

private sector

Private Infrastructure

Ada Karina Izaguirre

Ada Karina Izaguirre (aizaguirre@worldbank.org) is an infrastructure specialist with the World Bank's Infrastructure Economics and Finance Department.

Drawing on the Private Participation in Infrastructure (PPI) Project Database, this Note reviews developments in 2004 and changes in private participation in infrastructure since 2001. The database is a joint product of the World Bank's Infrastructure Economics and Finance Department and the Public-Private Infrastructure Advisory Facility (PPIAF), a multidonor technical assistance fund (<http://www.ppiaf.org>). For information on the database, go to <http://ppi.worldbank.org>.



Emerging Market Sponsors Dominate Private Flows

Investment flows to infrastructure projects with private participation in developing countries grew by 12 percent to US\$64 billion in 2004. Telecommunications investments drove the growth, rising by 35 percent, while investment flows to other infrastructure sectors fell by 20 percent. Greenfield projects were the most common type of private participation, and management contracts became more frequent.

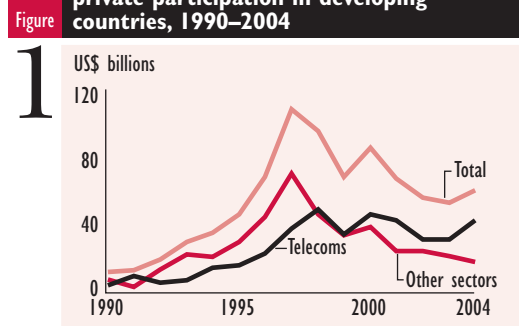
In 2004 developing countries saw investment flows to infrastructure projects with private participation grow for the first time since 2000 (figure 1).¹ But the growth was driven by just one sector: telecommunications. Investment flows to this sector grew by more than 35 percent to reach US\$45 billion,² a level just 15 percent lower than the peak in 1998, when Brazil divested the entire Telebras system.³

Investment flows to telecommunications grew in all developing regions except Sub-Saharan Africa, where they declined after peaking at US\$4.7 billion in 2003. Stand-alone mobile operators drove the growth in telecommunications, accounting for more than 50 percent of the investment flows to the sector.

In all other infrastructure sectors private activity remained subdued. In water, private activity grew by more than 30 percent but from a very low level, with investment flows amounting to US\$2 billion in 2004 (table 1). This limited activity was strongly concentrated—90 percent of investment flows went to just three

countries (Chile, China, and Mexico)—and was focused on less risky projects than those of the 1990s. Water and wastewater treatment plants claimed 50 percent of the investment flows to the sector in 2003–04—up from 14 percent in 1995–2000, when private activity in water was at its peak. Unlike water utilities, which depend on bill collection for their revenues, water and wastewater treatment plants

Investment in infrastructure projects with private participation in developing countries, 1990–2004



Source: World Bank and PPIAF, PPI Project Database.

Table Investment in infrastructure projects with private participation in developing countries, by sector or region, 1995–2004 (US\$ billions)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Sector										
Energy	21.7	30.0	46.3	29.3	21.1	27.4	15.6	19.2	17.6	12.7
Electricity	18.2	27.4	43.3	23.3	18.3	24.9	14.1	10.3	14.7	12.1
Natural gas	3.6	2.6	3.0	6.1	2.7	2.5	1.5	8.9	2.9	0.6
Telecommunications	17.2	24.6	39.9	51.8	36.1	48.9	45.2	33.0	33.2	45.0
Transport	8.2	15.7	19.4	17.5	8.2	9.1	8.1	3.6	5.0	4.5
Water and sewerage	1.5	1.7	8.4	2.2	6.5	4.8	2.4	2.0	1.4	1.9
Region										
East Asia and Pacific	18.8	28.0	34.9	9.7	13.1	14.3	11.0	9.7	13.0	8.7
Europe and Central Asia	8.1	10.5	14.2	12.1	9.4	25.0	12.3	16.8	12.2	12.5
Latin America and the Caribbean	17.1	25.8	49.3	71.2	37.3	38.7	33.7	19.6	15.8	17.4
Middle East and North Africa	0.1	0.3	5.1	3.1	3.0	4.1	4.4	1.6	6.2	10.9
South Asia	3.8	5.8	6.3	2.3	4.6	4.4	4.6	6.0	3.4	9.6
Sub-Saharan Africa	0.8	1.7	4.3	2.5	4.6	3.7	5.3	4.2	6.5	4.9
Total	48.7	72.1	114.1	100.9	72.0	90.2	71.3	57.8	57.2	64.1

Note: Data refer to projects reaching financial closure in 1990–2004.
Source: World Bank and PPIAF, PPI Project Database.

usually secure project revenues through water purchase (or payment) agreements with public utilities. Water utilities attracting private capital in 2004 were smaller than those doing so in the late 1990s. Investment commitments in water utility projects in 2004 averaged US\$60 million, less than half the US\$190 million in 1998–99.

