

Natural Monopolies In Albania: Problems And Regulation. The Case Of The Water Supply & Sewerage

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Abstract

Purpose: *This paper examines the problems of the water supply & sewerage (US&S) sector in Albania and the way they have been carried over time. Through the paper, there are described financial problems of the Albanian water industry and the current regulatory methods.*

Methodology: *The authors have used a systematic literature review on 19 case studies of WSS industries in countries like: England, France, U.S.A, etc., to identify politics and conditions, which have helped developed countries to overcome low performance problems, in the industry of water supply and sewerage. Secondary sources, such as: scientific studies on natural monopoly, case studies of developed and developing countries, a series of manuals on regulatory practices, followed by Western countries, have been analyzed, for comparative purposes. Also, data from annual performance reports of the water supply sector, strategic plans, ERRU regulatory acts and the Constitution of the Republic of Albania, are also used.*

Findings: *The implementation of a series of reforms led to significant improvements until 2007. However, after 2007, and especially the 2014 reform for decentralization and transfer of control of the sector to the local level has put the water supply sector in the performance stage where operating efficiency has decreased and performance has not improved.*

Value: *In response to the current mismanagement of electrical energy, Energy Efficiency Improvement Plans should be drawn up for US&S companies. Also, this paper offers a valuable comparative approach between countries of which this monopoly has been managed efficiently.*

Keywords: *natural monopolies, public good, water supply and sewerage, Albania, regulators.*

Introduction

According to Hanemann (2005), the problem of the water supply and sanitation industry lies in the need to match the demand and supply of quality water, in the right place, at the right time and at a price that people are able and willing to pay for having it. This illustrates a widespread opinion in the literature that it is the duty of state institutions to ensure water supply, efficiently.

However, efficient management for the materialization of this purpose has been a challenge, especially for the governments of countries in political transition. That's why in 1990, many developing countries privatized their water supply and sanitation sector. From 2002 to 2005, countries such as Albania, Algeria, Ghana, Peru and Russia joined this process and allowed private participation in this sector (Marin & Izaguirre 2006).

Despite the reforms undertaken in the water sector in Albania, within the EU integration process, the problems of this industry remain unsolved. Although identified by the monitoring unit, their solution has not been achieved even when they are foreseen by the national strategy, to be addressed. This implies that the reforms and policies undertaken have not found the right environment. In advance, the state must ensure certain conditions, so that the measures taken can be implemented.

Literature Review

Water fulfills both the definition of a public good and that of a private good. As a public good, it has two defining characteristics; water is non-excludable in possession and non-rival in consumption (Hanemann, 2005). However, it can be deposited, distributed, in countries like England, even completely privatized and finally sold on the market, for individual and exclusionary consumption. These types of distribution forms add to the characteristics of water the features of a private good.



Referring to Savas classification, on the categorization of goods according to the type of consumption and excludability, there can be hypothesized four forms of water as a good: Private Goods, Toll goods (taxable goods), Common-pool goods, Collective goods (Savas 2000).

So, some forms of water can be better provided by the government, while others would be more efficient to be provided by the private sector. However, the piped water, over which the study is focused, remains a case of natural monopoly and the performer of operations is subject to regulatory frameworks.

This form of economic entity is related with the significant cost of the water supply infrastructure investments. But even so, in order to use the economy of scale, water distribution can not be provided by several firms. The firm, generating alone the entire social output of the industry, can afford the high fixed cost of the necessary infrastructure.

The sole presence of a provider will limit the level of output to the level of a monopoly, which would lead to a loss of social welfare (Savenjie 2001). On the other hand, due to significant fixed costs, even though the monopolist will operate at higher prices but at a lower amount of output, the profit will be low. His unfavorable situation worsens when the state requires to trade at the social price. Therefore, government intervention is necessary to regulate these markets. It consists in the combined application of price controls and subsidies.

Experience has shown that ownership of industry assets, management and simultaneous performance of services by the state has left much to be desired. Baietti (2006) describes it as a chain of consequences: Incomplete coverage of the population with water supply, frequent water disconnections combined with high operational costs, no financial surplus for expansion opportunities, were followed by inappropriate tariffs and lack of willingness on the part of consumers to pay.

