

Chapter 2

Foreign Direct Investment in Telecommunications in Developing Countries

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In an industry as capital-intensive as telecommunications, access to capital is key to ensuring the deployment and expansion of a robust network. Until the mid-1980s, telecommunications services were made available in most countries on a monopoly basis either by state-owned service providers or by heavily regulated private entities.¹ The traditional monopoly model involved extensive state control and protected national markets. As a result, foreign direct investment (FDI) in the sector was minimal when the first privatization and liberalization wave began. Indeed, by 1990, only \$2 billion out of a total telecommunications investment of \$20 billion in developing countries was FDI.

The public offerings of shares in British Telecommunications in the United Kingdom in 1984 and NTT (Nippon Telegraph and Telephone) in Japan in 1985 opened the sector to private investment and competition. The breakup of AT&T (American Telephone and Telegraph) in the United States in 1984 enabled competition and the growth of new companies. Led by these public offerings and the dissolution of the U.S. monopoly, the traditional model began to erode. This erosion coincided with rapid technological changes in the sector. Fundamental transformations in economic policy in developing countries began at the same time, leading to the ascendancy of free market principles in national economic policies and international trade.

The privatization of incumbent operators in Chile (1988) launched the first wave of FDI in telecommunications into

developing countries, which needed not only capital but also management skills and technology transfers to accelerate the expansion and modernization of their telecommunications networks. Historically run as public monopolies, telecommunications companies were often burdened with organizational and operational inefficiencies. Heavy public debt levels and fiscal consolidation precluded injections of public funds. Domestic private investors had no experience in managing telecommunications enterprises and were not able to provide all the required investment capital by themselves (Guislain 1997).

The second wave of FDI in telecommunications occurred with the revolution in mobile telephone technology. The driving force of this revolution was the introduction of digital cellular services in the mid-1990s. The cost effectiveness of cellular networks and the generally more liberal attitude of governments toward this new technology created a boom in demand in developed and developing countries alike. The result was a renewed rush to invest, this time in an entirely new network infrastructure (UN 2004).

During both waves of FDI, strategic foreign investors were drawn into developing economies to seek new market opportunities, higher returns, and diversification of risk. Governments in countries receiving FDI saw it as an opportunity to expand existing telecommunications networks or install new telecommunications services. Through these new services, especially in mobile telephony, they extracted

immediate revenues in the form of license fees. In addition, foreign investors tended to be the only ones with the expertise and finances needed to provide telecommunications services in markets that had hitherto been served only by the incumbent monopolist. FDI brought greater commitment and longer-term engagement by foreign investors as well as new management approaches, technology, and skills transfer to the host countries.

As FDI has typically been the driver of sector growth in liberalizing economies, FDI levels are an important indicator of sector development. A country that ends its sector monopoly and has an open investment regime will see the share of public investment shrink and foreign investment rise rapidly. As the market grows, becomes more competitive, and matures, private domestic investment follows and often overtakes FDI.

This chapter illustrates FDI trends in telecommunications in developing countries from 1990 through 2003. It also analyzes the factors that lead to success in attracting and managing FDI, with a focus on regulatory issues and sector policies.

Trends in FDI Flows

Understanding the trends of FDI flows into developing countries can help policy makers interested in attracting private and foreign investment in the telecommunications sector make good, effective decisions.

Measurement

To identify FDI trends in telecommunications, investment flows must be measured and data collected. But measuring FDI flows into developing countries is difficult because the

data are usually limited and of poor quality. Annex 2A lists 10 data sources for FDI and private investment in the telecommunications infrastructure. Although each source has certain limitations, as summarized in the annex, these sources as a whole can be used to distill some generalized investment trends in the sector.

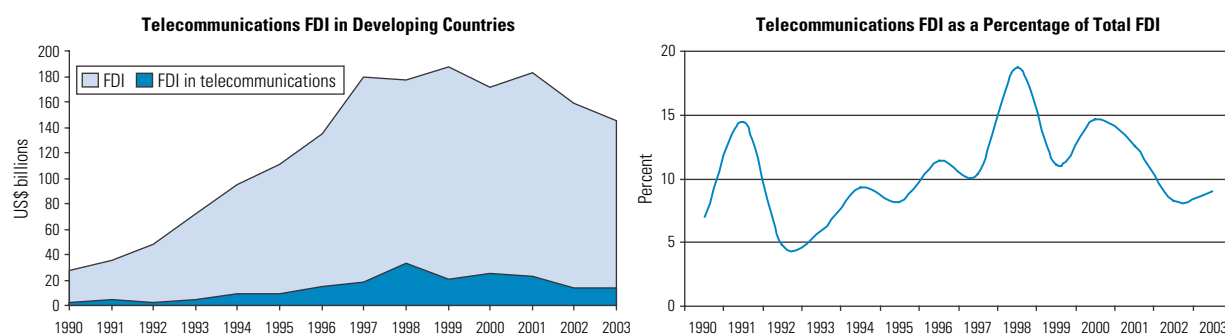
In this chapter, the World Bank Private Participation in Infrastructure (PPI) Project Database (<http://ppi.worldbank.org/>, 2004 update) is used as the main data source for analysis, primarily because it covers more developing countries than other sources reviewed. The PPI Project Database tracks information on more than 2,700 infrastructure projects with private investment participation in low- and middle-income countries, of which 25 percent are in the telecommunications sector. Box 2.1 provides key definitions and outlines some limitations of this database.

Investment Volume

Trends in the volume of FDI in telecommunications have fluctuated in line with the privatization and liberalization of the sector. FDI flows at first increased extremely rapidly, from a low base of about \$2 billion in 1990 to a peak of \$33 billion in 1998. Flows then hovered between \$20 and \$25 billion in the following three years, and dropped to about \$13 billion per year in 2002 and 2003 (figure 2.1).

Between 1990 and 2003, 122 of 154 developing countries financed telecommunications infrastructure projects with foreign investment. Investments included expanding facilities and acquiring assets, as well as license fees paid to governments. During this period, foreign investors or consortia of foreign and domestic private investors participated in more than 460 telecommunications infrastructure projects, making foreign investment commitments of about

Figure 2.1 Total and Telecommunications FDI, 1990–2003



Source: Authors' analysis based on data from the World Bank PPI Project Database (2004 update).

Box 2.1 PPI Investment Data Definitions and Limitations

The World Bank PPI Project Database has figures that include investments in both facilities and government assets. Investments in facilities are either in greenfield facilities or in expanding or modernizing existing infrastructure. Investments in government assets are resources the investor spends on acquiring publicly owned property such as state-owned enterprises (divestiture proceeds), rights to provide services in a specific area (license proceeds), or the use of a specific radio spectrum (spectrum fees).

Because the PPI Project Database is not designed to track foreign investment, only the percentage of the private participation and the origin of the investor (“sponsor”) in projects are available. We conducted further research to determine the type of investor based on the following criteria made in relation to the recipient country:

- If a project has either one sponsor that is foreign or multiple sponsors that are all foreign, then the sponsor type is taken to be purely *foreign*.
- If a project has multiple sponsors among which at least one is foreign and one is domestic, then the sponsor type is taken to be *consortium*.
- If a project does not have any foreign sponsor, then the sponsor type is taken to be *domestic*.
- *Public* refers to the public share in private consortia but does not include purely public-financed projects.

The FDI share of the project amount is calculated according to the type of sponsor and information on the composition of consortia from other sources. The analysis in this chapter is based on the 2004 update of the PPI Project Database and reflects the ownership structure and consortium arrangement as of mid-2004.

Several other data sources in annex 2A—including the ITU (International Telecommunication Union) Regulatory and Competition Database and the UNCTAD (United Nations Conference on Trade and Development) FDI Database, as well as the Business Monitor Online Database—have been reviewed to check consistency. Although major new investment projects of large operators were all included in the PPI Project Database, it did not capture some smaller projects or reinvested profits. We estimate that the data in this chapter cover approximately 75 percent of FDI projects and 85 percent of the total telecommunications FDI amount.

Source: Authors’ analysis.

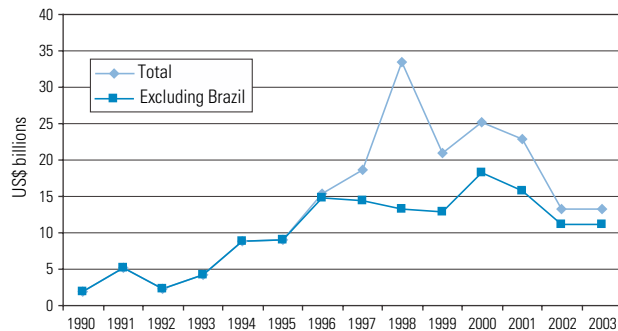
\$194 billion—an amount that is 11.5 percent of the total FDI inflows of \$1.7 trillion to developing countries, and 30 percent of the total investment of \$650 billion in the telecommunications sector in developing countries.² If one excludes China—which received about 30 percent of total FDI to developing countries but no telecommunications FDI—the share of telecommunications in total FDI was over 16 percent.

Telecommunications FDI increased sharply during the first half of the 1990s, growing on average by 40 percent annually during 1990–5, and reached an average of \$23 billion a year from 1996 to 2000 (this figure drops to

\$15 billion if one excludes the privatization of Telebras, the Brazilian incumbent, which constituted the single largest transaction during the period; see figure 2.2). After this boom, annual flows dropped. However, levels in 2001–3 (\$16.5 billion per year on average) were still much higher than those in 1990–5 (\$5.2 billion per year on average).

Purely foreign investment (without domestic partners) accounted for 42 percent of total private investment and funded 59 percent of projects. In addition, foreign investors’ participation in consortium projects allowed domestic investors to gain exposure to the sector alongside seasoned international operators and investors. As a result, an

Figure 2.2 Telecommunications FDI in Developing Countries, 1990–2003



Note: The numbers in the figure refer to the annual total telecommunications FDI.

Source: Authors' analysis based on data from the World Bank PPI Project Database (2004 update).

additional 22 percent of total capital for private telecommunications projects, or \$79.5 billion, was raised from public and domestic private investors through consortium arrangements with foreign investors.

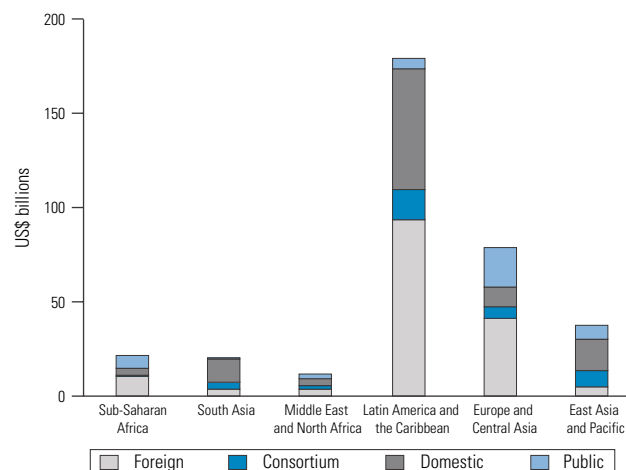
Regional and Country Breakdown

A regional breakdown of private telecommunications projects by source of funding displays notable differences (figure 2.3).³

Latin America and the Caribbean and Europe and Central Asia are the two regions with the highest percentage of countries in which *private* capital has become a significant source of funding for the telecommunications sector.⁴ Moreover, the dominant players were mainly foreign: these two regions together received about 80 percent of the overall worldwide FDI flows in telecommunications (figure 2.4).

