36	47	149
Albania	126	7	41	-	-	-
Bosnia and Herzegovina	110	154	54	-	-	-
Bulgaria	2 685	2 637	1 029	30	22	78
Croatia	51	396	3 801	6	15	34
Romania	2 200	1 978	5 354	-	10	4
Serbia and Montenegro	38	1 065	2 503	-	-	-
TFY Rep. of Macedonia	4	-	280	-	-	-
CIS	4 753	11 064	10 815	954	6 764	4 885
Armenia	-	4	435	-	-	-
Belarus	5	4	1	-	-	-
Georgia	-	79	145	-	-	-
Kazakhstan	428	1 526	116	5	-	1 503
Kyrgyzstan	3	150	100	-	-	-
Moldova, Republic of	16	49	10	-	-	-
Russian Federation	4 062	2 819	8 677	949	6 375	3 378
Tajikistan	-	12	-	-	-	-
Turkmenistan	-	47	-	-	-	-
Ukraine	41	6 374	959	-	390	5
Uzbekistan	199	-	372	-	-	-

Source: UNCTAD cross-border M&A database (www.unctad.org/fdistatistics).

Note: The data cover only those deals that involved an acquisition of an equity stake of more than 10%.

Annex table B.5. Number of cross-border M&As, by region/economy of seller/purchaser, 2004-2006
(Number of deals)

Region/economy	Sales			Purchases		
	2004	2005	2006	2004	2005	2006
World	5 113	6 134	6 974	5 113	6 134	6 974
Developed economies	3 747	4 528	5 059	4 271	5 077	5 826
Europe	2 211	2 721	3 014	2 140	2 702	3 158
European Union	2 055	2 544	2 832	1 951	2 442	2 833
Austria	50	66	57	90	75	83
Belgium	66	92	108	70	68	91
Cyprus	-	4	5	4	7	22
Czech Republic	46	50	73	11	10	23
Denmark	77	74	96	64	82	75
Estonia	5	11	8	4	2	8
Finland	68	57	66	35	77	88
France	267	312	333	220	324	370
Germany	360	429	512	259	305	328
Greece	10	9	14	6	21	23
Hungary	22	33	49	12	14	17
Ireland	51	53	56	66	60	76
Italy	105	178	150	62	108	115
Luxembourg	9	15	19	23	39	44
Latvia	6	13	11	4	6	3
Lithuania	12	12	21	2	7	4
Malta	1	2	5	2	-	2
Netherlands	113	154	128	129	204	216
Poland	36	64	66	13	23	17
Portugal	25	44	32	20	20	24
Slovakia	10	11	19	5	5	3
Slovenia	9	8	8	8	5	7
Spain	119	130	205	104	104	180
Sweden	118	136	166	136	156	197
United Kingdom	470	587	625	602	720	817
Other developed Europe	156	177	182	189	260	325
Andorra	-	-	-	1	-	1
Faeroe Islands	-	1	-	-	-	-
Gibraltar	2	1	-	-	1	4
Guernsey	-	1	4	8	3	8
Iceland	4	4	1	14	38	45
Isle of Man	3	8	6	3	6	6
Jersey	-	4	4	1	4	7
Liechtenstein	-	-	2	-	-	1
Monaco	2	1	4	-	1	1
Norway	60	67	75	62	74	98
San Marino	-	1	-	-	-	-
Switzerland	85	89	86	100	133	154
North America	1 129	1 323	1 559	1 729	1 840	2 092
Canada	289	288	397	428	419	490
United States	840	1 035	1 162	1 301	1 421	1 602
Other developed countries	407	484	486	402	535	576
Australia	207	264	273	198	290	340
Bermuda	6	8	9	16	15	19
Israel	18	29	37	29	29	37
Japan	82	86	65	111	158	120
New Zealand	94	97	102	48	43	60
Developing economies	1 245	1 368	1 605	801	979	1 041
Africa	90	97	157	41	58	81
North Africa	18	22	36	5	8	10
Algeria	4	1	5	-	1	1
Egypt	7	8	21	2	4	8
Libyan Arab Jamahiriya	-	2	1	2	1	-
Morocco	4	5	4	1	2	1
Sudan	2	1	2	-	-	-
Tunisia	1	5	3	-	-	-
Other Africa	72	75	121	36	50	71
West Africa	11	10	19	1	5	2
Burkina Faso	2	-	1	-	-	-
Côte d'Ivoire	-	1	1	-	-	-
Gambia	-	1	-	-	-	-
Ghana	3	4	5	1	-	1
Guinea	-	1	1	-	-	-

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Annex table B.5. Number of cross-border M&As, by region/economy of seller/purchaser, 2004-2006
(continued)
(Number of deals)

