



# Do economic regulatory agencies matter to private-sector involvement in water utilities in developing countries? <sup>☆</sup>

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## ABSTRACT

This paper suggests that, for developing countries, the creation of economic regulatory agencies, separate from the ministry in charge of water and sanitation, may not be a necessary or sufficient condition to stimulate large scale private involvement (PPPs) in the sector. The odds of an impact are higher for Latin American countries than other regions and for countries with higher income levels. They are also better when inflation is high. At the margin, the odds are unrelated to the contract type, except for greenfield projects, for which they may be contraindicated.

## 1. Introduction

The extent to which the creation of a separate economic regulatory agency (RA), national or subnational, is needed to attract large-scale private operators to engage in public-private-partnerships (PPPs) in the water sector has been a recurring discussion topic among analysts and policymakers for more than 25 years.<sup>1</sup> This topic is part of a broader set of issues linked to the desire to come up with an ideal design for the regulatory governance of the water sector. The basic goals of regulation may be the only area of convergence among analysts of the sector: first, to make sure that the needs of all users are met with decent quality standards, and second, to provide the right incentives to public and private providers, small or large and to deliver water and treat wastewater in cost-effective ways. An often-cited key to the success in delivering these goals is the extent to which the governance structure produces the right level and composition of investments. In developing countries, investment is central to the welfare effects of regulation and many assert that these investments can at least partially come through PPPs.

The desire to improve governance seemed rational to many policymakers, particularly in the countries with a long record of inability by the public sector to get largely self-regulated public enterprises to raise funds on their own and address water quantity and quality concerns. Until the early 1990s, in many countries, investment in networked water supply had, indeed, failed to catch up with population growth and efforts to improve sanitation were close to catastrophic. This is largely what made the initial case for private-sector participation relatively easy politically. It also helped make a case for institutional arrangements that would mitigate the risk of inappropriate political interference with pricing, staffing, and investment decisions given that the public enterprise managers were often political appointees with little or no experience in the sector.

In the early 1990s, the idea of creating independent economic RAs became a recurring theme in sector reforms.<sup>2</sup> It was expected to lessen the risk of firms capturing the regulatory process by trying to influence the government, ministries, or other public actors and win favourable regulatory decisions. RAs would also lessen collusion between governments and private operators and political interference with prices,

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<sup>1</sup> For recent discussions see the special volumes of Utilities Policy edited respectively by Cunha Marques and Berg (2011), Cunha Marques et al. (2016) and for a more general overview on the role of RAs in infrastructure, see UNCTAD (2012).

<sup>2</sup> See World Bank (2006) for an overview.

quantities, quality, and cost efficiency. RAs were thus seen as a strong signal the market that government was serious about regulation and this should mitigate investment risks and hence make it easier to attract private investors and operators.<sup>3</sup>

During the 1990s and 2000s, academic observers of the sector argued that the early evidence supported the concept that the RAs would help meet the policy goals of improving service coverage and quality as well as overall welfare. For instance, Andrés et al. (2007), Cubbin and Stern (2005), Gassner et al. (2009) or Gutiérrez (2003) described the potentially positive effects of independent regulators on various types of infrastructure investment in developing countries. Chisari et al. (1999) showed that effective regulation represented as much as 2% of GDP in welfare gains for counties implementing large-scale PPPs, such as Argentina in the early 1990s. By the late 1990s, however, the evidence started to be less conclusive (Parker and Kirpatrick, 2012) and uncertainty about the effectiveness of RAs and reforms aimed at attracting PPPs grew. The slowness of the progress in increasing access to drinking water and sanitation in the developing world also suggested that the “new” approach had not worked as expected.

Nonetheless, despite mixed results over 25 years, the potential role of RAs remains central to discussions of institutional and policy reform in the development context. The recurring message is still that RA would not only protect investors and private operators in risky political and economic environments but they would also protect consumers and taxpayers including subsidies as needed.<sup>4</sup>

The main purpose of this research is to assess the extent to which the commitment to RAs is rational under various circumstances. We utilize a data set integrating multiple sources on the diversified experiences with PPSs and RAs. Our screening analysis suggests that in many countries, the RA signal may not be sufficient to attract PPPs. But the emerging picture of the relationship between RAs and PPPs is complicated by the fact that there are countries with RAs and no PPPs as well as countries with PPPs and no RAs. We conduct an econometric test of the strength of the case for RAs in terms promoting PPPs to help them finance their investment needs. More specifically, the paper focuses on the extent to which reform in the form of RAs matters when trying to attract various types of contractual PPP arrangement, accounting for differences in regional location and development levels.