In Latin America and the Caribbean, bidding requirements for privatization transactions, which represent the bulk of the

Figure 2.3 Private Telecommunications Projects by Source of Funding, 1990–2003

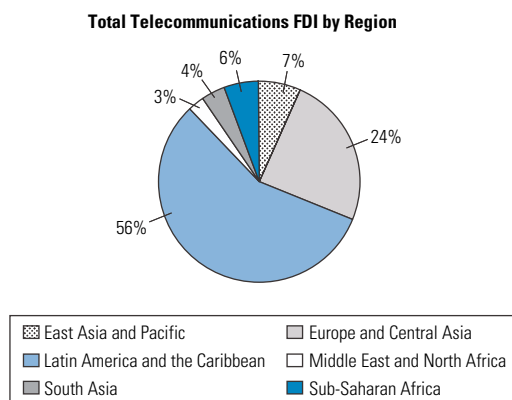


Source: Authors' analysis based on data from the World Bank PPI Project Database (2004 update).

Latin American telecommunications FDI volume, called for international operators or consortia including such operators. European and Central Asian countries were transitioning from planned economies, had little domestic private capital, and opened their doors to foreign investors. In contrast, in South Asia and in East Asia and Pacific, a substantial portion of telecommunications investments came from domestic investors, including large family groups that historically kept their investments within the region.

The large share of FDI received by Latin America and the Caribbean and by Europe and Central Asia also reflects the prominence of middle-income economies as recipients of FDI in telecommunications projects (figure 2.5). Of the \$194 billion total telecommunications FDI flows to

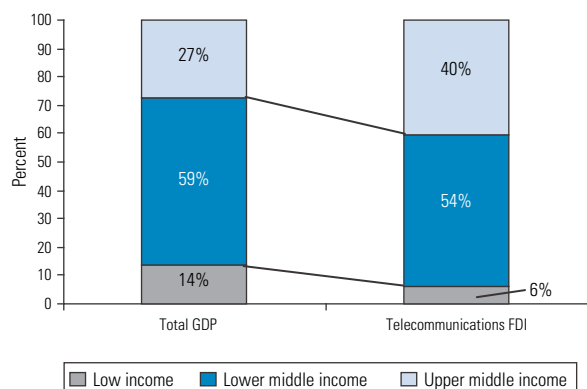
Figure 2.4 Telecommunications FDI by Region, 1990–2003



Region	Telecommunications FDI (US\$ billions)	Telecommunications as a percentage of regional GDP
East Asia and Pacific	13.6	0.07
Europe and Central Asia	47.2	0.32
Latin America and the Caribbean	109.8	0.47
Middle East and North Africa	5.5	0.07
South Asia	7.4	0.10
Sub-Saharan Africa	10.8	0.24
Total	194	0.27

Source: Authors' analysis based on data from the World Bank PPI Project Database and the WDI Database (2004 update).

Figure 2.5 Telecommunications FDI by Income, 1990–2003



Source: Authors' analysis based on data from the World Bank PPI Project Database and the WDI Database (2004 update).

developing countries during 1990–2003, 54 percent went to 48 of the 55 lower-middle-income countries.⁵ Upper-middle-income countries also had significant foreign participation, attracting 40 percent of total telecommunications FDI flows to developing countries. Only the remaining 6 percent went to low-income countries; of this, only 20 percent (\$2 billion) went to Sub-Saharan Africa. However, although volumes are admittedly low, the number of low-income countries with foreign participation in telecommunications infrastructure grew from 20 in the first half of the 1990s to 51 (out of 66) by 2003.

The top 10 recipients of FDI in telecommunications projects accounted for about 70 percent of total foreign investment in the sector in 1990–2003. Inflows to Brazil alone

amounted to \$51 billion, making it the largest single recipient (accounting for 26 percent of the total). Several other large developing economies—such as Argentina, Poland, Indonesia, and Turkey (see table 2.1)—were also in the top 10.

Although the BRIC (Brazil, Russian Federation, India, and China) economies together attracted 42 percent of the total \$1.7 trillion FDI to developing countries from 1990 through 2003, their share of telecommunications FDI was only 30 percent. Brazil, with \$51 billion, was the top single recipient of telecommunications FDI; India (at \$4.8 billion) and Russia (close to \$2 billion) ranked 11th and 17th, respectively. China, the single largest recipient of overall FDI—attracting close to 30 percent of the total FDI flows from 1990 to 2003—had no foreign direct investments in telecommunications because of the restrictions it placed on FDI in this sector.

In per capita terms, however, small economies—such as the Seychelles, Estonia, Belize, and Grenada—attracted the highest levels of FDI (table 2.2). This is not entirely surprising, as small countries are not able to take advantage of economies of scale; they thus incur higher per capita investment costs. Small countries also represent the major exceptions to the absence of FDI in telecommunications prior to the late 1980s—in particular, small island economies in the Caribbean and the Pacific where Cable and Wireless of the United Kingdom was the (foreign) incumbent monopoly operator.

Types of Investment

FDI flows can be distinguished by regions, and also by type of project and composition. The PPI Project Database

Table 2.1 Top 10 Recipient Countries by Total Telecommunications FDI, 1990–2003

Rank	Country	Number of projects	Telecommunications FDI (US\$ billions)	Percentage of global telecommunications FDI
1	Brazil	29	51.2	26
2	Argentina	7	22.8	12
3	Hungary	17	11.5	6
4	Venezuela, R.B.	6	8.9	5
5	Peru	8	8.0	4
6	Poland	10	8.0	4
7	Chile	20	6.2	3
8	Czech Republic	14	6.1	3
9	Indonesia	17	5.6	3
10	Turkey	3	5.4	3
Total		131	133.7	69

Source: Author's analysis based on data from the World Bank PPI Project Database (2004 update).

Table 2.2 Top 10 Recipient Countries by Telecommunications FDI per Capita, 1990–2003

Rank	Country	Total telecommunications FDI (US\$ millions)	Population (millions)	FDI per capita (US\$)
1	Hungary	11,506	10.2	1,131
2	Seychelles	71	0.08	884
3	Argentina	22,841	34.7	658
4	Czech Republic	6,073	10.3	590
5	Estonia	708	1.4	500
6	Belize	116	0.23	497
7	St. Kitts and Nevis	20	0.04	461
8	Chile	6,185	14.5	427
9	Grenada	41	0.1	424
10	Lithuania	1,439	3.6	405

Source: Authors' analysis based on data from the World Bank PPI Project Database (2004 update).

reports three main types of projects in telecommunications infrastructure:

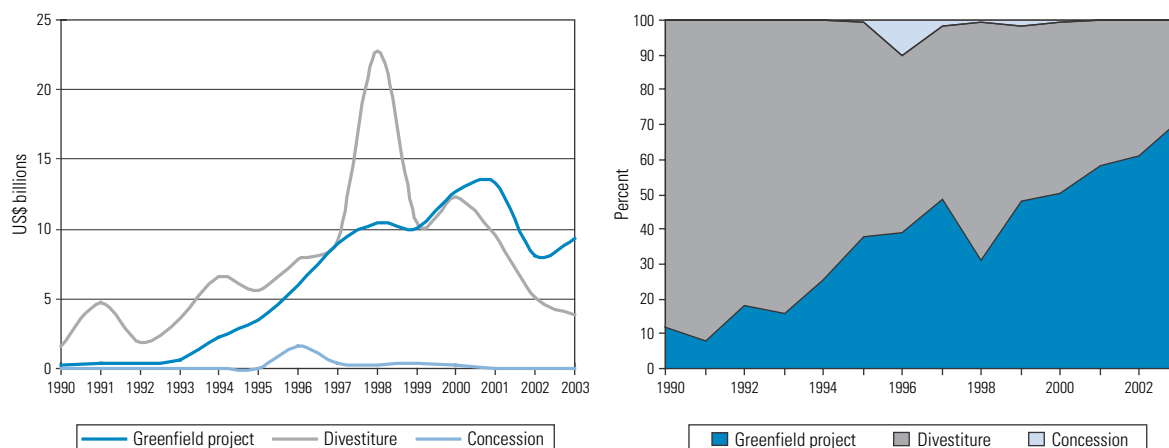
- *divestitures* (privatization of state-owned telecommunications companies and sale of private entities),
- *greenfield projects* (operations involving new licenses and investments in new companies), and
- *concessions* (fixed-term management and operation contracts with major capital expenditure).

The composition of global telecommunications FDI flows has changed over time, reflecting the evolution of the sector (figure 2.6). In the first half of the 1990s, they were dominated

by large privatizations; in the latter half of the decade, new license awards (mostly mobile telephony licenses) rose to prominence.

The First Wave: Privatization. The first wave of FDI flows to telecommunications in developing countries occurred in the early to mid-1990s and was characterized by divestitures, typically through sales of controlling stakes in the incumbent state-owned operator to foreign strategic investors. Since the first major privatization of an incumbent operator in a developing country (Chile) in 1988,⁶ more than 80 developing countries have privatized their incumbents (Qiang and Guislain 2003). Privatization proceeds

Figure 2.6 Telecommunications FDI by Type of Project, 1990–2003



Source: Authors' analysis based on data from World Bank PPI Project Database (2004 update).

paid by foreign investors to the selling governments accounted for \$57 billion; additional investments of \$137 billion were made in the privatized facilities.

Privatizations accounted for 70 percent of total investment in projects with foreign participation in Latin America and the Caribbean, 48 percent in Europe and Central Asia, and 35 percent in Sub-Saharan Africa (figure 2.7). Large privatization transactions in Latin America and the Caribbean during that period included

- Argentina (\$3.3 billion in 1990-92),
- Mexico (\$7.5 billion between 1990 and 1994),
- República Bolivariana de Venezuela (\$2.9 billion between 1991 and 1996),
- Cuba (\$1.4 billion in 1994),
- Peru (\$3.1 billion between 1994 and 1996), and
- Brazil (\$34 billion in 1998 from the privatization of the Telebras system).

In the first half of the 1990s, governments—intent as they were on maximizing privatization proceeds—often granted the privatized companies 5-to-10-year monopoly rights in basic services. These exclusivities have, however, had an adverse impact on overall sector development and are increasingly running afoul of World Trade Organization (WTO) commitments on trade in telecommunications services. As a result, more recent privatizations have featured

shorter monopoly or duopoly periods and come close to promoting full competition (Harris 2003).