The causes of unsuccessful management practices to provide water service, beyond the nature of a natural monopoly, are found in the so-called internalities. According to Wolf (1988), this situation is called non-market failures and occurs when the private interests of officials, with an influence on the sector's decision-making, prevail over public ones. Which is followed by increased costs and misallocation of resources and, as a result, externalities.

Politicians, in accordance with their own interests and short-term goals, change the charging methods and prices. In Peru, during 1990, to please the electorate, the majority policy applied surprisingly low prices for water service (Savodoff & Spiller 1999). In 1994, the World Bank estimated that the revenue collected could cover on average only 30% of the total cost. (Cowen & Cowen 1998).

Other forms of using decision-making in the water industry, with a profitable or powerful purpose, are the manipulation of tender documents and the release of confidential information. Thus, Davis (2004) cites the case of India, where firms

competition for tenders is not based on the best rates, investment capital and projects but on paying senior officials to provide inside information or manipulate the tendering system.

These internalities in the water and sanitation sector create space for poor financial management. Employing more staff than is necessary to accomplish the tasks, increases the cost of water service and creates the need for higher rates. On the other hand, it leads to difficulties in monitoring the performance of employees and, as a consequence, a decrease in the productivity of public utilities (Ostrom & Ostrom 1977).

According to a study by Tynan and Kingdom (2002), the water sector in developing countries reported 20 employees per 1000 connections. Meanwhile, in developed countries, this ratio consisted of 2-3 employees per 1000 connections.

The divergence between the cost and the collected benefits, the specialized technical requirements for this sector, the inappropriate political interventions combined with poor financial management are important determinants of the state's performance in the water and sanitation sector.

In these conditions, the participation of the private sector is important. The experience of the private sector has shown that, without the support of the public sector, it cannot improve the performance, in the water industry. It can not create an adequate competition to reduce the cost, does not increase the coverage of the water supply and does not increase the financial resources to the expected size.

From the supply side, the regulatory framework established by the state should ensure a business-friendly environment and effective regulatory mechanisms.

On the demand side, the state should strive for mechanisms to overcome the costs not covered by fees and subsidies to improve the quality of services in WSS.

A business-friendly environment reduces the risk of investors getting involved in the operating system of the water supply industry. In such environment, there are well-defined property rights, competitive labor markets, business ethics and good governance. According to the World Bank (1992), the participation of the private sector has been successful in those countries where reforms have been undertaken for an open economy and free entry into the market.

Shirley and Menard (2002), highlighted three conditions that enable the success of a regulatory contract: the tendency and effort to reduce asymmetric information between the regulator and the operator, the generation of motivational incentives for the operator in order for the latter to fulfill the terms of the contract and that both parties must generate trust in each other, respecting the agreement.

Asymmetric information can be reduced through continuous control and monitoring. Thus, the regulator to collect basic information could use Yardstick competition. Although market competition in the water industry is rare, when it is present as in the case of England, the best form of operation is considered



the franchise. Through aggressive commitment to competitive goals, the firms themselves will take care, even by paying for the collection of information about the market, another company.

Methodology

To identify politics and conditions which have helped developed countries to overcome low performance problems, in the industry of water supply and sewerage, the authors have used a systematic literature review on 19 case studies of WSS industries in countries like: England, France, U.S.A, etc. Secondary sources such as scientific studies on natural monopoly, case studies of developed and developing countries and a series of manuals on regulatory practices followed by Western countries have been analyzed, for comparative purposes. They have also, studied and interpreted the primary data, which were provided through the annual performance reports of the water supply sector, strategic plans, ERRU regulatory acts and the Constitution of the Republic of Albania. Due to them, they were able to analyze the performance of the water supply operators in Albania and identify the main laws that regulate the activity of this sector.

