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The privatization *of public* water utilities

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Latin America has kept in step with the worldwide trend towards the privatization of public utilities. Its motivation for doing so stems from a number of factors: an economic philosophy, its quest for greater efficiency, macroeconomic situations, debt-equity swaps, decisions to bring private capital into the management of public utilities during times of economic crisis, and others. This article analyses the characteristics and components of public utilities, the differences existing between one utility and another (particularly in terms of their capital/revenue ratio), the rigidity of supply and investment, the possibilities of giving consumers a choice, the concept of economies of scale and how it ties in with the notion of monopolies, and the legal implications of monopolistic systems. It also examines some aspects of the legal regulation of utilities, such as administrative controls, the idea of reasonable profit levels, control by holding companies, regulation and monitoring mechanisms, and terms and conditions of service, including some components of the relationship between water use and the management of water resources. Among the specific cases of utility privatizations which are reviewed, particular attention is devoted to the case of the United Kingdom, which is currently the subject of public debate; selected aspects of Spain's Public Administration Contracts bill are outlined as well. In conclusion, the author suggests that the countries of the region should take comparable legislation and the experience of other nations into account and should set up suitable regulatory and monitoring systems prior to privatization.

I

Introduction

This article has been prompted by the privatization process in South America, which in some countries has been undertaken not only with a view to increasing the efficiency of public services but also as a means of bringing about structural changes in the economy (Stelzer, 1995; Gerchunoff and Cánovas, 1993, p. 2).

In some countries, therefore, privatization operations have been, at least initially, a "macroeconomic tool" for stabilizing the economy, which has meant that the increased efficiency of production resulting from privatization has not necessarily been passed on to society in the form of lower rates and charges (as has occurred in the privatization of monopolies in various regions and countries of the world). In the United Kingdom, for example, the Exchequer's purpose in carrying out privatizations has been to maximize profits, while the corresponding policy has been aimed at broadening the shareholder base. Gains in efficiency have not resulted in lower rates for users. The privatization of these systems has been accompanied by very loose regulation, and the resulting lack of competition has triggered demands for stronger regulation (Stelzer, 1995; Gerchunoff and Cánovas, 1993, p. 2).

In this article we will look at various privatization techniques and their legal content, as well as the concept of public utilities and methods for their regulation, with a view to helping to identify suitable practices and regulations for the sector on the basis of comparable legislation. The article will focus on water utilities because so many public utilities involve the use of water resources, while the current trend is clearly towards the internationalization of these utilities by investors and service providers (Merrill Lynch, 1991). This trend is also evident in the drafting of legislation, particularly in the European Union. [1]

Public utilities are a structural part of modern society. Without them, today's cities and forms of production would simply be inconceivable. In most cases, they entail some monopolistic elements and have a bearing on the public interest, since they are connected with such aspects as basic public health and economic development (Tieman and others, 1995).

These activities involve significant economies of scale and of scope, call for fixed non-liquid investments and a production capacity designed to meet peak demand, and are subject to government regulation. The regulatory system primarily focuses on service quality and rates, with the latter being pegged, in some systems, to reasonable profit levels for the service provider.

The legal instruments governing the provision of such services entail elements of public interest which set them apart from common-law contracts, and the State takes an active part in their implementation or regulation. The institutional structure for the regulation of these utilities is composed of commissions and agencies in respect of which a special effort is usually made to ensure their technical and financial capabilities and independence.

In terms of water use, service providers are large institutional users which are normally required to obtain water use permits, to comply with regulations concerning water discharge and pollution, and to respect general obligations regarding the efficient and beneficial use of the resource.

Utility companies are often both vertically and horizontally integrated and tend to become internationalized. Consequently, many systems devote par-

□ This article is based on a study presented at the Ibero-American Seminar on Water Laws and Technology, organized by the Water and Environmental Sciences Institute and the University of Alicante at Alicante, Spain, on 15-17 December 1994.

[1] See, for example, the Public Administration Contracts bill of 26 October 1992, which was submitted to the Spanish Parliament, among other reasons, as a means of bringing the country's legislation into line with that of the European Community.

ticular attention to monitoring the composition of their blocks of shares and to the methods of signing contracts.

Countries that are now returning to a system of privately-operated public utilities are beginning to develop the relevant regulatory mechanisms and institutions. This institution-building process is essential for a proper understanding and monitoring of utility-related activities. The institutions created for this purpose, which perform a role of fundamental importance, require constant updating.

Familiarity with comparable legislation and management systems is highly valuable in this area, and the creation of systems, programmes and projects for transferring this type of knowledge would be a useful step.

II

The importance of public utilities in modern society

The role of public utilities in modern society can rightly be described as structural, because it is an outstanding element in social and economic organization, similar in importance to a society's monetary, credit and educational systems. The existing systems for organizing production and establishing population centres would be inconceivable without efficiently-run public utilities on a mass scale.

