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# Infrastructure Projects

## A Review of Canceled Private Projects

**In recent years the renegotiation and, even more, the cancellation of private infrastructure projects in developing countries have made the headlines in the world's financial press. For a variety of reasons the renegotiation of projects is not an unusual occurrence. But as this Note explains, only 48 private infrastructure projects in developing countries were canceled in 1990–2001, a small fraction of the nearly 2,500 projects that reached financial closure over this period.**

The 1990s saw a revolution in the provision of infrastructure services as governments worldwide turned to the private sector for financing and management expertise. In developing countries in 1990–2001, nearly 2,500 infrastructure projects involved private participation, attracting investment commitments of US\$750 billion. But the investment flows to such projects have fallen fairly steadily since 1997, dropping to less than half their peak by 2001. At the same time the cancellation and renegotiation of some private projects have grabbed the headlines in the world's financial press.

Renegotiations of private infrastructure projects have occurred in many countries, and particularly in some sectors and regions. One study estimates that as many as 74 percent of transport concessions and 55 percent of water concessions in Latin America were renegotiated in the 1990s.<sup>1</sup> Some renegotiations are due to opportunistic behavior by the private investor or the

### Box A definition of cancellation

**1** For the purposes of this Note, a project is considered to be canceled if one or more of the following events occurred before the end of the project's expected life (as determined in a contract or license):

- The private company sold or transferred its economic interest in the project to the public sector.
- The private company physically abandoned the project (such as by withdrawing all staff from the project).
- The private company ceased to provide services to all customers or halted construction of the project for around 20 percent or more of the project's expected life following the revocation of a license or repudiation by the relevant contracting or licensing authorities.

government. But some long-term contracts are renegotiated in response to unforeseen or changing circumstances. Cancellation, where the private sector exits the project before the end of the contract or license term, has made



**Table 1** Canceled infrastructure projects with private participation in developing countries, 1990–2001

Project	Sector	Country	Committed investment (2001 US\$ millions) <sup>a</sup>	Year of financial closure	Year of cancellation
Electricité et Eaux des Comores	Electricity distribution	Comoros	12	1997	1998
Cesco, Orissa	Electricity distribution	India	31	1999	2001
Dabhol Power Plant I	Electricity generation	India	1,050	1996	2001
Dabhol Power Plant II	Electricity generation	India	1,988	1999	2001
Dieng Geothermal Power Plant	Electricity generation	Indonesia	508	1996	1998
Karah Bodas Power Plant	Electricity generation	Indonesia	454	1994	1998
Patuha Power Ltd.	Electricity generation	Indonesia	717	1997	1998
Almaty Power Consolidated	Electricity distribution	Kazakhstan	347	1996	2000
Kazakhstan Natural Gas Transmission System	Natural gas distribution	Kazakhstan	662	1997	2000
Senelec	Electricity distribution	Senegal	69	1999	2000
Millicom de Costa Rica S.A.	Telecommunications	Costa Rica	4	1989	1993
Evergrowth Telecom Ltd.	Telecommunications	India	201	1997	1999
Koshika Telecom Ltd.	Telecommunications	India	443	1996	1999
Telecom Services Kiribati Ltd.	Telecommunications	Kiribati	1	1990	2001
France Telecom Mobile Liban	Telecommunications	Lebanon	183	1994	2001
Liban Cell	Telecommunications	Lebanon	263	1994	2001
Mobile Telecom Services Limited (MTS)	Telecommunications	Nigeria	1	1992	1995
Utel	Telecommunications	Ukraine	285	1996	2001
Rosario Port	Ports	Argentina	185	1998	2000
Sizarail	Rail	Congo, Dem. Rep. of	0	1995	1997
Ferihegy Airport	Airports	Hungary	132	1997	2001
MI/M15 Toll Road	Toll roads	Hungary	453	1993	1999
Jakarta Outer Ring Road (E2, E3, and N sections)	Toll roads	Indonesia	260	1995	1998
Jakarta Outer Ring Road (S and E1 sections)	Toll roads	Indonesia	368	1993	1998
Mombasa Container Terminal	Ports	Kenya	0	1996	1997
Acapulco-Tierra Colorada-Cuernavaca	Toll roads	Mexico	2,612	1989	1997
Aquascalientes-León-Lagos de Moreno	Toll roads	Mexico	430	1990	1997
Cadereyta-Reinosa	Toll roads	Mexico	439	1990	1997
Campeche-Champoton	Toll roads	Mexico	117	1991	1997
Chamaca-Lechería	Toll roads	Mexico	340	1991	1997
Córdoba-Veracruz y La Tinaja-Cosoleacaque	Toll roads	Mexico	1,592	1990	1997
Culiacán-Mazatlán	Toll roads	Mexico	739	1990	1997
Guadalajara-Tepic	Toll roads	Mexico	1,398	1990	1997
Guadalajara-Zapotlanejo	Toll roads	Mexico	123	1993	1997
Lagos de Moreno-Zapotlanejo	Toll roads	Mexico	359	1990	1997
Libramiento de Tampico	Toll roads	Mexico	42	1990	1997
Maravatio-Zapotlanejo	Toll roads	Mexico	1,460	1992	1997
Monterrey-Nuevo Laredo	Toll roads	Mexico	293	1990	1997
Puente El Zacatal	Toll roads	Mexico	57	1994	1997
Saltillo-Torreón	Toll roads	Mexico	270	1993	1997