Region/economy	Sales			Purchases		
	2004	2005	2006	2004	2005	2006
Liberia	-	-	1	-	2	-
Mali	1	-	2	-	-	-
Mauritania	2	-	1	-	-	-
Nigeria	2	3	4	-	1	1
Senegal	-	-	1	-	2	-
Sierra Leone	1	-	2	-	-	-
Central Africa	5	5	8	1	1	-
Burundi	-	-	1	-	-	-
Cameroon	-	1	-	-	1	-
Chad	-	-	-	1	-	-
Congo	-	-	4	-	-	-
Congo, Democratic Republic of	-	3	1	-	-	-
Equatorial Guinea	1	-	-	-	-	-
Gabon	1	-	1	-	-	-
Rwanda	3	1	1	-	-	-
East Africa	12	17	23	7	24	25
Eritrea	1	-	-	-	-	-
Kenya	2	3	3	2	1	2
Madagascar	1	2	2	-	-	-
Mauritius	2	8	6	4	20	22
Mayotte	1	-	-	-	-	-
Reunion	2	1	-	-	-	-
Seychelles	1	-	-	-	3	1
Uganda	2	2	6	1	-	-
United Republic of Tanzania	-	1	6	-	-	-
Southern Africa	44	43	71	27	20	44
Angola	1	1	2	-	-	-
Botswana	1	-	1	-	-	-
Malawi	-	-	-	1	-	-
Mozambique	1	-	7	-	-	-
Namibia	3	1	4	1	-	-
South Africa	32	33	50	25	19	41
Swaziland	1	2	-	-	-	-
Zambia	2	4	3	-	1	1
Zimbabwe	3	2	4	-	-	2
Latin America and the Caribbean	288	233	384	129	119	153
South and Central America	247	187	327	94	74	91
South America	178	136	222	69	52	60
Argentina	29	23	49	7	7	7
Bolivia	2	1	3	2	-	-
Brazil	69	65	87	34	26	35
Chile	25	12	25	8	7	7
Colombia	13	14	21	8	5	4
Ecuador	7	1	8	-	-	2
Falkland Islands (Malvinas)	-	1	-	-	3	-
Guyana	-	-	2	-	-	-
Paraguay	3	1	-	1	-	-
Peru	18	8	19	4	2	4
Uruguay	3	3	3	2	2	-
Venezuela	9	7	5	3	-	1
Central America	69	51	105	25	22	31
Belize	1	-	1	1	-	-
Costa Rica	3	4	2	1	2	5
El Salvador	2	3	4	-	-	1
Guatemala	1	2	6	1	-	2
Honduras	1	2	-	-	-	-
Mexico	52	35	83	19	18	21
Nicaragua	4	1	3	-	-	-
Panama	5	4	6	3	2	2
Caribbean	41	46	57	35	45	62
Anguilla	-	-	-	-	-	1
Antigua and Barbuda	1	4	3	-	1	2
Aruba	1	1	3	-	-	-
Bahamas	1	2	2	3	3	6
Barbados	5	1	2	-	2	2

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Annex table B.5. Number of cross-border M&As, by region/economy of seller/purchaser, 2004-2006
(continued)
(Number of deals)

Region/economy	Sales			Purchases		
	2004	2005	2006	2004	2005	2006
British Virgin Islands	15	11	9	18	13	15
Cayman Islands	4	8	4	8	12	12
Dominica	-	-	1	-	-	-
Dominican Republic	1	1	4	-	-	1
Grenada	1	-	1	-	-	-
Haiti	-	-	2	-	-	-
Jamaica	1	3	2	-	6	5
Martinique	-	-	1	-	-	-
Netherlands Antilles	1	7	6	2	2	2
Puerto Rico	7	5	11	1	4	5
Saint Kitts and Nevis	-	-	1	-	-	-
Saint Lucia	1	1	1	-	-	8
Trinidad and Tobago	2	2	2	2	1	1
Turks and Caicos Islands	-	-	2	-	-	1
United States Virgin Islands	-	-	-	1	1	1
Asia and Oceania	867	1 038	1 064	631	802	807
Asia	859	1 018	1 047	623	792	799
West Asia	40	58	81	25	57	83
Bahrain	1	3	3	2	3	7
Iran, Islamic Republic of	2	-	-	-	-	-
Iraq	1	4	-	-	-	-
Jordan	-	5	9	1	5	4
Kuwait	1	1	1	3	10	7
Lebanon	-	3	-	1	-	2
Oman	4	2	1	1	2	4
Qatar	3	-	-	1	4	1
Saudi Arabia	-	1	6	3	7	13
Syrian Arab Republic	1	1	2	-	-	1
Turkey	18	23	43	4	8	7
United Arab Emirates	9	15	15	9	18	37
Yemen	-	-	1	-	-	-
South, East and South-East Asia	819	960	966	598	735	716
East Asia	445	508	488	220	274	241
China	217	255	247	59	58	61
Hong Kong, China	143	182	162	128	172	149
Korea, Democratic People's Republic of	-	-	1	-	-	-
Korea, Republic of	55	36	38	18	26	15
Macao, China	-	8	8	-	1	1
Mongolia	7	1	1	-	-	-
Taiwan Province of China	23	26	31	15	17	15
South Asia	89	138	174	69	92	136
Bangladesh	2	3	3	-	1	-
India	80	126	163	64	91	133
Maldives	-	1	-	-	-	-
Pakistan	5	6	6	3	-	-
Sri Lanka	2	2	2	2	-	3
South-East Asia	285	314	304	309	369	339
Brunei Darussalam	1	-	5	-	-	1
Cambodia	2	1	7	1	-	-
Indonesia	45	61	40	14	25	13
Lao People's Democratic Republic	1	2	-	-	-	-
Malaysia	57	72	72	108	127	120
Myanmar	2	-	-	-	-	-
Philippines	24	21	17	7	9	7
Singapore	91	114	112	162	194	183
Thailand	54	42	43	17	13	12
Viet Nam	8	1	8	-	1	3
Oceania	8	20	17	8	10	8
Fiji	1	3	4	2	1	1
French Polynesia	1	-	1	1	-	2
Guam	-	2	1	-	-	-
Marshall Islands	1	-	-	-	1	-
New Caledonia	1	3	-	-	1	1
Niue	-	2	-	-	-	-
Northern Marina Islands	1	1	-	-	-	-