Public utilities have a number of characteristics which have made them a highly important area of the law:

i) They are activities in which competition is not fully effective, and are usually subject to government regulation designed to protect the public interest (Phillips Jr., 1993, p. 3).

ii) They seem to operate more efficiently when they are monopolies; however, in such cases public utilities often must be compelled (by means of regulations) to contribute to the general welfare rather than doing so voluntarily (Kaysen and Turner, 1959, pp. 48-49, as cited in Phillips Jr., 1993, p. 4).

iii) The regulation of public utilities is a result of the public interest associated with the activity; this is the primary legal basis for such regulation, which is chiefly expressed in the control of rates and services (Phillips Jr., 1993, p.4).

iv) Some authors feel that conflicts often arise between public and private interests as they relate to public utilities; they see this conflict as stemming from the difference between private firms' main objective (profit maximization) and the public interest (adequate service at the lowest possible price). Some countries have created institutions specifically for the purpose of conducting research on public utilities, since the regulatory process is not only controversial but also analytically demanding.[2]

v) At present, there are clear differences in the openness to technological change of the various types of public utilities; this gives rise to differing regulatory needs and, in some cases, even to a reformulation of the concept of natural monopolies in certain sorts of activities.

vi) Although regulation is certainly a characteristic of public-service providers, the content and scope of that regulation is not fixed, but instead tends to undergo adjustments as time passes and as circumstances and needs change (Phillips Jr., 1993, p. 7).

vii) At the same time, some authors contend that regulation has not served its purpose and that, in practice, it has become "the haven of refuge for all aspiring monopolists who found it too difficult, too costly or too precarious to secure and maintain a monopoly" under a deregulated system (Gray, 1940, pp. 8-20, as cited in Phillips Jr., 1993, pp. 8 and 31).

[2] See, in particular, the reference made to the creation of the National Regulatory Research Institute in the United States (Phillips Jr., 1993, pp. 5 and 17-21).

III

The economic characteristics of public utilities

Among the main economic characteristics of public utilities are the following:

1. Economies of scale and of scope

As we said earlier, part of the justification for having public utilities lies in the notion of natural monopolies, i.e., activities involving economies of scale (the greater the scale of production, the lower the unit cost) and of scope (certain types of services are less expensive when they are provided by one firm than when they are provided by two firms).

Drinking water and sanitation services provide ready examples of such a situation. It has been determined that the investment required to supply drinking water and sanitation services via a small-scale system for an average three-person household is US$1 600, whereas with a larger system, the figure is only US$200 (economies of scale). The concept of economies of scope, for its part, has been advanced as an explanation for the tendency to integrate drinking water services with sanitation services. Thus, small-scale systems experience financial problems which give rise to difficulties in technical areas, in management and in the general adaptation or improvement of services (Lawton and Davis, 1983, as cited in Phillips Jr., 1993, pp. 851 and 836-839). Economies of scale are thus a factor in the establishment of monopolies (Phillips Jr., 1993, p. 56), whose existence, in turn, justifies the regulation of prices (rates) and products (services).

2. Fixed non-liquid investment

The attainment of economies of scale frequently requires heavy non-liquid investments in large-scale infrastructure. This type of fixed investment usually represents a sizeable portion of total costs, and this means that the organizations providing such public services are capital-intensive. This trait, too, is particularly marked in the case of drinking water and sanitation utilities, in which the revenue/capital ratio is very low (Phillips Jr., 1993, p. 15).

Demand for these essential services, for which there is no substitute, is continually growing. There have been no major technological advances in recent years in the field, and this, coupled with inflation, environmental requirements, the cost of compliance with established standards and the need to secure and protect new sources of finance, has led to a constant increase in costs, with the resulting capital/revenue ratio ranging from 6:1 to 10:1 or, according to some authors, even as much as 12:1 (Wade Miller Associates, Inc., as cited in Haarmeyer, 1994, p. 43).

In fact, drinking water and sanitation services have been described as the most capital-intensive of all the public utilities (Environmental Protection Agency, 1977). As we will see later on, this influences the legal conditions under which the private sector invests in drinking water supply and sanitation services, as well as these utilities' financing systems and the regulation of private activity in this sector.

It should be noted that not all public utilities have the same capital/revenue ratio. For telephone services, the ratio is 3:1, for electricity it is from 3:1 to 4:1. and for airlines it is 1:1. This clearly influences the private sector's propensity to invest, the existence of real competition, the likelihood of monopolies and, in consequence, the various activities' differing needs in terms of regulation.

3. Idle capacity

Fixed investment in public utilities is carried out in order to meet peak projected demand and to cover the increases expected in that demand over time. Some factors of production cannot be divided up, and for technical reasons must therefore be structured in a single bloc. Idle capacity can be regarded as a result of the diversity of demand levels, which prompts service providers to try to attract that demand through the use of consumer incentives. Since this may lead to undue discrimination, it becomes a factor in the adoption of controls for preventing such an eventuality.

4. Operational limitations

In many cases, the possibility of competition among service providers is limited by the nature of the ser-

vice itself and by the carrying capacity of the facilities in question (e.g., pipes and available areas for installing and laying them), which normally do not have enough physical space available to support a large number of suppliers and thus set the stage for competition.

5. Market structure

In most cases, the demand for public utilities is diversified and fairly inelastic (although differences do exist from one utility to the next and between what we might call essential consumption and needs of other types). In addition, users are limited by the rigidity of the supply system (since they usually are not able to choose among various possible suppliers of drinking water and sanitation services).

