

**Public Finance and Project Finance:
a study of additional areas of employment
The case of water sector**

Abstract

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Abstract

The research aims at underline the importance of public finance in supporting infrastructures financing and public services management, particularly focusing on the development of Public Private Partnerships (PPP) and *Project Financing* operations in water sector.

Indeed, most of the case of PPPs relays on the relative efficiency of the private sector, but while there is an extensive literature on this subject, the theory is ambiguous and the empirical evidence is not consistent. Moreover, the project finance model appears not to be always applicable to financing public investments.

The research question has been related to the actual potential that public sector financing tools can still express in supporting specific initiatives in an efficient and effective way, considering also the fiscal ties and public expenditures restrictions that local governments have to face.

The statistical data, technical and scientific reports used in answering the research question are commented through a sequence of chapters which are designed to converge all the information on to a specific case, this being the analysis of the problem in the water sector.

The assumption is that the economic characteristics of the "water" sector, both on the supply's and the demand's side, provide the rationale for the wide intervention of the government, either directly or through economic and environmental regulations, or both of them.

- 1) What is the rationale in stressing on the efficiency and the convenience of the privatization and the private finance to deliver investment in infrastructure and in public services, as that of the water sector?
- 2) In which ways the public sector would be able to support *project financing* development?

As it is believed that local administrators and entrepreneurs are the people most interested in this research, conclusion and recommendations are addressed to them.

The first chapter introduces the following findings, giving an overview of the theories, both economical and organizational, which have led to the development of public-private partnerships as a key tool of public policy around the world.

There is a wealth of both theoretical and empirical literature on the realization of PPP, such as the theoretical literature on the nature of organizational collaboration, which raises, among other issues, the significance of structural issues on collaboration (Huxham and Vangen, 1996), the resource dependency thesis on collaboration (Benson 1975) and the institutional paradigm (Di Maggio and Powell 1988). More over there is the public management literature which has developed within Anglo-American experience. This has emphasized the significance of management arguments and focused upon issues of the contractual relationships, their management and costs and the impact of trust upon them (Williamson 1988, Osborne 1997). There is also the public governance perspective on public-private partnerships which have emphasized the primacy of the governance of relationships within networks and the importance of the interrelationships between the political and the social context of such networks (Kooiman 1993; Kickert 1997).

Given the theoretical framework briefly reported, the main characteristics of PPP are described, such as the different typologies available, the operators involved, both within public and private contexts, the key variables which the initiatives are based on (time, duration, geographic extension...).

The main focus of this chapter is on "Project Financing", which will be considered the financial structure on which to analyse the role of public finance and the "term of comparison" for alternative traditional and innovative ways to finance initiatives.

Some specific issues are explained thereafter, these being the importance of economic and financial evaluation, both by the "public sector" point of view and the "private" one, and of risk allocation. Indeed, even the source of financing can influence project risk and this will be better analysed in the following part of the research.

The second chapter starts with a general overview on the water industry, in order to introduce some main issues supporting the following analysis.

Over the last fifteen years competitive forces have been introduced into sectors once considered natural monopolies that were destined to economic regulation and, more often, to public ownership, with no role for producing market competition. However the water industry is one of the most striking examples of network industry that has been largely immune from both liberalization and privatization and which is predominantly under public ownership and largely fragmented, with different degrees of horizontal and vertical integration, and with many city and town councils supplying water services either directly (in house production) or through public law companies, insulated from any form of competition.

Moving from this basic considerations, insight is given on the problem of infrastructure development in water sector, with main reference to the financing of the building and the management of water sector operations.

The positions expressed on this issue from international organizations - European Union, OECSE, UN - and other international economic and financial institutions, as IMF and World Bank, are reported and discussed, in order to show the development of different approaches about the public financing and the use of private resources and project finance.

Furthermore, it is often stated that budget limits and fiscal ties are relevant justification to prefer private finance and encouraging a decreasing involvement of public finance and public sector towards investment in infrastructures. Thus this usual assumption is clarified, in order to adopt a critical and positive point of view, on the basis of fiscal, financial and legal elements and of empirical evidences.

The role of leverage of public finance is, then, strongly analysed, referring not just to the existent relevant literature, on public economics and on financing in water sector, but overall to experiences in the international context and in the European and Italian regions, in order to clarify which kind of public financial support can be developed and strengthened *in alternative to public grants*. In the specific case of water sector, it will be considered, for example, the role and the potential of some funds, such as the State Revolving Funds, particularly used in the United States and their applicability to European and Italian experiences.

Even though many kinds of innovative financing are spreading and preferred to traditional financial resources, it has to be deepened the involvement of savings issued by the citizens, as those obtained through *Local Bonds*.

Thus an analytical review is conducted on some significant financial tools available, such as:

1. *State Revolving Funds*, those are a US model;
2. Municipal Bonds/Water Bonds, specially representatives in the American context;
3. Public Banks, as the Dutch "Water Board Bank", the "European Investment Bank" and the Italian "Cassa Depositi e Prestiti";
4. Communitarian and National Funds for environmental/water programmes development;
5. PPP Funds/Equity Funds.

These financial resources are analysed in the context of a comparison among several financial structures typically suitable to the water sector.

The last chapter focuses on the use of project financing in developing water infrastructural programmes, in the specific scenario of Italy. Indeed, with the EU recently making

wastewater a priority, the opportunity for Private Finance in this sector has increased dramatically, but often without a robust evaluation of both several contextual issues and the alternative opportunities available.

The focus is on project/concession finance and, within this framework, on underlining the role and the potential of public finance and public authorities.

The main purpose is gathering and analysing some relevant information needed to formulate investment strategies, such as those concerning the specific risk allocation in water national sector, strongly related to the regulation and legal framework.

Special attention is put on the decision maker's approach in defining the economical/financial plan and in evaluating the preference for a financing structure.

As the development of the research has been conducted referring to a large number of experiences, one significant *case study* has been chosen and analysed.

It is the case of *the Project/concession Finance* of the public-private owned company "Nuove Acque" of Arezzo, the first example of the application of PF in the Italian water sector.