

# private sector

## Private Infrastructure

Ada Karina Izaguirre

*The Private Participation in Infrastructure (PPI) Project Database tracks infrastructure projects owned or managed by private companies in energy (electricity and natural gas transmission and distribution), telecommunications, transport, and water and sewerage. For more information on the database see the Web site at <http://rru.worldbank.org/PPI>.*

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### Activity Down by 30 Percent in 2002

**Drawing on the World Bank's Private Participation in Infrastructure Project Database, this Note reviews developments in 2002. Investment in projects with private participation totaled US\$47.5 billion—falling back to 1994 levels—and 128 projects reached financial closure. Energy was the only sector in which private activity grew in 2002, driven by natural gas transport projects. Europe and Central Asia and South Asia saw private activity grow in 2002. And in low-income countries private activity rose to among the group's highest investment levels in 1990–2002.**

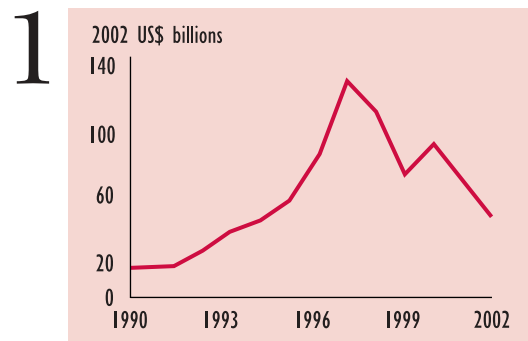
Over the past decade most developing economies have involved the private sector in providing infrastructure services. Indeed, between 1990 and 2002, 136 low- and middle-income countries introduced private participation in infrastructure sectors—65 of them in at least three sectors.<sup>1</sup> During that period the private sector took over the operating or construction risk, or both, for more than 2,600 infrastructure projects in developing countries, attracting investment commitments of more than US\$800 billion.<sup>2</sup> These projects have been implemented under schemes ranging from management contracts to concessions to divestitures to greenfield build-operate-transfer or build-operate-own projects.

#### The year in aggregate

Annual investment flows to infrastructure projects with private participation grew strongly

between 1990 and 1997, from US\$18 billion to more than US\$127 billion (figure 1). Since then investment flows have gradually declined, except for a temporary recovery in 2000. In 2002

**Figure** Investment in infrastructure projects with private participation in developing countries, 1990–2002



Source: World Bank, PPI Project Database.



they amounted to US\$47.3 billion, 30 percent less than in 2001.

Despite the big decline in recent years, private activity remains significant. In 2002 more than 125 new infrastructure projects with private participation reached financial closure, and the US\$47.3 billion committed to these projects and those reaching closure in previous years was only 24 percent less than the average for 1990–2002 and much more than commitments at the beginning of the decade.

The decline in private activity in 1998–2002 was driven mainly by a slowdown in the acquisition of government assets (state-owned enterprises, bands of radio spectrum, or rights to operate monopoly services such as airport facilities). In 2002 major transactions involving such assets were limited to the initial public offerings of a mobile operator in China and two natural gas transport companies in the Czech and Slovak Republics. After peaking in 1997–98, when Brazil privatized most of its electricity distribution and

telecommunications companies, investments to acquire government assets fell sharply. In 2002 they amounted to only 25 percent of the level in 1998. Investments in facility expansion also fell in 1998–2002, but less sharply. In 2002 they were at 40 percent of their peak in 1997 (figure 2).

