Viewpoint

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Recent Trends in Private Participation in Infrastructure

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This Note draws on the hard work of the PPI Project Database team. More sector detail is set out in their Notes: Gisele Silva, Nicola Tynan, and Yesim Yilmaz, "Private Participation in the Water and Sewerage Sector" (Viewpoint 147, August 1998), Ada Karina Izaguirre, "Private Participation in the Electricity Sector" (Viewpoint 154, September 1998) and "Private Participation in the Transmission and Distribution of Natural Gas" (Viewpoint 176, April 1999), Nicola Tynan, "Private Participation in the Rail Sector" (Viewpoint 186, June 1999), Dick Sommer, "Private Participation in Port Facilities" (Viewpoint 193, September 1999), and forthcoming Notes on telecommunications, toll roads, and airports.

The trend of liberalizing and privatizing infrastructure activities that began in a few countries in the 1970s and 1980s turned into a wave that has swept the world in the 1990s. Developing countries have been at the crest of this wave, pioneering better approaches to providing infrastructure services, reaping the benefits of increased competition and customer focus, which have led to higher efficiency and the easing of fiscal constraints. Market leaders among developing countries—such as Argentina, Chile, and Hungary—have gone further in privatizing infrastructure than all but a few industrial countries (New Zealand, the United Kingdom, and the United States).

This Note provides an overview of recent trends in private participation in infrastructure in developing countries by drawing on the World Bank's Private Participation in Infrastructure (PPI) Project Database. This database tracks about 1,700 projects, newly owned or managed by private companies, that reached financial closure in 1990–98 in water, transport, telecommunications, and energy (electricity, and gas transmission and distribution). Counting private projects and investments is a challenge for many reasons, and the general trends warrant more confidence than the numbers do (table 1; box 1).

TABLE 1 INVESTMENT IN INFRASTRUCTURE PROJECTS WITH PRIVATE PARTICIPATION IN DEVELOPING COUNTRIES BY SECTOR AND REGION, 1990–98
1998 US$ billions

	1990	1991	1992	1993	1994	1995	1996	1997	1998	Total
Sector										
Telecommunications	6.6	13.1	7.9	10.9	19.5	20.1	33.4	49.6	53.1	214.0
Energy	1.6	1.2	11.1	14.3	17.1	23.9	34.9	46.2	26.8	177.1
Transport	7.5	3.1	5.7	7.4	7.6	7.5	13.1	16.3	14.0	82.2
Water and sanitation	0.0	0.1	1.8	7.3	0.8	1.4	2.0	8.4	1.5	23.3
Region										
East Asia and the Pacific	2.3	4.0	8.7	15.9	17.3	20.4	31.5	37.6	9.5	147.2
Europe and Central Asia	0.1	0.3	0.5	1.5	3.9	8.4	10.7	15.3	11.3	52.0
Latin America and the Caribbean	12.9	12.3	17.1	18.0	18.4	19.0	27.4	45.1	66.3	236.5
Middle East and North Africa	0.0	0.0	0.0	3.3	0.3	0.1	0.3	5.2	3.6	12.8
South Asia	0.3	0.8	0.1	1.2	4.3	4.0	11.4	13.7	2.3	38.1
Sub-Saharan Africa	0.0	0.0	0.1	0.0	0.7	1.0	2.0	3.5	2.3	9.6
Total	15.6	17.4	26.6	39.9	44.9	52.9	83.3	120.4	95.3	496.2

Note: 0.0 means zero or less than half the unit shown. Data may not sum to totals because of rounding.
Source: PPI Project Database.

BOX 1 PPI PROJECT DATABASE: PROJECT CRITERIA AND DATABASE TERMINOLOGY

Database coverage

- Projects that have reached financial closure and directly or indirectly serve the public.
- Projects in water, transport, electricity, telecommunications, and natural gas, but excluding movable assets, incinerators, stand-alone solid waste projects, and small projects such as windmills.
- Low- and middle-income developing countries in 1996, as defined and classified by the World Bank.

Definition of private participation. The private company must assume operating risk during the operating period or assume development and operating risk during the contract period. A foreign state-owned company is considered a private entity.

Definition of a project unit. A corporate entity created to operate infrastructure facilities is considered a project. When two or more physical facilities are operated by the corporate entity, all are considered as one project.

Project types

- *Operations and management contract.* A private entity takes over the management of a state-owned enterprise for a given period. This category includes management contracts and leases.
- *Operations and management contract with major capital expenditure.* A private entity takes over the management of a state-owned enterprise for a given period during which it also assumes significant investment risk. This category includes concession-type contracts such as build-transfer-operate, build-lease-operate, and build-rehabilitate-operate-transfer contracts as applied to existing facilities.
- *Greenfield project.* A private entity or a public-private joint venture builds and operates a new facility. This category includes build-own-transfer and build-own-operate contracts as well as merchant power plants.
- *Divestiture.* A private consortium buys an equity stake in a state-owned enterprise. The private stake may or may not imply private management of the company.