Table

**Canceled infrastructure projects with private participation in developing countries, 1990–2001 (continued)**

1

Project	Sector	Country	Committed investment (2001 US\$ millions) <sup>a</sup>	Year of financial closure	Year of cancellation
Bangkok Elevated Road and Train System	Toll roads	Thailand	857	1990	1997
Tucuman	Water and sewerage	Argentina	93	1995	1997
BA Provincial Water and Sewerage	Water and sewerage	Argentina	1,009	1999	2001
Cochabamba Water and Sewer System	Water and sewerage	Bolivia	340	1999	2000
Jiangsu Province Water Supply	Potable water	China	183	1996	1999
SOGEA	Potable water	Gambia	0	1993	1995
Indah Wastewater Urban Sewerage Rehabilitation	Sewerage	Malaysia	2,858	1993	2000
Kelantan Water Supply	Potable water	Malaysia	12	1995	1999
Total or average			24,237	1994	1998

a. Investment commitments may not be required for some management contracts (such as for Sizarail, SOGEA, and the Mombasa Container Terminal).  
Source: World Bank, PPI Project Database.

headlines, but there has been little attempt to see how common it is. Do the highly publicized cancellations seen thus far represent widespread difficulties in sustaining private infrastructure? Do they herald a return to public provision?

To assess how widespread the problem has been, a working definition of *cancellation* was developed (box 1). This definition uses the criterion of whether the private sector continued to be active in a project or not, rather than a strict legal definition of exit from a project. Thus a project abandoned by a private company but subsequently revived by another would be considered canceled. But a project in which a private company sold its interest to another without a cessation in services or abandonment of the project would not be.

The definition was applied to the projects in the World Bank's Private Participation in Infrastructure (PPI) Project Database to see how many were canceled during the period January 1990–December 2001. The database covers projects that have reached financial closure and that directly or indirectly serve the public in the transport, electricity, telecommunications, natural gas (transmission and distribution), and water and sewerage sectors in low- and middle-income countries.<sup>2</sup>

### How many private infrastructure projects have been canceled?

Based on the definition of cancellation, 48 projects were judged to have been canceled in 1990–2001. These projects represented only 1.9 percent of the nearly 2,500 infrastructure projects with private participation that reached financial closure in developing countries during that period (see table 1 for a list of the canceled projects). The canceled projects had attracted investment commitments of US\$24.2 billion, 3.2 percent of the total investment (US\$754 billion) in private infrastructure projects in developing countries in 1990–2001.<sup>3</sup> On average, projects were canceled four and a half years after financial closure, relatively early in their life.