East Asia and Pacific, relative to the size of the region's economy, has attracted only modest FDI in telecommunications—amounting to merely 0.07 percent of the region's GDP (only one-seventh of the percentage in Latin America and the Caribbean, as shown in figure 2.4). This can be explained by three factors: the absence of telecommunications FDI in China, the low number of East Asian and Pacific countries that privatized their incumbent operators by selling controlling stakes to strategic investors, and the region's mobilization of domestic private capital.⁷

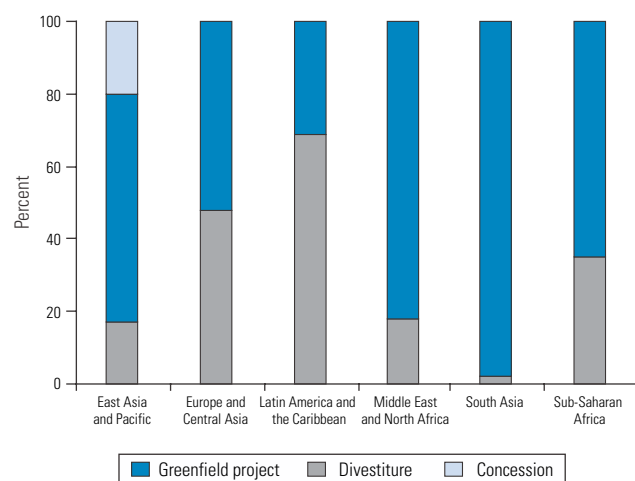
East Asia and Pacific was also the main region to use concessions.⁸ Some of the biggest FDI in East Asia and Pacific went to Indonesia in 1995–6 as “joint operations schemes” (akin to 15-year concession arrangements) with international consortia that included PT Telkom, the state-owned incumbent operator, among their shareholders.⁹ These concession schemes were, however, inherently unstable and ran into difficulties as a result of the 1997 East Asian crisis and the devaluation of major currencies in the region. PT Telkom ended up buying out its foreign partners.¹⁰

The Second Wave: Mobile Growth. The rising share of greenfield projects among FDI investments reflects the rising number of countries opening their telecommunications sector to competition and the shrinking number of assets to be privatized. But it is also a result of the impact of the revolution in mobile technology, which has led to the rapid deployment of mobile (or cellular) telecommunications networks.

Market enthusiasm for mobile communications can be seen in the increasing ratio of mobile FDI in total telecommunications FDI, which has risen from 7 percent on average in 1990–3 to 30 percent in 1994–9, and up to 51 percent in 2000–3. Over the same period, fixed-access and long-distance FDI remained at about 30 percent of total telecommunications FDI. More than half of all projects with foreign participation that were carried out between 1990 and 2003 were mobile projects (see figure 2.8); in the past two years, the share has been 95 percent.

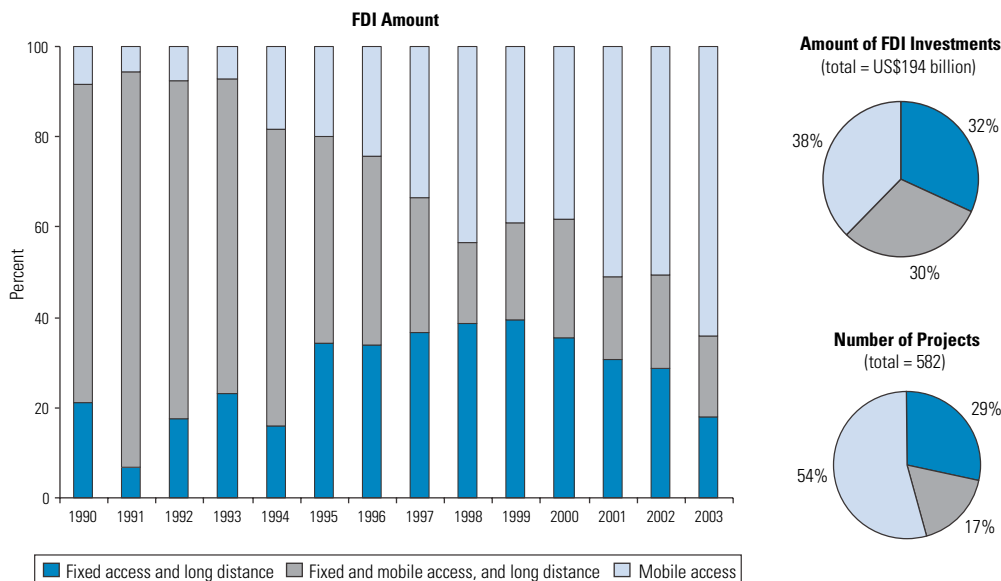
The soaring number of mobile projects confirms the obvious: that mobile telephony has become the most dynamic telecommunications segment in developing countries. The experience of Nigeria demonstrates this well (see box 2.2). By requiring lower infrastructure investments than

Figure 2.7 Telecommunications FDI in Developing Countries by Region and Type of Project, 1990–2003



Source: Authors' analysis based on data from World Bank PPI Project Database (2004 update).

Figure 2.8 Telecommunications FDI by Segment, 1990–2003



Source: Authors’ analysis based on data from World Bank PPI Project Database (2004 update).

fixed-line networks, cellular systems offer a cheap, quick way to expand coverage. They also have the potential to reach remote areas, which is a crucial feature from a development point of view. From an institutional perspective, liberalization of the mobile market was easier as this was a new service with few established vested interests. Also, the potential of mobile

telephony, both as a growth sector and a disruptive technology, was initially not widely recognized (Ure 2004).

Between 1990 and 2003, 213 foreign operators began providing mobile services—either on a stand-alone basis or along with basic fixed-line services—in more than 100 developing countries. By 2003, of the 164 countries with

Box 2.2 Mobile FDI in Nigeria

Following the adoption of the National Telecommunications Policy in 2000 and the award of three GSM (Global System for Mobile Communications) licenses to private operators in 2001, mobile investment and network rollout increased rapidly in Nigeria. The most dynamic new entrant was Mobile Telephone Networks (MTN) of South Africa, which achieved a 42 percent market share by March 2005. Globacom followed (100 percent held by local shareholders) with a 24 percent market share, V-Mobile (majority-owned by private investors, see box 2.7) with 24 percent, and then M-Tel (fully owned by state-owned incumbent NITEL) with 10 percent. New mobile subscriptions increased from about 28,250 per month during 2001 to more than 500,000 per month in 2004, raising the number of mobile subscribers from 370,000 in 2001 to about 11 million by March 2005. Mobile penetration rates rose from 0.3 percent to 8.2 percent over the same period. Industry reports estimate that foreign investment in the telecommunications sector had reached \$3.5 billion by the end of 2004, making it the second biggest recipient of private investment in the country, behind only the oil and gas sector. Mobile telephony represented more than 70 percent of this investment, at \$2.5 billion.

Source: Authors’ analysis of World Cellular Networks Datapack 2005; Middle East and Africa Wireless Analyst 2004.

available data, 130 had three or more competing digital mobile operators (Qiang and Guislain 2003).

Increased Domestic Financing and Emerging Mergers and Acquisitions. The overall financing pattern of the telecommunications sector changed after the two major waves of FDI, and sector FDI flows dropped after the 1996–2000 boom. The decline was smaller than it was in other infrastructure sectors, however, suggesting the strength and resilience of this sector despite global economic downturn and sector-specific factors—including the bursting of the telecommunications bubble and the overextension of established operators in advanced economies (Izaguirre 2005; Palmade 2004).

It is worth noting that the decline in telecommunications FDI flows did not reflect a slowdown in sector expansion. In part, this was because of the increase in domestic private financing, which took care of some of the telecommunications capital needs. And, although FDI flows for the acquisition of government assets (divestiture proceeds and license fees) dropped significantly after 2000, FDI flows for sector expansion remained at the same annual level as during the boom (figure 2.9). The high FDI flows of the mid-1990s reflected large one-off privatizations that would have been difficult to sustain even in the most favorable environment.

Over the past decade, the bulk of telecommunications FDI has thus been directed to finance infrastructure rollout, a trend that can be expected to continue in the future. A recent paper by Fay and Delgado (2003)—which considers telecommunications to be the highest-growth infrastructure sector for low- and middle-income countries—projects the

annual investment needs in developing countries from 2005 to 2010 at \$40 billion for fixed lines and \$56 billion for mobile ones.¹¹ Such needs, if met, imply an increase from the 2000 level in annual investment of 16.2 percent and 26.6 percent, respectively. Internal sources (such as retained earnings) and domestic private financing are likely to increase rapidly to finance this continued expansion, thus reducing the share of FDI in total new investment (World Bank 2005a).

This is not to say, however, that the privatization trend has died. Many developing-country governments still own the incumbent operator, or part thereof. The majority of those state-owned operators are under increasing stress, caught between growing pressure from private competition and the rigidities inherent in state ownership. The year 2005 may turn out to be another bumper year for privatization: it has witnessed major transactions in the Czech Republic (51.1 percent of Cesky was sold to Telefónica for \$3.5 billion), Pakistan (26 percent of Pakistan Telecommunication Company Ltd. [PTCL] was sold to Orascom for \$2.6 billion), and Turkey (55 percent of Turk Telecommunications was sold to a consortium led by Saudi Oger Telecommunications and Telecommunications Italia for \$6.5 billion).¹²

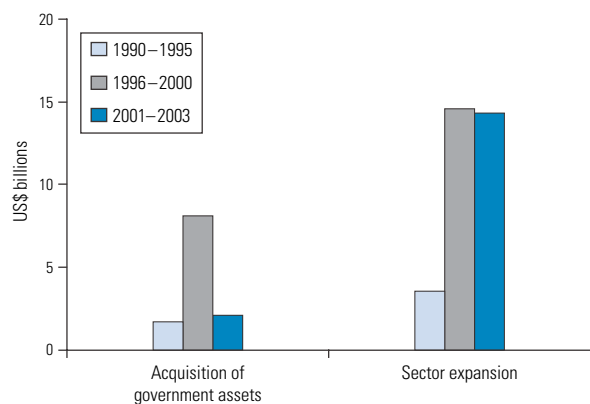
Investor Profile

The opening up of the telecommunications market, the new mobile technologies, the explosion of the Internet, and the financial crisis that hit many telecommunications investors from advanced economies in the early 2000s have all contributed to the evolution of the investor profile in the past 15 years.