6. Legal implications

Owing to the above characteristics, entry into the public-utility market is usually subject to government control and to regulatory measures aimed at forestalling transfers of income from consumers to investors. This is accomplished through consumer-complaint mechanisms and controls that have been expressly designed to keep the social, economic and political power of public utilities in check. [3]

IV

Legal concepts relating to the regulation of public utilities

Some activities have the ability, potential or characteristic tendency to affect the community as a whole through their influence on the general welfare, public health, collective security and other elements. These activities are subject to government control in order to safeguard the general welfare (Spota, 1941, p. 917, note 189; Phillips Jr., 1993, p. 87). This type of control is justified by the monopolistic nature of many such utilities, by their importance as essential consumer services, and by the absence of other alternatives. [4]

Accordingly, the administrative contracts under which a private person is granted the right to operate a public utility usually contain special clauses regarding the provision of guarantees, the administrative authority to interpret the contract, modifications for the purpose of serving the public interest, dispute settlement, determination of effects and the clarification of any doubts that may arise. [5]

Government control takes the form of regulations governing the quality of the service provided, its scope and coverage, frequency or consistency, price and, in the case of drinking water services, environmental impact.

Regulation, as well as the philosophical grounds for its existence, is nothing new. Some precedents in this area were laid down in the doctrine of the early Church Fathers –"just price" (*justum pretium*) and "natural price" (*verum pretium*)– and in the regulation of the guilds of medieval times and of activities regarded as being of common interest (Glaesser, 1957, pp. 196-201, as cited in Phillips Jr., 1993, p. 122). These measures regulated prices, the quality and type of service provided, etc. The topic has direct implications for a number of different aspects of water-related public utilities, as we will see below.

[3] See Breyer, as cited in Phillips Jr., 1993, p. 60.

[4] In some countries these controls are termed "police powers". This concept has some very interesting facets, since under some circumstances it permits the Government to act upon private goods on the grounds that certain types of controls, although they may reduce the economic rent derived from a good as a consequence of given regulations or linkages, are acceptable so long as the return on the corresponding investment, even though it has been limited, is "reasonable" (Penn Central Transportation Co. vs. New York, 438 US 104, 1978). It has been suggested that a very strong connection may exist between this case and the theory of public utilities. See Findley and Faber, 1992, p. 287.

[5] See the Spanish Public Administration Contracts bill, article 7.

1. Licensees' earnings

This section will make no attempt to delve into the technical complexities of different rate systems but will simply describe some of the criteria used to set the parameters which determine the total profits realized by public utility licensees and their connection with the rates charged. Existing legislation offers examples that set precedents in this area. The laws of the State of New York, for example, require that water use rates shall be fair and reasonable and may not exceed the limits authorized by law or by order of the relevant regulatory commission. This question is clearly linked to the issue of reasonable profits for the licensee. [6]

The most important point here is to determine what constitutes a reasonable profit. Providers of public services cannot be forced to operate at a loss, but this does not mean that they are guaranteed an actual return on their investment. The rate should be such as to cover operating costs and provide a reasonable return on the investment. It should also be of a level that will enable the organizations providing these types of services to attract resources in the capital market. Legal experts in the United States have discussed the idea that the returns on such an investment should be comparable to those realized from activities involving similar levels of risk and uncertainty, in similar areas, at the time the activity is being conducted. They have also said that such returns cannot be set at a specific level or according to a pre-determined formula, since they are subject to changes in economic conditions stemming from the state of the general economy and the positions of the specific companies concerned. Indeed, in some cases rates have been lowered as a means of punishing companies deemed to be inefficient (Phillips Jr., 1993, p. 427).

Not all systems regulate the return on investments. Haarmeyer claims that since French water companies have not been subject to profit controls that hinder the innovation process, they have led the field in technological and managerial innovations (Haarmeyer, 1994, p. 48).

In the United Kingdom, drinking water and sanitation utilities were privatized in 1989. Rates have been regulated through the establishment of price caps. The system functions on the basis of the wholesale price index plus an adjustment factor ("K"). In the water industry, this factor is positive owing to the characteristics of the subsector, which include capital-intensiveness, high investment needs and low productivity (Haarmeyer, 1994, p. 49).

The United Kingdom's experience merits analysis because it has sparked a widespread public debate on the subject which is in some ways unique in its conceptual richness, ideological seriousness and transparency. The English system is based on the idea that earnings should not be limited but that caps should be placed on the rates charged. In so doing, the Government "slanted the playing field in the investors' favour at the expense of consumers" (Stelzer, 1995). By 1992-1993, water company earnings had climbed by an average of 23%. Operating profits were up by 34.3%, on average. These returns were felt to be excessive (Tieman and others, 1995). As of March 1994, water rates were absorbing a sizeable portion of the income of the poorest sectors of the population, and these sectors' ability to pay became the primary consideration in the determination of prices for 1994 (Booker, 1994, p. 61).

The British system was overhauled in July 1994. The Office of Water Services lowered the adjustment factor in the midst of a climate of consumer discontent, with users charging that the directors of water companies were doubling their salaries by doubling the cost of water to consumers (*The Times*, 1994), that the water companies' costs were not rising as fast as inflation, that capital expenditures were not as big as planned, that money had been lost on sideline businesses that had nothing to do with the main activity, and other problems. All this has prompted some commentators to forecast that regulatory provisions which are more closely tied to profit levels may be implemented in the future (Helm, 1994). Others do not so much predict but rather recommend that some means of controlling earnings and profits should be introduced into the regulatory system (Stelzer, 1995). In addition, in view of how much the stock in these companies is worth, the possibility of taxing windfall profits has been mentioned (Tieman and others, 1995).