In energy and transport, investment flows fell to levels not seen since the early 1990s. As in earlier years, the private activity in energy was directed mainly to electricity projects in a few large developing economies, such as Brazil, India, Malaysia, Mexico, and Thailand. Power plants accounted for 75 percent of investment flows to the sector, followed by stand-alone transmission facilities and distribution companies (each with 9 percent). In natural gas, private activity was limited to two countries, China and Bulgaria, which awarded build-operate-transfer (BOT) contracts for distribution networks.

In transport, private activity was also highly concentrated: three countries—Chile, China, and India—accounted for more than 50 percent of investment flows. In toll roads, the only subsector that saw some recovery, 10 projects with private participation reached financial closure in 2004, with investments of US\$2 billion. In seaports, 12 container terminal projects reached closure, with investments of US\$1.4 billion.

There were 4 airport projects: the partial divestiture of Airports of Thailand, a BOT contract for a terminal in Turkey, a lease contract in China, and a concession for a small airport in República Bolivariana de Venezuela. There were 2 railway concessions, in Chile and Mozambique.

Diverging stories

Private activity in 2004 confirmed that telecommunications is the most successful sector in attracting private investment. The sector accounted for 70 percent of annual investment flows. In striking contrast, the water sector attracted just 3 percent. This outcome is not surprising: around the world mobile phone firms outperform water utilities in financial returns, service provision, and cost-recovering tariffs.

Why such differences in performance? The reasons include differences in the technologies of the two industries as well as in consumer expectations.⁴ Mobile phone markets support competition. The fixed costs of entry and exit are relatively low. The market power of dominant providers is usually controlled through competition. Consumers have several options for provider and price and so do not resist paying prices that include a fair return on capital.

In contrast, water utilities are natural monopolies, and governments regulate water prices.

For sociopolitical reasons they usually set prices below costs, immediately ensuring poor financial health for the utility. The political sensitivity of prices for water arises from its necessity for life, its positive health externalities, and its history of being underpriced.

Income group trends

Low-income countries benefited most from the recovery in 2004.⁵ Investment flows to this group grew to a peak of US\$13 billion, driven by both telecommunications and energy (figure 2). With seven power plants and a transmission line reaching financial closure, India had the most growth in electricity. Lower-middle-income countries saw the second consecutive year of recovery thanks to growth in telecommunications, which more than compensated for a decline in the other sectors. Flows to upper-middle-income countries remained constant, at US\$26 billion, with a recovery in telecommunications and water offsetting a drop in energy and transport.

Regional trends

In Latin America private activity recovered for the first time since 2000, with investment flows growing in all sectors except energy. In the Middle East and North Africa flows peaked for the second consecutive year thanks to telecommunications. South Asia saw a peak in investment flows driven by both telecommunications and electricity. But in East Asia flows fell to their lowest level since the early 1990s, with all sectors affected. Sub-Saharan Africa also saw private activity decline, though from its highest level in 1990–2004.

Greenfield projects dominant

In the 1990s the most common type of private participation varied across sectors and regions. But in the past few years greenfield projects have become the most common type across infrastructure sectors—except in water, where concessions still dominate. They are also the most common across developing regions—except in Europe and Central Asia, where divestitures are still preferred. Greenfield projects accounted for 56 percent of total investment flows and 60 percent of projects in 2001–04.

Among the other forms of private participation, those transferring less risk to the private sector were also those less affected by the slowdown in private activity. Management contracts became more common, increasing from 2 percent of projects (35) in 1990–2000 to 7 percent (44) in 2001–04. They grew in number in all regions and sectors, but most were for water projects. The share of lease contracts remained at 2 percent of projects in both periods. Fourteen lease contracts were implemented in 2001–04, most for water projects.

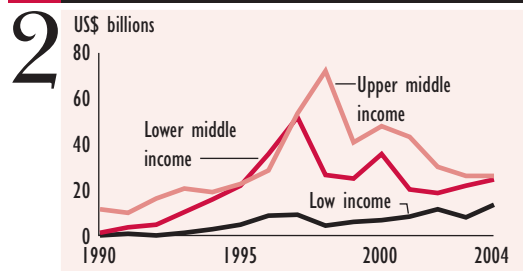
In contrast, divestitures and concessions declined as a share of both investment flows and projects. Most investment flows to divestitures in 2001–04 went to projects that had reached financial closure in the 1990s. New divestitures were limited to East Asia and Europe and Central Asia by 2003–04.