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**Annex table B.5. Number of cross-border M&As, by region/economy of seller/purchaser, 2004-2006
(concluded)
(Number of deals)**

Region/economy	Sales			Purchases		
	2004	2005	2006	2004	2005	2006
Papua New Guinea	3	9	8	5	7	3
Samoa	-	-	2	-	-	-
Vanuatu	-	-	1	-	-	-
Transition economies	121	238	310	41	78	107
South-East Europe	42	114	131	5	19	27
Albania	1	1	1	-	-	-
Bosnia and Herzegovina	3	5	7	-	-	-
Bulgaria	12	32	29	2	10	5
Croatia	7	8	14	2	2	6
Romania	12	43	49	-	7	10
Serbia and Montenegro	4	22	18	1	-	-
TFY Rep. of Macedonia	1	2	5	-	-	1
CIS	79	124	179	36	59	80
Armenia	3	2	3	-	-	-
Azerbaijan	1	-	-	-	-	-
Belarus	4	1	3	2	-	1
Georgia	1	5	8	-	1	-
Kazakhstan	6	10	8	2	4	5
Kyrgyzstan	3	2	3	-	-	-
Moldova, Republic of	2	2	4	-	-	1
Russian Federation	42	78	106	28	47	64
Tajikistan	-	1	-	-	-	-
Turkmenistan	-	2	-	-	-	-
Ukraine	12	20	36	4	7	8
Uzbekistan	5	1	8	-	-	1

Source: UNCTAD cross-border M&A database (www.unctad.org/fdistatistics).

Note: The data cover only those deals that involved an acquisition of an equity stake of more than 10%.

Annex table B.6. Value of cross-border M&As, by sector/industry, 2004-2006
(Millions of dollars)

Sector/industry	Sales			Purchases		
	2004	2005	2006	2004	2005	2006
Total	380 598	716 302	880 457	380 598	716 302	880 457
Primary	19 414	115 420	86 133	17 471	105 544	84 327
Agriculture, hunting, forestry and fisheries	1 245	1 824	2 191	648	234	2 872
Mining, quarrying and petroleum	18 169	113 596	83 942	16 823	105 310	81 455
Manufacturing	120 747	203 730	274 407	106 795	148 742	215 188
Food, beverages and tobacco	23 870	44 816	24 878	22 735	24 904	17 813
Textiles, clothing and leather	1 585	2 133	3 549	256	4 646	1 326
Wood and wood products	3 769	5 280	5 696	3 916	3 671	4 270
Publishing and printing	8 965	9 961	25 425	4 578	7 493	9 321
Coke, petroleum and nuclear fuel	880	1 892	4 281	1 608	769	3 946
Chemicals and chemical products	41 788	54 438	59 369	29 940	37 914	39 537
Rubber and plastic products	570	2 443	7 451	747	1 356	5 788
Non-metallic mineral products	5 178	6 915	9 777	6 032	13 170	8 844
Metals and metal products	4 579	29 460	48 890	4 541	18 452	47 095
Machinery and equipment	6 688	5 274	19 164	4 722	5 187	21 672
Electrical and electronic equipment	12 998	15 055	39 259	18 216	14 365	35 480
Precision instruments	5 871	13 488	8 903	4 799	6 426	10 354
Motor vehicles and other transport equipment	3 639	11 052	16 014	4 010	9 455	9 166
Other manufacturing	367	1 525	1 750	696	934	575
Services	240 437	397 152	519 918	256 332	461 969	580 942
Electricity, gas and water	24 799	38 259	23 253	17 596	25 826	12 005
Construction	3 324	6 232	11 402	610	2 922	7 023
Trade	26 445	29 232	23 105	13 087	15 166	14 324
Hotels and restaurants	4 618	7 604	31 968	1 268	2 058	13 554
Transport, storage and communications	36 530	97 502	140 913	24 634	66 215	89 299
Finance	81 809	93 795	131 615	174 096	290 454	378 131
Business services	55 261	93 127	109 233	22 387	48 900	45 524
Public administration and defence	18	87	92	-	1 568	7 625
Education	79	1 499	425	88	74	419
Health and social services	2 726	6 201	13 565	321	1 704	1 060
Community, social and personal service activities	3 349	23 415	30 040	2 068	6 775	10 691
Other services	1 479	200	4 308	175	306	1 287
Unknown^a	-	-	-	2	46	-

Source: UNCTAD, cross-border M&A database (www.unctad.org/fdistatistics).