Telecommunications: A Multiplayer Global Industry

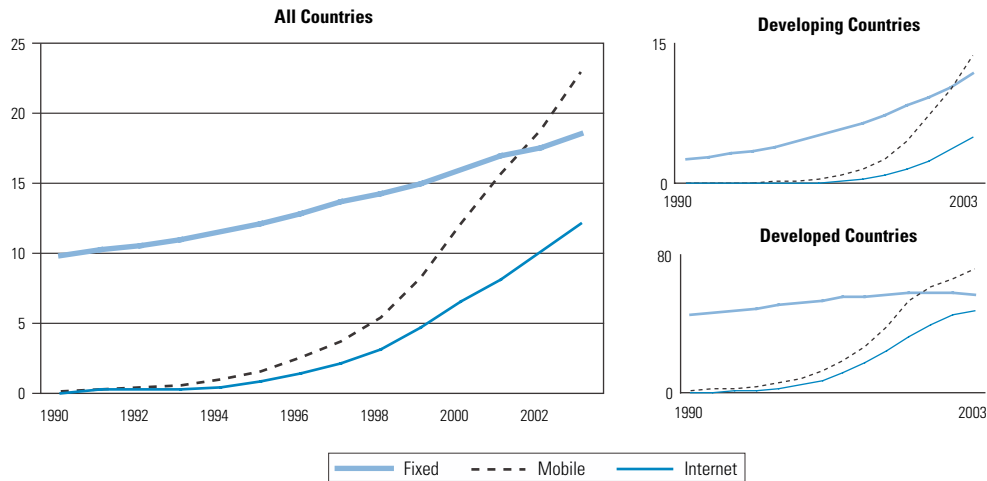
Removing restrictions to competition and FDI since the 1990s has created new opportunities for foreign investors. The development of new technologies has further facilitated liberalization by reducing entry costs, introducing new services (mobile phone, paging, Internet, voice-over IP [Internet protocol]), and undermining service segmentation. Wireless transmission improvements and higher productivity in undersea fiber-optic cable systems have lowered the cost per circuit. Digital technologies now make it possible to distribute voice, data, and video on the same

Figure 2.9 Average Annual FDI in Telecommunications, 1990–2003



Source: Authors' analysis based on data from World Bank PPI Project Database (2004 update).

Figure 2.10 Fixed, Mobile, and Internet Subscribers in All Countries, 1990–2003
(per 100 people)



Source: Authors' analysis based on data from ITU 2004.

communications channel, thus transmitting more information per cable and portion of spectrum. Such developments have enabled investors to become multifaceted information providers and to expand across national borders. Global and regional telecommunications companies, competing outside their home bases, have emerged in this new environment.

As a result of the host of new opportunities, the telecommunications sector, once composed monopolistic domestic providers, has become a multiplayer global industry. International telephone traffic and revenues grew rapidly in the early 1990s. This growth, along with the explosion of mobile and Internet usage (see figure 2.10), encouraged the large telecommunications corporations to diversify out of their highly competitive home markets, which were characterized by relatively slow growth, into emerging markets with higher growth prospects. These diversified firms dominated the substantial investment in the industry in the 1990s, and they expanded very rapidly. In 2002, there were eight telecommunications firms listed among the world's 100 largest (by presence in host countries) multinational corporations—four times the number listed in 1992 (UNCTAD 2004). On average, they were each present in 30 host countries (see table 2.3).

Market opportunities and the comparative long-run profit potential generally determine the flow and direction of their foreign investments (Palmade 2004). The potential for such profit is a function of economic and political factors that include the size of the market, income per

capita, and economic growth. Multinational corporations tend to invest in foreign markets where they have a “natural” cultural or historical affinity that arises from geographic proximity, common language, trade relationships, and political ties (for example, with former colonies). Examples are the investments by Telefónica of Spain as well as Bell-South and other U.S. operators in Latin America, Telstra (Australia) in Asia, and Deutsche Telekom in Central and Eastern Europe.

Between 1990 and 2003, the 10 largest foreign direct investors in telecommunications were all multinational corporations from Europe and the United States. They accounted for \$110 billion, or 57 percent, of the total FDI in telecommunications in developing countries (see table 2.4).

Although telecommunications FDI flows to developing countries were generally high during the mid- and late-1990s, they decreased after 2000. Several factors contributed to this reduction:

- the bursting of the telecommunications bubble in advanced economies;
- the compromised balance sheet of leading global operators, following major investments or acquisitions and high bids for 3G (third-generation mobile communication technology) licenses; and
- pessimism about emerging markets following the East Asian, Russian, and Argentine economic crises.

Table 2.3 Telecommunications Multinational Corporations Ranked by Presence in Host Countries, 2002

Rank	Corporation	Home economy	Assets (US\$ billions)		Sales (US\$ billions)		TNI (percent) ^a	Presence in number of host countries ^b
			Foreign	Total	Foreign	Total		
1	France Télécom	France	73	112	20	49	50	42
2	Telecom Italia	Italy		85	6	30	20	41
3	Deutsche Telekom	Germany	37	121	17	51	32	28
4	AT&T	United States		55	2	38	4	28
5	Cable & Wireless	United Kingdom	4	26	5	8	37	27
6	Teliasonera AB	Sweden	18	24	1	7	75	26
7	BT Group PLC	United Kingdom	2	43	2	29	8	26
8	Tele2 AB	Sweden	5	6	4	5	77	23

Note: Blank cells indicate negligible values.

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

b. Presence of multinational corporations in host countries includes subsidiary enterprises, associate enterprises, and branches.

Source: UNCTAD 2004.

Additionally, some investors grew too fast and stretched too far; disappointing returns from some projects, both in their home countries and abroad, have also affected their appetite.

Moreover, macroeconomic and regulatory risks in host countries were causing even major international companies to reassess further investments, to slow down their expansion abroad, or even to withdraw from some markets where

assets were underperforming or were considered nonstrategic. In 2001–3, France Télécom exited Argentina, El Salvador, and Indonesia and offered for sale assets in Brazil. Deutsche Telekom sold its shares in telecommunications operators in Malaysia, the Philippines, and Ukraine. Verizon left Argentina, the Czech Republic, and Mexico. Telia Sonera divested assets in Brazil, Hungary, and India (Izaguirre 2005).

Table 2.4 Top 10 Telecommunications Foreign Direct Investors, 1990–2003

Rank	Investor	Country of origin	Telecommunications FDI (US\$ billions)	Destination regions (amounts in US\$ billions)					
				East Asia and Pacific	Europe and Central Asia	Latin America and the Caribbean	Middle East and North Africa	South Asia	Sub-Saharan Africa
1	Telefonica Internacional Holdings	Spain	34.0			33.8	0.2		
2	Telecom Italia	Italy	17.3		2.0	15.3			
3	France Télécom	France	13.5	0.55	5.7	5.9	0.4		1.0
4	Deutsche Telekom	Germany	11.4	0.66	10.7			0.03	
5	Verizon	United States	9.6	0.44	0.6	8.5		0.04	
6	Portugal Telecom	Portugal	7.7			7.4	0.23		0.15
7	MCI	United States	6.3			6.3			
8	BellSouth Corporation	United States	3.9			3.9			
9	SBC Communications	United States	3.8			1.7			2.1
10	TeliaSonera	Sweden	3.4	0.24	2.5	0.6		0.07	

Note: Blank cells indicate negligible values.

Source: Authors' analysis based on data from the World Bank PPI Project Database (2004 update).

The Rise of South-South and Regional Investors

The withdrawal of some developed-country investors has given investors from developing countries the chance to acquire assets at low prices and compete for new licenses. At the same time, increasing wealth and capital account liberalization in some emerging market economies have increased the supply of capital from the South and enabled their companies to invest abroad.

This is reflected in the composition of the list of the 30 largest telecommunications multinational corporations (see annex 2B). Though still dominated by companies from Europe and the United States, by 2002 the top-30 list included four companies from developing countries: Datatec (South Africa), América Móvil (Mexico), MTN Group (South Africa), and Telekom Malaysia. These investors tend to be operators from large developing countries investing within their own regions. They also tend to be from countries that reformed early: privatization and competition forced them to become more efficient. At the same time, their exposure to competition was limited as they were generally protected from full market liberalization. This combination allowed them to generate high margins and profits at home, available for investment abroad in new companies or acquisitions.

Developing-country investors are increasing their share of total telecommunications-related FDI (see figure 2.11). From 2001 to 2003, South-South FDI accounted for over 36 percent of total inflows and close to 20 percent of the total number of telecommunications projects, compared with only 23 percent and 11 percent, respectively, in 1990–9.

The rise in South-South FDI has been stimulated by structural, cyclical, and policy factors similar to those driving North-South FDI flows. These factors include maturing

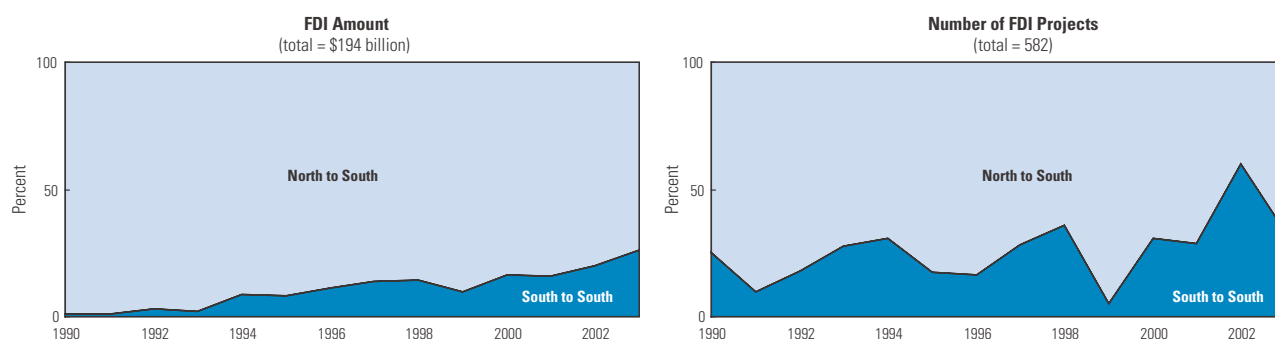
domestic markets and increased competition limiting profit opportunities (UNCTAD 2004). Specific factors—especially geographic proximity—seem to favor South-South investment. Since the cost of acquiring reliable information about foreign markets can be high for relatively small companies, they tend to invest in neighboring countries where they have gained familiarity through trade, cultural, or family links and thus comprehend the complexities of investing in these markets. They also tend to be more knowledgeable about local conditions than multinational operators and more tolerant of political risk.

In addition, when a multinational company considers a market too small or marginal to invest in directly, it may do so through a subsidiary. Investments by Vodacom of South Africa (partly owned by Vodafone of the United Kingdom) and Sonatel of Senegal (a subsidiary of France Télécom) are examples of multinational corporations investing through regional affiliates.

Over 85 percent of South-South FDI flows during 1990–2003 stayed within the same geographic region (see table 2.5). East Asia and Pacific, Europe and Central Asia, Latin America and the Caribbean, and the Middle East and North Africa received South-South FDI only from investors in their respective regions. This trend is even stronger when one considers investors from the Middle East and North Africa for whom Africa and South Asia are often perceived as part of their “natural” region. Moreover, nonregional investors are withdrawing: the largest Asian investor in Sub-Saharan Africa, Telekom Malaysia, for example, is gradually pulling out of the continent.