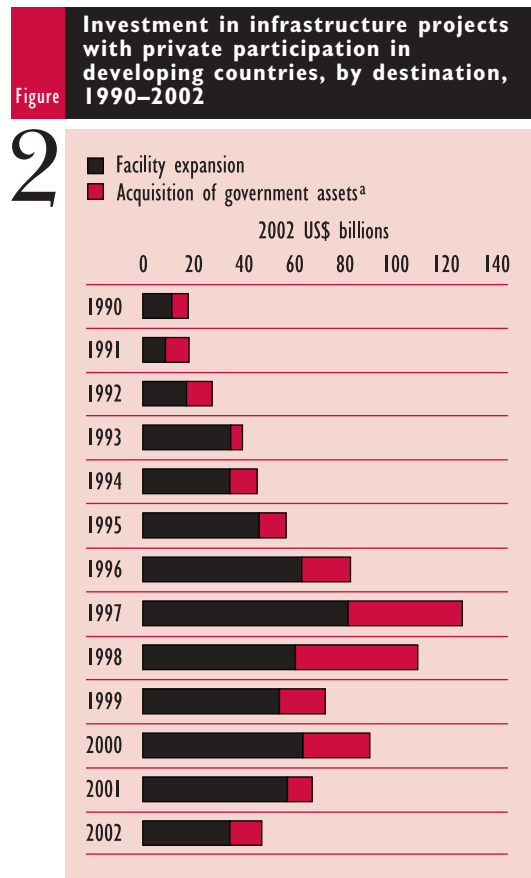
**Sector trends**

Telecommunications and transport saw the biggest declines in investment flows in 2002 (table 1). Investment flows to telecommunications fell to US\$24 billion, the lowest since 1995, declining in all regions except East and South Asia. Only 11 telecommunications projects reached closure in 2002, most of them small mobile operators. The decline was driven in part by a slowdown in investments by mobile operators after years of heavy investment in rolling out their networks. In transport investment flows dropped to US\$5 billion, the third lowest in 1990–2002. Most of this went to toll roads in Chile, Uruguay, and Jamaica and port terminals in China, Indonesia, and Oman. Toll roads accounted for US\$2.6 billion, and ports for US\$2.2 billion.

Investment commitments also fell in water and sewerage. China accounted for most of the activity in this sector in 2002, with 12 of the 21 projects and US\$1.2 billion of the US\$1.9 billion in investment commitments. The private activity in China was driven by the need to improve urban water supply.

Energy was the only sector in which private activity grew in 2002, driven by natural gas transport projects. Investment commitments for natural gas transport amounted to US\$9.7 billion, the peak for 1990–2002. Divestitures of large incumbent natural gas operators in the Czech and Slovak Republics, an export-oriented pipeline in Sub-Saharan Africa, and another pipeline in Vietnam accounted for most of that investment. The number of projects with private activity also rose, with 35 natural gas transport projects reaching financial closure in 2002. Distribution pipelines for China’s state-owned West-East transmission pipeline accounted for 29 of these projects.

In electricity investment commitments dropped to US\$7 billion, the lowest since the early 1990s. Most of this was directed to the 22 power plants reaching financial closure in 2002 and to Latin America and Eastern Europe.



Table

**Investment in infrastructure projects with private participation in developing countries, by region or sector, 1990–2002 (2002 US\$ billions)**

Region or sector	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Total
East Asia and Pacific	2.7	4.3	9.7	13.7	17.1	22.2	32.1	39.0	10.6	9.8	15.0	12.4	9.7	198.4
Europe and Central Asia	0.1	0.4	1.4	1.5	4.4	9.5	12.4	16.0	13.1	10.0	23.2	7.3	9.7	109.0
Latin America and the Caribbean	14.9	12.9	16.5	19.3	19.5	20.2	29.6	55.3	77.0	39.9	40.5	34.3	17.3	397.2
Middle East and North Africa	0.0	— <sup>a</sup>	0.0	3.6	0.4	0.1	0.4	5.7	3.4	3.2	4.1	3.9	1.6	26.4
South Asia	0.4	0.8	0.1	1.4	3.4	4.2	6.6	6.8	2.8	5.0	4.2	4.6	5.5	45.8
Sub-Saharan Africa	0.1	0.0	0.1	0.0	0.8	0.9	1.6	4.8	2.7	4.8	3.4	5.0	3.5	27.8
Energy	1.3	1.3	13.1	15.9	17.2	25.4	34.2	51.6	30.5	18.0	28.4	14.9	16.5	268.3
Telecommunications	6.3	13.7	8.0	9.9	18.8	20.2	28.5	44.3	56.3	38.7	47.3	40.2	23.7	355.8
Transport	10.5	3.4	4.7	5.8	9.0	9.7	18.1	22.1	19.3	9.0	9.9	10.0	5.2	136.6
Water and sewerage	— <sup>a</sup>	0.1	2.0	8.0	0.5	1.8	2.0	9.4	3.5	7.0	4.9	2.5	1.9	43.6
Total	18.1	18.5	27.7	39.6	45.6	57.1	82.8	127.5	109.6	72.7	90.5	67.6	47.3	804.5

a. No private participation in infrastructure occurred.  
Source: World Bank, PPI Project Database.

### Regional trends

Among regions, Latin America and East Asia experienced the biggest declines in investment flows, with both seeing the lowest levels since 1992. Investment flows to Latin America fell in all infrastructure sectors, though telecommunications accounted for most of the decline, dropping from US\$22 billion in 2001 to US\$10 billion in 2002. After years of investing massively in fixed and mobile networks, telecommunications companies slowed down, having already met most of the demand for phone lines under current market conditions. Even so, much of the investment in Latin America went to network expansion by existing operators.