^a Including non-classified industries.

Note: The data cover only those deals that involved an acquisition of an equity stake of more than 10%.

Annex table B.7. Number of cross-border M&As, by sector/industry, 2004-2006
(Number of deals)

Sector/industry	Sales			Purchases		
	2004	2005	2006	2004	2005	2006
Total	5 113	6 134	6 974	5 113	6 134	6 974
Primary	366	368	532	327	306	453
Agriculture, hunting, forestry and fisheries	37	42	49	33	30	34
Mining, quarrying and petroleum	329	326	483	294	276	419
Manufacturing	1 719	1 994	2 196	1 599	1 866	2 058
Food, beverages and tobacco	234	215	230	227	206	201
Textiles, clothing and leather	59	74	74	35	45	59
Wood and wood products	83	77	120	87	71	88
Publishing and printing	94	116	123	89	116	142
Coke, petroleum and nuclear fuel	16	19	34	14	12	11
Chemicals and chemical products	332	391	363	289	327	336
Rubber and plastic products	37	47	80	48	51	74
Non-metallic mineral products	74	84	97	70	91	105
Metals and metal products	142	214	209	106	185	180
Machinery and equipment	157	179	228	138	168	210
Electrical and electronic equipment	246	268	311	258	274	335
Precision instruments	121	155	174	115	147	171
Motor vehicles and other transport equipment	86	116	114	92	129	105
Other manufacturing	38	39	39	31	44	41
Services	3 028	3 772	4 246	3 184	3 956	4 463
Electricity, gas and water	123	135	170	96	98	139
Construction	70	91	114	46	75	89
Trade	381	551	528	284	371	447
Hotels and restaurants	94	99	141	50	53	72
Transport, storage and communications	386	445	440	308	370	379
Finance	584	652	669	1 292	1 573	1 717
Business services	1 171	1 481	1 799	942	1 200	1 345
Public administration and defence	3	11	9	-	12	17
Education	15	21	23	14	15	15
Health and social services	36	85	84	31	48	44
Community, social and personal service activities	146	172	214	96	119	153
Other services	19	29	55	25	22	46
Unknown^a	-	-	-	3	6	-

Source: UNCTAD, cross-border M&A database (www.unctad.org/fdistatistics).

^a Including non-classified industries.

Note: The data cover only those deals that involved an acquisition of an equity stake of more than 10%.

Annex table B.8. Number of foreign affiliates in the host economy and of foreign affiliates of home-based TNCs, 2002-2004

Host/home economy	Foreign affiliates in the host economy			Foreign affiliates of home-based TNCs abroad		
	2002 ^a	2003	2004	2002 ^a	2003	2004
Albania	..	..	561 ^c	..	..	..
Armenia	1 604 ^d	..	..	..	..	..
Australia	..	..	..	4 012 ^e	..	..
Austria	4 021 ^f	..	..	3 458 ^f	..	..
Bangladesh ^b	930 ^d	..	..	..	..	..
Cambodia ^b	23	..	..	..	..	..
China	34 466	38 581	42 753	..	..	..
Finland	2 448 ^f	..	..	..	..	..
France	9 057 ^f	..	..	8 409 ^f	..	..
Germany	9 462	9 300	9 225	22 721	22 816	22 997
Hong Kong, China	6 710	6 983	7 279	..	..	..
Hungary	26 645 ^g	..	..	..	..	..
India	490	508	..	..	..	..
Indonesia ^b	1 248	1 244	1 237	..	..	..
Ireland	1 225 ^f	..	..	..	..	..
Italy	1 843 ^d	..	..	2 573 ^d	..	..
Japan	1 861	..	2 230	13 322	13 875	14 996
Korea, Republic of	7 179 ⁱ	..	..	15 752	18 368	21 866
Lao People's Dem. Rep. ^b	791 ^d	..	..	..	..	..
Luxembourg	776	733	729	673 ^f	..	..
Macao, China	560 ^f	723	1 024	29 ^f	35	46
Madagascar	8 797 ^h	..	..	..	..	..
Malaysia ^b	496	587	583	..	..	..
Myanmar ^b	9	8	15	..	..	..
Nepal ^b	524 ^d	..	..	..	..	..
Norway	5 105 ^h	..	..	..	..	..
Pakistan	..	..	..	66 ^f	..	..
Papua New Guinea ^b	1887 ^h	..	..	..	..	..
Poland ^e	4 339 ^g	..	..	..	..	..
Romania	89 911	..	..	..	..	..
Singapore ^j	862	817	814	..	..	..
Slovenia	2 185	2 182	2 266	920	945	971
Sri Lanka ^b	1 430	1 562	1 693	..	..	..
Sweden ^e	8 704	10 077	9 864	..	844	856
Taiwan Province of China ^b	14 839	15 917	17 066	9 130	9 844	10 502
Turkey	495	1 105	2 129	..	..	..
United Republic of Tanzania ^b	492 ^g	..	..	..	..	..
United States	5 664	5 409	..	24 564	23 738	23 928
Vanuatu	19	..	..	..	..	..