The WSS Performance

Water supply coverage has remained the same over the past decade. It is clear that urban areas have a wider coverage than rural ones. From 2007 to 2021, overall water supply coverage has remained at an average level of 77.7%, approximately 93% for urban areas. However, in 43% of rural areas, the water supply network is completely missing. As a result, residents use alternative sources, wells, natural ponds or water transported by tankers. Regarding the quality of the service, we must consider two aspects; its continuity and quality of drinking water. There is a large gap between UK companies, with the lowest level of service continuity being 3h/day and the maximum being 23h/day. Half of the companies provide less than 12 hours/day of water supply. Regarding the quality, although the performance report of the water supply system states that the parameters are optimal, the citizens constantly have complaints about it. The practices of determining the price of water supply in Albania are characterized by an obvious lack of transparency. Consumers often do not have enough information about the cost of water production and service, which makes it difficult to understand how prices are set and raised. One form of lack of transparency is that of afro-religious billing. It ranges from 3000-4000 ALL per subject, when applied. This situation is related to the lack of equipment

with a measuring device for evaluating the quantities of water consumed. On the other hand, not equipping citizens and businesses with measuring devices makes it difficult to avoid network abuses and misuses.

Financial and Managerial Mismanagement

The average level for the entire Non-Revenue Water (WWR) sector, in 2021, reached 65.4% but compared to the WWR level in 2007, it has not improved. The poor results of WWR are related to low metered coverage. International best practices consider a minimum of 95% as a good collection rate.

Considering the fact that the variation between 56 WS companies, regarding the possibility to measure water consumption, goes from 0.15 to 100%, it makes one think that this indicator is related to the lack of managerial will to perform according to objectives.

Installation of meters is important to avoid abuse and misuse. In practice, achieving the 2017 target of 85% metered coverage would not be impossible if WS utilities did not continue to unnecessarily increase staff costs. The staff cost occupies the main item in the operation and maintenance budget in WS companies (it varies on average 22-81% and on average, at the national level, 34%).

Staff efficiency, in 2021 is reported to be 5.8 employees/1000 connections and UK companies have continued to increase the number of employees on average, with around 336 new hires. In 2007, this indicator was 6.3 employees/1000 connections. According to the standards, this indicator should be 2 workers/1000 connections.

It is noted that the increase in employment occurred during the elections, for example during the local elections of 2019. Also, the movement of managerial staff coincides with the same periods. The latter hinders the development and professionalism of employees and creates a culture of fear and repression in the organization.

Another important item in the operation and maintenance budget in UK companies is electricity. It ranges from 1% to 78% of total OPEX and averages 26% nationally.

According to the report published by ERRU, during 2022, out of 58 companies operating in the sector, 26 companies performed poorly, below the 70% level of this indicator. This increase can be seen in the context of energy cost increase.

The increase in price can explain the increase in the cost of energy, but it does not explain the reason for the increase in the amount of energy consumed. If we refer to the data related to the quantities of water pumped, they do not coincide with the amount of energy consumed for them.



The efficiency of water pumps varies, but is usually in the range of 40-70%. This means that to pump 1 liter of water, between 1.43 and 2.5 kW of electricity may be needed, using the minimum and maximum efficiency values. A worn pump system and outdated distribution infrastructure mean that the amount of electricity needed to pump a liter of water is greater. Given that the water supply network in Albania dates back in decades and the rate of its consumption is high, as a result the level of electricity to make it to work is higher.

Also, related with outdated supply system and its insufficient maintenance, are the high levels of water losses, published by the waterworks reports. According to the multi-year strategy published for consultation on the sector, the current infrastructure in the water sector is quite depreciated. Most of the WS utility's distribution network dates back 60 years and as a result, its present value is much lower than its replacement cost.

For water supply services, fixed assets per inhabitant range from 0 to 157,000 ALL/inhabitant with an average of 16,000 ALL/inhabitant, while the wastewater average is much lower at 13,000 ALL/inhabitant and ranges from 0 to 359,000 ALL/resident. This means that depreciation costs and maintenance costs (calculated as part of the asset value) will increase over time as the existing old infrastructure is replaced and expanded, worsening the recovery of operational costs for services.