More than a third of the canceled projects were from the Mexican toll road program. Without this program, projects canceled in 1990–2001 would represent only 1.0 percent of the projects that reached financial closure over the same period and 1.9 percent of the investment commitments for those projects. The 19 canceled toll road projects accounted for about 5.8 percent of all projects in that sector (table 2).

The water sector had the second highest rate of cancellation, with 3.5 percent of projects canceled, followed by electricity projects involving distribution and sale to final consumers. Other

Table

**Canceled infrastructure projects with private participation in developing countries, by sector, 1990–2001**

2

Sector	Projects reaching financial closure in 1990–2001		Projects canceled in 1990–2001		Canceled projects as a share of total (percent)	
	Number	Committed investment (2001 US\$ billions)	Number	Committed investment (2001 US\$ billions)	By number	By investment value
Energy <sup>a</sup>	978	247.7	10	5.8	1.0	2.4
Natural gas	146	34.5	1	0.7	0.7	1.9
Electricity generation	600	150.3	5	4.7	0.8	3.1
Electricity distribution or integrated utilities	220	63.0	4	0.5	1.8	0.7
Telecommunications	650	331.4	8	1.4	1.2	0.4
Transport	662	135.3	23	12.5	3.5	9.3
Airports	82	12.5	1	0.1	1.2	1.1
Ports	177	18.0	2	0.2	1.1	1.0
Rail	76	28.8	1	— <sup>b</sup>	1.3	0.0
Toll roads <sup>c</sup>	327	76.0	19	12.2	5.8	16.1
Water and sewerage <sup>d</sup>	202	39.7	7	4.5	3.5	11.3
Total	2,492	754.1	48	24.2	1.9	3.2

a. Including 12 electricity and water projects.

b. No investment commitments were made.

c. Including the Bangkok Elevated Road and Train System.

d. Including the SOGÉA lease, which covered electricity and water.

Source: World Bank, PPI Project Database.

sectors, including electricity generation, had lower rates of cancellation. The eight canceled projects in telecommunications represented only a very small share of projects and investment commitments in that sector.

### Why are projects canceled?

Many factors that led to the cancellation of a project were specific to the investors, governments, and regulators involved in that project. But in each sector some factors appeared in many of the cancellations.

In *transport* most of the canceled toll road projects saw the exit of the private sector because the roads could not attract enough users to meet the optimistic traffic forecasts. Consumers were often less willing than had been expected to pay for the right to use the toll roads, sometimes because the effect of alternative toll-free routes had been underestimated. For example, more than half the Mexican toll roads reached less than 50 percent of the forecasted volumes, and the M1/M15 toll road in Hungary achieved less

than 60 percent of projected traffic flows in its initial years of operation.

In some cases a government's willingness to assume traffic risks may have led to less investor scrutiny of demand forecasts and so perhaps increased the probability that the project would fall short of projections. The Mexican government offered indirect guarantees to the investors and lenders funding the private toll road program, which may have led private operators and banks to undertake some projects that they might otherwise have turned down.

Most *water and sewerage* projects that were canceled confronted controversies over price increases and difficulties in collecting from consumers. Public water utilities had generally kept prices below costs and had low collection rates. Attempts to raise prices or increase collections with the shift to private participation led to opposition from some consumers and politicians.

Sometimes project design worsened the situation by magnifying the adjustments required.

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In the Cochabamba water concession in Bolivia, for example, the local government opted for a high-cost bulk water source that exacerbated the need to raise previously subsidized tariffs. When tariffs were increased by about 35 percent almost immediately after privatization, the project ran into widespread opposition. Moreover, all this took place against the backdrop of broader political opposition to irrigation reforms and the government's coca eradication policy, both of which contributed to the civil disturbances that preceded the cancellation of the project.

