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Tensions between Public and Private: Water Supply in a Northwestern Spanish City under the Franco Dictatorship

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In this paper, we analyze the determinants of change in a public service management system, urban water supply in Spain during the Franco dictatorship (1939-1975). The case involves a medium-sized Spanish city where the city council had entrusted the service to a franchised private company early in the twentieth century. After the Civil War (1936-1939), however, a different regulatory framework erected by the new political regime provoked a change in the state's attitude toward public services. There was increasing pressure to return the water supply service to the public sector—in particular, to local authorities. The autarkic environment, changes in consumption associated with remarkable urban growth, and an increasingly interventionist institutional environment led to the gradual domination of Spain's public services management by municipalities by the 1960s-1970s. This transition may serve as a platform for debate about the applicability of recent European management models to modern urban services. We examine the impact of an anomalous institutional framework on business success (or failure) and seek to contribute to the debate on ownership and management of public services.

The relationship between a firm's performance and its institutional environment is increasingly a topic of research for business historians. Throughout history, several distinct legal and political regulatory frameworks have influenced businesses' success or failure. The effect of the environments created by these frameworks on specific firms or economic sectors constitutes one of the primary issues of economic and business history.

This dialectic is similar to other extended discussions, including the dichotomy between public and private enterprise, particularly in those

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activities merging efficiency and the interest and welfare of the population.[1] The problem of supplying certain services arose with the advent of modern state governments, along with the question of the most efficient manner of guaranteeing their adequate provision to citizens. The beginning of the second industrial revolution, which paralleled the development of several networked services, worsened the dilemma. Such services had distinct technological requirements, along with infra-structural, investment, management, and other needs, which influenced the systems of supply and service provision.[2]

Water supply is a sector in which there is growing concern about which system of ownership and management guarantees more efficient service: public (municipal) or private.[3] The background for this debate centers on the policies of privatization or nationalization of water services.[4]

Our objective is to examine the factors determining the changes in water supply management systems in Spain during the Franco dictatorship (1939-1975). We use a case study to assess the impact of a specific—anomalous—institutional framework on business success or failure. The unit of analysis is a water supply firm situated in a Spanish medium-sized city where the management of the service at the beginning of the twentieth century was handled by private enterprise under a municipal franchise (concession) system. With the advent of the new political regime after the Civil War (1936-1939), the regulatory environment underwent a gradual transformation, provoking dramatic changes in the attitude of public authorities with respect to collective services. We attempt to put the research into context by comparing this case with the experiences of other countries in water supply management.

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[1] Claudia Rotondi, "Scienza economica e municipalizzazioni, tra teoria e prassi," in *L'acqua e il gas in Italia*, ed. Giorgio Bigatti, Andrea Giuntini, Amilcare Mantegazza and Claudia Rotondi (Milano, 1997), 259-349; Robert M. Stein, "Privatization and the Arrangement of City Services," *Estudios de Economía* 23 (Aug. 1996): 1-23.

[2] Horacio Capel, "El agua como servicio público: A propósito del Seminario Internacional 'Faire parler les réseaux: L'eau, Europe-Amérique Latine'," *Biblio 3W: Revista Bibliográfica de Geografía y Ciencias Sociales Universidad de Barcelona* 218 (22 March 2000).

[3] Steven Renzetti, "Municipal Water Supply and Sewage Treatment: Costs, Prices and Distortions," *Canadian Journal of Economics* 32 (May 1999): 688-704; Nicolas Spulber and Asghar Sabbaghi, *Economics of Water Resources: From Regulation to Privatization* (Boston, 1998); K. William Easter, Gershon Feder, Guy Le Moigne, and Alfred M. Duda, *Water Resources Management* (Washington, D.C., 1993).

[4] William Megginson and Jeffry Netter, "From State to Market: A Survey of Empirical Studies on Privatization," *Journal of Economic Literature* 39 (June 2001): 321-89; Graeme A. Hodge, *Privatization: An International Review of Performance* (Boulder, Colo., 2000); John Vickers and George Yarrow, *Privatization: An Economic Analysis* (Cambridge, Mass., 1989).

The private firms managing the water supply suffered increasing pressure during the dictatorship to return control to public authorities, specifically to local municipal authorities. In fact, over the long term, this strategy was partially successful, gradually transforming the management of public services in Spain so that municipal management was dominant by the 1960s. Because of the tensions that arose during those years, the private company faced numerous difficulties, which forced the adoption of more efficient management practices. Although the prevailing autarkic context (which made the purchase of machinery, inputs, technology, and so forth very difficult) restricted efficiency, the transformation of the (increasingly interventionist) institutional framework was probably the decisive factor restricting the firm's expansion. We believe that a discussion of this transition process might enrich recent debates about management systems for modern urban services in Europe.

Institutional Framework and the Water Supply

Until recently, water has been considered a renewable natural resource, but confirmation that the world is suffering a serious water crisis has modified conceptions of this asset. As a result, we presently perceive water as a finite and limited resource, seriously affected by the demands of an increasing population.[5] Legislation in industrialized nations has gradually come to reflect the economic and social importance of water.

Since the nineteenth century, water supply has had the character of a public service.[6] Management by private companies and the institution of a tariff, however, also gave water supply some characteristics of a private

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[5] Terence R. Lee, *Water Management in the Twenty-First Century: The Allocation Imperative*, New Horizons in Environmental Economics (Cheltenham, 1999); James Winpenny, *Managing Water as an Economic Resource* (London, 1994).

[6] R. Andreas Kraemer, "Public and Private Management of Water Services," paper presented at Semana Internacional de Estudos sobre Gestão de Recursos Hídricos (Foz do Iguaçu, 19-23 April 1999), 1. The contemporary concept of public service comes from France, as a means created by the administration to satisfy certain needs of citizens that private initiatives could not meet; see Andrés Arregui, "Internacionalización de las empresas de servicios público," *Información Comercial Española* 735 (1994): 131-39, at 131. In the past, one argument for providing water was that this service was equivalent to a public good. Isabelle Fauconnier, "The Privatization of Residential Water Supply and Sanitation Services: Social Equity Issues in the California and International Contexts," *Berkeley Planning Journal* 13 (1999): 37-73, at 41. Non-excludability and non-rivalry are characteristics of public goods; in contrast, excludability characterizes private goods, which, once used up, cannot be used by others. Paul A. Samuelson, "The Pure Theory of Public Expenditure," *Review of Economics and Statistics* 36 (Nov. 1954): 387-89.

asset.[7] The networked infrastructures that water supply requires underwent extraordinary growth from the mid-nineteenth century onward, both because of the emergence of new concerns about hygiene that arose with modern urbanism and because of the development that accompanied the second industrial revolution.[8] Accordingly, the expansion and organization of networked infrastructures constituted a fundamental mechanism of urban growth.[9]

From the supply side, water provision infrastructures have particular features that have led to the characterization of this service as a classic natural monopoly; it is more economical for a single firm to meet an area's needs than to have several suppliers, as is the case for other public utilities.[10]

Water supply requires a complex network, although it is generally more efficient to have exclusive water mains. During the nineteenth century, this environment favored the rapid transition of networks that had originally been competitive into monopolies in the majority of Western countries.[11] These networks usually covered long distances and provided

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[7] Gregorio Núñez, "Servicios urbanos colectivos en España durante la segunda industrialización: entre la empresa privada y la gestión pública," in *La empresa en la Historia de España*, ed. Francisco Comín and Pablo Martín (Madrid, 1996), 399-419, at 408.

[8] Network industries are defined as those in which a fixed infrastructure is needed to deliver the goods or services to end users—for example, gas and water pipelines and telephone and electricity cables and wires.

[9] Gabriel Dupuy, *El urbanismo de las redes* (Barcelona, 1998).

[10] Robert Millward, "European Governments and the Infrastructure Industries, c. 1840-1914," *European Review of Economic History* 8 (April 2004): 3-28, at 3; Alfred Kahn, *The Economics of Regulation: Principles and Institutions* (Boston, 1988); William W. Sharkey, *The Theory of Natural Monopolies* (Cambridge, Mass., 1982); William J. Baumol, John C. Panzar, and Robert D. Willig, *Contestable Markets and the Theory of Industry Structure* (New York, 1982). Private ownership does not solve the problem of natural monopoly; see Andrei Jouravlev, *Regulación de la industria de agua potable*, vol. 1*: Necesidades de información y regulación estructural* (Santiago, Chile, 2001), 6. In practice, choosing between public or private monopoly should not have significant consequences for improving efficiency, as "a monopoly is a monopoly, whether public or private, and it tends to behave as such." Germà Bel, "Privatización y desregulación: cuando la liberalización no basta para aumentar la competencia," in *Privatización, desregulación y ¿competencia?* ed. Germà Bel (Madrid, 1996), 22.

