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Transaction Costs in Private Infrastructure Projects—Are They Too High?

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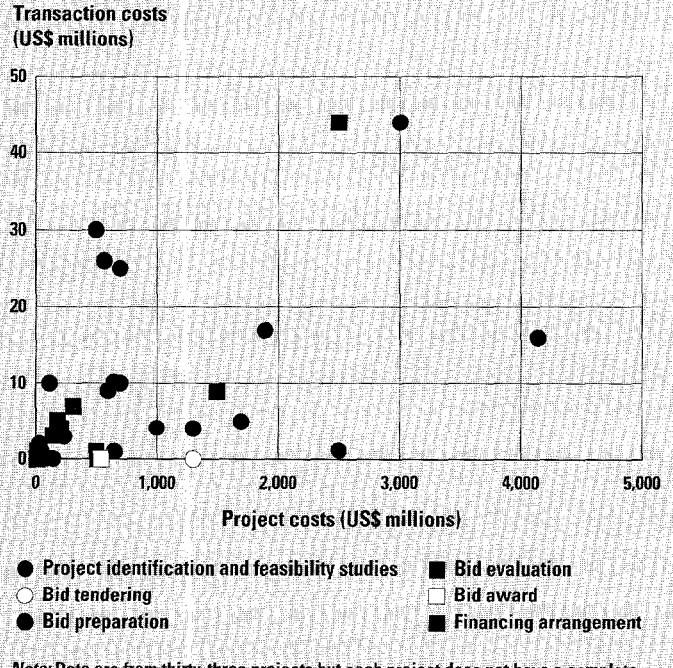
Although the number of private infrastructure projects continues to grow, tales of endless delays and exorbitant development costs still scare both developers and governments. These costs probably amount on average to some 5 to 10 percent of total project cost—or some US$2 billion to US$3 billion a year, assuming that investments worldwide exceed US$35 billion a year. Most of these costs ultimately will be borne by consumers and taxpayers, although investors may have to swallow the consequences of serious miscalculations. The question is whether the cost of developing private infrastructure projects undermines their very rationale—the cost-effective provision of service. To answer this question, this Note assesses the broad magnitude of the costs and the factors driving them.

FIGURE 1 TRANSACTION COSTS NOT RELATED TO PROJECT SIZE



Note: Data are from thirty-three projects but each project does not have a complete set of observations.
Source: Data compiled from various sources (see text).

The magnitude of transaction costs

Developing a private infrastructure project is a complex task requiring firms and governments to prepare proposals, market them, conduct bidding or negotiate deals, and arrange funding. (Box 1 sets out the steps in such transactions.) The costs incurred in these processes —*transaction costs*—include staff costs, financing costs such as placement fees, and advisory fees for investment bankers, lawyers, and consultants. Consistent and comparable data on the size of these costs are rare. Prominent developers are unable or unwilling to produce accounts showing detailed transaction costs by project. Nonetheless, it has been possible to piece together a broad picture of these costs by interviewing government officials, financiers, and developers and using data published in the media.

The first impression is one of great variation in costs across countries, sectors, and time. Developers' transaction costs range from a relatively small 1 to 2 percent of project costs to well over 10 percent. These estimates exclude the cost of officials' time. A few large projects have piled up development costs far exceeding US$100 million. Some large projects that never made it to closure left developers