If we examine the experiences of other privatized utilities, we find, for example, that the relevant regulatory decree in Buenos Aires includes references to the rationality and efficiency of the sys-

[6] *Consolidated Law Service*, vol. 26, New York, 1993, p. 158 *et seq.* (article 89-b-1).

tem, to a balance between supply and demand, to health and social objectives, to the need to reflect economic costs as well as the licensee's profits, and to transfers between different sectors of users. Rates are subject to review in the event of any significant change in operating costs, in the quality or level of service, in the taxes to be paid by the utility company, in the exchange rate for the dollar or in environmental or other laws. [7]

It is interesting to compare the above Act with Spain's Public Administration Contracts bill, which calls for a set price in local currency and stipulates that the price should be geared to the market (article 13). Readjustments must reflect actual market fluctuations (the markets in question may be regional ones), including changes in the cost of labour and of basic factors affecting the contract (articles 100 and 101 of the Public Administration Contracts bill).

2. The provision of public services

One of the typical features of public utilities is that they involve economies of scale, which are a basic element in the concept of natural monopolies. The legal consequence of this is that the entry of service providers into the public utility system has been subject to State authorization. The fact that some of these utilities are monopolies has another legal implication as well: the conditions under which such services are provided are (or should be) monitored in order to ensure that utility licensees are not obtaining monopoly rents at the expense of users.

Spain's Public Administration Contracts bill permits the private management of public utilities when they have an economic content and the services provided are of a sort that can be delegated. Concession contracts cannot be implemented until a legal framework for the utility has been formed, areas of administrative responsibility have been defined, the benefits to be provided to the persons subject to that administrative jurisdiction have been specified, and it has been established that the activity corresponds to the administrative authority in question and is subject to the police powers necessary to ensure the satisfactory operation of the utility in question (article 151).

Consequently, the legal instruments by which authorization is given for the operation of public utilities have certain features which differentiate them from other contracts. One very important feature of this sort, which has already been mentioned in our discussion of the privatization process in the United Kingdom, is that rate guidelines are subject to periodic review to ensure that the rate is reasonable and that it is performing its assigned functions of attracting investment and covering costs while not representing a monopolistic levy on users.

Under Argentine law, whose legal doctrines and jurisprudence have been strongly influenced by European experiences, "the licensing agreement is not a common-law contract ... between equal parties ... but rather the delegation to a company of the responsibility for duly providing a public service ..."; following along the lines laid down by Mayer, it is stated that "the licensing arrangement is an administrative act that cannot be covered satisfactorily by private-law contracts"; therefore, "in the event of disputes, the application of common law is suppletory" and is applicable only in so far as it does not contravene the general interest; "the rights which arise are public civil rights". United States law applies similar concepts, since the possibility of providing a public service is contingent upon the issuance of licenses, franchises or administrative permits, all of which imply the existence of special terms and conditions. This circumstance has important implications, since the legal act is subject to police power, and the licensee is obligated to comply with regulations and provisions even if they are subsequent to the issuance of the license. [8]

Under English law, providers of drinking water and sanitation services are appointed, and the appointee is required to discharge all duties imposed by any legal provision. In addition, the terms and conditions of the appointment are subject to agreed modifications, through their referral to the Antitrust Commission, by reason of functions performed by the companies in question that involve the public interest, or in accordance with orders given under other legal provisions (HMSO, 1991, articles 6-17).

[7] Article 44 of the regulatory act ("Marco Regulatorio") governing the granting of concessions to provide drinking water and sewerage utilities in Greater Buenos Aires (Buenos Aires, Argentina).

[8] See Spota, 1941, v. 2, pp. 908-925 together with the doctrine and jurisprudence cited therein; Phillips Jr., 1993, pp. 94-96 and 136; and 94 US, Munn vs. Illinois, 1877.

A recent decision handed down in the United Kingdom holds that drinking water and sanitation utilities operate under the control of the State. In the case of South West Water, the court found that, despite its private character, South West Water derives from the State, since it operates a public utility which is controlled by a State-designated regulator. The legal character of the organization providing the service is irrelevant because the public utility is under the control of the State (*Financial Times*, 1994).

The activities of the State may not cause the licensee to operate at a loss or to suffer confiscation. Nevertheless, the methodology and concept of "reasonable" profits, both in regard to public utilities and as they relate to their conceptualization (in line with the Penn Station case mentioned earlier), are a legal tool with financial, economic and technical underpinnings which should be properly understood, analysed and applied in countries that have privatization processes under way.

3. Licensees as institutional water users

The management of water-related utilities has an impact on both the quantity and quality of the resource. For this reason, licensees are regarded as large-scale users and are subject to a series of water-use controls and requirements. The proliferation of water uses, their reciprocal effects and their aggregate impact on the environment have made it necessary to establish organizational and legal structures to monitor, plan and reconcile those uses.

These institutional measures tend to be structured at the watershed or area level for planning and management purposes (Dourojeanni, 1994; ECLAC, 1994; Barraqué, 1993, p. 43 *et seq.*). This is what has been done in France, Spain and other European countries. Latin America is currently engaged in the analysis and discussion of this issue, and this process is quite far advanced in Brazil, Colombia, Peru and Venezuela.