[11] Robert Millward, "The 1940s Nationalizations in Britain: Means to an End or the Means of Production?" *Economic History Review* 50, no. 2 (1997): 209-34; Michael Klein, *Economic Regulation of Water Companies* (Washington, D.C., 1996); Michael Klein and Timothy Irwin, *Regulating Water Companies* (Washington, D.C., 1996); Robert Swartwout, "Current Utility Regulatory Practice from a Historical Perspective," *Natural Resources Journal* 32 (Spring

long-term service, which requires considerable capital investment and generates high sunk costs, as the costs derived from the building of the infrastructure are hardly transferable to other economic activities.[12] The networks also provide significant economies of scale, as well as positive and negative externalities that market mechanisms cannot capture.[13] Other meaningful characteristics are the indivisibility of water provision, the capital-intensive nature of water supply and its complex distribution system, and the fact that fixed costs are usually higher than variable costs.[14] Taken together, these attributes have led to consideration of water supply as a classic example of a natural monopoly.[15]

1992): 300-308; Christopher D. Foster, *Privatization, Public Ownership and the Regulation of Natural Monopoly* (Oxford, U.K., 1992).

[12] Joel A. Tarr and Joseph W. Konvitz, "Patterns in the Development of the Urban Infrastructure," in *American Urbanism: A Historiographical Review*, ed. Howard Gillette and Zane L. Miller (Westport, Conn., 1987), 195-226; Joel A. Tarr, "Building the Urban Infrastructure in the Nineteenth Century: An Introduction," in *Infrastructure and Urban Growth in the Nineteenth Century*, Essays in Public Works History 14 (Chicago, 1985): 61-85; Joel A. Tarr, "The Evolution of the Urban Infrastructure in the Nineteenth and Twentieth Centuries," in *Perspectives on Urban Infrastructure*, ed. Royce Hanson (Washington D.C., 1984), 4-66; Joel A. Tarr, J. McCurley, F. C. McMichael, and T. F. Yosie, "Water and Wastes: A Retrospective Assessment of Wastewater Technology in the United States, 1800-1932," *Technology and Culture* 25 (April 1984): 226-63. The existence of a network does not constitute a barrier to competition, as firms could compete for water provision if they shared that network; see Simon Cowan, "Regulation of Several Market Failures: The Water Industry in England and Wales," *Oxford Review of Economic Policy* 9, no. 4 (1993): 14-23, at 16. In fact, competition may be unsustainable and even undesirable because operating the non-competitive activity as a monopoly minimizes costs, *ceteris paribus*; see Rauf Gonenc, Maria Maher, and Giuseppe Nicoletti, *The Implementation and the Effects of Regulatory Reform: Past Experience and Current Issues* (Paris, 2000), 15.

[13] "Water deficient in quality and quantity imposes costs on agents other than the immediate consumers and producers." See Millward, "The 1940s Nationalizations," 216. Externalities relating to urban water services were associated, in the past, with public health; see Kraemer, "Public and Private Management," 1. Charles D. Jacobson and Joel A. Tarr, "No Single Path: Ownership and Financing of Infrastructure in the 19th and 20th Centuries," in *Infrastructure Delivery: Private Initiative and the Public Good*, ed. Ashoka Mody (Washington D.C., 1996), 1-36; Robert Millward, "Urban Water Supplies c. 1820-1950: The Dilemma of the Private Companies," *Histoire, Economie, Société* (forthcoming, 2006), 3. These externalities increased from the nineteenth century onward, when rapid urbanization polluted many water sources; see Robert Millward, "State Enterprise in Britain in the Twentieth Century," in *The Rise and Fall of State-Owned Enterprise in the Western World*, ed. Pier Angelo Toninelli (Cambridge, U.K., 2000), 157-84, at 160.

[14] Cowan, "Regulation of Several Market Failures," 15-16; Robert Millward, "The Political Economy of Urban Utilities," in *The Cambridge Urban History of*

In practice, in the case of a natural monopoly, a sole supplier might be tempted to abuse its privileged position in the market. There is the risk that companies will under-provide services to certain groups or areas; such inadequate provisioning can initiate important spillover effects for public health and the environment.[16] As there are few substitutes for these necessary services, the potential for monopoly profits increases.[17] For these reasons, such situations create spaces for public intervention and regulation, although the remedies arise from the lack of competition, rather than from the properties of the service.[18]

Therefore, public authorities have often regulated natural monopolies through the establishment of controls on prices, quality, benefits, subsidies, and so forth.[19] The regulator acts as a substitute for the market by adopting some of the roles and functions of competitors in an attempt to force the regulated firm to behave differently—that is, as it would if it were subject to market competition.[20] Sometimes the public sector goes

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Britain, vol. 3: *1840-1950*, ed. Martin Daunton (Cambridge, U.K., 2001), 315-50, at 339.

[15] Sanford V. Berg and John Tschirhart, *Natural Monopoly Regulation: Principles and Practice* (Cambridge, U.K., 1988).

[16] Dennis Rondinelli and John Kasarda, "Privatization of Urban Services and Infrastructure in Developing Countries: An Assessment of Experience," in *Third World Cities: Problems, Policies, and Prospects*, ed. John Kasarda and Allan M. Parnell (Newbury Park, Calif., 1993), 134-60; Robert Millward, "Nationalization and Privatization," in *The Oxford Encyclopedia of Economic History*, vol. 4: *Monte di Piet to Spain*, ed. Joel Mokyr (Oxford, U.K., 2003), 54-58, at 56.

[17] Millward, "The Political Economy," 320.

[18] Dieter Bös, "Regulation: Theory and Concepts," in *International Handbook on Privatization*, ed. David Parker and David Saal (Cheltenham, 2002), 477-95; 477; Kraemer, "Public and Private Management," 2; Fauconnier, "The Privatization"; Robert Boyer, *Le théorie de la régulation: Une analyse critique* (Paris, 1986). Anthony B. Atkinson and Joseph Stiglitz, *Lectures on Public Economics* (London, 1980). For an opposing view, see Harold Demsetz, who pointed out that the existence of a natural monopoly, as a mechanism to justify the regulation was a fallacy; Harold Demsetz, "Why Regulate Utilities?" *Journal of Law and Economics* 11 (April 1968): 55-66.

[19] Anthony Ogus distinguishes two methods of intervention: "economic" regulation, that is, the regulation of prices and quality of services supplied in a market characterized by monopoly conditions; and "social" regulation, that is, those areas of state intervention—for example, environmental and health and safety regulation and consumer protection—generally justified by reference to externalities and information asymmetries. See Anthony Ogus, "Comparing Regulatory Systems," in *International Handbook on Privatization*, ed. David Parker (Cheltenham, 2005), 514-36; and Anthony Ogus, *Regulation: Legal Form and Economic Theory* (Oxford, U.K., 1994).

[20] Millward, "Nationalization," 56; Gonenc, Maher, and Nicoletti, *The Implementation and the Effects*; Dieter Helm, "British Utility Regulation: Theory, Practice, and Reform," *Oxford Review of Economic Policy* 10 (Autumn

further, intervening directly with management, protected by the diverse arguments that arise from market failures.[21]

On the other hand, publicly owned or managed water utilities frequently lack the necessary market discipline to maintain efficient investment programs. As a result, they may incur high building and operating costs, engage in overcapitalization and an excessive use of debt streams, have a tendency to avoid innovation, and be inclined to favor certain economic groups, which could act against the public welfare.[22]

There are several alternative approaches to managing the modern water supply: leaving the service totally to private initiative; public

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1994): 17-39; J. Carlo Rietveld, "Is Privatization in the Future for US Water Suppliers?" *Journal AWWA* 86, no. 3 (1994); Roger A. Morin and Lisa T. Hillman, *Regulatory Finance: Utilities' Cost of Capital* (Arlington, Va., 1994). See, also, the literature review on the economics of regulation literature in Parker, although it focuses on the institutions and experiences of developed economies, particularly the United States and the United Kingdom; David Parker, "Economic Regulation: A Preliminary Literature Review and Summary of Research Questions Arising," Centre on Regulation and Competition (CRC) Working Paper no. 6 (Oct. 2001).

[21] James Roumasset, "Privatizing Public Services with Externalities: Water and Wastewater Systems," University of Hawai'i Department of Economics Working Paper no. 00-8 (2000); Kraemer, "Public and Private Management"; Fauconnier, "The Privatization"; Daniel J. Kucera, "Privatization of Water and Wastewater Utilities: A Very Public Affair," *Water Engineering & Management* 142 (April 1995): 15-17; Simon Cowan, "Market and Regulatory Failure in the Water Sector," in *Deregulation in the European Union: Environmental Perspectives*, ed. Ute Collier (London, 1997), 131-44. However, the literature on market failures is more abundant than the literature on public sector failures. Public choice theory analyzes some of the deficiencies of modern state government. See Dennis C. Müeller, ed., *Perspectives on Public Choice* (Cambridge, U.K., 1997); Müeller, *Public Choice* (Cambridge, U.K., 1979); James M. Buchanan, *Liberty, Market, and State: Political Economy in the 1980s* (New York, 1986); James M. Buchanan and Richard E. Wagner, *Democracy in Deficit: The Political Legacy of Lord Keynes* (New York, 1977); Gordon Tullock, *Private Wants, Public Means: An Economic Analysis of the Desirable Scope of Government* (New York, 1970); James M. Buchanan and Gordon Tullock, *The Calculus of Consent* (Ann Arbor, Mich., 1962).

