THE ECONOMICS OF PUBLIC-PRIVATE PARTNERSHIPS

In the past 25 years, many developing and advanced economies have introduced public-private partnerships (PPPs), which bundle finance, construction, and operation into a long-term contract with a private firm. In this book, the authors provide a summary of what, they believe, are the main lessons learned from the interplay of experience and the academic literature on PPPs, addressing such key issues as when governments should choose a PPP instead of a conventional provision, how PPPs should be implemented, and the appropriate governance structures for PPPs. The authors argue that the fiscal impact of PPPs is similar to that of conventional provisions and that they do not liberate public funds. The case for PPPs rests on efficiency gains and service improvements, which often prove elusive. Indeed, pervasive renegotiations, faulty fiscal accounting, and poor governance threaten the PPP model.

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The Economics of Public-Private Partnerships

A Basic Guide

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Preface

An important organizational form for providing infrastructure services has emerged in recent decades. Known as public-private partnerships or PPPs, this approach is often described as lying somewhere between public provision and privatization. In this book we provide a summary of what, we believe, are the main lessons arising from the interplay between experience and the academic literature on PPPs. What do we know that we did not know 10 or 20 years ago? What are the answers that experience combined with economic analysis provide to the question of choosing between PPPs and public provision? What is the best approach to design a PPP contract?

Until recently, infrastructure facilities such as highways, bridges, airports, schools, and jails were considered public goods. As such, they were built by governments, financed with taxes, and managed by public agencies. In the late 1980s, several countries began using PPPs. A PPP bundles finance, construction, and operation into a single long-term contract between the procurement authority and a private firm. During the life of the contract, the firm receives a stream of revenues as compensation for the initial investment, the operational costs, and the maintenance expenses. Depending on the contract, the stream of revenues may consist of user fees, payments from the procuring authority, or a combination of both. At the end of the contract, the assets revert to the government.

The importance of PPPs will likely continue to grow, albeit sometimes for the wrong reasons. Governments view PPPs as a costless means of releasing resources from infrastructure investment, which can then be redeployed to other programs. The deficiencies of fiscal accounting provide additional incentives to choose PPPs because they typically neither affect the budget deficit nor count as public debt. In addition, public provision of infrastructure is often deficient in quality and expensive, so PPPs promise the efficiency of private firms. The flaws of public provision – white elephants,

pork-barrel projects, lack of transparency in public work contracts, and substandard maintenance and service quality – also give governments more reason to hope that PPPs will provide better performance and service quality.

A notorious aspect of the experience with PPP contracts is that they are routinely renegotiated. Some renegotiations are to be expected because these are long-term contracts and circumstances change over the life of a concession. However, there is extensive evidence showing that renegotiations often take place shortly after the awarding of the contract, under terms that favor the concessionaire. Renegotiations cast doubt on the alleged benefits of PPPs. They lead to adverse selection problems because they attract firms with a comparative advantage in lobbying but relatively less skill in building and operating facilities. Furthermore, they weaken the incentives for governments to design and select projects with care and reduce firms' incentives to contain costs, the moral hazard problem. Finally, they provide political incumbents with yet another means of anticipating spending.

In this book we show that it is possible to be more precise about the extent to which PPPs are akin to public provision or to privatization of infrastructure facilities. The fact that some PPPs are paid for by user fees leads us to the belief that PPPs are costless for government and should not be included in the fiscal balance sheet. However, when we consider their intertemporal effect on the budget, we are led to the conclusion that PPPs should be included in the fiscal balance sheet, so that their impact is the same as if they were part of the public sector. It follows that from a public finance perspective, PPPs are close to public provision. Without endemic contract renegotiation, however, the PPP mechanism provides incentives to be efficient and to reduce costs in the provision of infrastructure services. In this, a PPP resembles privatization in the incentives that are provided. However, in a fundamental sense, PPPs differ from privatization: contract length can be used to create risk-sharing arrangements that are not possible under privatization. In particular, it is possible to design flexible-term contracts, which can lead to large welfare gains.

Given the erroneous beliefs surrounding PPPs, what are their real benefits? First, the incentive to reduce life cycle costs fosters continuous maintenance, which is much cheaper than intermittent maintenance. This is especially valuable when quality of service is contractible, such as in highways. There are other reasons to expect better maintenance under PPPs. A PPP contract can specify that the infrastructure must be handed back in good condition at the end of the contract. This creates incentives for maintenance that are unavailable under public provision of an equivalent project.

Second, we believe that in a PPP project that collects user fees, users feel empowered to demand good service, and this requires continuous maintenance. When user fees are collected on a public infrastructure project, the perception is that funds will flow into the general budget or, at best, into a general infrastructure fund, so users feel less empowered.