Source: UNCTAD FDI/TNC database (www.unctad.org/fdistatistics).

^a Or latest year available between 1998 and 2002.

^b Approval data.

^c 2005.

^d 1999.

^e Data refer to majority-owned affiliates only.

^f 2001.

^g 2000.

^h 1998.

ⁱ Approval data in 1998.

^j Data refer only to the manufacturing sector.

Annex table B.9. Employment of foreign affiliates in the host economy and of foreign affiliates of home-based TNCs, 2002-2004

(Thousands of employees)

Host/home economy	Foreign affiliates in the host economy			Foreign affiliates of home-based TNCs		
	2002 ^a	2003	2004	2002 ^a	2003	2004
Australia	..	..	..	321.9 ^b	..	..
Austria	244.8	240.9	232.8	299.1	327.7	370.5
Belgium	..	..	..	236.8	209.7	..
Canada ^b	..	..	..	919.0	..	..
China	..	..	24 000.0	..	..	..
Czech Republic	599.4	600.1	620.4	9.9	16.8	24.8
Finland	219.2 ^e	..	..	379.2 ^b	..	..
France	1 890	1 880	..	..	..	..
Germany	2 143.0	2 162.0	2 280.0	4 546.0	4 517.0	4 605.0
Hong Kong, China ^b	..	..	543.0	..	..	..
Hungary	606.7 ^f	..	..	..	..	..
Ireland ^c	154.1	149.1	149.5	..	..	..
Italy ^c	560.1 ^g	..	..	642.5 ^g	..	..
Japan	293.7	434.9	430.9	3 407.9	3 766.2	4 138.6
Luxembourg	70.5	70.2	..	103.3 ^e	..	..
Macao, China	34.8 ^e	28.6	36.7	4.8 ^e	5.2	10.9
Madagascar	193.8 ^h	..	..	..	..	..
Mozambique ^d	..	13.6	13.2	..	..	..
Nepal ^d	73.5 ^g	..	..	..	..	..
Poland ^b	648.3 ^f	..	..	..	..	..
Portugal ^b	150.4	..	..	23.6	24.9	..
Singapore ^c	160.4	155.0	157.6	..	..	..
Slovenia	64.9	62.1	64.0	..	..	..
Sri Lanka ^d	380.7	397.2	415.7	..	..	..
Sweden ^b	492.0	564.2	544.6	590.0	956.4	953.6
Switzerland	143.8	157.8	190.1	1 832.7	1 808.9	1 861.7
United Rep. of Tanzania ^d	80.6 ^f	..	..	..	..	..
United States ^b	5 425.4	5 244.4	5 116.4	8 255.6	8 242.2	8 617.2
Vanuatu	0.1	..	..	..	..	..

Source: UNCTAD FDI/TNC database (www.unctad.org/fdistatistics).

^a Or latest year available between 1998 and 2002.

^b Data refer to majority-owned affiliates only.

^c Data refer only to the manufacturing sector.

^d Approval data.

^e 2001.

^f 2000.

^g 1999.

^h 1998.

Annex table B.10. Assets of foreign affiliates in the host economy and of foreign affiliates of home-based TNCs, 2002-2004
(Millions of dollars)

Host/home economy	Foreign affiliates in the host economy			Foreign affiliates of home-based TNCs		
	2002 ^a	2003	2004	2002 ^a	2003	2004
Austria	217 102 ^d	..	..	84 775 ^d	..	..
China	380 725	474 347	579 365	..	..	..
Finland	48 209 ^e	..	..	..	..	..
Germany	665 116 ^e	..	..	1 467 450 ^e	..	..
India	14 252	15 990	..	..	..	..
Japan	205 407	263 207	252 024	669 629 ^e	..	831 635
Norway	88 167 ^f	..	..	..	..	..
Poland ^b	46 251 ^d	..	..	..	..	..
Singapore ^c	19 489	..	..	..	..	..
Slovenia	10 269	15 108	16 276	..	..	..
United States	5 229 812	5 814 489	6 384 667	6 802 399	7 946 240	8 757 063

Source: UNCTAD FDI/TNC database (www.unctad.org/fdistatistics).

^a Or latest year available between 1998 and 2002.

^b Data refer to majority-owned affiliates only.

^c Data refer only to the manufacturing sector.

^d 2000.

^e 2001.

^f 1998.