To report the analysis, the paper is organized as follows. Section 2 provides an overview of the ways in which RAs have been discussed in the academic and policy literature. Section 3 reviews the evidence available on the role of RAs. Section 4 is a summary of insights drawn from a data set on the relevant institutional preferences for agencies and contracts across the world. Section 5 discusses the data sources for the key variables for our econometric analysis and explains how we estimated the relevance of RAs for PPPs in developing countries. Section 6 concludes.

## 2. Debating the case for RAs

The establishment of RAs in the developing world began in Argentina (in the early 1990s) and moved on to be tested in Latin America and Sub-Saharan Africa and to a lesser extent, thus far, in Asia and Eastern Europe. RAs were, however, not new. The United States has very long experience in the economic regulation of investor-owned energy, telecommunications, and water utilities at the state level (and at the federal level, except for water), but oversight of contractual PPPs is left mainly to local governments. Regulatory commissions are structured to have a high degree of political independence, even though

<sup>3</sup> The policy debates then largely ignored the fact that the regulator can create regulatory risk and that they can also be captured. It also ignored that regulators do not necessarily take risks away but instead that they can shift it between investors and consumers.

<sup>4</sup> See OECD (2002) for an early full review of the debates in a broader context.

most commissioners are political appointees. In Europe, the United Kingdom introduced investor ownership with economic regulation, but few countries followed that lead. Despite wide support for the idea from political scientists (for example Majone, 1997; and Thatcher, 2002, 2011), the model was, not widely adopted in the water sector. Busuioac (2009), for instance, shows that the actual level of autonomy of such agencies in the EU is below the autonomy provided by formal legal rules. Likewise, Cambini and Rondi (2017) very recently found that political interference largely persists within the EU, with the negative consequence of decreasing investment.

For developing countries, the case for RAs also came from applied economists and theoretical academics concerned with the institutional weaknesses linking the multiple sources of conflicts of interest characterizing public sector institutions (for example Alexander, 2014; Laffont, 2005; Andrés et al., 2007; Auriol and Picard, 2009; and Gasmi et al., 2009). The emerging academic message was simple: unbundling the regulatory function from other public sector responsibilities would increase the transparency of political interference or incompetence, and hence improve accountability. The ultimate purpose was to make it easier for oversight to be a technical rather than a political process. This, in turn, would make it easier to attract private-sector capital in sectors demanding high investment levels with slow amortisation periods by reducing the risk of expropriation. Even if the private sector were not interested, it would still be a useful idea to improve the accountability of public enterprises. Indeed, the regulators would at least provide an independent management audit of the management that would go beyond the traditional accounting review delivered by national public auditors.

The approach was eased by the growing popularity of contract-based approaches to public operations. Management contracts, licenses, concession contracts or any other types of more targeted contracts (Build-Operate and Transfer, Build-Operator and Own, and so on) became increasingly popular methods. A hybrid model combines contract-based regulation with some discretionary power for newly established regulators. International organisations and other policy analysts have been vocal supporters of these agencies, echoing recommendations from the political, economic, and legal literature. However, recent research (e.g., Jensen and Wu, 2017), suggests that a hybrid regulatory model may initially increase private involvement, but may not be sustainable over the long term.

Today, we know that privatization and regulation have not always had the expected effects on access, affordability, or service quality (e.g., Estache et al., 2009). With the insights of many failed experiences in the sector, some academics and practitioners have become somewhat cynical of the possibility of achieving independence from inappropriate political interference in the regulation of the sector. The private actors also have doubts. Indeed, if private firms are still interested in targeted projects, the evidence reviewed below seem to suggest that creating an RA to regulate water utilities may not be needed to attract private financing and that the creation of RAs does not ensure private financing of much-needed projects and operations.

The doubts about the impacts of RAs probably reflect the challenges linked to implementation. Trillas and Montoya (2011), for example, argue that legal independence does not solve the political problem regulation, but relocates it. The ideal of independence has seldom, or then only temporarily, been achieved. In almost all countries, political processes are used to nominate regulators, oversee agency budgets and technical staff, and design or validate procedures.<sup>5</sup> Ministers, or more broadly politicians, have a hard time giving up their ability to politicise

<sup>5</sup> Argentina's agency could not overcome the desire of the first Kirchner administration to turn regulation into a political instrument. But this issue is not unique to developing or emerging economies. Similar cases characterise the nomination of members of regulatory commissions in continental Europe, where holding a party card is a common requirement for regulators as well as members of the boards of regulated firms.

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