

IMPROVING THE PERFORMANCE OF PUBLIC WATER SUPPLY SERVICES

Iuliana Parvu¹
Dragoş Mihai Ipate²

Abstract.

Water supply services as well as their administration are essential to support the sustainable development of the society. For this reason, both at the European level and at the level of Romania, it is necessary to find the most suitable management methods and models for their administration. As regards European Union various managerial strategies are adopted in connection with water supply services that differ depending on the local specifics, history, culture and local traditions etc. This paper presents relevant issues regarding the management of water services in the member states of the European Union, in order to understand the current European perspective on the water services administration and to identify good practices for our country.

Keywords: water supply services, public services, sustainability, public ownership

Introduction

According to European Union directives, "water is not a commercial product like anything else, but rather a heritage that must be protected, defended and treated as such". But even if water is a public good, the provision of water services is an activity that involves important technical, economic, managerial and regulatory aspects - whether they are performed by public or private operators.

In the context of the sustainable development, the proper functioning of water distribution systems is a fundamental objective for any public system, especially because the water supply services function as public services in the vast majority of states. Thus, in 2015, a worldwide statistic on the role of the public sector in water supply shows that 90% of drinking water suppliers are public suppliers, both in developed and least developed countries, with the exception of France and the United Kingdom.(according with PSIRU database)

On the other hand, even in those countries where systems have not been privatized at all, water supply services are managed similarly to private corporations. For example, in the Netherlands, municipal water supply companies are set up and operate as commercial companies, although they are 100% public companies and the tariffs for these services are regulated by the state. Over time, attempts have been made to implement a strategy for the privatization of water supply systems in developed countries, but this experiment has failed because the expected improvements in service efficiency have not been achieved. The failure of the water supply services privatization confirmed that the management must be ensured by the public system, of course in terms of efficiency and managerial performance.

1. Public vs. private ownership over water supply services in the EU countries

The impact of the privatization of the water supply services was analyzed in the case of certain European countries, the results being presented below.

In the **UK**, in 1989, all water / sewerage suppliers in England and Wales were privatized. The main reason for this change was the need for substantial investments in water / sewerage infrastructure, because of the implementation of EU standards. As a result of this process and inflation adjustments, water / sewerage prices in England and Wales have risen by 50% since 1989.

¹ Spiru Haret University, iuliana.parvu@spiruharet.ro

² Spiru Haret University, dragos.ipate@spiruharet.ro

In **France**, after the Second World War, water services were privatized to help (re) develop the sector that required a high level of investment. However, since 2000, it can be observed that France is undergoing a process of re-municipalization, which leads to a relatively fair distribution between private and public operators in the water sector. The reasons for re-municipalization vary from political will, to the desire for greater control, to litigation or conflict. On the other hand, the sewerage sector has experienced, in recent years, a certain transfer from the public sector to the private sector.

In **Spain**, about 50% of water supply services are privatized. The main motivation for privatization was the serious situation of municipal budgets, especially since the onset of the economic crisis, which thus found a way to obtain funds from the budget through the concession fee. In some cases, these services have shifted from the private to the public sector as a result of civic movements opposing the privatization of water services because it is an essential public good and because of dissatisfaction with the quality and price of providing these services by the private providers. This process is, however, costly because it involves the purchase of the private supplier, the reimbursement of the concession fee, whose revenues have, in most cases, already been spent by the municipality and a compensation for lost profits. In Spain there are a growing number of civic movements calling for the return of water services to the public sector.

In **Germany**, until 2008, there was an intensification of privatization in the water sector, which is associated with the burden of municipal debt. But in recent years, the trend is toward re-municipalization. For example, in 1999, Berlin privatized water services to facilitate debt payments, selling 49.9% of the water company to a consortium of a French multinational (Veolia) and a German multinational (RWE). After the citizens campaigned for a re-municipalization of water utilities and organized a referendum on this issue, the shares of RWE were bought first, in 2011 and then those of Veolia, in 2013.