BOX 1 TRANSACTION PROCESS FOR DEVELOPING A PRIVATE INFRASTRUCTURE PROJECT

Framework	Feasibility studies	Bidding	Contract formulation	Financing arrangement	Project implementation
GOVERNMENT • Establish privatization agency • Pass enabling legislation • Establish regulatory agency • Mobilize public support • Select and identify project • Restructure state-owned enterprise	GOVERNMENT • Market opportunity • Select advisers • Conduct economic studies • Conduct engineering studies	GOVERNMENT • Prequalify bidders • Evaluate bids • Award bids	GOVERNMENT • Financial negotiations • Engineering negotiations • Legal negotiations	GOVERNMENT • Consistent involvement and commitment • Consistent involvement throughout financial engineering process - Due diligence - Road shows	GOVERNMENT • Manage and adjust regulatory structure to create stable market conditions
DEVELOPER • Assess the market • For unsolicited bids: - Carry out preliminary feasibility studies and project identification - Identify primary decisionmakers in the government - Shepherd project through the government - Project public relations	DEVELOPER • Conduct economic studies • Conduct engineering studies • Legal consultation	DEVELOPER • Assemble consortium • Prepare bid • Prepare engineering proposal • Prepare financial proposal • Intraconsortium negotiations • Perform environmental assessment • Work out bid award disputes	DEVELOPER • Financial negotiations • Engineering negotiations • Legal negotiations • Intraconsortium negotiations • Develop financing plan	DEVELOPER • Financial engineering • Registration • GAAP compliance • Auditing • Underwriting • Road shows • Negotiate with institutional investors • Issue shares	DEVELOPER • Operation of business • Ensure compliance with contractual obligations • Ensure compliance with any legal or regulatory changes

stranded with tens of millions of dollars in expenses. Interestingly, the scatter of observations of selected costs from 33 projects in figure 1 shows little relationship between project size and transaction costs, indicating that the technical characteristics of projects are not the main driver of transaction costs. Industry experts suggest that transaction costs vary mainly with familiarity with and the stability of the policy environment. Costs are usually about 3 to 5 percent in well-developed policy environments, while they may be 10 to 12 percent in pioneering projects.

Factors driving transaction costs

Transaction costs are dominated by staff and travel costs, primarily reflecting the legal and financial complexity of reaching contractual agreements between numerous parties in essentially new and unique environments. The cost of technical studies appears less important than expenses incurred in dealing with governments. Project development time usually is counted in years. Initial optimism about the speed of progress has often been unfounded, and many firms have seen development times

double. For most projects, development time falls in the range of two to eight years.

Why is the development process so protracted and costly? Throughout the process, uncertainty is typically high. Developers and advisers may be "on hold" for long periods, for example, while the government prepares tender documents. When the tender is finally issued, they may have to go on all-night overdrive to complete bids, which suddenly must be submitted within a matter of weeks. A lack of definition and transparency and a cloak of secrecy over government process can greatly compound uncertainty and with it transaction costs.

These are the symptoms of a simple underlying fact: private infrastructure is a new way of doing business for most governments. Although many private firms are learning as well, government is the ultimate decisionmaker in most private infrastructure projects, given that these projects constitute a form of contracting out complex services. Governments must adjust a myriad of responsibilities and processes—sometimes drastically, sometimes just a little. As government officials confront the new ways of doing business, some feel threatened by the possible loss of their function and job, some are reluctant to admit ignorance, and others simply do not see the issues. (For a stylized account of typical problems based on an actual case, see box 2.) Lack of clarity leaves scope for abuse by parties of ill repute, inside and outside government. Allegations of misdeeds become rife, often generating a vicious cycle of uncertainty and reluctance to assume responsibility.

Skeptics of private infrastructure point to this kind of disarray and the consequent costs of moving to private provision and financing. But there are transaction costs in traditional public sector projects too. Private projects simply bring more of the previously hidden costs out into the open. Nobody knows exactly how the transaction costs of public and private projects compare. While public projects, like private, require intensive and long-drawn-out preparation, private projects tend to involve more scrutiny and negotiation of the

BOX 2 A FAMILIAR STORY

"Ciudad Progressiva," a municipality in northern Mexico, urgently needs to upgrade its water supply by building a pipeline to a distant river, but is short of money. The mayor knows of private financing possibilities: French and British water companies have made numerous tempting presentations. Unwilling to antagonize the municipality's water company, the mayor decides not to privatize the entire water system but only to contract for the new pipeline with a private investor under a build-operate-transfer concession.

The mayor soon learns that the path to private water is an obstacle course. The municipality's water company, feeling threatened, is slow in providing adequate technical information. Drawing up contracts between the municipality and the private company turns out to be complicated, and local procurement practices make it difficult to hire expensive outside counsel. But the mayor somehow manages to hire a competent lawyer, who helps find ways around obstacles arising from current regulations and procurement procedures. After several iterations and almost two years, contracts satisfactory to all parties have been drawn up. The private sponsor, dependent on public monopolies for water supply and sales, has insisted on minimum revenue guarantees.