[22] Janice A. Beecher, "Privatization, Monopoly, and Structured Competition in the Water Industry: Is There a Role for Regulation?" in UCOWR *Proceedings*: *Water: Lessons of World Development* (Kamuela, Hawaii, 1999), 103-10; Andrei Shleifer and Robert W. Vishny, "Politicians and Firms," *Quarterly Journal of Economics* 109 (Nov. 1994): 995-1025. In contrast, some scholars point out that public enterprises diminish—although they do not eradicate—corruption in service provision, or at least that has been the case in the United States. Edward L. Glaeser, "Public Ownership in the American City," Harvard Institute of Economic Research, Cambridge, Mass., Discussion Paper No. 1930 (Oct. 2001); available online at: http://post.economics.harvard.edu/hier/2001papers/HIER1930.pdf.

management and public ownership (including both supply and infrastructure), generally under municipal control; and public ownership of infrastructure under a privately run concession, usually accompanied by state guarantees of bond interest or profit sharing, depending on government attitudes toward the management of the service.[23] Each of these options has advantages and disadvantages.

The history of water control and supply has been complex, as it touches on many important historical issues and processes.[24] Although similar to other public utilities, it was the one most likely to be publicly owned and managed.[25] The concession system unquestionably has positive elements, as it facilitates taking advantage of economies of scale, creates incentives for cost minimization, and might have interesting effects in terms of social equity, as it is able to satisfy market needs at competitive prices.[26] But adequate monitoring by a public entity, through control of the fees charged to users, seems indispensable.[27] However, a concession system also has disadvantages, relating to efficiency levels and high transaction costs.[28]

During the nineteenth century, municipalities had neither the financial nor the technical capacity to supply water, and private entrepreneurs obtained many concessions. At the beginning of the twentieth century, "private enterprise was seen as the proper institutional form," and the water infrastructure remained in the hands of private operators in countries such as the United Kingdom, France, Germany, Italy, and Spain.[29]

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[23] Millward, "European Governments."

[24] Richard Coopey and Aled Jones, "The Boundaries of Water History: The Case of Britain," in *Water in History: Global Perspectives: An International Historical Conference* (Aberystwyth, 1999).

[25] Tony Prosser, "Public Service Law: Privatization's Unexpected Offspring," *Law and Contemporary Problems* 63 (Autumn 2000): 63-82; John Ernst, ed., *Whose Utility? The Social Impact of Public Utility Privatization and Regulation in Britain* (Buckingham, U.K., 1994); George L. Priest, "The Origins of Utility Regulation and the 'Theories of Regulation' Debate," *Journal of Law and Economics* 36 (April 1993): 289-323.

[26] Richard A. Posner, "Natural Monopoly and Its Regulation," *Stanford Law Review* 21 (Feb. 1969): 548-643; Demsetz, "Why Regulate Utilities?"

[27] Jacobson and Tarr, "No Single Path."

[28] Michael A. Crew and Paul R. Kleindorfer, *The Economics of Public Utility Regulation* (Cambridge, Mass., 1986); Oliver E. Williamson, "Franchise Bidding for Natural Monopolies—in General and with Respect to CATV," *Bell Journal of Economics* 7 (Spring 1976): 73-104.

[29] Robert Millward, "Emergence of Gas and Water Monopolies in Nineteenth-Century Britain: Contested Markets and Public Control," in *New Perspectives on the Late Victorian Economy: Essays in Quantitative Economic History*, ed. James Foreman-Peck (Cambridge, U.K., 1991), 96-124, at 99; Malcolm Falkus, "The Development of Municipal Trading in the Nineteenth Century," *Business*

However, private management had several serious shortcomings, which led toward the municipalization of water utilities.[30] From the late nineteenth through the twentieth century, a great majority of European and North American cities built large waterworks, which in many cases remained under local government control through municipal authorities.[31] Although some state governments opted for the regulation of private firms, others in many countries created state or municipal enterprises.[32] In Europe, state governments often instituted public monopolies instead of delegating the regulation of utilities, even though the motivation to control the market was similar.

By the early 1900s, governments everywhere were involved in regulation of prices, rates of return, terms of franchises, and lengths of leases, or in direct ownership, but there were great differences among countries in the details.[33] By World War I, these systems had fallen under municipal control and ownership, as the large-scale schemes for developing the water supply in major conurbations involved levels of finance and a degree of planning beyond the scope of private enterprise.[34]

Each country set up its own regulatory framework, but we can define some clear similarities and differences in the management of water utilities at the international level, particularly during the nineteenth and

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History 19 (July 1977): 134-62; 140; Robert Millward, "La regolamentazione e la proprietà dei servizi pubblici in Europa: una prospettiva storica dal 1830 al 1950," *Economia Pubblica* 34, no. 2 (2004): 25-38, at 28.

[30] Capel, "El agua como servicio público."

[31] Richard Coopey, "Politics or Engineering? Motives and Connections in the Construction of Victorian Water Systems," in *Water and Civilization: Fourth Conference of the International Water History Association* (Paris, 2005). Millward, "Nationalization," 55; Tapio Katko, Petri Juuti, and Pekka Pietilä, "Historical Perspectives of Public-Private Co-operation in Water Services," paper presented at the International Water History Association (IWHA) 3rd conference (Egypt, 2003); Keith J. Crocker and Scott E. Masten, "Prospects for Private Water Provision in Developing Countries: Lessons from 19th Century America," in *Thirsting for Efficiency: The Economics and Politics of Urban Water Systems Reform*, ed. Mary M. Shirley (London, 2002), 317-47, at 317.

[32] "The policy implication was regulation of fares, tariffs, freight rates, and profit rates. Again, the experience with regulation was often perceived in the late nineteenth century and the early twentieth as unsatisfactory, so public ownership followed, suggesting that other factors were involved." Millward, "Nationalization," 55-56.

[33] Robert Millward, "Regulation and Ownership of Public Services in Europe: An Historical Perspective c. 1830-1950," presented at Milan State University Workshop on Public Services in Europe (Milan, 2003), 1.

[34] Millward, "Urban Water Supplies," 2; John A. Hassan, "The Growth and Impact of the British Water Industry in the Nineteenth Century," *Economic History Review* 38 (Nov. 1985): 531-47.

early twentieth centuries.[35] By the end of the nineteenth century, there was a dual system: the U.S. model of state regulation, and the Continental model of big government regulation (excluding the United Kingdom). The institutional environment, different levels of industrial development, and the degree of national interventionist economic policies can explain the differences among countries.[36] The level of urbanization probably was also a critical variable: municipally owned enterprises seem to have been more common in the expanding industrial cities of Western Europe, whereas in countries characterized by slow urbanization rates and with small or weak units of local government, the concession system rather than municipalization dominated during the nineteenth century.[37]

In the United States, the public sector has supplied water to consumers since the early nineteenth century, although throughout most of that century the service remained privately owned. However, the trend was clearly toward municipalization.[38] In the transition between the nineteenth and the twentieth centuries, the establishment of new municipally owned water networks, combined with the transfer of private firms to public hands, tilted the national balance toward public ownership.[39] State ownership developed mainly as a result of demographic growth and of the inability to arrive at an early and adequate

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[35] Millward, "La regolamentazione," 26; Millward, "European Governments," 4; Ole Hyldtoft, "Modern Theories of Regulation: An Old Story: Danish Gasworks in the Nineteenth Century," *Scandinavian Economic History Review* 42, no. 1 (1994): 29-53, at 30.

[36] Judith Clifton, Francisco Comín, and Daniel Díaz, *Privatization in the European Union: Public Enterprises and Integration* (Dordrecht, 2003).

[37] And "whose councils, faced with mounting programmes for public health and other services, were desperate for new revenue sources." In Millward, "Institutional Change," 6.

[38] At the beginning of the nineteenth century, private water companies served 94 percent of the U.S. market; Janice A. Beecher, G. Richard Dreese, and John D. Stanford, *Regulatory Implications of Water and Wastewater Utility Privatization* (Columbus, Ohio, 1995), 21. By the end of the century, their share had fallen to 47 percent. However, the same did not occur with other public services, which relied on private capital; Joel A. Tarr, *The Search for the Ultimate Sink: Urban Pollution in Historical Perspective* (Akron, Ohio, 1996), 118.

