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To build or not to build: Normative and positive theories of public–private partnerships ☆

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Abstract

This paper analyzes whether the two tasks of building infrastructures which are socially useful in providing public services and managing these assets should be bundled or not. When performance contracts can be written, both tasks should be performed altogether by the same firm if a better design of the infrastructure helps also to save on operating costs. Otherwise, tasks should be kept apart and undertaken by different units. In incomplete contracting environments we isolate conditions under which either the traditional form of public provision of services or the more fashionable public–private partnership emerges optimally. The latter dominates when there is a positive externality and the private benefits from owning assets are small enough. Finally, we take a political economy perspective and study how incentive schemes are modified under the threat of capture of the decision-makers. Much of the gains from bundling may be lost in this case.

JEL classification: H11

Keywords: Public–private partnership; Bundling/unbundling; Agency costs; Capture

1. Introduction

One of the most intriguing issues in modern industrial organization consists of delineating the optimal division of labor between the public and the private spheres. In this respect, the recent privatization wave which took place over the eighties and nineties in most industrial countries and which was also advocated by international agencies for developing countries certainly testifies that this question is at the heart of most major reforms. Even though defenders of full privatization schemes can still be found nowadays in the most liberal spheres, an unequivocal commitment to privatization is often viewed as an excessive response to the inefficiency of the public sector (if any) even when privatization is accompanied by a convenient regulatory environment. Most scholars and public decision-makers advocate thus for a more pragmatic approach which

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consists of promoting efficient (or at least as efficient as possible) partnerships between the public and the private sectors for the provision of major services and public goods.[2] Only tasks where the private sector has a comparative advantage should thus really be delegated to the private sphere.

To understand the optimal pattern of delegation it is useful to keep in mind that most public services (like water management, waste disposal services, sanitation, public transportation, prison management) involve a complex array of tasks. Those activities necessitate indeed, first, to build infrastructures and, second, to operate these assets as efficiently as possible. Delegation to the private sector thus takes place *de facto* in a *multi-task environment*.[3]

The traditional form of public procurement used in most industrial countries has so far relied on some kind of unbundling of these tasks. First, a government designs the characteristics and quality attributes of the project. Second, the government chooses a private *builder* to build assets but retains ownership. Finally, the government chooses an *operator*, who may be either public or private, to manage these assets and provide the service. More recently, several initiatives around the world[4] and various legal reforms[5] have proposed an alternative form of procurement, the so-called *Public–Private Partnerships* (PPPs henceforth). With this procurement mode the government takes a more minimalist stance: it only chooses a private consortium which is in charge of both designing the quality attributes of the infrastructure, building these assets and, finally, managing them as efficiently as possible. Compared with the more traditional form of procurement, the PPP alternative is thus characterized by two important features. First, the two tasks of building and managing assets are now bundled. Second, the ownership pattern is also quite different.

Taking first a normative point of view, the first objective of this paper is to understand why and under which circumstances those two alternative forms of procurement are optimal. Of course, this issue is really only relevant in a framework where delegation of tasks to the private sector also comes with some agency problem.[6] To make the analysis interesting we will thus envision the case where efforts in building and managing assets are non-verifiable and delegation comes with moral hazard. We then ask whether or not agency costs exhibit some kind of *economies of scope* when tasks are bundled. The analysis shows that ownership and its impact on incentives is *not* the key to understanding the optimal form of procurement. Instead, the key reason for bundling is to be found in technology and in the impact of a good design on operating costs, not on the ownership issue which is only secondary. This result is quite robust to the space of compensation schemes that can be used by the local government to delegate the services and to the exact organizational form taken by the merger of two firms when tasks are bundled.

Two cases are a priori feasible and are documented by practitioners. First, a better design of the infrastructure may help to save on operating costs, the case of a positive externality. The prison sector serves as a prime example because the design of a prison may significantly affect the cost of implementing a given security level.[7] Second, a better design may also require learning new procedures for managing assets and thus increase operating costs, the case of a negative externality. As an illustration, the report made by the French Cour des Comptes following the Roissy Airport Terminal E2 crash argued that an important issue was that Aéroport de Paris cumulated several ‘hats’ as an owner of the infrastructure, a designer and a builder. It argued that this bundling of tasks induced a sacrifice in terms of the quality of the infrastructure.

With a positive externality both tasks should be performed by the same firm which is better able to internalize the impact that a better infrastructure design has on operating costs. Intuitively, under moral hazard, there is a trade-off between providing incentives to the builder to improve the quality of the infrastructure and giving him insurance against adverse shocks on the realized quality. This trade-off calls for reducing the power of incentives so that the builder exerts less than the first-best effort. This decreased quality of the assets may excessively increase the operating costs and thus exerts a negative externality on the operator if building and managing assets are unbundled. The builder and the operator should thus be merged into a single entity. The optimal organizational form exhibits thus an important

[2] See the 1998 United Nations Development Programme.

[3] See Holmström and Milgrom (1991) (moral hazard) and Laffont and Tirole (1993, Chapter 3) (adverse selection) for general analysis of the multi-task problem.

[4] Berger (1985) traces the references to partnerships between the public and the private sectors in the U.S. to the Carter administration and its willingness to include private actors in the development of urban projects in areas of very costly public funds and huge public deficits. Daniels and Trebilcock (2002) offer a nice overview of some issues raised by public–private partnerships in Canada.

[5] See the June 2004 text prepared by the Raffarin government in France, for instance.

[6] Otherwise the first-best could be achieved with simple forcing contracts, thereby making the organizational issue of whether to bundle the two tasks irrelevant.

[7] See Schneider (2000).