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Critical analysis of the Portuguese Water Industry Restructuring Plan

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ABSTRACT

The discussion on the Portuguese water industry's reorganization has gained relevance since 2014, when the Government presented a plan, justifying it with efficiency gains, financial sustainability, and the promotion of territorial equity/social cohesion.

In this paper, the Portuguese water industry is analyzed and a critical appraisal of the Government approach is offered, considering the main economic reasons provided by international experience and literature.

The plan's fundamentals can be contested, because economic sustainability might not be achieved by aggregation if optimal scales and hydrographic regions are exceeded. Besides, the "compulsory" aggregation of systems may contribute to the failure of the process.

1. Introduction

Water governance must contribute to outcome-oriented public policies, based on mutually-reinforcing and complementary dimensions. One of these dimensions is efficiency as seen in the contribution of such governance to the maximization of the benefits of sustainable water management on welfare at the least cost to society.

The OECD (2015:5) discusses water governance, stating that through "the range of political, institutional and administrative rules, practices and processes (formal and informal) through which decisions are taken and implemented, stakeholders can articulate their interests and have their concerns considered, and decision-makers are held accountable for water management". In order to achieve such governance mechanisms, however, restructuring the water industry might be necessary, depending on each specific context.

The debate concerning the restructuring of network industries, in general, and utilities in particular, started in the 1970s and 1980s, when some reforms were introduced with the objective of improving market efficiency. Essentially, the aim of such reforms has been to separate the potentially competitive areas from the other ones, deregulating and promoting competition, and reforming the regulation of the natural monopolies (Armstrong et al., 1999; Church and Ware, 2000). However, unlike other utility sectors, such as telecommunications or electricity, where there is a large consensus on the degree of industry unbundling, promotion of competition, and institutional arrangements for industry regulation, in the water industry there is no such consensus (Ballance and Taylor, 2005).

In the meantime over the past two decades, certain reforms have been implemented within the water and wastewater industries around the world, although these changes have not been as extensive as in other utility industries (Armstrong et al., 1999). "Water supply and wastewater industries have enjoyed more stable industry structures than most, in large part due its monopoly characteristics and the social importance and basic public good nature of water quality and wastewater treatment services" (Abbott and Cohen, 2011: 6). Another reason for the relative stability of the industrial structures is the fact that a large component of the cost of supplying water and sewerage is tied up in the distribution networks which cannot be duplicated because they are very expensive. Unlike other utilities, namely electricity, more than 50% of the cost of water supply corresponds to the cost of networks, (Ballance and Taylor, 2005; Robinson, 2002).

The water industry is a good example of economic activities that

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must be regulated because of its market failures. According to Armstrong et al. (1999), there are three classes of market failures, these being: monopoly power, asymmetry of information, and externalities. Furthermore, Vass (2001) introduces two other failures related to social exclusion and iniquity, because insufficient provision of water services as a consequence of economic deprivation penalizes and excludes the most vulnerable groups within a population from access to a vital resource (United Nations, 2010).

In 2014, the Portuguese Government presented a restructuring plan for the water industry with the aim of achieving territorial and corporate reorganization (including the public holding Águas de Portugal) that would result in increased efficiency levels, sustainability, and territorial and social cohesion. Some initial steps were adopted in the meantime with the creation of three new regional systems aggregating several operators.

The research question of this paper is the following. Is the ongoing Portuguese Government Plan for the water sector adequate to the promotion of its objectives?

The restructuring plan has raised doubts among some public stakeholders, namely the municipalities, which were not convinced on the advantages of the agglomeration of the nineteen multimunicipal systems operating in the country into only five regional systems, and they are suspicious that the intended restructuring might be a first step to the privatization of the water industry as a whole. Some municipalities have raised several other concerns, such as the loss of political oversight over service provision.

It is important to highlight that, under the Portuguese Law and for historical reasons, municipalities have been responsible for the provision of water services to end-users. Besides, due to municipalities' participation on the capital share of water utilities, the allocation of decision rights between central government and local government is a bargaining issue in Portugal.