In Latin America and the Caribbean, early movers from the largest advanced economies—AT&T, BellSouth, France Télécom, MCI, and SBC—retreated after the burst of the

Figure 2.11 Telecommunications FDI, North-South versus South-South, 1990–2003



Source: Authors' analysis based on data from the World Bank PPI Project Database (2004 update).

Table 2.5 Intra-regional South-South Telecommunications FDI, 1990–2003
(as a percentage of total South-South FDI)

Region of investor	Destination region					
	East Asia and Pacific	Europe and Central Asia	Latin America and the Caribbean	Middle East and North Africa	South Asia	Sub-Saharan Africa
North to South	72	93	90	52	75	51
South to South	28	7	10	48	25	49
East Asia and Pacific	100				24	50
Europe and Central Asia		100				
Latin America and the Caribbean			100			
Middle East and North Africa				100	36	5
South Asia					40	
Sub-Saharan Africa						45

Note: Based on the largest 75 investors in telecommunications, accounting for 95 percent of total telecommunications-related FDI in developing countries between 1990 and 2003.

Source: Authors' analysis based on data from the World Bank PPI Project Database (2004 update).

telecommunications bubble and the decline in demand for fixed-line services in which they had invested heavily.¹³ This left as principal foreign operators Portugal Telecom and Spain's Telefónica, both counting on common cultural roots to convey strategic commercial advantages. It also created room for regional investors such as Telmex of Mexico and its

spin-off, América Móvil, which is now the largest wireless provider in Latin America (box 2.3).

Many global operators invested in the developing markets of the East Asia and Pacific region in the 1990s, but most have since withdrawn. It is the regional companies that have kept or expanded their investments in this region,

Box 2.3 Expansion of Mexican Operators in Latin America

Once a state-owned monopoly, Teléfonos de México (Telmex) was privatized in 1990. It remains the largest telecommunications operator in Mexico, where it enjoyed a 78 percent market share in international long distance and 52 percent in Internet dial-up access in December 2004.

Telmex has expanded aggressively and has become a leading regional player in Latin America. In 2004, it acquired AT&T Latin America (with operations in Argentina, Brazil, Chile, Colombia, and Peru) and paid \$113.5 million for an 80 percent stake in Tectel, Argentina's data and voice provider. In early 2005, it acquired MCI's equity stake in Brazilian long-distance operator Embratel. Today, Telmex has a direct presence in Argentina, Brazil, Chile, Colombia, Mexico, Peru, Puerto Rico, and the United States.

América Móvil was spun off from Telmex in 2000 and operates Mexico's largest mobile company, Telcel. It has expanded aggressively in Latin America in recent years, investing over \$2 billion and purchasing assets from Bell Canada International, SBC, and AT&T, as these operators pulled out of Latin America. This acquisition strategy, funded by América Móvil's profits in Mexico, has opened up new markets for the operator: it now has (mostly fully owned) subsidiaries in Argentina, Brazil, Colombia, Ecuador, El Salvador, Guatemala, Honduras, Nicaragua, Paraguay, Peru, and Uruguay as well as in the United States.

América Móvil tripled its sales during the last two years, and is now the largest wireless provider in the region. With about 66 million customers by mid-2005, it is one of the 10 largest mobile operators in the world.

Source: Business Monitor International 2004 and América Móvil Web sites (accessed on September 16, 2005).

Table 2.6 Mobile Operators in Sub-Saharan Africa, 2004

Operator	Ownership	Subscribers (millions)	Subscribers excluding South Africa (millions)	Number of countries	Population under license	Fiscal year 04 revenue (US\$ millions)
Celtel	Mobile Telecommunications Company K.S.C. (Kuwait)	6	6	13	234	614
MTN	Employees (18.7%); institutional and private investors	14.3	6.3	5	179	4,266
Vodacom	Telkom SA 50%, Vodafone 35%, VenFin Limited 15%	15.5	2.6	4	106	3,960

Note: Cable and Wireless (25%) and SBC Communications (15.5%) sold their shares in MTN in 1998. In 2002, employees acquired their shares through a management buy-out (Newshel 664).

Source: World Bank, adapted from Celtel, MTN, and Vodacom, March 2005.

including SingTel (with a presence in Bangladesh, Indonesia, the Philippines, and Thailand), Telekom Malaysia (with operations in Bangladesh, Cambodia, Indonesia, Pakistan, Sri Lanka, and Thailand), and Shinawatra from Thailand (investing in Cambodia and the Lao People's Democratic Republic) (Ure 2004).

In Sub-Saharan Africa, global operators have also gradually phased out, to be replaced by regional players. Vivendi, for example, sold its equity stake in a Kenyan mobile operator in 2004 to Celtel as part of a debt reduction effort required after its ill-fated attempt to establish a global communications and

media empire. France Télécom and its subsidiary Orange, although present in six African markets, have not shown strong strategic interest in the region in recent years. The three main mobile operators in Sub-Saharan Africa today are regional operators: South Africa's MTN and Vodacom, and Celtel, owned by the Mobile Telephone Corporation (MTC) of Kuwait (see table 2.6 and box 2.4). These operators are expanding their presence across Africa, having provided about \$5 billion in FDI in telecommunications to other countries in the region. Together they represent about 47 percent of total FDI in Sub-Saharan Africa.

Box 2.4 Celtel

Celtel International, previously known as MSI, was founded in 1998 by a group of shareholders (including its chairman, a Sudanese investor) and international investment institutions such as the International Finance Corporation.

Celtel embarked on an aggressive investment strategy in Africa. Emphasizing smaller markets, it aimed to establish a regional brand and reap economies of scale. It issued \$356 million in equity between 1998 and 2003 to finance African licenses (around \$30 million) and network deployment. Investments in Africa in 2004 were \$250 million, an increase of 140 percent over the previous year, resulting in a doubling of the number of subscribers from 2.5 million at the end of 2003 to 5.2 million a year later, and an additional 16 percent increase to 6 million subscribers by March 2005. By that time, the company had invested over \$900 million in telecommunications.

Today, Celtel has equity stakes in operators in Burkina Faso, Chad, the Democratic Republic of Congo, the Republic of Congo, Gabon, Kenya, Malawi, Niger, Sierra Leone, Sudan, Tanzania, Uganda, and Zambia. The company is the market leader in all countries where it has a presence, with the exceptions of Tanzania and Uganda. In early 2005, Celtel was acquired by MTC of Kuwait for \$3.34 billion.

Source: Authors' analysis.

As mentioned above, cross-regional South-South FDI flows have been limited. The biggest recipient has been Sub-Saharan Africa. About \$2 billion (or one-fifth) of foreign investments in telecommunications in Africa came from East Asian and Pacific sponsors during 1990–2003, most of it in the mid-1990s. However, Telekom Malaysia, the most important Asian operator in Sub-Saharan Africa, has sold its 12.6 percent stake in Telkom South Africa and announced that it intends to divest its stakes in the Ghanaian and other African operators. The company has decided to refocus its overseas investments on countries closer to Malaysia. Interestingly, Chinese companies have made some inroads in Africa in recent years, though (so far) on a relatively modest scale.¹⁴

Middle East and North African FDI to Sub-Saharan Africa has included investments from Morocco and Tunisia to Mauritania, and from the Arab Republic of Egypt (through Orascom) to 12 Sub-Saharan African countries. Orascom, which invested in the late 1990s, exited from most of these countries as well as from Jordan and the Republic of Yemen during 2002–4 in an attempt to refocus its strategy on core operations in the Middle East. The most recent Middle East and North African FDI in Sub-Saharan Africa was the acquisition by MTC (Kuwait) of Celtel in March 2005 (see box 2.4).

South Asia has also benefited from South-South cross-regional FDI. In addition to the \$455 million from within its own region, it received \$1 billion of investment from East Asian sponsors and \$2.9 billion from Middle East and North African ones—the latter inflows will almost double following the sale in March 2005 of 26 percent of PTC (Pakistan) to Orascom of Egypt for \$2.6 billion.

Most of these FDI flows are categorized as cross-regional because of the World Bank regional classifications. In fact, however, investors and recipients are often located in neighboring regions. The limited South-South FDI across continents and the recent divestment by investors to refocus on regional investments underscores the importance of geographic proximity as well as links of culture and trade.

Investors: From Strategic to Financial

Financial and equity investors—such as investment banks, private equity, and mutual funds—became more active in the telecommunications sector in developing countries in the late 1990s, bringing an alternative source of private capital.¹⁵ These investors are usually driven purely by

financial returns on their investments. Among the top 20 telecommunications investors from developing countries, Isbank (Turkey) and Banco Opportunity, Banco Safra, and Techold (all from Brazil) are financial investors.

Financial investors typically look for companies with strong cash flows and good business fundamentals. The cash flows attract bank loans, syndicated for large borrowings, which provides the leverage for which the funds are looking. Having good fundamentals implies that the company is probably already a major force in the industry, either as a dominant player or a leading innovator.

The funds' typical investments are in the range of 10 to 25 percent stakes, but on occasion they can reach to 15 to 40 percent or even outright control. Unlike strategic investors, financial and equity investors look for shorter-term investments of about 3 to 5 years, with rates of return of 25 percent or better. In some cases these funds pair up with operators in order to mitigate company, market, and managerial risk. For example, Newbridge Capital partnered with ChinaNet to purchase Asia Global Crossing in November 2002.

During 2004–5, major private equity transactions in the telecommunications sector consisted mostly of buyouts of mature firms with strong fundamentals and an industry track record.¹⁶ To take just one example, in June 2004 the private equity firm Advent International acquired a 65 percent stake in Bulgaria's fixed-line telecommunications operator, the Bulgarian Telecommunications Company (BTC), and agreed to invest \$450 million in telecommunications infrastructure. One of the last European telecommunications operators to be privatized, BTC needed major investments to significantly upgrade its network. Advent, active in Central and Eastern Europe, had previously invested in Cesky Mobil in the Czech Republic and Connex in Romania.

This trend of growth in portfolio and financial investment is typical of a maturing sector that is moving away from the old public sector monopoly paradigm toward market-based financing mechanisms.

Factors for Success: Attracting Telecommunications FDI

A range of conditions affect the FDI-friendliness of a country's telecommunications sector. The basic contributing factors mirror what applies to other sectors of the economy.

Healthy General Business Environment

A business-friendly overall environment is an important ingredient for attracting and retaining FDI in telecommunications. Factors that favor FDI for any sector are sound macroeconomic policies, low political risk, ease of market entry, the protection of property and investor rights, and—more generally—reliable contract enforcement. Good infrastructure, a skilled work force, and favorable tax policies are additional factors.