[39] Crocker and Masten, "Prospects for Private Water Provision," 318; David T. Beito, "From Privies to Boulevards: The Private Supply of Infrastructure in the United States during the Nineteenth Century," in *Development by Consent: The Voluntary Supply of Public Goods and Services*, ed. Jerry Jenkins and David E. Sisk (San Francisco, 1993), 23-48; Letty Anderson, "Fire and Disease: The Development of Water Supply Systems in New England, 1870-1900," in *Technology and the Rise of the Networked City in Europe and America*, ed. Joel A. Tarr and Gabriel Dupuy (Philadelphia, 1988), 137-56.

system of regulation to control these businesses, as the regulatory environment for water was not sufficiently developed.[40]

In the United Kingdom, from 1820 to 1870 the dominant context was competition, as joint stock financing with limited liability was seen as a much more attractive option than municipal initiative.[41] After about 1840, however, water was increasingly considered a natural monopoly. It was in the United Kingdom that the first municipalization initiatives originated, with the objective of extending water networks to working-class neighborhoods to improve sanitary conditions.[42] As a result, between 1870 and 1920 a gradual change to public ownership at the local level took place.[43] By the beginning of the twentieth century, water utilities were mostly in the hands of local authorities.[44]

In France, the concept of public services is rooted in the Constitution, but it had not been applied to water supply.[45] The municipalities had the legal authority to provide it, but they generally delegated that

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[40] Christina Brow, "Funding America's Drinking Water Infrastructure: From Public to Private," *Journal of Engineering and Public Policy* 5 (2001), 4.

[41] Millward, "Urban Water Supplies," 5.

[42] Bernard Barraqué, "Les services publics d'eau de d'asainissement en Europe: la problématique public-privé est-elle pertinente?" in *Intérêts publics et initiatives privées: Initiatives publiques et intérêts privées. Travaux et Services publics en perspective. Actes du colloque international tenu dans le cadre des Onzièmes entretiens du Centre Jacques-Artier*, ed. Sylvain Petitet and Denis Varaschin (Artois, 1999), 191-98.

[43] Robert Millward, *Private and Public Enterprise in Europe: Energy, Telecommunications and Transport, 1830-1990* (Cambridge, U.K., 2005), 6; James Foreman-Peck and Robert Millward, *Public and Private Ownership of British Industry, 1820-1990* (New York, 1994), 1; Robert Millward and Robert Ward, "From Private to Public Ownership of Gas Undertakings in England and Wales, 1851-1947: Chronology, Incidence and Causes," *Business History*, 35 (July 1993): 1-21, at 1.

[44] Robert Millward, "The Economic Development and Impact of the Urban Infrastructure in Victorian Britain," in *Urban Growth on Two Continents in the XIX and XX Centuries: Technology, Networks, Finance and Public Regulation*, ed. Andrea Giuntini, Peter Hertner, and Gregorio Núñez (Granada, 2004), 31-48. The beginning of the municipalization impulse probably traces back to 1850, and was widespread by the 1890s. See Millward, "Urban Water Supplies"; Millward, "Nationalization." According to Millward, "the weakness of the regulatory regime was one of the factors behind the drive to municipalisation in the forty years up to the First World War." Millward, "The Political Economy," 318.

[45] Bernard Barraqué, Jean-Marc Berland, and Sophie Cambon, "Country Report on France," in *Institutions for Water Resources Management in Europe*, ed. Francisco N. Correia (Rotterdam, 1998), 189-329; Bernard Barraqué, "Water Management in Europe: Beyond the Privatisation Debate," *Flux* 7 (Jan.-March 1992): 7-26.

responsibility to other parties.[46] The municipalities' small size reduced the range of possibilities for managing their own public services, and from the nineteenth century on, a few large private firms operating under long-term concessions dominated the water industry.[47] Franchising or contracting operations and maintenance keeps the asset ownership under public control, and implies recurrent bidding to obtain contract renewals, thereby providing an incentive for private operators to perform all aspects of the service well.[48]

In Italy, the municipalization experience had three stages, associated with the liberal, fascist, and republican governments, respectively, and which coincided with three distinct phases in the role of government in public issues. The Law of 1903 marked the first wave of municipalization, lasting until World War I. The advent of fascism brought about a stage of stagnation, even a regression, for municipalization.[49]

In mid-nineteenth-century Portugal there were two institutional alternatives. Although in Lisbon public management had operated for a century, private construction and operation of water systems became the dominant option.[50] The origin of a national-scale, territorially structured, and administratively planned water policy in Portugal can be traced back to 1884, when legislation restructured water policies that endured until the late twentieth century.[51] However, at the beginning of the twentieth century, when the country was behind European standards of public utilities diffusion, the nine Portuguese towns with modern water provision

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[46] Steven Renzetti and Diane Dupont, "Ownership and Performance of Water Utilities," *Greener Management International: The Journal of Corporate Environmental Strategy and Practice* 42 (2003): 9-19; Ivan Chéret, "Managing Water: The French Model," in *Valuing the Environment: Proceedings of the First Annual International Conference on Environmentally Sustainable Development* (World Bank) (Washington D.C., 1994), 80-92.

[47] See Katko, Juuti, and Pietilä, "Historical Perspectives"; Prosser, "Public Service Law"; Kraemer, "Public and Private Management," 10; and Jean-Pierre Goubert, *La conquête de l'eau: L'avénement de la santé à l'âge industriel* (Paris, 1986), 186. Private supply had existed in Paris since the eighteenth century; see Pierre Guislain, *The Privatization Challenge: A Strategic, Legal, and Institutional Analysis of International Experience* (Washington, D.C., 1997).

[48] Jacobson and Tarr, "No Single Path"; Fauconnier, "The Privatization," 47.

[49] Claudio Pavese, "Le municipalizzate in Italia," presented at the Seconda Conferenza Nazionale dei Servizi Pubblici Locali, "L'innovazione al servizio dei cittadini" (Milan, 2000); Stefano Fenoaltea, "The Growth of the Utility Industries in Italy, 1861-1913," *Journal of Economic History* 42 (Sept. 1982): 601-27, at 619.

[50] Álvaro Ferreira and Ana Cardoso, "The Networked City: Managing Power and Water Utilities in Portugal, 1850s-1920s," *Business and Economic History on Line* 2 (2004), http://www.thebhc.org/publications/BEHonline/2004/daSilvaMatos.pdf.

[51] João Howell Pato, "The Evolution of Water Management Systems in Portugal: 1884-1994," presented at "Water and Civilization," the Fourth Conference of the International Water History Association (Paris, 2005).

relied mainly on private management with or without private ownership of the infrastructure.[52] The economic impact of World War I later launched another wave of municipalization.

Finally, in Germany and in the Scandinavian countries (Sweden, Norway, and Finland), municipal ownership was strong.[53] We can date the growth of municipal enterprises in those nations to the period from 1850 to 1880.[54]

The Institutional Framework in Spain under Franco

In Spain, public services have been managed in several ways that can be grouped into two categories: direct management, through a local entity or public society; and indirect management, through concession, cooperation, leasing arrangements, mixed firms, consortia, or formal agreements.[55] Between the mid-nineteenth century and the Civil War, given the economic weakness of local councils, management was mostly through private concessions.[56]

The regulatory framework was supported by legislation concerning municipal administration. The Municipal Law of 1877 rested on liberal principles that made it very difficult for the municipalities to undertake certain basic industrial and commercial activities. Even so, some city councils did provide the water supply, as it was considered a matter of public hygiene, and the law allowed municipalities to be involved in that

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[52] Ferreira and Cardoso, "The Networked City," 8.

[53] Millward, *Private and Public Enterprise*, 6; Marko Stenroos, "Managing Water Supply and Public Utilities in Finland 1876-1918," presented at the International Water History Association (IWHA) 2nd conference, "The Role of Water in History and Development" (Bergen, 2001); Ole Hyldtoft, "Making Gas: The Establishment of the Nordic Gas Systems, 1800-1870," in *Nordic Energy Systems: Historical Perspectives and Current Issues*, ed. Arne Kaijser and Marika Hedin (Canton, Mass., 1995), 75-99; Marjatta Hietala, *Services and Urbanization at the Turn of the Century: The Diffusion of Innovations* (Helsinki, 1987), 207.

[54] Robert Millward, "Institutional Change in State Enterprise in Western Europe 1945-90: Economics or Technology or Ideology?" presented at the Conference on Transforming Public Enterprise in Europe and the Americas: Networks, Integration and Transnationalisation (Santander, 2004), 5.

[55] Francisco Sosa, *La gestión de los servicios públicos locales* (Madrid, 1997).

[56] Juan M. Matés, "Evolución y cambio en el abastecimiento urbano: del sistema clásico al moderno," in *Actos del VII Congreso de la Asociación de Historia Económica* (Zaragoza, 2001), 13; Francesca Antolín, "Las empresas de servicios públicos municipales," in *Historia de la empresa pública en España*, Francisco Comín and Pablo Martín (Madrid, 1991), 283-330, at 284. However, there were other options: Madrid had a state company in operation; in Barcelona there was a private corporation; in Cadiz, Seville, and Valladolid represented early instances of municipalization. Juan M. Matés, "La conquista del agua: importancia urbana y económica," *Boletín de Estudios Giennenses* 174 (2000): 29-56, at 38.

issue.[57] The Water Law of 1879 reinforced the state's role, and the care of public water resources rested with the councils.[58]

Although there were some profitable private firms, the trend was toward municipalization.[59] The passage of the Municipal Statute of 1924 marked the turning point: that statute defined the councils' responsibilities more clearly, gave them new powers to manage services directly, and established a new judicial framework, as water provision became obligatory.[60] The legislative change in the 1920s had its roots in the transformation of the institutional framework introduced by the military dictatorship of Primo de Rivera (1923-1930).

