CERIS : Civil Engineering Research and Innovation for Sustainability

Financial models to reach sustainable development goal 6 (SDG 6)

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Summary

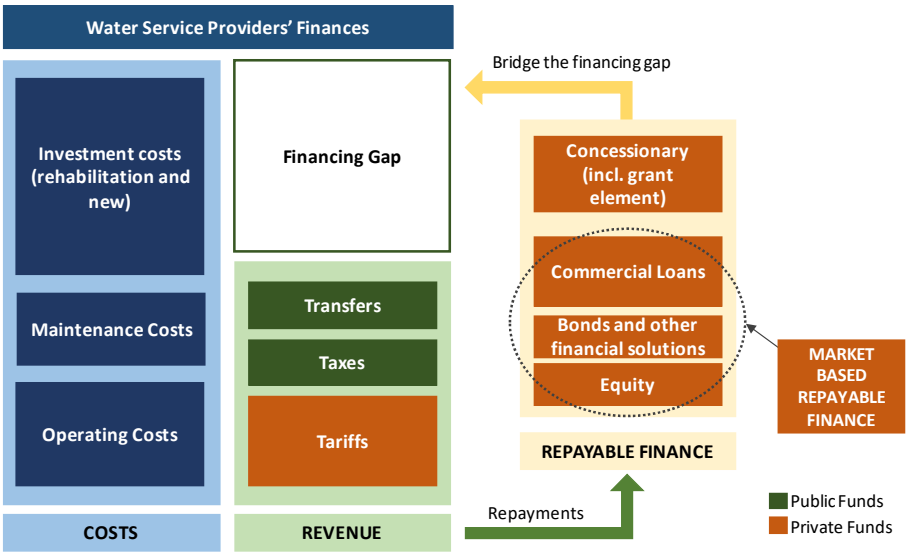
There are still too many communities worldwide that do not have access to good sustainable water and wastewater services, and it is this thesis' objective to contribute towards decreasing these numbers. Therefore, this research has three main purposes: to carry out a diagnosis of the most used financing mechanisms in the water supply and sanitation (WSS) sectors (it is extremely important to understand the differences between the several existing financing solutions and infrastructures, and the types of players that finance WSS projects), while understanding why they have not been effective and have failed to meet these sectors' needs; to determine how SDG6 can be achieved through the identification of adequate financing models that could be applied to bridge the financing gap; and to design a decision support model, to help identify which financing models are potentially best suited to the specific needs of a project, while aiming to achieve SDG6.

At the end of this research work, it is expected to have created a knowledge base and framework, which can be used by decision-makers in the WSS sectors when deciding what financing models can be more advantageous to apply.

In this context, this research aims to contribute to the literature by: providing a literature review focused on the studies that addressed the financing topic in the WSS sectors; gathering information on different types of private financing instruments available in the market and performing multicriteria analysis focused on WSS infrastructure projects; analyzing the financing barriers and identifying the risks and their connections to the types of financing instruments, or models, and how these can be mitigated; developing a knowledge base and framework that could be used by decision makers in, both, the borrower and lending sides, to make informed decisions on the financing models that better suit their needs. The development of this type of theoretical and comparative study can be a groundwork for researchers, and other players, that will allow them to study and add to the data regarding the actions and changes that need to be fostered in order to guarantee that the SDG6 is achieved and that the access to WSS services is actually sustainable worldwide.

Keywords

Water supply, sanitation, financing models, SDG6, financing gap.



Water Utilities Financing (adapted from OECD, 2010).