The emergence of South-South and regional FDI adds new considerations to the business environment. Most South-South investors are operators with limited global experience. Many of them have smaller market shares and less experience in distributing products and services in other countries than multinational operators have.¹⁷ They may have less bargaining power in negotiating for new contracts or resolving disputes in existing contracts. They may also have greater difficulty in meeting qualification requirements for tenders and lower creditworthiness with local banks, making it more difficult to raise financing. Unlike multinationals, they are often not well positioned to raise capital by issuing new bonds or stocks.

To maximize competition, countries wishing to attract FDI should be careful not to insist on unnecessary requirements that might exclude otherwise qualified bidders. They should focus instead on creating a level playing field that provides fair opportunities to new entrants irrespective of size or origin.

Liberalized Telecommunications Market

The first sector-specific step countries have taken to attract foreign investment has been to liberalize the telecommunications sector by opening it up to private and foreign investors and allowing competition. This is the most fundamental factor for attracting FDI because if there is no opportunity to invest in a country (other than purchasing the incumbent operator, where that option is offered), there can be no FDI. Governments have also realized that any restriction they place on investment (be it foreign or domestic) raises the cost of financing (and ultimately of services), thus making investment less likely.

The past two decades have witnessed an unparalleled opening and modernization of the telecommunications sector in all regions, although the pace and scale of reform have varied by region and country. Despite this progress, the 2005 ITU Regulatory and Competition Database suggests

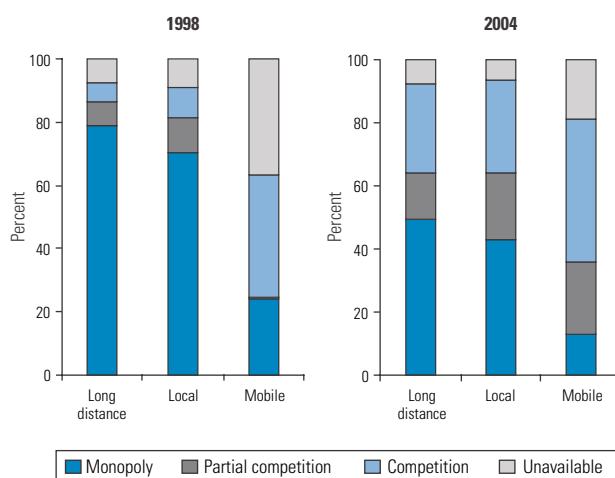
that as of 2004, 50 percent of developing countries retained monopolies on international telephony, 43 percent still had monopolies on fixed local services, and 13 percent on mobile services (see figure 2.12). A recent survey of 15 Asian economies notes that all but 1 had restrictions on telecommunications FDI, including maximum foreign share of 30 to 49 percent of total equity (Ure 2004).

A similar picture is found around the world (box 2.5), pointing to a considerable unfinished liberalization agenda and many missed opportunities for FDI. Ure reports that one foreign investor pulled out of a partnership investment in an Asian telecommunications company because “the regulations . . . made it very clear that we couldn’t be in control—capped at 49 percent. That was the main reason we left” (Ure 2004, p. 32).

In most cases, foreign ownership restrictions limit takeover risk and hence management accountability, and reduce investment incentives, thereby inhibiting effective, profit-oriented management. Furthermore, limited ownership arrangements were more attractive when the investors had the security of a monopoly situation. With the gradual opening up of telecommunications markets, there is decreasing acceptance among foreign investors of these restrictions.

Policy makers in developing countries should further reduce foreign ownership restrictions in the telecommunications sector to reap the benefits FDI brings in terms of

Figure 2.12 Telecommunications Sector
Liberalization in Developing Countries,
1998 Compared with 2004



Source: Authors’ analysis based on data from the ITU Regulatory and Competition Database 2005.

Box 2.5 Foreign Ownership Restrictions

Many countries are sensitive about foreign ownership of strategic or otherwise sensitive assets. Arguments in favor of restrictions are often linked to sovereignty or national security issues. Countries also express concern that foreign investment may crowd out local companies. Restrictions may be embodied in the country's constitution, laws, or regulations. The constitution had to be amended in Brazil and Mexico, for example, to allow the privatization and liberalization of the telecommunications sector (Guislain 1997).

In some countries, including the United States, foreign ownership rights are restricted to minority shares, typically 25–49 percent. Countries with such limits in telecommunications include Malaysia (30 percent); Kenya and the Philippines (40 percent); and India, Mexico, and Poland (49 percent, though in Poland the restriction does not apply to local services operators).

Proctor and Olivier (2002) analyzed the impact of FDI restrictions in Canada and India. They concluded that FDI restrictions led to an increase in the cost of capital in the telecommunications sector, slowing down investment and artificially prolonging the dominance of the incumbents. In India, for example, FDI is limited to 49 percent for most services, but it is allowed for up to 74 percent for Internet service with a gateway, certain infrastructure providers, and radio paging. Up to 100 percent FDI is permitted there for Internet service providers (ISPs) without gateways, and for providing e-mail and voice mail. The Indian government is now in the process of increasing the foreign investment ceiling from 49 percent to 74 percent in an effort to mobilize additional capital to fulfill its ambitious telephone penetration targets.

FDI may also be restricted to special arrangements under which foreign investors may purchase assets (typically as minority stakeholders) only in partnerships with domestic residents. In China and Vietnam, for example, until very recently, private and foreign involvement in basic telecommunications networks could occur only through special investment schemes. In these schemes, foreign companies finance capital investment and share in revenues, but they have no equity share and have only limited or no management control. In Indonesia, to take another example, the 1989 telecommunications law limited the award of basic telecommunications licenses to companies in which the incumbent public operator is a shareholder. And in yet another example, Turkish foreign investment law excluded foreign investment in concessions; it was modified in 1994 to pave the way for the privatization of Türk Telekom, which is to materialize more than 10 years later.

Source: Authors' analysis.

lower cost of capital (Proctor and Olivier 2002) and higher productivity, coverage, and quality of services (Harris 2003; Palmade and Anayiotas 2004; Qiang and Guislain 2003).

Consistent Regulatory Framework

For most telecommunications operators and potential investors, “regulatory risk” is the principal factor in their investment strategies.¹⁸ Foreign investors respond positively to a stable and predictable regulatory framework. They are willing to pay more for a telecommunications company if it operates in a well-established regulatory framework, as this stability reduces uncertainty and thereby risk (Kirkpatrick, Parker, and Zhang 2004). The

independence of regulatory bodies from political influence and from capture by incumbent operators promotes regulatory credibility. Not surprisingly, countries that established independent regulatory authorities before they privatized and liberalized their telecommunications sector have seen more outside investments than countries that did not (Wallsten 2002).

The principal requirement for a regulatory framework is consistency—not only with respect to the law, regulations, and administrative procedures, but also with respect to how those are applied in practice.¹⁹ Well-managed regulatory bodies operating under a clear legal framework lead to greater predictability in decision making; greater predictability

reduces the cost, time, and risk to which potential investors and participants are exposed. This is particularly important for foreign investors who are less familiar with the local laws, business culture, and officials.

Inconsistency, delays, uncertainty, and policy confusion increase the cost of doing business and deter investments. For example, the Thai Telecommunications Act of 2001 reduced the foreign ownership ceiling from 49 percent to 25 percent. But the government, under intense industry pressure, quickly reversed the decision. Such policy reversals send the signal that either regulations are not well thought through, which is a capacity issue, or that special interests wield significant influence, which is an independence and integrity issue (Ure 2004). Either way, the inconsistency acts as a deterrent to FDI.

Dispute Resolution Mechanisms

Some countries have a relatively short FDI track record. The reliability of these countries' regulatory institutions or the strength of their governments' commitment to adhere to key contractual provisions may not be clear. Governments may consider providing guarantees to investors during their country's transition to full competition and regulatory independence. Guarantees could be in the form of government commitments to predefined regulatory frameworks, government payment of contractually obligated subsidies, and specifically agreed dispute resolution processes. For the additional comfort of potential investors, such guarantees may be backed by international financial institutions (Gupta et al. 2002).

However, privatization agreements governing the sale of a government's stake in the incumbent operator to foreign investors often included provisions that guaranteed the buyer certain exclusive rights or an increase in tariffs over a certain period. These guarantees have often created stumbling blocks for the continued growth of the sector. Similarly, inherently unstable agreements such as build-operate-transfer (BOT) agreements, concessions, and revenue-sharing arrangements have often outlived their usefulness before the lapse of their contractual term. In these cases, the agreements may be terminated early or converted into more stable mainstream licenses.

When rights given to investors are exorbitant or when technological or market conditions make them no longer reasonable, governments and legislators often end up modifying the concerned laws, regulations, or license conditions.

In many countries, this has led to terminating the incumbent's monopoly early, to mandatory interconnection, to introducing new tariff structures, or to changing the terms and conditions of licenses. Any of these changes may alter initial contract terms significantly. Although license or concession agreements do not prevent the legislature from modifying the legal framework, they may provide redress (such as compensation rights) to aggrieved investors.²⁰ Governments need to carefully consider the tradeoff between maintaining the status quo (if that is an option at all), unilaterally modifying the initial terms of service provision, or reaching some form of agreement with the concerned service providers.

The resolution of this type of dispute is challenging for the government or regulator, caught between the rival objectives of introducing competition or other regulatory changes and of honoring contractual commitments to investors. Ending exclusivities, for instance, should normally lead to a more competitive market and greater foreign investment (see box 2.6).²¹ In some cases, the parties are able to reach an amicable agreement. For example, Is-Tim (Aria)—a Turkish mobile operator 49 percent owned by Telecom Italia Mobile (TIM's bid to obtain this license in 2001, \$2.5 billion, was the largest ever single FDI in Turkey)—claimed that the Turkish Telecommunications Authority did not enforce its roaming rights with other operators. This case was filed in Paris under International Chamber of Commerce (ICC) rules. The parties were later able to reach an amicable settlement—brokered in part by the Italian and Turkish prime ministers—which involved the merger in 2004 of Is-Tim and Aycell, the Türk Telekom mobile subsidiary.

In other instances, disputes between foreign investors and the host government have led to litigation. Most FDI contracts call for international arbitration to settle disputes because foreign investors are often not comfortable with the judicial system, practices, and traditions of the host country. Moreover, more countries have signed bilateral investment treaties giving their investors the right to go to international arbitration with respect to investments in the host country, even when their contract does not include an arbitration clause. This helps explain the large increase in FDI arbitration cases over the last decade (box 2.7).

Arbitration tends to be a last resort, however, to be used when all communication has broken down and agreement cannot be reached. It typically implies the end of the business relationship between the country and the investor.

Box 2.6 Ending the Exclusivity of Cable and Wireless in the Caribbean

Until the mid-1980s, Cable and Wireless (C&W) was one of the few foreign direct investors in telecommunications in developing countries. Its operations (typically with exclusivities) were mostly in the Commonwealth (see endnote 1). In the Caribbean, C&W was able to negotiate licenses with very long exclusivity periods, in some cases for 20 years or more. The common belief was that the island developing states that C&W operated in were too small to sustain competition. However, a growing perception that lack of competition was keeping communication costs high and hence limiting these countries' participation in the global economy led to a reevaluation of the C&W monopoly.