The first wave of municipalizations during the interwar period was not completely successful. The new legal framework, in attempting to transfer service to municipalities, increased the pressure on private firms. Growing state interventionism reduced the probability of survival for many firms, and led some of them to municipalization or dissolution.[61] However, the inability of city councils to achieve more efficient management, their limited access to external financial resources, and the inefficiency of the government regulatory framework limited the success of this first attempt. In many cities, private management remained in force until the Civil War.

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[57] Encarna Galván, *El abastecimiento de agua potable a Las Palmas de Gran Canaria: 1800-1946* (Las Palmas, 1996), 26. The nineteenth-century Spanish state had a markedly centralist nature. For this reason, municipalities could assume only certain services, those characterized by small investment levels and simplicity of management. Núñez, "Servicios urbanos colectivos en España."

[58] Joaquín Melgarejo, "De la política hidráulica a la planificación hidrológica: Un siglo de intervención del Estado," in *El agua en la historia de España*, ed., Carlos Barciela and Joaquín Melgarejo (Alicante, 2000), 275-324, at 279. Maestu points out that under Spanish law the owner of water rights is the state government, which, in turn, grants concessions, along with certain conditions, to various users, either temporarily or permanently. The state delegates its rights to individuals for an economic use or to develop a public service. In this sense, concessionaires have usage rights, but not property rights. Josefina Maestu, "Dificultades y oportunidades de una gestión razonable del agua en España: la flexibilización del régimen concesional," in *La economía del agua en España*, ed. José M. Naredo (Madrid, 1997), 121-40, at 123.

[59] Juan M. Matés, "El servicio público de aguas potables en España: Un sector entre la confluencia de los intereses públicos y privados," presented at the III Congreso Ibérico sobre Gestión y Planificación del Agua (Seville, 13-17 Nov. 2002).

[60] Juan M. Matés, *Cambio institucional y servicios municipales: Una historia del servicio público de abastecimiento de agua* (Granada, 1998), 2. The municipal law of 1935 and the municipal regulation laws of 17 July 1945 and 3 Dec. 1953 later ratified this circumstance, revised by the Decree of 24 June 1955.

[61] Matés, "La conquista del agua," 30-32.

Increasingly interventionist state activity characterized the period from 1940 to 1974.[62] After World War II, the majority of the European democracies adopted a model of economic regulation based on public companies that provided networked services, as a reflection of the welfare state and the peak of modern public enterprises.[63] This trend was linked to other long-range issues, which had their roots in the late nineteenth century: the nationalization of water management and ownership and the transfer of control of urban water services from municipalities to the state.[64]

In those countries such as Greece, Portugal, and Spain that experienced long dictatorships, there was a failure to develop either a strong welfare state or significant public enterprise networks for public services and utilities.[65] Although Spain shared some common features with other nations during those years, the conditions were different, as the country suffered a political, social, and economic involution. The ideology and the economic policy of the Franco dictatorship were predominantly interventionist and centrist. This represented a break with the previous period, although the forty years of the military state were not a homogeneous era. We can distinguish three stages: the autarkic postwar period (1940-1959), during which attempts to industrialize the country and interventionist policies led to the creation of many public enterprises; a period spanning the advent of regional development policies (1964 to 1970), characterized by private firms taking the leading role; and a third

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[62] Francisco Comín, *La empresa pública en la España contemporánea: formas históricas de organización y gestión (1770-1995)* (Madrid, 1995), 9.

[63] Judith Clifton, Francisco Comín, and Daniel Díaz, "Transforming Public Enterprises: Inward and Outward FDI in the Manufacturing and Network Industries: 'From Ugly Ducklings to Swans': Globalisation—NPA-SPA—Spain Is Different," presented at the VIII Congreso de la Asociación Española de Historia Económica (Santiago de Compostela, 13-16 Sept. 2005), 1-18, at 2; Karen Bakker, "From State to Market? Water *Mercantilización* in Spain," *Environment and Planning A* 34, no. 5 (2002): 767-90. Millward, "The 1940s Nationalizations."

[64] Clifton, Comín, and Díaz, *Privatization in the European Union*; Erik Swyngedouw, Maria Kaïka, and J. Esteban Castro, "Urban Water: A Political Ecological Perspective," *Built Environment* 28, no. 2 (2002): 124-37. In the United Kingdom between the 1940s and the 1980s public service enterprises were public monopolies. John Singleton, "Labour, the Conservatives and Nationalisation," in *The Political Economy of Nationalisation in Britain, 1920-1950*, ed. Robert Millward and John Singleton (Cambridge, U.K., 2004), 13-33; Foster, *Privatization*. Until the 1970s, a large proportion of U.S. waterworks were publicly operated. Susan Feigenbaum and Ronald Teeples, "Public versus Private Water Delivery: A Hedonic Cost Approach," *Review of Economics and Statistics* 65 (Nov. 1983): 672-78; W. Mark Crain and Ashgar Zardkoohi, "A Test of the Property-Rights Theory of the Firm: Water Utilities in the United States," *Journal of Law and Economics* 21 (Oct. 1978): 395-408.

[65] Clifton, Comín, and Díaz, "Transforming Public Enterprises," 4.

phase that began during the years 1970-1975 and extended to the advent of democracy and further, into the mid-1980s.[66]

In sum, the period after the Civil War in Spain witnessed a new stage for water supply, extending into the 1970s and characterized by the same increasing interventionism and municipalization that took place in the majority of Western countries.[67] Given the inability of the private sector, the state recovered the management of the water supply, though it appropriated the waterworks and experience of the private firms.[68]

First Attempts to Municipalize Water Utilities under Autarkic Economic Policy, 1939-1956

Much as other Spanish towns and cities did at the end of the nineteenth century, La Coruña's city council delivered the concession for the building and management of the water supply to a private firm, because of the municipality's limited ability to provide the large capital investment required by the new waterworks.[69] The result was the establishment of *Aguas de La Coruña S.A.* in 1903.[70]

At the institutional level the years before the Civil War were characterized by a deteriorating relationship between the firm and the city council, resulting from the debt accumulation provoked by the unprofitability of the water supply enterprise.[71] Fear of the consequences of monopolistic private management caused a change in the municipality's attitude. We observe a progressive acceleration of municipal intentions to control tariffs, as well as the firm's strategy of expansion.

After the Civil War, the idea of municipalizing the service gradually germinated, envisioned as a publicly rather than privately owned monopoly. La Coruña, like other Spanish cities, underwent considerable demographic growth during the 1930s and the 1940s, which forced the firm to face continuous pressure to expand the city's water supply

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[66] Comín, *La empresa pública*, 13.

[67] Juan M. Matés, *La conquista del agua: Historia económica del abastecimiento urbano* (Jaén, 1999).

[68] Sebastián Martín, "Reflexiones sobre las privatizaciones," *Revista de Administración Pública* 144 (1997): 7-44.

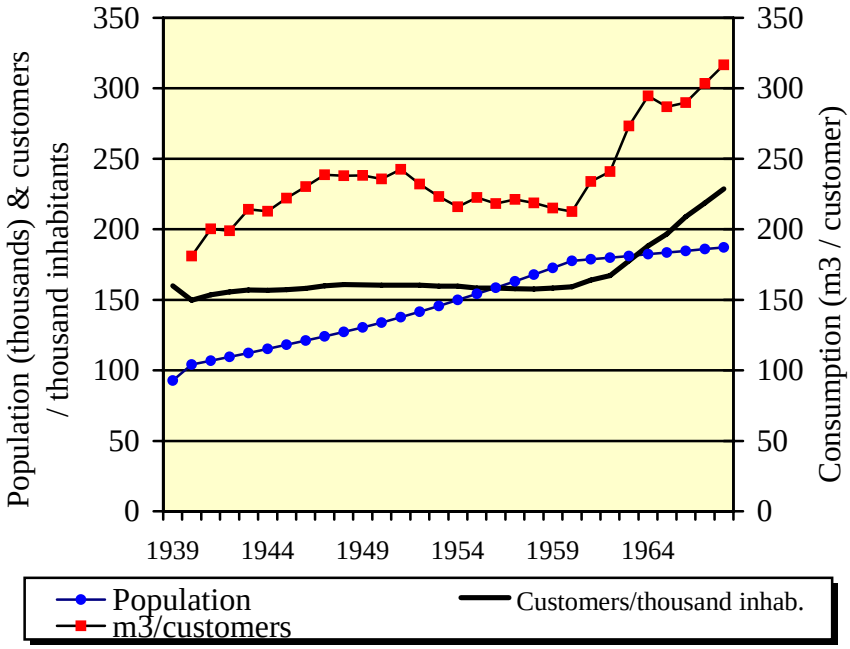
[69] Alberte Martínez et al., *Aguas de La Coruña: 1903-2003: Cien años al servicio de la ciudad* (Madrid, 2004); Martínez, "Administración local e dotación de servicios: a longa xénese do abastecemento de auga na Coruña," *Revista da Escola Galega de Administración Pública* 27 (2001): 111-26.