Annex table B.11. Wages and salaries of foreign affiliates in the host economy and of foreign affiliates of home-based TNCs, 2002-2004
(Millions of dollars)

Host/home economy	Foreign affiliates in the host economy			Foreign affiliates of home-based TNCs		
	2002 ^a	2003	2004	2002 ^a	2003	2004
Australia ^b	..	..	..	7 607	..	..
Finland	5 574 ^c	..	..	..	..	..
France ^b	24 677 ^c	..	..	..	..	..
Hong Kong, China ^b	..	..	22 980	..	..	..
Ireland ^b	4 106 ^c	..	..	..	..	..
Japan	17 191	..	..	31 589	37 846	38 732
Norway	9 667 ^d	..	..	..	..	..
Sweden	15 496 ^b	20 135 ^b	..	35 435	..	..
United States ^b	315 779	316 369	324 523	268 919	293 618	326 734

Source: UNCTAD FDI/TNC database (www.unctad.org/fdistatistics).

^a Or latest year available between 1998 and 2002.

^b Data refer to majority-owned affiliates only.

^c 2001.

^d 1998.

Annex table B.12. Sales of foreign affiliates in the host economy and of foreign affiliates of home-based TNCs, 2002-2004
(Millions of dollars)

Host/home economy	Foreign affiliates in the host economy			Foreign affiliates of home-based TNCs		
	2002 ^a	2003	2004	2002 ^a	2003	2004
Australia ^b	..	..	..	77 325	..	..
Austria ^b	90 073 ^d	..	..	34 273	..	..
Belgium ^b	..	..	..	45 111 ^f	..	..
Canada ^b	..	..	..	229 924	..	..
China	376 820	526 851	698 718	..	..	..
Czech Republic	65 098	75 839	98 681	2 833	3 187	5 620
Finland	47 389 ^e	..	..	120 730 ^b	..	..
France	278 132 ^e	..	..	336 569 ^e	..	..
Germany	760 587	954 252	1 183 687	1 334 086	1 533 801	1 729 526
Hungary	59 ^d	..	..	..	..	..
India	18 965	22 298	..	..	..	..
Ireland ^b	71 375 ^e	..	..	..	..	..
Italy	153 742 ^g	..	..	120 429 ^g	..	..
Japan	215 716	280 676	296 325	1 100 371	1 252 235	1 504 664
Luxembourg	16 320 ^d	..	..	27 383 ^e	..	..
Madagascar	1 181 ^f	..	..	..	..	..
Poland ^b	62 070 ^d	..	..	..	..	..
Portugal ^b	34 512	..	..	10 252	11 919	..
Singapore ^c	61 313	..	..	..	..	..
Slovenia	9 428	11 571	14 345	..	..	..
Sweden	146 428 ^b	193 592 ^b	..	305 966	..	..
United States ^b	2 030 962	2 122 683	2 303 543	2 515 641	2 865 226	3 238 471

Source: UNCTAD FDI/TNC database (www.unctad.org/fdistatistics).

^a Or latest year available between 1998 and 2002.

^b Data refer to majority-owned affiliates only.

^c Data refer only to the manufacturing sector.

^d 2000.

^e 2001.

^f 1998.

^g 1999.

Annex table B.13. Value added of foreign affiliates in the host economy and of foreign affiliates of home-based TNCs, 2002-2004
(Millions of dollars)

Host/home economy	Foreign affiliates in the host economy			Foreign affiliates of home-based TNCs		
	2002 ^a	2003	2004	2002 ^a	2003	2004
China	103 578	140 142	..	..	..	..
Czech Republic	14 157	15 928	20 749	240	375	517
Finland	10 795 ^c	..	..	..	..	..
France	69 866 ^c	..	..	..	..	..
Hong Kong, China ^b	..	..	45 760	..	..	..
Hungary	11 060 ^d	..	..	..	..	..
Ireland ^b	25 004 ^c	..	..	..	..	..
Japan	36 893	..	46 498	..	..	..
Madagascar	359 ^e	..	..	..	..	..
Norway	29 315 ^e	..	..	..	..	..
Portugal ^b	6 156	..	..	870	1 115	..
Singapore ^f	21 290	..	..	..	..	..
Slovenia	1 275	1 289	1 761	..	..	..
Sweden	32 388 ^b	43 489 ^b	..	71 044	..	..
United States ^b	460 609	475 062	514 957	601 606	697 778	824 336

Source: UNCTAD FDI/TNC database (www.unctad.org/fdistatistics).

^a Or latest year available between 1998 and 2002.

^b Data refer to majority-owned affiliates only.

^c 2001.

^d 2000.

^e 1998.

^f Data refer only to the manufacturing sector.