Definition of financial closure. For greenfield projects, and for operations and management contracts with major capital expenditure, financial closure is defined as the existence of a legally binding commitment of equity holders or debt financiers to provide or mobilize funding for the project. The funding must account for a significant part of the project cost, securing the construction of the facility. For operations and management contracts, a lease agreement or a contract authorizing the commencement of management or lease service must exist. For divestitures, the equity holders must have a legally binding commitment to acquire the assets of the facility.

Recording of investments. Investments and privatization revenues generally have been recorded on a commitment basis in the year of financial closure (for which data are typically readily available). Actual disbursements have not been tracked. Where privatizations and new investments are phased and data were available at financial closure, they are recorded in phases.

Sources. World Wide Web, commercial databases, specialized publications, developers and sponsors, and regulatory agencies.

Contact. The database is maintained by the Private Participation in Infrastructure Group of the World Bank. For more information contact Shokraneh Minovi at 202 473 0012 or sminovi@worldbank.org.

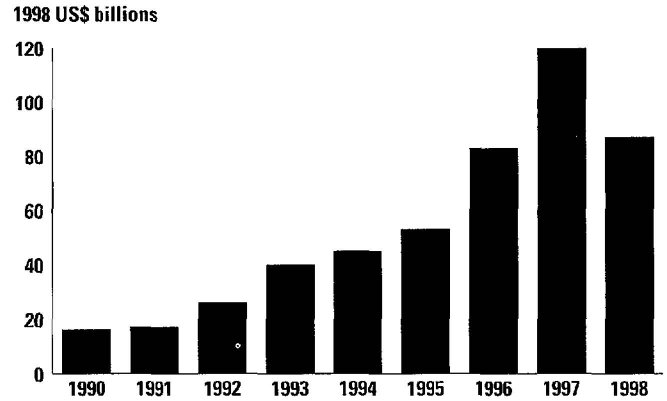
What trends have emerged in private participation in infrastructure in developing countries in the 1990s?

- Private activity has grown rapidly, but the public sector still dominates.
- Private activity declined in 1998 from a high in 1997, falling most in East Asia and in energy.
- Telecommunications and energy have been the leading sectors in private participation, and Latin America and East Asia the leading regions.
- Almost all developing countries have some private activity in infrastructure.

Rapid growth in private activity

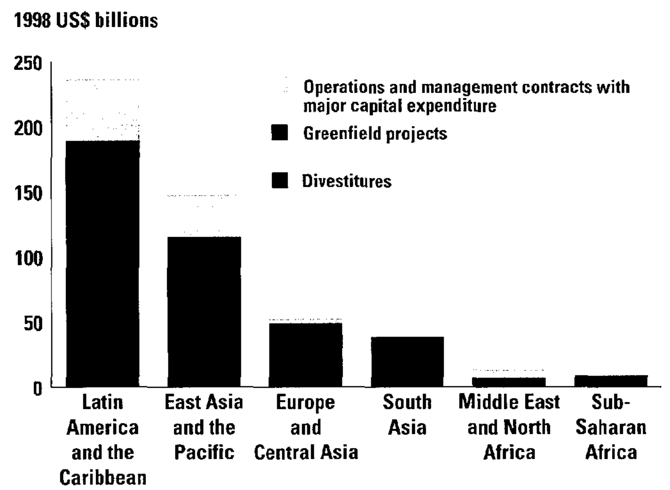
Private activity—as measured by investment flows to infrastructure projects with private participation—grew dramatically between 1990 and 1997, from about US$16 billion to US$120 billion (figure 1).[1] It then declined by about a fifth to US$95 billion in 1998, a result of the financial crisis that began in Asia in mid-1997. Private activity in 1998, sustained by a US$19 billion telecommunications privatization in Brazil, itself severely afflicted by the crisis, remained above the 1996 level.

FIGURE 1 INVESTMENT IN INFRASTRUCTURE PROJECTS WITH PRIVATE PARTICIPATION IN DEVELOPING COUNTRIES, 1990–98



Source: PPI Project Database.

FIGURE 2 CUMULATIVE INVESTMENT IN INFRASTRUCTURE PROJECTS WITH PRIVATE PARTICIPATION IN DEVELOPING COUNTRIES BY REGION AND TYPE OF ACTIVITY, 1990–98



Source: PPI Project Database.