Another potential advantage of PPPs is that when projects are fully funded by user fees and there is no space for opportunistic renegotiations, private firms will evaluate projects and discard those that are white elephants. In addition, the PPP will face fewer pressures to lower user fees than in the case of a publicly provided project, and this can lead to large increases in potential revenues from infrastructure projects. Finally, because revenue from user fees is received directly by the PPP, there is no distortion induced by general revenue taxes or by costs associated with the operation of the government bureaucracy required to disburse these funds to the private firm.

There are counterarguments in favor of public provision, not all of them convincing. Observed financing costs seem lower for the government than for private firms, but this is because governments can borrow to burn resources and the rate on government debt would not increase significantly – lenders look only at global indebtedness and do not evaluate individual public projects. Thus, the higher borrowing costs PPPs face are partly due to better project evaluation by lenders, and this is valuable. Furthermore, we argue that the higher borrowing costs of PPPs may be due to incorrect contract design, to the risk of regulatory takings and expropriations. Additionally, higher borrowing costs under PPPs include the costs associated with the transfer of endogenous risks to prevent moral hazard and to strengthen incentives to cut costs, the provision of adequate service quality, and the monitoring of management. A more compelling argument in favor of publicly funded projects is that they appear in the public balance sheet, so they cannot be used to anticipate public spending away from the purview of Congress. Finally, although there is scope for opportunistic renegotiations during the construction phase of a public project, there is no possibility of opportunistic renegotiation afterward, one of the most important problems associated with PPPs.

The previous argument suggests that public provision should be preferred over PPPs in most less-developed countries. Institutional development plays a more substantial role under PPPs than under public provision because governments must refrain from regulatory takings or from expropriating the project once investments are sunk. Under a PPP the continuing relationship provides more scope for opportunism. This book therefore

concentrates on middle-income and developed countries where the institutional setup is sufficiently developed.

Regarding PPPs and types of infrastructure, we argue that there is scope for potentially large welfare gains under PPPs in the case of highways, tunnels, and bridges, where quality can be contracted and verified. Moreover, contracts can be designed so as to adapt to changing conditions without much scope for opportunism by either party. Even though the case is less clear cut, we also conclude that PPPs are likely to be better than public provision for other types of transport infrastructure, such as airports. By contrast, most of the advantages of PPPs are either absent or more difficult to establish in the case of complex infrastructure projects, such as hospitals and schools.

We began working on PPPs almost 20 years ago, writing academic papers and advising governments and multilateral organizations. Two years ago we decided to write a book detailing the main lessons we have learned from this experience. We believe our key conclusions can help design government policy that leads to better infrastructure at lower cost. Our aim in this book is to distill the lessons that are relevant for policy makers and to combine real-world evidence with the underlying economic arguments. For this reason, this is a work of synthesis that draws heavily on the research of others. That said, this book is not an all-encompassing, neutral survey, and not everybody will agree with our conclusions.

Indeed, we have strong and opinionated views on some issues, and on others we believe the jury is still out. At the policy level, PPPs have turned into an ideological issue, with some commentators in favor because they limit the role of governments and with others in opposition for that same reason. In contrast, we have tried hard to let the evidence and economic analysis temper our biases. The reader can decide to what extent we have succeeded.

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It was not easy to avoid using equations throughout this book. For those readers who may be interested, we have written an appendix containing a bare bones model that formalizes in the simplest way possible many results that we mention in the text. Furthermore, we have avoided references whenever possible. Instead, we have included bibliographical notes at the end of each chapter, which acknowledge the main papers from which we have drawn. We have also drawn from our previous work, which appears in the following publications:

"The Basic Public Finance of Public Private Partnerships," *Journal of the European Economic Association* **11**, 83–111, 2013.

"The Economics of Infrastructure Finance: Public-Private Partnerships versus Public Provision," *EIB Studies* **15**, 40–69, 2010.

"Highway Franchising in the United States," *Review of Industrial Organization* **29**, 27–53, 2006.

"Highway Franchising and Real-Estate Values," *Journal of Urban Economics* **57**, 432–448, 2005.

"Privatizing Highways in Latin America: Fixing What Went Wrong," *Economia, The Journal of Lacea* **4**, 129–164, 2003.

"Least Present Value of Revenue Auctions and Highway Franchising," *Journal of Political Economy* **109**, 993–1020, 2001.

"Highway Franchising: Pitfalls and Opportunities," *American Economic Review* **87**, 68–72, 1997 (reprinted in *The Economics of Public Private Partnerships*, D. Grimsey and M. Lewis (eds.), Northampton: Edward Elgar, 2005).