There is also an increasing tendency to separate water management for specific uses from national water policy and management. As a result of this trend, responsibility for water policy and planning in general is being handed over to ministries responsible for the environment, natural resources or water resources. The idea here is that this is a suitable way to ensure impartiality and objectivity in the management of a resource subject to both environmental degradation and multiple demands. A report by the Secretary-General of the United Nations to the Committee on Natural Resources (United Nations, 1994) cites examples of this tendency in a number of countries, including Canada, France, Guatemala, Israel (with some differing characteristics), Oman, the United States and other nations.

In addition, some countries have modified their integrated water monitoring and management systems along with the system under which their drinking water and sanitation utilities operate.

Thus, in 1992 Mexico reformed its water-resource legislation with the introduction of a package that includes the adoption of a system of tradeable water rights, the creation of watershed authorities as a means of reducing the fragmentation of the water sector, the imposition of fines for polluting, and the possibility of privatizing the country's drinking water and sanitation utilities (Casasús, 1994).

One of the merits of the United Kingdom's reform of its drinking water supply and management system is that it separates water companies from the water-resource monitoring and management system; in other words, the regulator has been separated from the object of regulation. Today, the English system applies a series of controls on water companies. These include controls on the system as such, which are administered by the Office of Water Services, while environmental and water-use controls are administered by the National Rivers Authority and the Drinking Water Inspectorate (Jeffrey, 1994, p. 64).

England's water companies have certain environmental obligations they must fulfil (see the Water Industry Act, 1991, articles 3-5). The prospectus describing the terms of sale of water-company stock sets out certain conditions regarding corporate water use. It notes that, pursuant to the 1963 Water Act, water utility licensees must obtain permits in order to divert watercourses or to create certain types of reservoirs. The regulation of discharges or dumping and the conditions under which dumping may be performed, as well as the issuance of watercourse diversion permits, are the responsibility of the National Rivers Authority (see the prospectus *The Water Share Offers,* 1989, pp. 29 and 30).

Under the system of privatization used in Greater Buenos Aires, the decree establishing the regulatory regime stipulates that the management of pollution control functions shall conform to the regulatory provisions of the Secretariat for Natural

Resources and the Human Environment and to the annexes setting forth the regulatory framework for use in this area; that water pollution shall be monitored by the Regulatory Agency for the utility concerned (which sets it apart from the English system, in which the regulation and control of pollution is the responsibility of a different body from that which oversees the management of the utility as such); and, finally, that the utility licensee has the right to make use of groundwater and effect diversions of surface water.[9]

The system for granting water rights may have something to do with the tendency of some sectors to form monopolies. To remedy this type of situation, water laws usually contain requirements regarding the effective use of water resources, within given time periods, for purposes which the legal system deems beneficial. The purpose of these principles is to prevent individuals from establishing absolute monopolies on the resource (Beck, 1991, p. 106 *et seq.*).

In connection with this point it has been noted that, in the case of hydropower generation, the issuance of use permits that are not subject to any time limit for effective use may actually result in the establishment of monopolies in this activity and prompt the utilization of energy sources other than water. This has also been seen to have a distortionary effect on power generation –a segment of the generation-transmission-distribution chain which may, by virtue of its particular characteristics, be regarded as non-regulable (according to some modern bodies of law) and open to competition. The issuance of unlimited water rights opens up opportunities for forming legal monopolies (De Andrade, 1995, p. 10; Sánchez Albavera, 1994, p. 22).

4. Determination of the service area

The delimitation of drinking water and sanitation service areas should be based on two objectives: ensuring that no areas are left without service or that the different zones within a political district are gradually incorporated into the service area; and ensuring that the areas created are such as to permit economies of scale.

This was one of the aims of the reform of the drinking water supply and sanitation system in Mexico City, where the fragmentation of the service among various municipalities has been held to have weakened the sector (Casasús, 1994).

Figures have already been presented which attest to the differences between the relative costs of supplying a typical family in small and large service areas. The concept of economies of scale should be a fundamental consideration in the regulation of public utilities (whether they have been privatized or not). This means that the content of recommendations regarding such steps as the decentralization of services at the lowest suitable level need to be made more specific. This principle could be complemented by the concept of economies of scale. In some countries it has been suggested that regional enterprises should be created which would group together a number of smaller systems or that the larger companies should absorb the smaller ones.[10]

Although these considerations may seem somewhat obvious, some countries are still working to decentralize their utilities at the political level despite the fact that the basic political units may not always be the best choice from a technical and/or economic standpoint.

5. Generic obligations and rights of licensees

According to a very useful summary prepared by Phillips, utility licensees have four basic obligations: i) They must serve any customer within their service area who is willing to pay for the service. This general duty may include the obligation to serve areas that are unprofitable and are therefore being subsidized by other services offered by the licensee. It may also entail the construction of infrastructure to meet future demand; ii) They must provide safe and adequate service which instantaneously meets demand; iii) They must serve all their clients without engaging in arbitrary, unfair or undue discrimination; and iv) Licensees must charge no more than a just and reasonable price for the services they render.

[9] Articles 17, 29 and 76 of the regulations ("Marco Regulatorio") governing the licensing of drinking water and sewerage utilities in Greater Buenos Aires.

[10] Phillips Jr., 1993, p. 839. In some districts the smaller companies contract management services from specialized or larger firms, which saves them the trouble of recruiting staff directly.