What is the relative contribution of this investment in infrastructure projects with private participation in total infrastructure investment? Aggregate data suggest that developing countries have invested on average about 4 percent of their national incomes in infrastructure facilities, or about US$250 billion a year. So the average annual investments of about US$100 billion in infrastructure projects with private participation over the past three years accounted for about 40 percent of total infrastructure investment in developing countries. But these projects typically attract some public financing, and some public projects attract some private financing. Estimates using other data suggest a private share of infrastructure investment financing averaging about 15 to 20 percent a year.[2]

Leading sectors

Telecommunications and energy have led the growth in private activity during the 1990s. The expansion in private activity in these sectors has been spurred by technological change that has reduced sunk costs, allowed major reforms in market structure, and facilitated competition. Investments in telecommunications projects with private participation grew continuously in 1990–98, from about US$7 billion to US$53 billion. Cumulative investments in telecommunications amounted to 43 percent of flows to all infrastructure sectors in that period. Investments in energy projects with private participation, only about US$2 billion in 1990, peaked at about US$46 billion in 1997 before declining sharply to US$27 billion in 1998. Energy claimed about 36 percent of cumulative investments in 1990–98. Transport and water—where technological change has been less pronounced, political barriers to reform can be strong, and subnational governments often play a major role—lagged, together accounting for just 21 percent of cumulative investments. But these sectors, too, have seen growing private participation in the 1990s.

Leading regions

Among regions, Latin America and the Caribbean and East Asia have led the growth in private activity during the 1990s. Latin America saw steady growth in investments in infrastructure projects with private participation in 1990–98, from US$13 billion to US$66 billion, and today has the most private infrastructure activity. In 1997–98 private activity in Latin America was marked by large privatizations in energy and telecommunications, especially in Brazil. Investments in East Asian infrastructure projects with private participation grew rapidly in 1990–97, from about US$2 billion to US$38 billion, then plummeted to only US$9 billion in 1998. Investments in East Asia are now comparable to recent levels in Europe and Central Asia, the third-ranked region.

The leading regions have pursued different types of private participation (figure 2). Latin America and the Caribbean and Europe and Central Asia have relied primarily on divestiture, often accompanied by market structure and regulatory reforms. By contrast, East and South Asia have preferred greenfield investments, often focused on bulk supply facilities, such as independent power producers, delivering to unreformed state enterprises.

Country trends

In 1990–98, 154 developing countries had some private activity in one infrastructure sector, and 14 had private activity in three or four sectors. Middle-income countries have attracted most private activity; among low-income countries only China and India have attracted substantial private investment. In other regions, notably Sub-Saharan Africa, the number of countries with projects with private participation has been increasing, but private activity remains limited.

While private activity has been concentrated in relatively few countries, it is beginning to spread. In 1990 the top ten countries accounted for 97 percent of all investments in infrastructure projects with private participation in developing countries, but by 1998 they accounted for only 74 percent. The top-ten list varies from year to year, but typically includes Argentina, Brazil, China, Hungary, India, Indonesia, Malaysia, Mexico, and Thailand—which also account for most of the developing world's population and income.

Looking ahead

The financial crisis in developing countries has triggered a critical rethinking of prospects for private infrastructure. With deteriorating demand, many high-profile projects have been canceled or are in trouble. Recent growth forecasts for developing countries have been revised downward, and a return to trend growth rates (4.5 to 5 percent) is unlikely before 2001. But while the crisis was unexpectedly severe, there has also been recognition that many of the affected projects allocated risk in ways that left private sponsors and financiers—as well as governments and taxpayers—unnecessarily exposed. Singapore's prime minister observed that "we were concentrating on fast growth, quick infrastructure, but forgetting the fundamentals."[3] Getting the policy fundamentals right will require a stronger focus on competitive market structures, cost-covering tariffs, and credible governance frameworks for private investors. Policy announcements of promising reforms and competitive solutions in the much-watched power sectors of China, Indonesia, the Republic of Korea, the Philippines, and Thailand may presage a move to more sustainable private infrastructure activity. These countries are likely to shift away from the almost exclusive focus on greenfield investment toward more comprehensive sector reform, including investments in privatizing, rehabilitating, and modernizing existing assets. Indeed, this is already beginning.[4]

The slowdown in demand growth allows a move to more competitive market structures in such sectors as power, and the fiscal crisis places a premium on dealing with the poor financial performance of state enterprises. When growth resumes, there will be a need for more greenfield investment. But if governments follow the Latin American model, this investment will occur in a new environment with less public procurement and with commercial risks borne more by private players and users than by taxpayers. Getting the policy fundamentals right should see a return to rapid growth of private activity.

1 All dollar amounts are in constant 1998 U.S. dollars.
2 World Bank, Infrastructure Working Group, "Facilitating Private Involvement in Infrastructure—An Action Program" ([http://www.worldbank.org/html/fpd/infraact/infraact.html], September 1997).
3 *The Economist* (May 15–21, 1999).
4 Mary Watkins, "Crisis? What Crisis?" *Project Finance* (June 1999).

Neil Roger, Private Participation in Infrastructure Group