Discussions with potential lenders, meanwhile, have revealed that credit will not be made available unless the municipality obtains a guarantee that it and its water company will have money to meet the payments when they are due. After a trip to the capital and having obtained the governor's approval, the mayor gains assurances that Banco Nacional de Obras y Servicios Públicos (BANOBRAS) will issue a payment guarantee based on its recourse to future federal tax revenues due to the municipality under the revenue sharing system. Lenders now quote their terms. The best offers are seven- to eight-year loans carrying interest rates 10 percentage points above the federal government's domestic borrowing rate.

The Ministry of Finance then points out that all the guarantees taken together amount more or less to a sovereign guarantee. In effect, future sovereign revenues are being pledged and a call on them would increase the public borrowing requirement by an equivalent amount—everything else being equal. And still the banks want a spread of 10 percentage points. "No way," is the ministry's response. "So borrow directly on sovereign guarantee," retort the banks. "But we want it off balance sheet," replies the ministry. "Then pay an extra 10 percent." As the discussion drags on inconclusively for several months, with the ministry trying to squeeze out a lower spread, the mayor's three-year term ends, and the discussion starts over again from scratch.

details up front and may require more expensive advisers. To some extent, this greater attention to project parameters reflects the shifting of risks to private investors, while in public projects many risks are silently assumed by consumers and taxpayers. But a tentative comparison of public sector projects funded by the World Bank with projects funded by its private sector arm, the International Finance Corporation, suggests that private projects are more likely to be executed on time and within budget. The "average" public sector project suffered time overruns of 50 to 70 percent and cost overruns of 10 to 20 percent in dollar terms. Better monitoring in private projects may imply higher transaction costs but it also means lower all-in costs.

The way forward

Some of the higher costs in private projects are the costs of the transition to a new way of doing business. These costs will fall as governments and developers become familiar with new processes. But decisive government action on two fronts will reduce costs:

- Clarifying the new responsibilities and rules of the game in the government.
- Disseminating lessons of experience broadly within the government.

Some governments have already clarified responsibilities and rules for government officials through concession laws (Chile, Hungary, and the Philippines) or in general government guidelines (the United Kingdom and the State of Victoria in Australia). Just as important are building the necessary institutional capacity for handling these projects and improving learning from experience. As many governments have come to see, hiring experienced advisers is crucial. No less crucial is building a competent cadre of officials who understand the intricacies of private projects and project finance. Because these skills tend to be scarce and sought after, governments may need to adopt unbureaucratic solutions and salary mechanisms to attract and retain competent staff. The cost of greater remuneration should be offset by the savings from the declining need for outside advisers.

Equally unbureaucratic solutions are needed to allow lessons to flow from one project and sector to others. All too often staff in one agency or level of government fail to tap the knowledge of staff in other agencies and unnecessarily start from scratch. One way to improve the dissemination of lessons is to establish a single private finance entity reporting to the minister of finance.

Conclusion

Introducing private participation in infrastructure seems to increase the transaction costs in developing projects, although this cost difference may be more apparent than real. Private participation may simply bring otherwise hidden public costs into the full light of day. Transaction costs seem to have more to do with the characteristics of the policy environment than with the characteristics of the project. Thus, they will naturally fall over time, and decline more where governments adopt better policy and enforce proper conduct. And the available evidence suggests that, even with higher transaction costs, private participation means overall gains because of the improved incentives for efficiency and cost-consciousness.

Taking all the actions necessary to reduce costs is tough, though, and many governments will continue learning the hard way. But for those able to undertake thorough reform and to learn fast, the rewards are large—worldwide, they amount to several billion dollars. The Bank's experience with private power in Pakistan is indicative of these rewards. The pioneering Hub River Power Project took some seven years to reach financial closure. After the policy framework was clarified in 1994, the second deal, for the Uch Power Project, took two to three years to reach financial closure. The next generation of projects is expected to take only one and a half to two years to reach closure.

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