The generic rights of licensees include: i) Legal protection of their property; ii) The right to charge a reasonable price for their services, since they cannot be forced to operate at a loss, although the State does not guarantee that they will actually realize a reasonable profit; iii) The rates and regulations to which their service is subject must be reasonable in nature and include the right to disconnect a customer under certain circumstances; iv) The right, in most cases, to protection from competition within their service area; v) In general, the right of eminent domain, which includes the right to expropriate private property, impose mandatory easements, gain entry, require information and other measures having to do with their ability to do their job (Phillips, Jr., 1993, p. 121).

Spain's Public Administration Contracts bill requires that licensees be in good technical, financial, economic and professional standing.

6. Some elements specific to water utilities

Water utilities have certain duties involving specific aspects of the generic rights and obligations listed in the preceding section.

They are obligated to provide water service within their area and to maintain, upgrade and expand the corresponding infrastructure, as well as to meet certain operating standards. In accordance with the financial terms and conditions of the licensing arrangement, they must provide services and infrastructure to users on demand (this is complemented by the right to require compulsory hook-ups). The financial terms of such arrangements may include payments, deposits, the installation of meters and other conditions.

In some systems, the licensee can be held liable under civil law if he fails to fulfil his obligations to users. This liability can be discharged by proof of due diligence.

A licensee's obligations include the provision of a sufficient amount of water of suitable quality, the maintenance of the continuity of such service at an adequate level of water pressure, and the upkeep of hook-ups to ensure that they remain in working condition. Under certain circumstances, this obligation may extend to non-domestic uses. Water quality requirements are particularly important, and licensees are obligated to abide by any guidelines established as to the purposes for which water may be used, the substances which the water may or may not contain, the concentrations of specific substances, sampling systems, monitoring of and information on the quality of the water sources used, etc.

The licensee's obligations may also extend to technical aspects of the methods used to provide service, the construction and design of infrastructure, and the quality and features of equipment and facilities. These obligations are complemented by a number of rights or authorities, such as the power to require the installation of meters in some cases, to monitor users, to prevent activities that pollute the resource, and to control dumping or discharges in the drainage system. For their part, the licensees themselves are also subject to increasingly strict standards concerning the level of pollution occasioned by their activities.

One particularly important obligation is that the licensee must supply adequate and timely information to the public and to government authorities. To this end, he must keep certain records and have available surveys, blueprints and maps of service networks, publications, reports and information on the status of the sector, etc. [11]

Hydropower companies are subject to standards or regulations concerning, inter alia, public safety, environmental monitoring, environmental impacts, water resource use, and the operation of power plants affecting water resources (coordination with other uses). [12]

[11] The examples given in this section have been taken from the laws of the United Kingdom (the Water Industry Act of 1991), the prospectus entitled *The Water Share Offers* (1989), and the regulations ("Marco Regulatorio") governing the licensing of drinking water and sewerage utilities in Greater Buenos Aires.

[12] See Argentine Republic, *Proyecto de Pliego Hidroeléctrica Mendoza, Provincia de Mendoza, Argentina*, 16 July 1992.

V

Techniques used in the privatization of public utilities

The traditional dividing lines between governments, utility operators and the user public are undergoing major changes as a result of the transfer of utility operations to the private sector, the integration of users and their interests into water management structures, the monitoring of services (as a basis for legitimation) and, as mentioned earlier, the establishment of management and planning structures at the watershed or area level (Barraqué, 1993, p. 46).

The term "privatization" is understood to refer to the introduction of market forces into the economy and, in a narrower sense, the transfer of public enterprises, activities or assets to private hands, whether wholly or as a majority or minority interest therein. The objectives of privatization may include the rationalization of public enterprises, increased efficiency, a broader distribution of ownership, the reduction of public-sector expenses, the conversion of external debt into equity and the generation of a public demonstration effect regarding a government's economic policy (Vuylsteke, 1988, vol. 1, p. 1; Gerchunoff and Cánovas, 1993).

In addition to the above reasons, and with specific reference to the water and sanitation sector, some authors also cite the professional interests of some groups connected with water resources which regard privatization as a means of avoiding financial constraints and carrying forward the professionalization of the water industry (Barraqué, 1993, p. 51). Another trend which has been observed is the concentration of services in a smaller number of companies and the diversification of these firms, many of which offer utility service proper, consulting services and construction capabilities, thereby availing themselves of the economies of scale and of scope associated with certain activities. Barraqué, for example, notes that the firms Générale des Eaux and Lyonnaise des Eaux have diversified both vertically and horizontally, offering drinking water service, sanitation services, solid waste disposal, transport services, heating, etc. Lyonnaise des Eaux recently merged with Dumez, which carries out construction activities and provides consulting services (Barraqué, 1993, pp. 47, 51 and 67).

The possibility of forming integrated holding companies, which would not benefit consumers, given the triangular practices and transfer pricing facilitated by such corporate structures, has prompted the passage of laws and the creation of special mechanisms to control such activities. The study of this subject and empirical research in connection with privatized public utilities in Latin America are still in their early stages. [13]

The most common methods of privatization are private or public stock offerings, the incorporation of private investments in existing firms, sell-offs of the assets of public enterprises or of the government, the reorganization of firms into component parts, the purchase of a block of stock by a firm's management or staff, leases or management contracts, construction/ownership/operating contracts, payments based on usage rates, etc. (Vuylsteke, 1988, pp. 7-9).

