Commentary Article

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Integrative Journal of Global Health

2021
Vol.5 No.4:9593

Short Commentary on "The Financing of Water Treatment and the Balance of Payments for Water Services: Evidence from Municipalities in the Region of Valencia"

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Received date: July 21, 2021; **Accepted date:** October 14, 2021**; Published date:** October 25, 2021

Citation: García-López M, Melgarejo J, Montano B (2021) Short Commentary on "The Financing of Water Treatment and the Balance of Payments for Water Services: Evidence from Municipalities in the Region of Valencia". Integr J Glob Health. Vol. 5 No: 4.

Abstract

The diversity of water services currently provided requires a variety of revenue formulas so that each service is financed by its own users. However, the lack of recovery of financial and environmental costs is a common problem in Spain. To this problem we have to add the lack of equity and co-ordination of the different tariffs applied. In particular, wastewater treatment and water supply in the Region of Valencia (Spain) are associated with such problems. Household payments for these services are related to the structure of the household or the size of the municipality. Thus, the aforementioned problems imply a lack of financing that prevents minimising the environmental impact of an activity such as water treatment which, due to its high energy consumption, produces significant greenhouse gas emissions.

Keywords: Water prices; Water tariffs; Sanitation taxes; Wastewater treatment costs; Energy costs; Household budgets

Introduction

Payments for a society's water services are varied, as there are many different services. The services that stand out are those that involve supplying water to the users of this resource, but within this concept we find different types of water. The most common is the supply of water to households or industries, which is a service whose ultimate responsible organization in Spain is the city government. This service obtains its revenues through the well-known escalating tariffs, which also aim to reduce over-consumption through price increases as consumption increases (Rogers, De Silva & Bhatia). The supply of other types of water works differently. A striking case in the Valencia Region (Spain) is that of urban wastewater treatment and reuse. The reuse part of the activity involves the agreement of two entities, provider and demander, whereby a price is agreed and it functions as a business operation. However, for this to be possible, certain treatments must first be carried out. These treatments are carried out with the aim of minimising the natural impact of pollution from discharge, but also to enable more advanced treatments to transform the water into a valuable resource. Therefore, following the European Union's Water Framework Directive (EU), it is the users of water who must pay for its subsequent treatment. In this case, these are the households that consume the resources, as they are the ones that are generating the need for water treatment. However, the tariff structure for obtaining revenues is different from that used to finance the water supply service (EPSAR; Aguas de Alicante). Specifically, water treatment obtains its revenues through a linear tariff that applies a constant cost per cubic metre with the only particularity that the unit price is higher as the size of the municipality in which the user resides increases.

Therefore, we have two tariffs that apply to the same event, water consumption, but that work in very different ways. In Spain, it is not very common for a project to recover the costs associated with it, and there is great room for improvement in this respect. The problem is not that the environmental costs are not recovered, which is a high cost, but that in most cases not even the financial costs are recovered. This leads to the need to assess how to change the financial functioning of water services to make them sustainable activities. Of course, revenues from public services depend to a large extent on the situation of the users of these services, but at the very least the costs of sustainability of the service should be recovered (Tardieu & Préfol). In the case of water treatment and reuse in the Region of Valencia, financial costs are recovered (EPSAR). However, the activity is energy intensive and requires both energy efficiency measures and alternative energy sources to minimise the environmental impact derived mainly from greenhouse gas emissions (EPSAR; Hernández-Sancho, Molinos-Senante & Sala-Garrido; Albadalejo-Ruiz, Martínez-Muro & Santos-Asensi; Albadalejo-Ruiz & Trapote). It is an activity that, therefore, is not recovering environmental costs, i.e., we are emitting greenhouse gases in exchange for reducing the environmental impact derived from water discharge pollution. Taking into account that the proportion that Valencian households pay for water services is low, it is possible to consider modifications with the aim of improving the financing of water services and balancing payments for water services.

Increasing tariffs penalise more populous households (Arbués, Villanúa & Barberán,), while linear tariffs do not provide an incentive for responsible consumption. Both of these tariffs present problems due to their structure, but governments are naturally reluctant to increase tariffs. These payments are likely to be seen as one and the same by water users, as they only pay attention to the total

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amount of the bill. Thus, the entities responsible for tariffs are dependent on each other because they do not want the total payments to be made by the household for water services to be too high. However, in this situation we encounter problems such as the above-mentioned problem of wastewater treatment, which due to its tight financial situation is not able to minimise its environmental impact.

Furthermore, we should never forget the potential equity problems due to the tariff structure (Zetland & Gasson). In this regard, the revenue formula for water treatment currently implies higher payments simply because of being part of cities with a larger number of inhabitants. This is curious, as it is precisely the larger cities that can take advantage of economies of scale and carry out the activity more efficiently. Small municipalities, due to their size, are not able to reach the cost levels of larger places, so the average cost of their water services is higher. In other words, households in small municipalities pay a higher water supply price and sanitation tax in order to finance the services they receive. Therefore, delivering water services as efficiently as possible and designing efficient and equitable tariff structures is essential in the current situation of scarce financial and environmental resources.