In **Sweden**, municipalities are the main providers of public water and sanitation services, but since the late 1990s, there has been a trend towards privatization, especially through private management contracts. This aimed at more efficient use of resources, increasing the level of efficiency, considered ideological reasons, but also the need to finance the debts of the municipality. Thus, the largest water company owned by the municipality was privatized in 2001. However, only a few years later, in 2005, the company returned to the municipality. The motivation was that, in the new form of organization, the company does not achieve the expected profit and the legislation that came into force in 2007 through which the water sector in Sweden is under the control of public property.

In **Hungary** there have been different trends in private sector participation in the water sector over the years. Following the change of the 1990 regime, ownership of the water sector was decentralized and transferred to the municipality and subsequently to the private sector. The main reason for allowing private sector participation was related to the expected income from privatization. In 2007, private sector participation in the water sector was almost 40%; however, in 2009 the renationalization of the sector began. The reason was that the government decided to reduce dependence on foreign investment in utilities in Hungary, not only in the water sector.

In **Poland**, the first public-private partnerships in the water and wastewater sector are more recent, but the privatization process continues. The privatization process in Poland is justified by the need to increase the volume of investments in this area.

As previously presented, the level of private sector participation in the EU varies greatly. Research has also shown that private investment in the water sector often comes from abroad. The largest private suppliers in Europe are Veolia Environment (France), Thames Water (UK), RWE (Germany), FCC (Spain), Suez Environment (France), ACEA (Italy), which have important customer bases outside the internal markets.

Nationally, the private market in England and Wales is attractive for foreign investment, with about half of all private investors being from outside the UK. In Spain, about half of private companies in the water sector are owned by French parent companies, while the French market is dominated by domestic private investment. The participation of the private sector in Hungary, Poland and Sweden is lower, but it belongs entirely to foreign investors. An interesting finding of the research conducted at national level is that the French company Veolia has investments in water suppliers in all European countries, including Romania, except Spain.

Another relevant aspect of the specific studies reveals that in most countries where there have been higher levels of private sector participation, there is a trend of re-municipalization in terms of water supply. The reasons for this transfer are: political intervention; the involvement of civic movements (opposing privatization for fear of tariff increases and of the negative impact on the quality of services that privatization could generate); the desire for greater public control over the provision of services; lack of experience of private operators in providing such services with a high level of complexity; lack of private funds for the development of this sector; government policies aimed at consolidating public property and discouraging foreign investment (e.g. Hungary) etc.

1. Indicators for measuring the performance of water supply systems at European level

In the perspective of identifying measures regarding the improvement of the managerial performance of the organizations providing water supply services, we will present a series of indicators able to indicate the performance of this system in Romania. From all the available data, we highlight the first and last 5 places, as well as Romania's position.

Table 1. Drinking water network / per capita (m)

Rank at the European level	Country	Indicator value
1	Finlanda	19,4
2	Slovenia	15,09
3	Franța	15,00
4	Portugalia	11,3
5	Irlanda	10,6
21	Malta	5,6
22	Slovacia	5,5
23	Spania	4,8
24	Estonia	4,73
25	România	3,5

Source: EurEau, 2018, *The governance of water services in Europe*

The European average of the indicator is 8.35 m / capita of drinking water network. As can be seen from the data presented, Romania ranks last among European countries for which data are available. The first 5 places are occupied by Finland, Slovenia, France, Portugal and Ireland, and the last places next to Romania are Estonia, Spain, Slovakia and Malta.

Table 2. Water network used in industry / per capita (m)

Rank at the European level	Country	Indicator value
1	Irlanda	19,1
2	Danemarca	15,9
3	Croația	14
4	Austria	11,28
5	Finlanda	11,00
21	Malta	3,83
22	Spania	3,54
23	Belgia	2,6
24	Slovacia	2,4
25	România	1,3

Source: EurEau, 2018, *The governance of water services in Europe*

The European average is 6.92 m, and Romania with a network with a length of 1.3 m / capita is also in last place. The first 5 places are occupied by Ireland, Denmark, Croatia, Austria and Finland, and the last 5 are occupied, in addition to Romania by Slovakia, Belgium, Spain and Malta.