Projects canceled in the *electricity* sector, like those in the water sector, had difficulties in enforcing and maintaining cost recovering pricing policies and problems in collecting payments owed by consumers or government off-takers. These problems afflicted both distribution and generation projects.

In some cases, such as with independent power producers in Indonesia, macroeconomic shocks may have increased the difficulty of implementing reforms and accelerated the failure of projects. These shocks led to a contraction in real incomes, reducing demand for infrastructure services. And because most projects were funded by foreign currency loans, the shocks led to higher debt service costs in local currency terms.

In contrast, the projects canceled in *telecommunications* saw relatively few disputes over pricing or collection. Instead, most of the projects, involving cellular services in markets with alternative suppliers, were canceled because they failed to attract sufficient customers or because the government decided to change the market structure.

Some infrastructure projects had major problems in the bidding phase. At least four projects were won through high bids for concession or license fees—but once in operation failed to provide revenues sufficient to both pay canon fees and meet investment obligations. Where projects were not competitively tendered, the case for more than half the 48 canceled projects, political and social opposition seems to have focused on the lack of transparency in the award, with frequent allegations of corruption and impropriety.

### **Implications for private provision of infrastructure**

We should expect to see some cancellations of private infrastructure projects. Much of the rationale for moving away from public provision was based on the assessment that public enterprises did not face real commercial disciplines. The “freedom to fail” provides incentives for the private sector to be efficient.

The projects canceled thus far represent only a small share of the projects that have encountered problems. Most problems are solved by adjusting key terms, by renegotiating contracts, or through other means short of cancellation. Even where substantial macroeconomic shocks occurred, most private infrastructure projects successfully withstood the impacts.

The small number of cancellations reflects the incentives for both the government and the private sector to remain in projects rather than walk away. The private sector may have invested in sunk assets and thus may be willing to accept some changes in contractual terms. Governments may want to avoid cancellation because of the substantial payments often required in compensation for breach of contract (including cancellation) and because of concerns about service continuity following the exit of the private sector.

The small number of canceled projects, the attempts by governments to reprivatize some of them, and new private projects in countries that have seen cancellations all suggest that many governments still view the public sector as less effective than the private sector in providing infrastructure services. But we may see more canceled projects in the near future. Many of the most active infrastructure operators in developing countries face financial pressures, calling into question their ability to continue to support temporarily unprofitable ventures. And the macroeconomic crisis in Argentina, a pioneer in private participation in infrastructure, has put many of the private infrastructure arrangements in that country under great stress.

The factors that lead to disputes over projects, and in some cases to cancellation, illustrate the complexities and challenges of placing infrastructure provision on a commercial footing. The politics of this reform have proved difficult in many countries, leading to some of the

reversals that we have seen. Ensuring transparency in the award and regulation of projects and building a consensus for reform will help reduce opposition to private provision of services. But difficult adjustments may be unavoidable in some sectors. In the energy and water sectors consumers have historically paid much less for services than it costs to provide them. One way or another someone—whether consumers or taxpayers—has to pay for these services. Governments that do not have strong fiscal positions will be unable to subsidize these services for most consumers, although they might be able to do so for particular groups, such as the poor. But several steps can be taken to avoid tariff shocks—phasing in price increases, making judicious use of transitional subsidies, and ensuring that investment obligations that must be financed by user fees require only realistic increases in prices.

## Notes

1. Luis J. Guasch, Jean Jacques Laffont, and Stephane Straub, “Renegotiation of Concession Contracts in Latin America” (World Bank, Washington, D.C., 2002).

2. For more information on the database, see [http://www.worldbank.org/privatesector/ppi/ppi\\_database.htm](http://www.worldbank.org/privatesector/ppi/ppi_database.htm).

3. Investment data are from the World Bank’s PPI Project Database. The database records total investment (privatization revenues and license or canon fees), not private investment alone, on a commitment basis in the year of a project’s financial closure. Actual disbursements are not tracked. All investment figures cited here are in 2001 U.S. dollars.

## viewpoint

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