More canceled and distressed projects

In 2004, 10 projects, involving investment commitments of US\$1.3 billion, were canceled, increasing the number of projects canceled or under distress in 1990–2004 to around 160.⁶ Those projects accounted for 9 percent (US\$79 billion) of the total investment flows slated for infrastructure projects with private participation in 1990–2004.

Water and sewerage continued to be the sector most affected, with projects accounting for 37 percent of total investment flows to the sector in 1990–2004 canceled or under distress by December 2004. The high incidence of canceled and distressed water projects reflects the political difficulties of setting and maintaining tariffs at cost-recovering levels in the sector. Canceled

Figure 2 Investment in infrastructure projects with private participation in developing countries, by income group, 1990–2004



Source: World Bank and PPIAF, PPI Project Database.

and distressed projects accounted for smaller, though still substantial, shares of investment in transport (13 percent) and energy (11 percent). In all three sectors canceled or distressed projects accounted for smaller shares of the total number of projects, suggesting that larger ones had been more prone to cancellation or distress.

New investors emerging

The landscape of companies pursuing infrastructure projects is changing. In recent years, as the large early sponsors from industrial countries—such as AES, EDF, and SUEZ—reduced their investments in developing countries, other sponsors from industrial countries emerged. But the new players never matched the earlier investors' level of engagement in developing countries.

Corporations based in developing countries also emerged as important sponsors, with projects accounting for 39 percent of investment flows in 1998–2003.⁷ And half the top 10 sponsors for projects implemented in 2001–04 are from emerging markets: Emirates Telecommunications Corporation (United Arab Emirates), Reliance Industries (India), Malakoff (Malaysia), America Movil (Mexico), and Gazprom (Russian Federation).

Emerging market sponsors were most prominent in telecommunications, claiming 9 of the top 10 spots for projects implemented in 2001–04. In addition to Emirates Telecommunications Corporation, Reliance Industries, and America Movil, the list includes MTN Group (South Africa), Orascom (Arab Republic of Egypt), Telemar Participações (Brazil), Wataniya Telecom (Kuwait), Globalcom (Nigeria), and Bharti Enterprises (India).

Emerging market sponsors also became key players in energy, with 4 ranking among the top 10 for projects implemented in 2001–04: Malakoff (Malaysia), China Light and Power (Hong Kong, China), Banpu (Thailand), and Sasol (South Africa). In India local investors drove the recent revival of private activity in electricity.

In water, emerging market companies began to appear among the main sponsors in both local and foreign markets in 2001–04. Local companies with little or no sector experience, such as the Russian Interros and the Chilean

Grupo Solari and Grupo Luksic, took the lead in domestic projects. And two Malaysian water utilities, PBA Holdings and Ranhill Utilities, saw their first investments in China as the beginning of their expansion into new markets.⁸

Notes

1. The Private Participation in Infrastructure (PPI) Project Database includes only low- and middle-income countries, as classified by the World Bank. Country classifications and project information in the database are updated annually. The 2004 update includes upward revisions for 1999–2003 in energy and telecommunications.

2. All U.S. dollar amounts are in nominal terms as posted on the PPI Web site (<http://ppi.worldbank.org>). This reporting method differs from that used in earlier Notes based on the PPI Project Database, which reported investment in real U.S. dollars for the year of the update.

3. The PPI Project Database underestimates investments in telecommunications because of data gathering problems. It relies on public information, but many operators do not release data on investments.

4. For more information, see World Bank, "Infrastructure Development: The Roles of the Public and Private Sectors" (Infrastructure Economics and Finance Department, Washington, D.C., 2005, draft).

5. For the 2004 update the PPI Project Database used the World Bank's country income classification published in July 2004: low income, gross national income (GNI) per capita of US\$765 or less; lower middle income, US\$766–3,035; and upper middle income, US\$3,036–9,385.

6. Canceled projects are those in which private sponsors sell or transfer their economic interest back to the government; remove all management and personnel; or cease operation, service provision, or construction. Distressed projects are those under international arbitration or for which cancellation has been formally requested.

7. For more on the emergence of developing country sponsors, see Stephen Ettinger, Shelly Hahn, and Georgina Dellacha, "Developing Country Investors and Operators in Infrastructure, Phase 1 Report" (Public-Private Infrastructure Advisory Facility, Washington, D.C., 2005).

8. See PBA Holdings' 2004 annual report at <http://www.pba.com.my/> and Ranhill Utilities' press releases at <http://www.ranhill.com.my/>.

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Telephone:

001 202 458 7281

Fax:

001 202 522 3480

Email:

ssmith7@worldbank.org

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