Table 3. Average residential consumption (l / capita / day)

Rank at the European level	Country	Indicator value
1	Italia	245
2	Portugalia	204
3	Croația	150
4	Grecia	150
5	Cipru	149
11	România	136
21	Polonia	94,17
22	Republica Cehă	88,5
23	Malta	79,36
24	Slovacia	79
25	Estonia	78

Source: EurEau, 2018, *The governance of water services in Europe*

The European average for residential consumption is 127.22 l / capita / day, Romania ranking 11th, with a consumption higher than the European average.

Table 4. Average rate (€ / m3)

Rank at the European level	Country	Indicator value
1	Danemarca	9,00
2	Finlanda	5,89
3	Luxemburg	5,5
4	Belgia	4,53
5	Suedia	4,44
19	Portugalia	1,82
20	Spania	1,78
21	Italia	1,5
22	România	1,42
23	Grecia	1,4

Source: EurEau, 2018, *The governance of water services in Europe*

The average tariff at European level for the consumption of one m³ of water is 3.24 €, Romania having one of the lowest tariffs in Europe, respectively 1.42 € / m³, a lower tariff being registered only in Greece, respectively 1.40 € / m³. The highest tariff in Europe is registered in Denmark, respectively 9 € / m³

3. Coordinates of the managerial reform of water supply services

In accordance with the literature and specialized practice an efficient management of public water supply services must ensure the following:

Strategic directions for the efficient management of public water supply services

- Funding stability - without funding, water supply systems deteriorate, or being affected the quality of the provided services;
- Improving operational and commercial efficiency;
- Reducing the negative impact on the environment;
- Professionalizing the management of the water services companies and minimizing the political intervention in the development of these services;
- Ensuring the transparency of water services delivery;
- Identifying clear performance measurement targets and indicators that can be monitored and reported regularly;
- Measuring national level performance and comparison with other states;
- Identifying measures and developing strategies to ensure improved performance;
- Reporting to trans-national indicators such as those included in the Recent Economic Developments in Infrastructure (REDIs), or in the International Benchmarking Network (IBNET).

Funding stability - is a central element of the managerial strategies, whether they are addressed at the central or local level. Water supply services companies must provide sufficient revenue for current operations, maintenance costs, repairs but also investments to modernize the quality of service. These revenues come from payments made by consumers, transfers from local and / or central budgets and subsidies. The strategic approach to funding must include analyzes of the extent to which tariffs can be increased so that they can be borne by different segments of the population; consider performance-based budget allocations; criteria for allocating justified subsidies; incentives for suppliers to improve their performance and reduce costs.

As a rule, revenues from consumers are well below the costs, but, given that water supply services are aimed at all categories of the population, any changes in tariffs can only be made after a substantiated impact assessment. For the low-income population, in most countries, subsidies are granted, but this is also a subject to be analyzed in order to highlight their correct allocation, because, ultimately, subsidies are provided by taxes paid by citizens, fact which generates a number of social costs.

Improving operational and commercial efficiency - it essentially means ensuring a better response to the requirements and needs of current and potential consumers. Direct public management models have generally proven to perform poorly, but changes in institutional structures can improve performance. Increasing the level of autonomy in the water supply services involves:

- *An independent organizational structure* - this means that, although it is part of a public system, the organizational structure is self-financing and has a certain level of autonomy for managing current activities. However, this operational model of water supply companies has proved to be unable to operate in a long-term sustainable way as it is prone to political interference.

- *Existence of an autonomous government department in order to supervise the water supply services corporations* - The existence of an autonomous statutory body offers opportunities to improve efficiency by allowing the replacement of bureaucratic administration with commercial administration, by facilitating the introduction of clear objectives of financial and operational performance and cost accounting systems, by creating greater managerial autonomy, by that it allows the replacement of centralized decisions based on supply with those based on demand. The model is quite common around the world and has had mixed performance.