Both exogenous and endogenous factors influence the corporate privatization process. Exogenous factors include public opinion, the situation in the capital market, the overall state of the economy, employment regulations in the public and private sectors, the area of activity in which the firm is engaged, etc. Endogenous factors include the original legal character of the activity in question (is it a public utility or not?), its organizational structure (is it an arm of the central government, a decentralized unit, a public stock corporation?), its financial standing, its market, its economic viability, its regulatory framework, possible price levels, type of ownership (public or national), etc.

In the United Kingdom, the privatization of firms in the water industry has taken the form of stock offerings. The terms of such sales have been studied so as to ensure some degree of dissemination

[13] See, for example, the United States Public Utility Act of 1935 and the reports of the Monopolies Commission in the United Kingdom.

among the public of stock ownership. Limitations were also imposed to prevent excessive concentration of the stock being offered. Furthermore, the Government has reserved for itself a special type of share which confers no stockholder equity but will give it a say in certain sorts of decisions that it feels to be of fundamental importance (see *The Water Share Offers* prospectus, 1989).

Some authors have indicated that the blocks of capital involved in the purchase of various State enterprises in Argentina give an excessive amount of control over key activities to a small group of shareholders whose horizontal involvement in a sizeable number of public enterprises could have an impact from the standpoint of the power of the holding companies involved. [14] The provision of the service in question takes the form of an operating license under which the licensee promises to make the investments needed to upgrade, expand and maintain the utilities, while the State awards it the service and certain guarantees. The granting of monopoly rights has been regarded as an important element in the privatization of public utilities (Vuylsteke, 1988, p. 63).

It is interesting to compare this arrangement with Spain's Public Administration Contracts bill, which provides that, for all public utilities, contracts will be awarded on the basis of open or restricted invitations to tender and which limits negotiated procedures to well-founded grounds of exception (article 155).

The privatization process usually requires a number of preparatory steps, including the preparation of public opinion, the creation of privatizable companies, the prior development of frameworks that will ensure the transparency and credibility of the process, financial reorganization aimed at putting the relevant firms on a sound financial footing, the taking of decisions regarding contracts being performed at the time and concerning the future of existing employees, the establishment of the regulatory structure for the relevant utilities, the creation of appropriate regulatory agencies, the establishment of a system of civil liability coverage (this is particularly important when the State continues to be the owner of record), the institution of safeguards and guarantees, and the definition of insurance and civil liability systems.

When water-related infrastructure is being privatized, plant safety systems (particularly in the case of dams) and methods for checking on the condition of the systems that are to be privatized take on great importance. These verification procedures play a crucial role in assessing the physical condition of corporate assets and illustrate the importance of undertaking baseline studies prior to privatization (Vuylsteke, 1988, p. 98). If a suitable baseline analysis of the relevant infrastructure is not undertaken before privatization in order to determine its condition, the State will not know what is being privatized and the licensee will be able to bring claims alleging the existence of undisclosed defects after the license has been granted. This type of situation can call the transparency of the process into question and eventually lead to rate increases that were not explicitly provided for in the original negotiations.

The various modalities of privatization that have been used in connection with water utilities in particular include the leasing of infrastructure, management contracts, franchises and licenses and, as a complementary measure, the division of systems into their component parts.

In some of these arrangements, the equity investment remains in public hands, and what is actually being transferred is the operation of the systems. This type of arrangement has been used for drinking water and sanitation utilities, a sector which, owing to its high costs and low rates of return, has traditionally received some sort of preferential treatment, including special tax provisions. [15] Thus, in the past local water companies in England used long-term reimbursable, rate-based loans to cover these costs. This system has fallen into disfavour because it does not promote efficiency, since it is presumed to be more efficient for capital costs to be covered by users' payments. This means, it has been said, that today's water users are paying a tax for the benefit of future generations (Tieman and others, 1995). A related question, but one which we will not explore here, is how applicable these systems may be in societies with regressive economic structures in cases where investment needs exceed users' capacity to pay. This raises more general issues regarding economic structure and systems of taxation which should be analysed when the financial structures of the utilities are being designed.

[14] For this reason, European laws generally require the submission of an exhaustive list of associated firms by applicants for such licenses. See the Spanish Public Administration Contracts bill, article 129, and Gerchunoff and Cánovas, 1993, p. 10 *et seq.*.

[15] According to Barraqué (1993, p. 67), in France private water companies could secure a refund of their value added taxes. Similar refunds were given under the Internal Revenue Code of the United States, up to 1986 (see Haarmeyer, 1994, p. 51 *et seq.*).

The method of dividing up systems into their component parts (generation, distribution and transmission) has been used in the hydropower industry. This represents a departure from the more traditional form of organization in which such enterprises (especially public power companies) were vertically integrated (Vuylsteke, 1988, p. 23).

As noted earlier, among these three activities, power generation is regarded as the one that lends itself the most to deregulation, since there would presumably be no limitations on corporate entry into the system. This idea of unlimited access is subject to certain conditions, however: for example, the relevant markets must be large enough, there must not be agreements among generating companies, the institutional system must not have monopolistic leanings (Sánchez Albavera, 1994; De Andrade, 1995), there must not be environmental or input-related constraints, and the State must not set aside certain markets for a particular generating company. Under such circumstances, an interesting quandary may arise if, following the State's award of licenses under which markets are set aside for certain generators, new sources emerge that can supply power more cheaply than those generators. Could users argue that such agreements are *res inter alios acta* and lodge legal demands that these new sources be given market access? The question is a complicated one, but failure to make allowance for this element of free enterprise in respect of market entry undermines the argument that generating activities should not be regulated and paves the way for the repetition, on a socially inequitable basis, of the inefficiencies in the public systems which prompted their privatization in the first place.