Annex table B.14. Profits of foreign affiliates in the host economy and of foreign affiliates of home-based TNCs, 2002-2004
(Millions of dollars)

Host/home economy	Foreign affiliates in the host economy			Foreign affiliates of home-based TNCs		
	2002 ^a	2003	2004	2002 ^a	2003	2004
China ^b	22 680	33 556	41 741	..	..	..
Finland	2 439 ^f	..	..	..	..	..
France ^{b,c}	18 670 ^g	..	..	..	..	..
India ^b	2 260	2 862	..	..	..	..
India ^d	1 559	1 867	..	..	..	..
Japan ^b	12 399	14 601	15 282	29 505	40 273	56 522
Japan ^d	4 290	..	7 541	12 958	27 502	39 055
Macao, China	400	494	1 015	8	- 5	- 8
Paraguay	88 ^f	..	..	..	..	..
Poland ^c	2 004 ⁱ	..	..	..	..	..
Singapore ^e	7 779	..	..	..	..	..
Slovenia	297	272	473	..	..	..
Sweden	5 477 ^c	7 786 ^c	..	8 051	..	..
TFY Rep. of Macedonia	5 ^h	..	..	..	..	..
United States ^{b,c}	- 54 973	30 416	68 101	212 564	325 684	354 016

Source: UNCTAD FDI/TNC database (www.unctad.org/fdistatistics).

^a Or latest year available between 1998 and 2002.

^b Profits before taxes.

^c Data refer to majority-owned affiliates only.

^d Profits after taxes.

^e Data refer only to the manufacturing sector.

^f 2001.

^g 1998.

^h 1999.

ⁱ 2000.

Annex table B.15. Exports of foreign affiliates in the host economy and of foreign affiliates of home-based TNCs, 2002-2004
(Millions of dollars)

Host/home economy	Foreign affiliates in the host economy			Foreign affiliates of home-based TNCs		
	2002 ^a	2003	2004	2002 ^a	2003	2004
Austria ^b	24 855 ^f	..	..	23 724 ^f	..	..
China	169 937	240 341	338 606	..	..	..
Czech Republic	20 523	25 754	35 607	208	152	621
Finland	10 404 ^f	..	..	..	..	..
France	59 267 ^f	..	..	..	..	..
Hungary	21 042 ^g	..	..	..	..	..
India	2 784	3 337	..	..	..	..
Ireland ^c	61 049 ^g	..	..	..	..	..
Japan	42 392	..	50 011	368 918	443 795	..
Korea, Republic of	5 098 ^g	..	..	..	..	..
Poland ^c	23 565 ^g	..	..	..	..	..
Portugal ^c	7 598	..	..	309	402	..
Singapore ^d	42 765	..	..	..	..	..
Slovenia	4 380	4 987	6 674	..	..	..
Sweden ^e	34 138	44 133	..	66 663	..	..
United States ^c	140 510	147 643	153 902	918 979	..	..

Source: UNCTAD FDI/TNC database (www.unctad.org/fdistatistics).

^a Or latest year available between 1998 and 2002.

^b Data for foreign affiliates in home-based TNCs abroad refer to majority-owned affiliates only.

^c Data refer to majority-owned affiliates only.

^d Data refer only to the manufacturing sector.

^e Data for foreign affiliates in Sweden refer to majority-owned affiliates only.

^f 2001.

^g 2000.

Annex table B.16. Imports of foreign affiliates in the host economy and of foreign affiliates of home-based TNCs, 2002-2004

(Millions of dollars)

Host/home economy	Foreign affiliates in the host economy			Foreign affiliates of home-based TNCs		
	2002 ^a	2003	2004	2002 ^a	2003	2004
Australia ^b	..	..	..	49 771	..	..
Austria	27 448 ^c	..	..	16 945 ^c	..	..
China	160 286	231 914	324 557	..	..	..
Czech Republic	20 291	24 162	33 422	2 063	1 959	3 269
Finland	1 279 ^d	..	..	..	..	..
Hungary	24 552 ^e	..	..	..	..	..
India	2 563	3 242	..	..	..	..
Ireland ^b	12 328 ^e	..	..	..	..	..
Japan	32 954	..	..	453 779	540 692	..
Korea, Republic of	13 723 ^e	..	..	..	..	..
Poland ^b	12 278 ^e	..	..	..	..	..
Portugal ^b	8 918	..	..	668	883	..
Sweden ^f	33 234	42 256	..	48 863	..	..
United States ^f	335 021	357 247	378 111	215 300 ^e	..	..

Source: UNCTAD FDI/TNC database (www.unctad.org/fdistatistics).

^a Or latest year available between 1998 and 2002.

^b Data refer to majority-owned affiliates only.

^c 2001.

^d 1998.

^e 2000.

^f Data for foreign affiliates in the host economy refer to majority-owned affiliates only.