Five member countries of the Organization of Eastern Caribbean States (OECS)—Dominica, Grenada, St. Kitts and Nevis, St. Lucia, and St. Vincent and the Grenadines—joined together to negotiate with C&W for an early termination of its market exclusivities. In 2000 they established a regional telecommunications authority, the Eastern Caribbean Telecommunications Authority (ECTEL), to coordinate their sector policies and regulations, negotiations with C&W, and new licensing approaches.

The five countries worked with ECTEL to renegotiate existing exclusivity arrangements with the incumbent. In 2001, OECS member states reached an agreement with C&W on phasing out its exclusivity rights. New licenses were issued starting in 2002. Unlike previous termination agreements, such as those in Hong Kong (China) and Singapore, the termination agreement with C&W provided no compensation.

The end of the monopoly led to a significant increase in foreign investment in the OECS, especially in mobile telephony. Direct investment in the sector increased from \$40 million in 2001 to more than \$80 million in 2003 and over \$90 million in 2004. Thanks to intense competition from new entrants, mobile penetration increased in Dominica from 1.6 percent in 2000 to 60 percent in 2004; in Grenada it increased from 4.5 percent to 86 percent. Meanwhile retail prices fell on average by about 50 percent.

Source: World Bank 2005b; World Bank and ITU 2004.

Arbitration is not suitable for working on the many day-to-day issues that may pit a foreign investor against the government or regulator of the host country. Other forms of settlement—such as mediation and technical expert intervention—are needed to deal with such disputes as they arise.

International Agreements

FDI in telecommunications has been bolstered by the WTO General Agreement on Trade in Services (GATS) and the commitments undertaken under its auspices, especially the 1997 Basic Telecommunications Agreement. These agreements open markets to foreign suppliers of telecommunications services. As of June 2005, 104 of 148 WTO member countries had made some commitments on telecommunications in their GATS schedules, including 96 governments (whose suppliers account for over 95 percent of the world's

telecommunications revenues) that made commitments on basic telecommunications.

These commitments lay the foundation for improved market access and the liberalization of investment, both foreign and domestic. They strengthen investor confidence by demonstrating that a country intends to reform its telecommunications sector in a nonreversible way. They also provide recourse to foreign investors (through their government) to settle disputes under the WTO dispute resolution system. GATS commitments, in this way, enhance and underpin the domestic sector reform agenda of developing countries, providing investors with greater predictability.

Specific country commitments are classified along four modes. Mode 3, "commercial presence," opens the telecommunications sector to FDI. If explicit restrictions are introduced in the GATS schedule, it provides for a more limited opening. Such possible restrictions include a specific

Box 2.7 Selected FDI Disputes in Telecommunications

As of mid-2005, a number of telecommunications FDI disputes were at various stages of adjudication. The following paragraphs summarize some of the key issues raised by these cases.

Argentina: The government's decision to freeze utility tariffs following a 70 percent devaluation of the Argentine peso in 2002 has generated considerable litigation. One telecommunications dispute has been referred to the International Center for Settlement of Investment Disputes (ICSID). In July 2003, Telefónica of Spain, an investor in Telefónica de Argentina SA, claimed \$3.8 billion in damages from the Argentine government as compensation. The tribunal was constituted in April 2004, but as of September 2005, no decision had yet been issued in this dispute.

Belize: In March 2005, a U.S. district court in Miami fined the government of Belize for defying its order to return control over Belize Telecommunications to a U.S. investor. The government installed a new board in the company after the investor failed to pay an installment on the purchase price of his shares. The investor argued that the government had failed to protect him from competition as agreed in the context of the sale.

Ghana: Telekom Malaysia acquired a 30 percent stake in Ghana Telekom following a privatization tender in 1997. Telekom Malaysia lent \$50 million to the government in 2000 as advance on an additional 15 percent equity stake. Its management contract, which gave it control over the company, expired in 2002. Disagreements between shareholders ensued, and the government appointed a new board and took over control of the company. Telekom Malaysia filed an arbitration claim under United Nations Commission on International Trade Law (UNCITRAL) rules in London in 2003 pursuant to the Malaysia-Ghana bilateral investment treaty. The parties have reached an agreement for the government to reimburse the amount of the loan and buy back the shares.

Lebanon: The government decided in 2001 to terminate BOT or concession-type agreements with two mobile companies—France Télécom Mobile Liban, owned by France Télécom and local investors, and Libancell, owned by Sonera of Finland and local investors. The government alleged, among other things, that the companies offered services to more subscribers than authorized by their contract. The owners claimed expropriation and filed international arbitration proceedings in 2002. In February 2005, the arbitral tribunal ordered the government to pay France Télécom \$266 million in indemnification. Libancell owners were awarded a similar amount.

Nigeria: A dispute opposes Econet of Zimbabwe and the main shareholders of V-Mobile, a private mobile operator, over the proposed sale of 51 percent of V-Mobile's shares to Vodacom (South Africa) and Virgin Mobile (United Kingdom). Econet, which has a 5 percent shareholding, claims it has preemptive rights. It also claims that it has a contract to manage V-Mobile's network. The dispute was referred to the permanent court of arbitration in The Hague, which appointed an arbitration panel. The panel found it had no jurisdiction—the case is now (September 2005) with the Nigerian federal high court.

Source: Authors' analysis based on INVEST-SD News Bulletin 2004; World Bank and ITU 2004.

ceiling on foreign ownership in the sector or the incumbent operator, or limiting the opening to certain market segments.

More than 93 governments also committed in GATS to telecommunications regulatory principles. Along with the

overall GATS disciplines on regulation and transparency, these principles are considered to be best practices fundamental to ensuring minimum standards of good regulatory behavior, effective competition, and a stable climate for investors.

Countries wishing to accede to the WTO also have to make telecommunications commitments deemed reasonable by the major WTO member countries with whom accession is negotiated. This by and large implies more liberal commitments than those made by many of the countries that joined WTO before 1998. WTO accession is contributing to sector reform in countries such as Russia, Saudi Arabia, Ukraine, and Vietnam.

The first WTO dispute settlement case in telecommunications (and in services, more generally) was filed in 2002. The United States complained that Mexico had failed to meet several of its obligations under the GATS. The panel charged with settling this dispute concluded that the interconnection rates charged by Mexican operators to terminate international calls from the United States were not cost-oriented and that Mexico had failed to maintain appropriate measures to prevent anticompetitive practices, both required under the Reference Paper that Mexico had adopted as part of its GATS commitments. The panel also found that Mexico did not ensure access to public telecommunications networks in Mexico to U.S. telecommunications operating companies on reasonable terms, thus breaching provisions in the GATS Annex on Telecommunications. The panel, however, found that Mexico had not committed to allow international simple resale using cross-border leased circuits, as also claimed by the United States. The WTO dispute resolution body approved the panel's findings in June 2004. Mexico and the United States agreed on a timetable for Mexico to revise its international long-distance rules to allow competitive negotiation of interconnection charges and to issue regulations for companies without own facilities to provide international telecommunications services using the networks of Mexican concessionaires. These measures were satisfactorily implemented by August 2005 (Wellenius, Galarza, and Guermazi 2005).

Besides multilateral agreements, developing countries increasingly view bilateral and regional investment treaties as a way to enhance cooperation and to promote flows of FDI in the telecommunications sector. The bilateral trade agreement between the United States and Vietnam, for example, gives U.S. companies the right to invest in certain segments of the telecommunications sector even though domestic law has not yet opened these to competition and Vietnam has not yet joined the WTO. Similarly, the Central American Free Trade Agreement (CAFTA) calls for liberalizing the telecommunications sector in Central American

countries and opening it up to foreign investment. CAFTA has already provided impetus for sector reform in Costa Rica and elsewhere. The focus of trade negotiation has thus moved beyond the cross-border movement of goods and services and now embraces the movement of capital as well. This has resulted in dramatic increases in trade linkages and cross-border capital flows.

Looking Forward

This chapter summarizes trends in telecommunications FDI in developing countries over the last two decades. As governments in developing countries privatized incumbent operators, liberalized foreign investment regimes and their telecommunications sectors, and established consistent regulatory frameworks, FDI levels in telecommunications grew about 10-fold from very low levels in the early 1990s to about \$16.5 billion per year in the early years of this decade. The rapidly changing nature of the sector makes it difficult to predict what the future holds for telecommunications FDI. The following issues are likely to affect upcoming FDI trends in the sector:

- **Sustainability of the level of telecommunications FDI flows.** Will overall telecommunications FDI flows continue at their current levels? The likelihood of sustained or increased inflows may depend on many factors, including continued globalization of the economy, the recovery of capital markets and the global telecommunications industry, renewed appetite for privatization (as seen in early 2005), continued liberalization of markets, increasing demand for high-capacity broadband networks, and investor interest in providing access to rural areas. On the other hand, internal sources of financing and domestic private financing are likely to increase rapidly in many developing countries, reducing the need for FDI.
- **Profile of FDI investors.** Will the share of South-South telecommunications FDI continue to grow? Are there likely to be new Southern investors, such as those from the Gulf region who emerged in 2004–5? Will investment from China increase as its government promotes outward FDI by offering loans on preferential terms, tax rebates, and investment insurance? Will private equity investors increase their appetite for developing-country telecommunications investments? Are new technology developments likely to change investment requirements

and lead to a different investor profile and destination of FDI? The fast-rising voice-over IP technology could prove disruptive in this respect.

M&As in the telecommunications sector of developing countries are beginning to increase. Privatized fixed-line operators as well as new mobile operators are merging or being taken over by other companies, domestic or foreign. The takeover of African mobile operator Celtel by MTC of Kuwait, the sale by Orascom of many of its mobile operations in Africa and the Middle East, and the acquisition spree of Telefónica, Telmex, and América Móvil in Latin America are all cases in point. Will a group of global or regional telecommunications operators emerge and take control of much of the global industry?

- **Asian impetus.** Will the rivalry between China and India boost global FDI further? In particular, will FDI be boosted by China's WTO commitments and India's ambitious teledensity targets? What will result from India's decision to raise the FDI ceiling in that country from 49 percent to 74 percent? China's reliance on competition among public operators and domestic financing has been successful, but it is idiosyncratic. Is this approach, which is already evolving as a result of

China's recent accession to the WTO, sustainable? To what extent will China open its telecommunications sector to foreign investment?

- **WTO agenda.** Will telecommunications commitments and related sector reform by WTO accession candidates—including Algeria, Ethiopia, Iran, Russia, Saudi Arabia, and Vietnam—create new opportunities for FDI? Will the WTO Doha Development Round succeed and include a deepening of commitments in the telecommunications sector?
- **Regional integration.** Will small markets (such as those of African countries and Caribbean and Pacific islands) garner the political will to pursue economies of scale by integrating their telecommunications markets, bringing about a new wave of telecommunications FDI?