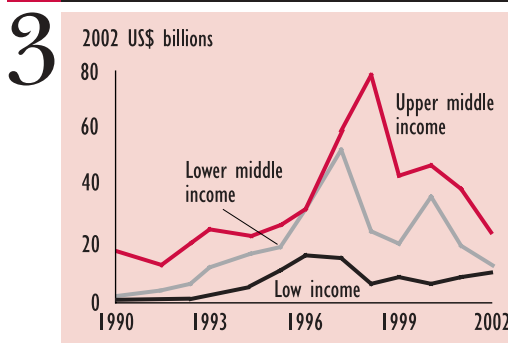
In East Asia investment flows declined in all sectors except telecommunications. The few large projects attracting investment included an initial public offering of China Telecom, a natural gas pipeline and a power plant in Vietnam, two port terminals in China and Indonesia, and water treatment plants in China.

In Sub-Saharan Africa, too, investment flows fell, but only to US\$3.5 billion, the third highest level for the region in 1990–2002. Most went to an export-oriented gas pipeline between Mozambique and South Africa and to network expansion by mobile operators. In the Middle

East and North Africa private activity also declined in 2002. Investment was directed to two water and sewerage projects, one mobile operator, and one port terminal.

By contrast, Europe and Central Asia and South Asia saw private activity grow in 2002. In Europe and Central Asia the privatization of two natural gas transport companies and electricity generation and distribution companies accounted for most of the investment flows. In South Asia investment flows went mainly to network expansion by mobile operators in India.

**Figure**  
Investment in infrastructure projects with private participation in developing countries, by income group, 1990–2002



Source: World Bank, PPI Project Database.

**Table** Top five developing countries by investment in infrastructure projects with private participation, 2002

Country	Investment <sup>a</sup> (2002 US\$ billions)
Brazil	6.8
India	5.1
Czech Republic	4.2
Mexico	3.8
China	3.7
Total	23.5

a. Includes investment in 2002 in projects reaching financial closure in 1990–2002.  
Source: World Bank, PPI Project Database.

**Table** Top five developing countries by infrastructure projects with private participation closing in 2002

Country	Projects
China	48
Brazil	6
India	6
Chile	5
Poland	5
Total	70

Source: World Bank, PPI Project Database.

### Income group trends

In low-income countries private activity rose from US\$8.9 billion in 2001 to US\$10.2 billion in 2002, among the group's highest investment levels in 1990–2002 (figure 3). Energy and transport projects drove much of the growth. Conversely, in middle-income countries private activity fell significantly. In upper-middle-income countries investment flows dropped to US\$24 billion, the lowest since 1994. Telecommunications and transport explained most of the decline. In lower-middle-income countries investment flows fell to US\$13 billion, the lowest since 1993. Investment flows declined in all sectors except water and sewerage, where they remained at US\$1.4 billion.

### Top countries

A few countries accounted for most of the private activity in 2002. Indeed, the top five attracted 50 percent of the investment (table 2). In China and the Czech Republic most of the

investment went to new projects, while in the other three countries most went to projects that had reached financial closure in 1990–2001 (such as privatized telecommunications companies). China accounted for the largest number of projects reaching closure in 2002, with activity focused primarily in natural gas distribution and water (table 3).

### Canceled projects

Private participation in infrastructure has not been free of difficulties. In 2002, 10 infrastructure projects with private participation were canceled, with the projects returning to the government. These brought the number of projects reaching financial closure in 1990–2002 and then canceled by 2002 to 57. Still, the 57 canceled projects accounted for only a small share of the private activity in infrastructure—2 percent of the projects and 3 percent of the investment in 1990–2002.

### Notes

1. The Private Participation in Infrastructure (PPI) Project Database includes only low- and middle-income countries, as classified by the World Bank. It dropped the Republic of Korea from the 2002 update because that country was reclassified from upper middle income to high income. For the country income classification used in the 2002 update, see <http://rru.worldbank.org/PPI/methodology.asp>. Project information and country classifications in the database are updated annually.

2. All dollar amounts are in 2002 U.S. dollars. Nominal figures have been deflated using the U.S. consumer price index. The PPI Project Database records total investment in infrastructure projects with private participation, not private investment alone. Investment commitments include expenditures on facility expansion, divestiture revenues, and license or canon fees.

## viewpoint

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