Annex table B.17. R&D expenditures of foreign affiliates in the host economy and of foreign affiliates of home-based TNCs , 2002-2004

(Millions of dollars)

Host/home economy	Foreign affiliates in the host economy			Foreign affiliates of home-based TNCs		
	2002 ^a	2003	2004	2002 ^a	2003	2004
Finland	87.7 ^f	..	..	..	..	..
India	61.5	70.5	..	..	..	..
Japan	5 317.7	6 667.1	7 187.3	3 657.3	3 436.1	4 270.8
Poland ^b	48.1 ^g	..	..	..	..	..
Singapore ^c	884.7	..	..	..	..	..
Sweden ^d	3 116.1	3 628.4	..	8 725.5	..	..
Switzerland	..	..	..	5 793.9 ^g	..	..
United Kingdom ^b	5 104.1 ^h	..	..	..	..	..
United States ^e	27 507.0	29 803.0	29 900.0	21 151.0	22 793.0	..

Source: UNCTAD FDI/TNC database (www.unctad.org/fdistatistics).

^a Or latest year available between 1998 and 2002.

^b Data refer to majority-owned affiliates only.

^c Data refer only to the manufacturing sector.

^d Data for foreign affiliates in Sweden refer to majority-owned affiliates only.

^e Data refer to R&D performed by majority-owned affiliates.

^f 2001.

^g 2000.

^h 1998.

Annex table B.18. Royalty receipts and payments of foreign affiliates in the host economy and of foreign affiliates of home-based TNCs, 2001-2004
(Millions of dollars)

Host/home economy	Foreign affiliates in the host economy				Foreign affiliates of home-based TNCs		
	2001 ^a	2002	2003	2004	2001 ^a	2002	2003
(a) Royalty receipts							
Germany	744	1 025	1 176	..	859	839	..
United States	1 644 ^b	..	..	..	9 241 ^c	..	..
(b) Royalty payments							
Austria	572	..	..	..	..	..	..
Germany	2 224	1 617	1 658	..	1 481	1 754	..
India	59	58	84	..	..	..	..
Japan	2 752	1 200	..	1 671	..	..	7 819 ^d
Korea, Republic of	18 228 ^c	..	..	..	..	..	..
United States	7 738 ^b	..	..	..	35 845 ^c	..	..

Source: UNCTAD FDI/TNC database (www.unctad.org/fdistatistics).

^a Or latest year available between 1998 and 2001.

^b 1999.

^c Data refer to majority-owned affiliates only in 1999.

^d 1998.

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UNCTAD, *Investment Policy Review of Rwanda* (New York and Geneva, 2006). 146 p. Document symbol: UNCTAD/ITE/IPC/2005/11. Sales No. #.06.II.D.15. \$20.

UNCTAD, *Report on the Implementation of the Investment Policy Review for Egypt* (New York and Geneva, 2005). 18 pages. UNCTAD/WEB/ITE/IPC/2005/7.

UNCTAD, *Algérie: Evaluation des capacités de promotion des investissements de l'ANDI* (Geneva, 2005). 21 pages. UNCTAD/WEB/ITE/IPC/Misc/2005/8.

UNCTAD, *Investment Policy Review of Colombia* (forthcoming). UNCTAD/ITE/IPC/2005/11.

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UNCTAD, *Investment Policy Review of Kenya* (Geneva, 2005). 126 pages. UNCTAD/ITE/IPC/2005/8. Sales No. E.05.II.D.21.

UNCTAD, *Investment Policy Review of Benin* (Geneva, 2005). 147 pages. UNCTAD/ITE/IPC/2003/4. Sales No. F.04.II.D.43.

UNCTAD, *Investment Policy Review of Algeria* (Geneva, 2004). 110 pages. UNCTAD/ITE/IPC/2003/9.

UNCTAD, *Investment Policy Review of Sri Lanka* (Geneva, 2003). 89 pages. UNCTAD/ITE/IPC/2003/8.

UNCTAD, *Investment Policy Review of Lesotho* (Geneva, 2003). 105 pages. Sales No. E.03.II.D.18.

UNCTAD, *Investment Policy Review of Nepal*. (Geneva, 2003). 89 pages. Sales No. E.03.II.D.17.

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2. Investment Guides

UNCTAD, *An Investment Guide to Rwanda: Opportunities and Conditions* (Geneva, 2006). 79 pages. Document symbol: UNCTAD/ITE/IIA/2006/3. Free of charge.

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UNCTAD and ICC, *An Investment Guide to Mozambique* (Geneva, 2002). 109 pages. Document symbol: UNCTAD/IIA/4. Free of charge.

G. International Standards of Accounting and Reporting

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UNCTAD, *Accounting and Financial Reporting Guidelines for Small and Medium-Sized Enterprises (SMEGA): Level 3 Guidance* (Geneva, 2004). 20 pages. Document symbol: UNCTAD/ITE/TEB/2003/6. Sales No. E.04.II.D.15. \$10.

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UNCTAD, *Selected Issues in Corporate Governance: Regional and Country Experiences* (New York and Geneva, 2003). Sales No. E.03.II.D.26.

H. Data and Information Sources

UNCTAD, *World Investment Directory*.

Volume IX: Latin America and the Caribbean (New York and Geneva, 2004). Sales No. E.03.II.D.12. \$25.

Volume VIII: Central and Eastern Europe (New York and Geneva, 2003). Sales No. E.03.II.D.12. \$25.

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