Under leasing arrangements, the contractor leases facilities from the State for the execution of the activities which have been transferred to him. The lessee assumes the full risk associated with the activity in question. The State needs to ensure that, upon termination of the contract, these facilities will be returned to it in good condition. The lessee, rather than the State, bears legal liability for the utility, but the government retains certain supervisory rights. This model has frequently been applied in France, where the municipalities employing it take responsibility for the financing and construction of the facilities, while the lessee runs, manages and charges for the service. Rates reflect the costs involved plus earnings and include a surcharge to cover capital costs, which is transferred to the public authority (Haarmeyer, 1994, p. 47). This system has also been used in Africa.

When management contracts are used, the State pays a third party to operate the systems in question. Under this arrangement the State does not save on investment costs, and in addition it has to pay a fee for management services. If the arrangement works as it should, the utility's efficiency and profitability will increase. Under this system, as applied in France, the municipality charges users for the service and then covers the contractor's expenses. The budget for drinking water and sanitation utilities is separate from the rest of the municipal budget (Haarmeyer, 1994, p. 47).

In both cases –leases and management contracts– the payment of debts and other commitments continues to be the obligation of the State. And under both these systems, clear-cut and precise definitions are required regarding each party's obligations in respect of maintenance, operations, renewal of elements of the system, and the payment of other costs. The technical capabilities and financial standing of the contractors are of fundamental importance in such situations.

The granting of concessions has been widely used for drinking water and sanitation utilities and for power utilities. Typically, some sort of investment on the part of the licensee is required; the term of the concession is fairly long (20-30 years), and upon its expiration the utility reverts to the State. One important element in this kind of arrangement is the inclusion of precautionary provisions to ensure that, as the expiration date of the concession approaches, the concessionaire will still maintain a suitable rate of investment and will continue to operate and maintain the facilities properly.

Systems of concessions, leases and management contracts are all widely used in France and Spain.

Australia's experiences in this regard are interesting as well, especially because the contracts used in that country have been quite rigorous and detailed as to the obligations of the parties. The concessionaires finance the venture; the Government makes a commitment to buy the water; construction work and loans are covered by tied contracts in order to ensure that such projects are completed on time and within their budgets; and the works are covered in great detail in the concession contracts (Haarmeyer, 1994, p. 50).

VI

Conclusions and recommendations

The privatization of public utilities is a worldwide phenomenon. The process has somewhat of a globalizing effect, inasmuch as global investment funds exist in the sector and the corporations providing the services operate on a worldwide scale. Within this context, a comparative study of the relevant legislation, especially in economies that have a great deal of experience in this field, may be useful for countries that have only recently begun to return to a system of privately-run public utilities. Such an examination brings out a number of important points that warrant special consideration.

i) The drafting techniques required to draw up contracts that specify precisely what is expected of each party, the costs, time periods (including deadlines for the completion of projects for the development of water resources), the features of the services to be rendered, the areas in which they are to be rendered, and the environmental controls to which they will be subject.

ii) The concept of a reasonable profit or return for the utility provider, bearing in mind that these services are monopolies with guaranteed financial flows.

iii) The need to set up independent commissions or regulatory bodies and ensure that they have adequate funding, capacity and technical expertise.[16] Countries that are now embarking upon the privatization process would be well advised to develop institutional and technical capabilities in this sector, since otherwise it will be almost impossible for them to know what to regulate or whether the costs and expenditures of utility companies are reasonable or not.

iv) Given the concentration of many services in a limited number of companies and the presence of the same economic groups or conglomerates in various types of public and private utilities, it is necessary to establish very precise, transparent rules governing public utilities' assets and their valuation, investment and operating costs and expenditures, accounting practices, loans, ownership and transfers of blocks of stock, and contracts for the provision of services, consultancy and materials.

v) There must be suitable participation by users, along with ready access to administrative and judicial forums. The provision of ready access should not be confined to cases in which an individual problem can be identified simply and quickly (e.g., inappropriate rates) but should also apply in instances where users as a group are affected by practices that unreasonably restrict competition in the provision of the service in question.

vi) Powers in respect of national water management policy should be given to non-sectoral bodies. It appears necessary for the management of the water supply, the monitoring of water uses and the protection of water resources to be carried out by agencies at the watershed level. In cases of privatization, the need for this type of management and harmonization of uses is especially crucial.

vii) A suitable regulatory structure should be established before privatization is undertaken. This structure should cover, among other things, the necessary regulatory mechanisms and bodies, the area of activity to be regulated, the principle of reasonable returns, the desired quality and regularity of the services to be provided, and the authority to carry out ongoing supervisory and monitoring activities.

(Original: Spanish).

[16] The importance of this point and of having regulatory systems equipped with appropriate personnel and adequate funding should not be underestimated. This is illustrated by the problems encountered by Mr. Littlechild –the regulator for electrical power utilities in the United Kingdom– in setting rates, analysing the financial status and capital structure of the companies he regulates, and maintaining relations and negotiating with them. The fact that each company has an entire team devoted to fighting for its interests with respect to the regulations prompted the observation that Mr. Littlechild is outgunned by his opponents (*The Times*, 1995, pp. 2, 19 and 20).

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