Consequently, it is timely to critically analyze the Government Restructuring Plan with reference to scientific literature and international experience. Additionally, we also consider the relevance given by OECD Principles of Water Governance, suggesting the promotion of stakeholder's engagement for informed and outcome-oriented contributions to water policy design and implementation of reforms.

The remainder of the paper is structured as follows. Section 2 provides a brief note about the methodology followed. Section 3 presents a review of the main international experiences regarding water industry governance, reorganization and degree of agglomeration. Section 4 provides a review of the scientific evidence on the advantages and disadvantages of more concentration in the water industry. Section 5 deals with the Portuguese water industry governance, focusing on the heterogeneity which characterizes the sector, with the aim of describing the Portuguese water industry pre-reform. Section 6 firstly presents the 2014 Portuguese Government Water Industry Restructuring Plan (6.1.) and then the plan is critically discussed, based on the international experience and economic scientific evidence (6.2.). Section 7 concludes.

2. Methodological notes

In order to fulfill our research objective, to assess whether the Portuguese Water Industry Restructuring Plan is adequate to the promotion of its objectives, we follow a descriptive type of inference, making use of an exploratory research strategy (Gerring, 2007 and Gerring, 2004).

Methodologically the approach followed can be considered a case study research because we want an empirical in-depth understanding of a single "case" set in its real world context that can be generalized across a larger set of units (Gerring, 2004: 341). That is, we want to study intensively the features of a "single unit"- the governance economic consequences of the concentration of the Portuguese water industry into five regional operators. The focus on the "case" and the intention to cover the contextual conditions produce the topics to be considered by our case study (Yin, 2012: 4). This is why our approach starts by reviewing the water industry restructuring at the international level to concentrate then on the discussion of the Portuguese reform.

Differently from the crucial-case method (Eckstein, 1975), we are not interested in using our case as a crucial. Remember that a case is crucial when "the facts of that case are central to the confirmation or the disconfirmation of a theory" (Gerring, 2007: 231). Our research method is more likely concerned with the deep study of the Portuguese Government strategies taking into account its main objectives and theoretical justifications to conclude about the degree of congruency between them.

3. The international experience

An overview of the world and the European water industry reveals very high water industry fragmentation as a consequence of the local nature of the monopolies networks that provide water supply (WS) and wastewater (WW) services. The exceptions to the rule are the major cities across the world, which are served by large and centralized utilities, such as Mexico City, Paris, Berlin, Moscow, and New York. At the European level, the key examples of higher degree of aggregation are the cases of England and Wales, and the Netherlands, (Marques, 2011; Ferro and Lentini, 2010).

In England and Wales 12 firms provide WS and WW services simultaneously and 13 provide only WS. These firms are private in the global sense because not only do they manage the systems, but they also own the networks and infrastructures. This is the result of a long trend for aggregation that has been in evidence since 1973 and was reinforced in 1989 by incentives to attract private capital to a market supported by 60 million consumers distributed over a territory of 245 thousand km^2, and where the influence of Thatcher privatization policies was decisive.

In the Netherlands, a small country with 16 million inhabitants and 41.5 thousand km^2, the movement towards the deep integration of a market that was composed of 229 firms at the beginning of the twentieth century resulted on 10 WS systems that provide the service today and remained public. The WW is more fragmented, usually vertically disintegrated, and the responsibility of the role of Water Councils, 25 regional organizations representing the stakeholders in charge of environmental management, control and flood prevention and management of watercourses is relevant.

The Italian case is also important because it includes a moderate attempt of integration at the regional level, based on the hydrographical regions and basins, created by 1989 and 1994 (Galli Law) reforms. The effects of such restructuration were important for the integration of WS and WW in the same operators, and for the creation of Optimum Territorial Areas (ATOs), managed by means of the coordination of different local authorities. The infrastructures of the 91 ATOs are totally public, but there is a growing tendency to concede its management to private entities or in partnership with private firms.

Since 1976, national authorities of Romania devoted institutional efforts to the development and management attending to hydrographic basins. According to that, the National Water Administration (*Apele Romane*) created 11 decentralized Hydrographic Basins Comités with important competencies in the environment and water management. Usually the water industry is vertically integrated and locally owned and managed by public authorities including both services of Water Supply and Sewerage.

The Chilean water industry is vertically integrated, with over 53

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