For the period 2007-2009, the annual average of investments was 8.68 billion ALL. Compared to 2015-2016, the level of investments increased by 11.2 and 13.04 billion ALL. Meanwhile, in 2021, the value of investments fell to 4.25 billion.

One of the main reasons for the lack of investments in the water supply infrastructure in Albania is the lack of sufficient financial resources. Public and private funds available for this sector have been limited. When there is a lack of transparency and difficult procurement processes, it is difficult to attract foreign investors or secure the necessary funds to improve infrastructure.

Successful investments in water infrastructure require long-term planning by the government and relevant institutions. Improving the water supply infrastructure is not a quick process and requires proper coordination at the strategic and operational level. Also, it will serve as an instrument to attract other investors, public and private.

Most of the water supply and sewerage services in Albania are provided by public operators. This brings the lack of competition which can create obstacles to innovation and to ensure high quality of services. In this context, it is important to create favorable conditions and regulations for the entry of private operators in the market and to encourage healthy competition.

Currently, the entry of private operators into the water and sanitation sector is still limited and hindered by complex licensing processes and regulations.

Licensing processes, public procurement and other legal requirements can be complicated and difficult for private operators to cope with. It is important that Albania develops clear and simple regulations to facilitate the entry and operation of private operators in the water supply and sanitation sector.

Also, the government should improve the business climate. It is important to take steps to fight corruption, in order to create a better business climate. This will encourage foreign and local investors to engage in the water supply sector. Corruption manifests itself in the form of low payments, dubious contracts, rigged tenders and misuse of public resources.

Excessive bureaucracy is another gap for corrupt affairs. The high level of bureaucracy and lengthy procedures in the water sector can create opportunities for corruption. When there is a lot of room for personal gains and abuse of administrative processes, sector employees can use these conditions to carry out illegal and corrupt actions.

And finally, the lack of transparency. Information regarding the performance and planning of the water supply and sanitation sector is often insufficient and unavailable to citizens. Financial and performance reports are vague, and the lack of transparency fosters suspicion and mistrust among citizens. In 2022, 26 WS companies were checked by ERRU, assessed as having reported suspicious data.

For that must be induced increase of responsibility level on the part of the management staff of WS companies and control on the part of the regulator and ERRU

Conclusions

The implementation of a series of reforms led to significant improvements until 2007.

However, after 2007, many indicators on the operation and management of the sector have remained the same. The 2014 reform for decentralization and transfer of control of the sector to the local level has put the water supply sector in the performance stage where operating efficiency has decreased and performance has not improved.

The experience of developed countries has shown that if the appropriate institutional environment is created and regulatory mechanisms are strengthened, the engagement of the private sector can be an important partner for the success of the water supply sector. The stronger the regulatory framework of a country, the less risky privatization becomes for the natural monopoly of water and the greater the propensity for success.

There should be a clear, objective and fair process for the selection and appointment of managers of water supply operators. Performance contracts should



be considered in relation to the position of the Executive Director of the company in management for the improvement of the financial performance of the company, from which the continuity in the task will also depend.

Also, demand accountability from the mayor of the relevant municipality. As in France, the mayor must be held accountable for poor performance and poor quality of services (Ephraim Clark&Gerard Mondello, 1996).

Regulatory mechanisms should generate effective incentives to encourage operators not to act abusively and to disclose more information, in terms of financial reports publications. These incentives can be in the form of price adjustments, rewards or the establishment of a system of performance indicators to check efficiency and control over distribution. In Thailand, this type of system resulted in profitability rate of 40.3% over the established target (McIntosh 2003).

In response to the current mismanagement of electrical energy, Energy Efficiency Improvement Plans should be drawn up for UK companies. To draw conclusions, to apply and the needs that they foresee as a necessity for increasing operational efficiency are financed.

Finally creating an institutional, a friendly business environment and installing effective regulatory mechanisms are prerequisites that have served other countries successfully. As such, they should also be considered to be applied in the water and sanitation sector, in Albania, for the effective application of reforms and policies.

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