- *The companies organization as public enterprises, run similarly to commercial companies* - however, they must be monitored by competent and independent management and mechanisms must be put in place to encourage managers and staff of service providers to meet the objectives and take responsibility for poor performance.

Involvement of the private sector in the water supply services - There is a wide range of private participation options in the field of water supply services, ranging from a smaller transfer to a larger transfer of risks and responsibilities to the private partner. However, most public-private partnerships in the water supply and sewerage sector will continue to require public funding, either due to difficulties with the possibility and opportunity to increase tariffs to a level that ensures short-term cost coverage, or because of the social objectives or other conditions that cannot be met by private operators. Responsibilities, risks and rewards must be carefully allocated in public-private partnerships. National or regional public companies should be able to compete for public-private partnerships. In countries with low levels of water supply coverage for private consumers, the gap between connected and non-connected households is often filled by small private sector providers. Community programs focused on on-site sanitation are a necessary complement to network sewerage systems, and the local private sector can play an important role in providing the services needed for on-site sanitation. Recent initiatives to integrate these providers into utility contracts and to invite small operators to provide a range of services have yielded positive results for consumers, especially those in poor households.

Legislative framework for water supply services - Water supply and sewerage services have the characteristics of a natural monopoly, as well as a significant impact on public health and the environment. Therefore, specific legislative regulations on the provision of services are needed, whether the provider is a public or private entity. These will refer to the structure and levels of tariffs, to the qualitative standards of service provision and to the objectives related to the extension of the water supply network. With regard to legislative measures, the appropriate division of roles between national and local authorities needs to be clearly defined.

Regulating public sector suppliers is a unique challenge, as public sector entities do not typically respond to economic incentives that have an effect on the private sector. However, better oversight and monitoring of the performance of public sector service providers can lead to greater transparency and pressure to continue the reform. Where private financing is desired, the regulatory framework must provide financiers with sufficient comfort to achieve a return on their investment commensurate with the risks involved.

Developing robust regulatory frameworks and strong institutions to implement them takes time. It is also necessary to ensure the stability and predictability of the regulatory regime by limiting the volume of discretion that regulators have in setting key prices and parameters, especially during the first years of public-private partnerships. Robust and functional dispute resolution mechanisms, which allow for a credible and timely review of regulatory decisions and contribute to the accountability of regulators, are an integral part of these measures. Placing contracts and other regulatory instruments in the public domain will also improve transparency

Expanding water supply services to poor communities - managerial reforms of the water supply sector must generate increased resources for investments in expanding the system. However, it is not guaranteed that the poor will be connected to the general water supply system. Extending services for the poor requires special attention and specific interventions. This would include the initial assessment of poverty, the assessment of demand and availability for payment, the development of contractual arrangements to encourage the operator (public or private) to serve customers, regardless of the expected level of consumption, and a tariff structure that favors access and minimum consumption of water.

Poor people in urban areas often have specific requirements that cannot be met by single approaches. Therefore, successful reforms require transparent and well-informed stakeholder consultation, so that programs can be developed to meet the needs of the poor. A number of regulatory and policy approaches can be used to expand access and accessibility. These include the use of direct or cross-subsidies, the liberalization of entry into underutilized areas, allowing the level of services to be differentiated according to consumer preferences and their ability to pay. Very often, existing subsidies are mostly captured by non-poor households and appropriate measures must be taken to redirect them to lower-income consumers.

Environmental impact - Sector reform must provide an opportunity to improve environmental monitoring and assess the relationship between economic regulation and environmental impact in terms of standards, institutional roles and decision-making processes. It is particularly important to ensure that environmental standards are in line with economic and social policies and regulations and that compliance with them is within the financial capacity of the operator, the customer base and the government.

Conclusions

This paper highlights an area of economic activity, that of water supply services, which, par excellence, is managed in the public system. The main objective of the paper is to raise the issue of an approach based on efficiency and performance in the public system. The paper presents a series of proposals on the managerial reform of the public drinking water supply system, but the directions of approach have the potential to transfer to other public areas to be approached from a similar perspective to the private sector.

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