[70] The early twentieth century brought a large increase in the number of water supply companies in Spain. This trend continued in an upward curve until the Civil War, with two outstanding peaks in 1910-1914 and 1925-1929. Juan M. Matés, "El abastecimiento de agua de Barcelona: de las tentativas municipalizadoras al predominio de la empresa privada," *Revista de la Facultad de Humanidades de Jaén* 3, no. 2 (1994): 57-80, at 66.

[71] Martínez, "Administración local."

network, and, as a consequence, to undertake new water provision projects (see Figure 1).[72]

FIGURE 1
Water Consumption, Number of Customers, and Population in La Coruña, 1939-1968



For such projects, it was necessary that both the firm's internal (capital) and external (debt, grants, and so forth) funding sources be open and robust.[73] But, although the company could still appeal to these means of financing during the 1940s, during the 1950s and especially during the 1960s, some of them started to fail. In addition, the autarkic economic policy of the early Franco dictatorship was an obstacle to the normal evolution of the firm and the water service. Consequently, the city council found sufficient arguments to support its attempts at municipalization, founded on collective interest considerations.

In 1939, Aguas de La Coruña obtained from the national hydrological authorities a second concession license to construct a new water line, with a flow of 100 liters per second (l/s), which increased the initial concession.

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[72] Jesús Mirás, "La empresa 'Aguas de La Coruña, S.A.': La prestación de un servicio público básico en una ciudad de tipo medio entre 1939 y 1968," *TST: Transportes, Servicios y Telecomunicaciones* 3-4 (2002): 99-117, at 103. The city population increased from 74,132 inhabitants in 1930 to 104,220 in 1940.

[73] Jesús Mirás and Carlos Piñeiro, "El abastecimiento de aguas en la ciudad de A Coruña durante el franquismo," *Revista Galega de Economía* 12, no. 2 (2003): 203-20, at 209.

They based their request on the need to extend the infrastructure for tap water supply, cleansing, and distribution, which were operating at the limit of their capacities as a result of urban demographic growth and the increase in both the number of customers and consumption (see Figure 1). The project negotiations encountered innumerable difficulties, however, and the prevailing institutional framework became unfavorable to the firm.[74] The 1940s witnessed the Spanish councils' increasing orientation toward municipalization, a trend accelerated during the 1950s and 1960s by the municipal regulation law of 1955.[75]

The process of municipalization of La Coruña's water service followed a long path, from the first initiatives taken by the city council in the early 1940s until the culmination of the process in 1968. The first proposal dated back to 1944, although that initiative apparently remained latent during the rest of the decade. At the end of the 1940s, a new push for municipalization began. In 1948 company engineers proposed a project to increase the city's water supply that added a third concession license of 375 l/s of water (approximately 32,400 cubic meters [m^3] per day) to the two former concessions (with a total flow of 17,280 m^3). An immediate obstacle was the lack of consensus among the firm, the city council, and the state concerning the level of tariffs needed to repay the investment and to guarantee the project's economic viability.[76]

After the Civil War tariffs were a continuous source of disagreement between the state administration and the public services concessionaires. In the case of Aguas de La Coruña, the freezing of tariffs caused a dramatic fall in average income per customer, which decreased 42 percent in real terms between 1930 and 1940 (1935 pesetas; see Figure 2). Although the average expenses per consumer also decreased (in part because of the firm's increased productivity and efficiency), the total impact was a diminution in average profit per customer of more than 55 percent.

The deterioration in profitability occurred just as the firm had planned to address the need to expand supply capacity and infrastructure. In any case, several years passed before the state authorized the tariffs associated with the new concession license; with the high inflation rates in the Spanish economy between 1939 and 1951, the tariffs initially calculated were severely outdated by the time they could be implemented.[77]

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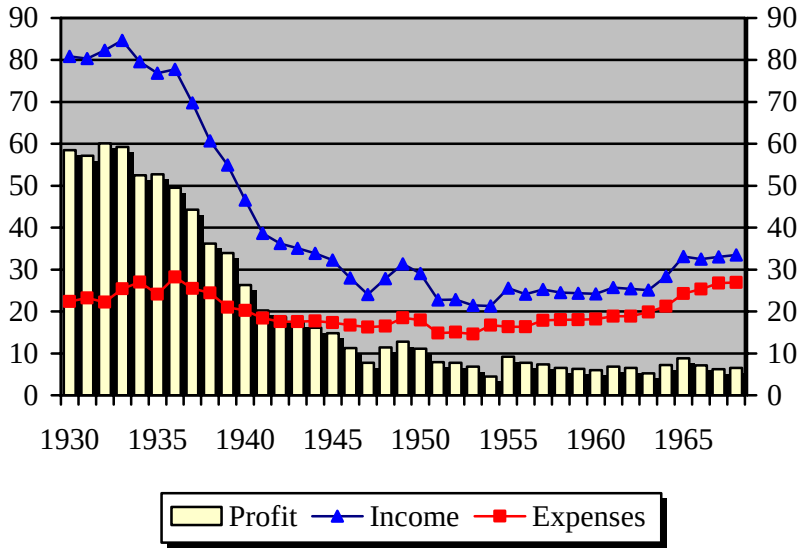
[74] Mirás, "La empresa 'Aguas de La Coruña'," 104.

[75] Several Spanish cities municipalized the service, following the steps initiated in other cities in the 1920s and the 1930s: Malaga, Huelva, Santa Cruz de Tenerife, Las Palmas, and so forth. Jesús Mirás, "Intervención y regulación del abastecimiento de agua en el franquismo: A Coruña, 1939-1975," *Revista de História Económica e Social* 5 (2003): 35-62, at 42; Matés, "La conquista del agua"; Matés, *Cambio institucional*, 150.

[76] Aguas de La Coruña, *Annual Report* [hereafter, AC, *Report*] (1948), 2-3.

[77] In Spain, the tariffs arranged in concession contracts became obsolete as a result of inflation, which meant that many private firms were municipalized with

FIGURE 2
Profits per Customer, 1930-1968
(in real terms—1935 pesetas)



The general behavior of prices, together with the stagnation of tariffs, drastically reduced the real value of the firm's income. Expenses exhibited the opposite behavior, due to inflation and the lack of inputs, spare parts, and supplies, which were intensified by Spain's international economic isolation and the weakness of its Gross Domestic Product. The expenses/income ratio continued to worsen until it surpassed 80 percent at the end of the 1960s, even though earnings before interest and tax (EBIT) remained stable in absolute terms (see Figure 3).

In sum, the profit margin in constant pesetas decreased significantly after 1936, in both absolute terms and unit value.[78] Between 1939 and 1950, the real value of the profit per customer decreased 40 percent and the operating ratio increased proportionally. Thus, there was an urgent

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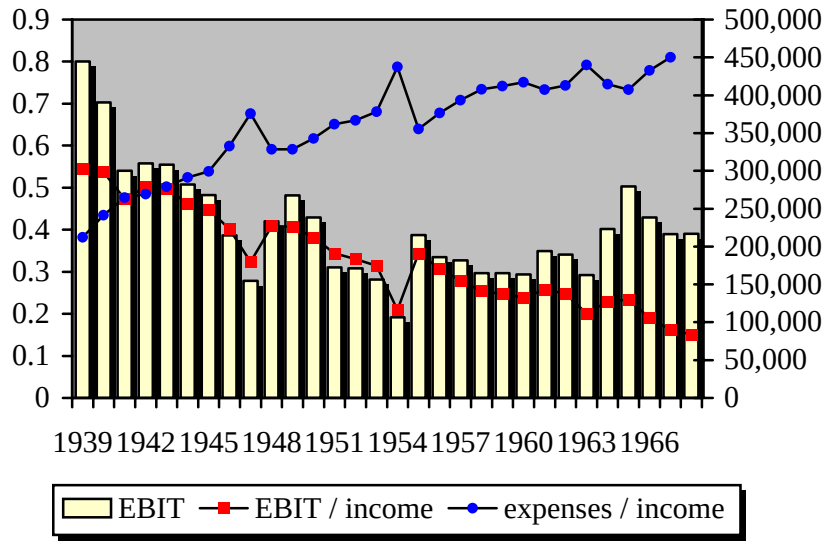
relative ease and at low cost, once they became financially exhausted. Matés, "La conquista del agua," 38-39. According to Matés, Spanish legislation provided the state administration with unilateral and unconditional power to fix public utilities tariffs. Article 12 of the Decree of the Ministry of Public Works of 17 May 1940, concerning rules for water provision, established that assistance and subsidies were to be granted for the purpose of improving public hygiene, not to create income for the councils. For this reason, project authors had to calculate carefully the tariffs they presented for passage by the Ministry. During the postwar period, firms that had limited revenues and could not cover their operating costs attempted to secure tariff increases; see Matés, *Cambio institucional*, 112-18.