It is difficult to foresee how these issues will evolve since over the past two decades, the nature of both investors and investment has changed continuously. However, it is almost certain that, given the increasing trend toward globalization, FDI in telecommunications will continue. FDI has had a tremendous impact on building telecommunications networks in the developing world, and it will remain an essential ingredient for reducing the digital divide.

Annex 2A

Table 2A Data Sources of FDI in Telecommunications

Organization	Database	What it provides	How to access it
1. Business Monitor International	Business Monitor Online	This is a database of foreign companies and their investments in the telecommunications industry, along with detailed, periodic reports of the sector structure and performance within each country.	http://www.businessmonitor.com/ (registration required)
2. Informa Telecoms & Media	World Cellular Networks Datapack	This database provides information on cellular market share and penetration; operators, investors, and infrastructure; and technologies and licenses by country.	http://www.emc-database.com/ (registration required).
3. European Union (EU) Eurostat	EU Direct Investment	This database covers FDI data in EU member countries.	http://epp.eurostat.cec.eu.int/portal/page?_pageid=1073,1135280&_dad=portal&_schema=PORTAL&p_product_code=FDI_YBK
4. International Finance Corporation (IFC)	Investments in Telecommunications Projects	This database provides data on IFC investments in telecommunications projects worldwide.	http://ifcln001.worldbank.org/IFCExt/spiwebsite1.nsf/US\$US\$Search?openform

Table 2A *continued*

Organization	Database	What it provides	How to access it
5. International Monetary Fund (IMF)	International Financial Statistics Yearbook, or Balance of Payments Statistics Yearbook (BOPSY)	Embedded within Balance of Payment statistics, FDI statistics from IMF do not include geographic or industrial sector breakdown.	http://www.imf.org/external/pubs/cat/longres.cfm?sk=17592.0
6. International Telecommunication Union (ITU)	Regulatory and Competition Database	This database provides privatization data of telecommunications operators.	http://www.itu.int/ITU-D/treg/profiles/guide.asp?lang=en
7. International Telecommunication Union (ITU)	World Telecommunications Indicators Database	This provides data on telecommunications investments referring to the expenditure associated with acquiring the ownership of telecommunications infrastructure. These data include expenditure on initial installations and on additions to existing installations. The database does not have a breakdown of public and private investments.	http://www.itu.int/ITUD/ict/publications/world/world.html
8. Organisation for Economic Co-operation and Development (OECD)	International Direct Investment	This database provides inflow and outflow data in the telecommunications sector to and from OECD countries. It covers OECD countries only.	http://lysander.sourceoecd.org/vl=10914548/cl=73/nw=1/rpsv/statistic/s14_about.htm?jnlissn=16081080
9. World Bank	Private Participation in Infrastructure (PPI) Project Database	This database provides sector-specific data for private participation in infrastructure in developing countries. This is the main data source used in this report to approximate FDI in the telecommunications sector.	http://ppi.worldbank.org
10. United Nations Conference on Trade and Development (UNCTAD)	Foreign Direct Investment Database	Telecommunications FDI data are grouped with transport services.	http://www.unctad.org/Templates/Page.asp?intItemID=1923&lang=1

Source: Authors' compilation.

Annex 2B

Table 2B The 30 Largest Telecommunications Multinational Corporations in the World, 2002
(amounts in US\$ billions)

Rank	Corporation	Home economy	Assets		Sales		TNI (%) ^a	Host countries ^b
			Foreign	Total	Foreign	Total		
1	France Télécom	France	73	112	20	49	50	42
2	Telekom Italia	Italy	..	85	6	30	20	41
3	Deutsche Telekom	Germany	37	121	17	51	32	28
4	AT&T	United States	..	55	2	38	4	28
5	Cable & Wireless	United Kingdom	4	26	5	8	37	27
6	Teliasonera AB	Sweden	18	24	1	7	75	26
7	BT Group PLC	United Kingdom	2	43	2	29	8	26
8	Tele2 AB	Sweden	5	6	4	5	77	23

(Table continues on the following page.)

Table 2B *continued*

Rank	Corporation	Home economy	Assets		Sales		TNI (%) ^a	Host countries ^b
			Foreign	Total	Foreign	Total		
9	Telefónica SA	Spain	36	71	11	27	50	19
10	NTT	Japan	..	158		99		19
11	Vodafone Group PLC	United Kingdom	207	233	34	42	85	19
12	KDDI Corp.	Japan	..	24	..	21	..	19
13	Colt Telecom Group PLC	United Kingdom	2	4	1	2	57	13
14	SBC Communications Inc.	United States	..	95	..	43	..	12
15	Datatec Limited	South Africa		1	2	2	96	12
16	Verizon Communications Inc.	United States	14	167	3	67	7	11
17	TDC A/S	Denmark	..	13	4	7	55	10
18	BellSouth Corp.	United States	3	49	2	22	8	10
19	KPN	Netherlands	..	26	3	12	24	9
20	Level 3 Communications Inc.	United States	1	9	1	3	16	9
21	Cellstar Corp.	United States	2	2	75	9
22	Swisscom R	Switzerland	2	12	3	11	23	8
23	Iberdrola	Spain	4	24	1	10	12	6
24	Sing Tel Ltd.	Singapore	16	19	3	6	62	6
25	América Móvil	Mexico	2	11	2	6	31	6
26	MTN Group Ltd.	South Africa	1	4	1	2	36	6
27	NTL Inc.	United States	13	13	3	3	100	5
28	Telstra Corporation	Australia	3	21	1	11	12	4
29	Telekom Malaysia Berhad	Malaysia	..	9	..	3	..	4
30	BCE Inc.	Canada	1	39	1	20	3	3

Note: .. Not available.

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

b. Presence of multinational corporations in host countries includes subsidiary enterprises, associate enterprises, and branches.

Source: UNCTAD 2004.

Endnotes

1. Notable exceptions to the public ownership model in the sector were the United States and the Philippines, where the sector was always private, as well as a number of Commonwealth countries where services were provided by Cable and Wireless, a U.K. company nationalized in 1946–7 and re-privatized following a 1981 law. The monopoly model was, however, near universal by the early 1980s, even though in the late nineteenth and early twentieth century competition had prevailed in many countries (Guislain 1997).
2. The total FDI figure is based on UNCTAD 2004. The total telecommunications investment figure is based on ITU 2004.
3. The breakdown of countries among regions used in this report follows the World Bank's classification. See [http://www.](http://www.worldbank.org/data/countryclass/classgroups.htm)

[worldbank.org/data/countryclass/classgroups.htm](http://www.worldbank.org/data/countryclass/classgroups.htm) for details. Differences in absolute levels of regional FDI need to be read in light of the different size, population, and wealth of these regions.

4. According to Estache (2005), the percentage of countries with significant private financing in the telecommunications sector in 2002 by region was: Latin America and the Caribbean (67 percent of countries), Europe and Central Asia (58 percent), South Asia (50 percent), Sub-Saharan Africa (41 percent), East Asia and Pacific (38 percent), and, last, the Middle East and North Africa (23 percent).
5. The seven middle-income countries that did not receive FDI in telecommunications between 1990 and 2003 were Bosnia and

Herzegovina, Djibouti, the Federated States of Micronesia, the Marshall Islands, Suriname, Syrian Arab Republic, and Turkmenistan.

6. In 1988, Chile sold 49 percent of shares in incumbent local operator CTC to foreign investors for \$270 million, and 45 percent of ENTEL, the long-distance operator, to a combination of Telefónica de España, Chase Manhattan Bank, employees, and pension funds.
7. Divestitures in East Asia and Pacific have commonly been carried out through public offerings of minority stakes on local or regional stock exchanges, with the government keeping majority control of the companies.
8. There were seven projects run as concessions in Indonesia, Lao People's Democratic Republic, and Vietnam during 1995–6, totaling about \$2.8 billion. Thailand also used the concession model, but these transactions were not captured by the PPI Project Database.
9. These joint operations with foreign investors allowed Indonesia to almost double the number of fixed lines between 1996 and 2000.
10. Other examples of concessions in the telecommunications sector awarded to foreign investors include Turkey (later transformed into regular licenses after payment of a fee) and Lebanon. In the latter case, however, disputes between government and operators emerged, leading to the termination of the concessions and international arbitration (see box 2.7).
11. At the country level, in India, for instance, an estimated \$60 billion would be needed for investment in the telecommunications sector from 2003 to 2010 to achieve the government's goal of a teledensity of 15 phones per 100 people.
12. On the other hand, in a few countries, such as Ghana, privatized incumbent operators are being taken over by governments as a result of failed privatizations, leading at least temporarily to foreign disinvestment.
13. BellSouth sold its assets to Telefónica in 2004 in order to finance Cingular's acquisition of AT&T Wireless.
14. ZTE, a Chinese vendor, runs a joint venture mobile operation in the Republic of Congo with the local operator and bought a 51 percent stake in Niger Telecommunications when the company was privatized. Distacom of Hong Kong became the strategic investor in Telecom Malagasy (Telma) in Madagascar, paying \$12.6 million for a 68 percent stake and committing \$165 million in additional investments over five years.
15. Another fund-raising channel is the public offering, with a growing number of telecommunications companies listing on stock exchanges, domestic as well as international.
16. This trend is taking place in developed countries as well. In December 2004, Cinven, a private equity firm, bought a 50.01 percent majority stake in the cable operating subsidiaries of

France Télécom and Vivendi Universal for \$716 million (AltAssets, accessed on September 16, 2005)

17. Telecommunications investors from the South involve a diverse range of companies from big and aggressive operators, such as América Móvil, Orascom, or MTN, to smaller ones such as Econet of Zimbabwe.
18. The aforementioned survey (see Ure 2004) in Asia included 10 risk factors: rate of return, scale of investment, direct control, country risk, currency risk, regulatory risk, other insurable risks, non-insurable risks, local taxation laws, and other issues.
19. Investors tend to emphasize consistency over transparency. Local partners are often in charge of dealing with local authorities, and choosing the right local partners who are influential but also commercially sound is of paramount importance.
20. A country's national sovereignty allows it to adopt new legislation and regulations or amend to existing legal texts, subject to constitutional and other legal requirements. Such normative changes can be made even if the government entered into a contractual commitment with an investor not to modify the legal environment that applies to the investment; in such cases, the investor may be entitled to compensation, based on the terms of the contract.
21. In most instances, the profits of incumbent monopolists have increased after the introduction of competition; although this may at first appear contradictory, the benefits of competition tend to outweigh the inefficiency of monopoly, even at company level. Indeed, the incumbent is forced to improve service delivery and cut costs to withstand new entry, while benefiting from the tremendous power of incumbency. Moreover, Wallsten (2003) found that exclusivity periods granted at privatization are correlated with a significant decrease in the level of the incumbent's investments.

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