[78] Mirás, "La empresa 'Aguas de La Coruña'," 115.

need for the firm to implement tariffs high enough to compensate for price increases and to guarantee minimum profitability for the large investment the firm projected, approximately 41 million in current pesetas.[79]

FIGURE 3
EBIT, Income, and Expenses in Aguas de La Coruña, 1939-1968
(in real terms—1935 pesetas)



In 1948, assets profitability was 9.65 percent, with an average capital cost of 6.17 percent. However, shareholders' profitability had oscillated around 9.7 percent (see Figure 4). For a total investment of 52.56 million pesetas, the target would be a net profit of 3.96 million real pesetas, which—*ceteris paribus* capital structure and financial costs (interest)—would correspond to an EBIT of 4.7 million pesetas. Plans projected quadrupling the active and overall business (turnover).

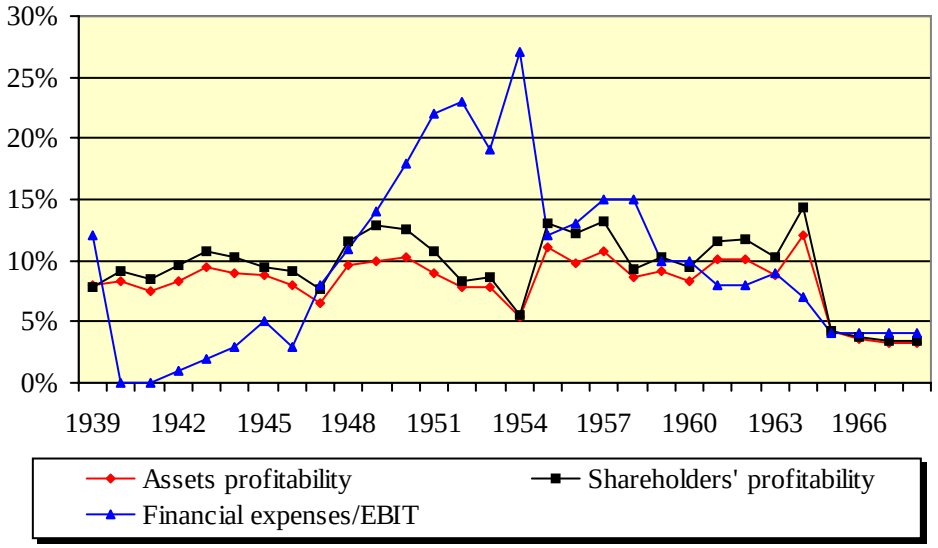
The city council took contradictory positions. The municipal law in force allowed the council to intervene in the concession terms. Initially, La Coruña's city council supported the plan prepared by the firm in 1948, which was based on an estimated population of 115,920 inhabitants for that year. The reality, however, was that in 1948 the city had already reached more than 125,000 inhabitants (see Figure 1). Therefore, it was

[79] Private companies found it very difficult to reach profitability rapidly, which explains both their reluctance to invest and the growing leadership of municipal institutions; see Matés, "El servicio público de aguas," 2; Mirás, "La empresa 'Aguas de La Coruña'," 106.

possible that the city would have insufficient water flow within the project's forecast horizon (the late 1970s).[80] Consequently, in 1949 the council decided instead to municipalize the water utility.

The firm reacted to this ruling with hostility, initiating a legal struggle between the institutions. The firm's arguments focused on the efficiency, quality, and economic profitability of the service (see Figures 3 and 4), though profitability was gradually declining. Indeed, the firm's profits were approaching critical values: even taking into account the eventual tariff adjustments, expenses were likely to increase faster than both short- and long-term income.

FIGURE 4
Profitability, 1939-1968



The new collection and cleansing infrastructure meant high fixed costs, and the growth of the city could raise maintenance and exploitation costs, as it would require extending the distribution network to locations farther from the inner city. The council, however, faced an indemnity or recovery price for the company, even though it did not have the financial resources to cover that disbursement. Therefore, the council would need to apply for a loan, and given that the firm's returns would not predictably increase, the council would have difficulty improving the business's profitability.

In conclusion: a) the service's shortcomings could not be resolved, and the firm was facing new waterworks projects to serve the growing needs of the city; b) the necessary expansion would be delayed; c) the city council recognized that it was unlikely to profit from this operation and would

[80] La Coruña Municipal Archive [hereafter, LCMA], folder 2745.

instead suffer losses; and d) the council not only would not be able to reduce service tariffs, but would probably have to increase them to offset eventual losses.[81]

Discussions reached a deadlock that damaged the firm by blocking the project to extend the water supply infrastructure. During 1949-1951, municipal technical commissions issued several reports that, in general, advised that a change of ownership would be harmful from both a technical and an economic point of view.[82] For this reason, in 1951 the city council abandoned its move toward municipalization, although that decision did not imply agreement either on water pricing reforms or on the conditions demanded by the firm in the new concession license.[83]

Nevertheless, apparently this decision unblocked the concession measure. However, between 1951 and 1953, it continued in negotiation, while the project's economic viability progressively deteriorated.[84] The basis for the tariffs requested in 1948 was the estimated budget for works foreseen at that time. However, from the project records we know that all costs and general expenses underwent considerable growth, such that in 1952 the initial budget had increased to 67 million pesetas, making the initial calculation of the tariffs obsolete.[85]

The transformation of the institutional framework, however, was the source of the firm's most significant difficulties. The agent of change was the Decree of 1 February 1952, which relied on the old idea that the state should assist modestly endowed councils to solve their water supply problems.[86] This regulation concealed the new approaches inherent in the national economic policy, which were to pursue rapid industrial growth requiring accelerated adaptation of urban infrastructures.[87] The most significant innovation in the decree established and regulated state relief

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[81] Aguas de La Coruña Archive [hereafter, ALCA, folder 227. "Municipalización."
[82] ALCA, folder 227, "Municipalización."
[83] LCMA, folder 2745.
[84] ALCA, folder 227, "Municipalización."
[85] The average tariff was set at 1.4354 pesetas, with a maximum tariff at 2.45 for household services. However, in December 1952 the firm estimated that the average tariff should increase to 2.34 pesetas, and the maximum tariff to 4.00 pesetas. Records of the Board of Directors of Aguas de La Coruña [hereafter, RBDAC] (16 April 1952), LCMA, folder 2745.
[86] Together with the Decree of 11 September 1953, which modified the Decree of 17 May 1940. Salvador Canals, "Construcción de abastecimientos de agua y saneamiento de poblaciones con auxilio del Estado," *Revista de Obras Públicas* 2772, no. 1 (1946), 159-69, at 159.
[87] Andrés Jiménez, "Regímenes de explotación, su evolución y causas de la misma," in *Explotación de abastecimientos de agua*, ed. Aguinaga Moreno and José Manuel (Madrid, 1974), 31-53.

to populations, to address the extraordinary increase in the cost of waterworks.[88]

On December 4, 1952, the ministerial order that regulated the concession was passed with the original tariffs in place, although inflation had completely undermined the project's viability. Therefore, the firm seriously considered accepting municipalization and transferring the new concession freely to the council, a move that would facilitate implementation of the benefits available under the Decree.[89] At the end of 1954, the council resolved to take charge of the concession license and to solicit the state government's assistance for the waterworks. On February 21, 1956, the Ministry of Public Works passed a new project to enlarge the city's water supply to 525 l/s, and authorized the application of the benefits of the Decree of 1952. The transfer finally took place on September 1, 1956.

The Slow Path to Municipalization of Service during the 1960s

The city continued to grow rapidly, increasing the pressure on the water supply and creating a critical situation.[90] In 1957, the city municipality urged the Ministry of Public Works to make the assistance contemplated in the 1952 Decree effective immediately. The subsidies offered to cities such as La Coruña rose to 50 percent of the final estimated budget. The reason for this urgency was the need for the council to secure a loan, which would be essential for carrying out the project.[91]

Costs for the waterworks program the council was to build amounted to 133.6 million pesetas. Given this amount, applied as warranty for a loan at 5.25 percent, the council would have had at its disposal approximately 74.4 million pesetas, that is, around 55.7 percent of the total waterworks budget. This would require the state to contribute the remaining 44.3 percent. Owing to budgetary restrictions, however, the state could provide only 40 percent. Besides, only the projects for ground works, cleansing, and water supply enlargement, which came to 47.6 million pesetas, had been definitively approved. The immediate state contribution was limited to around 40 percent of that figure—that is, to little more than 19 million pesetas. On January 13, 1961, the Ministry passed a reformed water supply enlargement project, with a contract budget of 51.9 million pesetas. The state contribution was 19 million pesetas and the municipal contribution, 32.9 million. Finally, at the end of 1962 the new provision

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[88] C. Torres, "Financiación: Régimen de auxilio del Estado," in *Explotación de abastecimientos de agua*, ed. Aguinaga Moreno and José Manuel (Madrid, 1974), 173-79. The benefits reached all the towns and cities with an average water supply less than 200 liters/per head/per day. Subsidies established by the state could reach as much as 50 percent of the budget without requiring repayment.

[89] AC, *Report* (1953); RBDAC (12 Jan. 1954).

[90] From 104,220 inhabitants in 1940 to 133,844 in 1950, and to 177,502 in 1960.

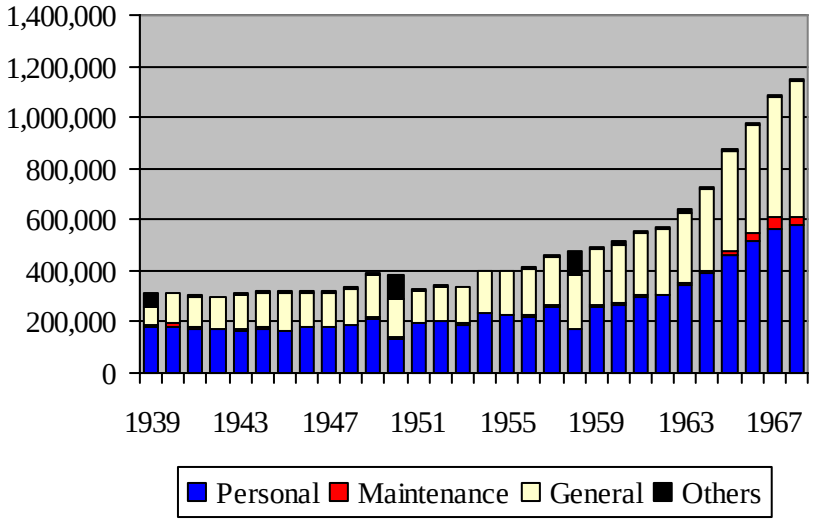
[91] LCMA, folder 2745.

went into effect. Then the question of the real owner of the city's water supply network arose for the first time in more than sixty years of service.

The reversion to public hands progressed quickly in the following years. In 1963, the council initiated the first official proposal to purchase the firm, although the final agreement still needed a maturation process as well as ministerial approval. On April 15, 1966, the Ministry of the Interior authorized the city council to acquire the firm's investments, up to a value of 23.9 million pesetas. This action was the penultimate step before municipalization.[92]

In practice, there were two different owners of the service, each possessing part of the water infrastructure. However, the company was unable, legally, to purchase the new waterworks the council had built and it was almost impossible to plan for future enlargement of the infrastructure, as the firm lacked funds. For this reason, in 1967 Aguas solicited authorization to increase tariffs. They based their request on the continuous growth of general expenses (see Figure 5), and the need to set aside more funds for investment securities in order to improve the service provided to several neighborhoods and to finance the investments that the continuous enlargement of the network required. However, the Ministry rejected this demand.

FIGURE 5
Operating Expenses, 1939-1968
(in real terms—1935 pesetas)



Throughout the latter half of the 1950s and throughout the 1960s the most significant cost segment was personnel expenses, at about 60

[92] ALCA. The Credit balance of amortization in 1968 was 2.070,000 pesetas.

percent, followed by general expenses (around 30 percent). General expenses experienced the most significant increase during these 15 years, with annual average growth around 18 percent. Maintenance costs had a marginal role until well into the 1960s.

During this stage, the macroeconomic environment did not damage the firm's evolution, for Spain experienced a more accelerated growth rate than it had during the 1940s, particularly after approval of a new economic policy in 1959. However, increasing expenses damaged the business's efficiency, particularly the pressure of rising personnel and general costs. The real value of income also worsened, decreasing economic and financial profitability (see Figure 4).[93]

In 1968, the council had purchased practically all the firm shares and had taken charge of management through the designation of a new board of directors. This was a temporary solution until full municipalization, after which the new business structure would come into operation as a municipal enterprise.[94] Therefore, after 1968 the company entered a transition period lasting several years, during which the firm's juridical configuration entered into an interregnum of institutional confusion, as it did not fit into any of the models envisaged by the law. It had a private form and a public "essence," creating serious inconveniences.

Given the impossibility of management by a private company and the council's need to take charge of water provision, the only alternative was a definitive reversion of the service into public hands. Municipalization was therefore viewed as the only viable solution to the problem of regularizing the firm's juridical situation and of implementing a method of exploitation that was considered more suitable in that historical context.[95]

Municipalization could have several advantages. First, the city council would have as a priority (due to legal imposition) proper service provision, not profit maximization. This would obviate the dilemma of the difficult reconciliation of profit appropriation by the firm with public interest. Formerly the firm would have had to support an excessive increase in expenses, owing to amortizations, depreciation allowances, provisions for investment, municipal and state taxes, and so forth. With municipalization, the service would enjoy the fiscal benefits settled by the municipal law of 1955. In addition, in cases of water provision deficits, state law recognized the principle of state subsidiary arrangement with respect to municipalities, ensuring economic resources for the scope of their performance.[96]

By the mid-1970s, before formal municipalization, the service presented a paradox. Extension of the water infrastructure to areas of the city without service was financed by investment allowances from profits or

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[93] AC, *Report* (1967), 5.
[94] ALCA, folder 227. "Municipalización."
[95] Report, Jan. 1975, ALCA. folder 227. "Municipalización."
[96] Mirás, "Intervención y regulación," 53-55.

the results of exploitation. Accordingly, the expenses generated were borne by all users, such that the oldest users financed to a significant extent any enlargement of the water supply network in the municipality. Once municipalization occurred, beneficiaries of the new service would partially finance network extension through special taxes for waterworks.[97]

This set of factors led the city council to initiate steps toward final municipalization of the service as a monopoly in 1974.[98] One issue remained: choosing the management method and the firm's organizational structure. Direct management was initially rejected, due to the service's complexity. In addition, the council did not consider a public basis for the service or methods involving citizen participation (mixed enterprise, concession, and so forth) suitable. The final choice was private municipal enterprise.[99] Thus, on June 1975 the council approved tariffs to expedite municipalization, which finally passed on September 16, 1974.

Conclusions

The immediate postwar years marked a turning point for public services in Spain. The new institutional framework increased the pressure to revert water utilities to public hands, in accordance with the new orientation of state economic policy and the dominant ideology among political authorities. The new tendency toward municipalization is chronologically linked to the nationalization impulse that emerged in Western countries after World War II, although the underlying motives were different.

On the other hand, the management of Spanish companies passed through many vicissitudes. The history of water supply in La Coruña fits the profile of the majority of Spanish cities and serves to illustrate the evolution of water provision as well as the pressures to which it was subject during the middle third of the twentieth century. A private firm had managed the service since the end of the nineteenth century. The context of autarky that prevailed in the early Franco dictatorship created a very unfavorable environment for private management methods, as the frequent shortages that both management and water operations had to face in La Coruña and in other Spanish cities attest. The frequent obstacles that confronted normal provision of inputs, materials, energy, and so forth impeded a regular supply to the city during the 1940s and 1950s. In addition, increases in costs and in employee wages (intended to

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[97] Report, Jan. 1975, ALCA, folder 227. "Municipalización."

[98] The municipal regulation law required several conditions to confirm the municipalization of the service: a) the nature of the service had to be mercantile, industrial, extractive, forest, or agrarian; b) it had to be a basic needs service; c) it should be provided within the municipal boundaries; d) the service had to provide more profitable conditions to the users than a private firm or indirect management. Mirás, "Intervención y regulación," 55.

[99] Report, Jan. 1975, ALCA, folder 227, "Municipalización."

compensate employees for losses in purchasing power) hindered management.

The city council's policy, based on the dictatorship's prevailing ideology and interventionist legislation, led to an attempted a takeover of water supply management at the end of the Civil War and also complicated the scenario. The municipality's greatest obstacle was its financial incapacity to create an integrated management of the service. The council's hesitant attitude blocked (although perhaps unintentionally) the efficient modernization of the service.

Examination of the firm's outcomes, as well as of financial and efficiency indicators, reveals that management could have remained solid for some time once the urban growth ceased to require large investments in infrastructure. From examination of municipal documents and from the company archive, one cannot infer that water supply shortages determined the later ownership change. In the last analysis, financial bottlenecks and insufficient tariffs were the factors that forced the company to accept the municipalization proposed by the city council. Therefore, this asphyxiation was the result of a legal framework that narrowed the margin of operation, as it established political prices that did not compensate for the large investments necessary and reduced the possibilities of state financing. Finally, access to state subsidies, which were unavailable to private firms, facilitated the reversion to public ownership; the municipal enterprise created *ex novo* could access the means to effectively carry out water provision projects.

In conclusion, we can discern that the institutional environment's influence was the decisive variable in the transformation of water management methods in La Coruña, an inference that can be extended—with differences in timing—to the majority of Spanish cities during the Franco dictatorship.