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Abstract

In this work we will analyze the strategies that foreign companies adopted in Spain, during the 19th and 20th centuries, in the sector of water supply to cities.

The work is divided into three parts. In the first one the place that the foreign firms occupied in Spain is described, and some cases of managers devoted to the business of drinking water supply are cited. In the second part, a chronological description of the installation of the foreign companies is presented. At the same time, we will carry out an analysis of the strategies that some of these companies developed to obtain the concession contracts. Finally, we will present a small balance of the foreign investment in the sector of the water and some brief conclusions.

1. Introduction

The historical study of the companies of water supply presents a particular interest for the managerial history, especially due to the protagonism that it acquired, the novelty that it represented from the technological point of view, and the important presence of investments, national and from other countries, for the creation of companies in Spain. The managerial phenomenon that arose inside the administrative frame generated a singular and characteristic typology that shows interesting data for a better knowledge of the History of Business.

The administration of public services is a differentiated model of company, stable in theory and of scarce risk. Although in this sector the risk was in an insufficient demand and in a non profitable investment during many years. Also, it could be an unknown sector for the Spanish managers; on the other hand, the experience was multiple in the case of foreigners, particularly the Belgians, in the existence of managers, manufacturers, investors, etc., and in discerning the possibilities that the scale economies offered. So, the managerial strategy, the financial problems, the social origin of the managers, etc., are aspects that can help to have a more complete vision of the formulas used for the benefit of a public service.

In spite of the importance that this sector presents, it has been frequently forgotten by Spanish historiography. In the analysis of the public services attention has been paid to other sectors, especially to the electricity, but the interest has been overlooked by the managerial development of the domiciliary supply of drinking water.
2. Strategies and settlement of foreign companies.

The role of foreign investments in a backward country in terms of industrial development, such as Spain, was analysed by Broder, who reported the consequences of the irruption of external factors, both economical and technical, in the heart of a lethargic economy. Foreign investment in public services, throughout 19th century, had an essential importance in the establishment of private companies, as well as a prominent place in the diagram of Spanish economic growth.

The foreign tendency to settle in Spain can be a consequence of a more general phenomenon where investors were looking for business opportunities of any type. Moreover, the water sector was interesting because of the novelty and attraction it had for less modernized cities. Besides, the limited competitively of national industry left free way to the introduction of foreign technology and materials.

Private foreign investments in water supply have been detected as early as the 18th century, and later on –19th century-, the first foreign attempt became apparent in the most important cities of the country, especially Barcelona and other cities such as Cádiz, Algeciras and Seville. There are several reasons that explain why these cities received the first foreign investments in Spain. Firstly, its geographical location, and in the second place, the traditional British presence in the area, due to mining exploitations and wine-producing industries, besides the permanent commercial contacts with Great Britain. These facts provide us news from different parts of Spanish geography- including Castilla-, and they seem to show that we are facing a quite generalized attitude and not only exclusively focused on some provinces or territories.

The coming of these British companies could be related with the progressive municipalization of water supply that was taking place in that country, especially between 1860 and 1905, and that forced these companies to seek new markets for their expansion. At the same time, the important presence of French capital could be related with the great wave of investments coming from that country that took place in the middle of the 19th century.

The investments for house drinking water supply shared with other public services – railway and tram, gas and power supply- the considerable fixed capital that was necessary to employ. Generally, foreign ownership companies moved in a completely monopolist field and continued keeping their headquarters outside the peninsula.

Moreover, the «administrative concession» formula was welcome among foreign companies. Town councils, incapable of realizing the multiplying effect of intersectorial relationships of the economy, granted concessions without any special difficulty and allowed the consequent output of national resources abroad.

This double situation, high fixed capital and management by means of «administrative concessions», allowed them to resist the pounding of those who called for a national industry and management. All the mistakes made during that period of time, and so many times denounced with railway construction, returned to be raised at the time to make the foundations of water, gas and power supply, since Spanish industry was capable of producing the necessary material at the time installations were taking place.

In Spain policies were not in the style of the big financial groups, but totally different. Some British companies were looking for long term investment, with a policy that seems to consist of getting the concession of potable water supply in big cities or even connected with
mining centres, as the case of Cartagena-Mazarrón. French and Belgian financiers seemed to be much more enterprising, perhaps because they did not have such an ensured market, though it can also be related to the function they held—especially the Belgians—of financial intermediaries in the international investment market. For example, the search for new financial contributions led the Crédit General Liégeois, shareholder and promoter of the Compagnie Générale des Conduites d’Eaux (1867) settled in Liege and in charge of the potable water supply of Barcelona and Alicante, to deal with French companies such as the Société Générale d’Eaux de Barcelone (1882) and the Société d’Eaux d’Alicante (1898). It is noticeable, therefore, at the end of the 19th century how the change of orientation of Belgian investments towards electricity was allowing French financiers to occupy their prominent position.

In any case we have to highlight the importance that foreign capital had in water supply financing, up to its nationalization in 1920. The preponderance of French capital in water supply companies was the most outstanding, but lower than the one existing in gas companies. Most of these French companies wanted to find a wider market, with more opportunities to invest and with a better adapted dimension to the minimum profitability threshold of those investments. For example, in some French cities it is seen, in the last decades of the 19th century, that the slowness in the change of the supply structure was due to the insufficient magnitude of local market. That is, deprived of the guarantee that other cities offered in a fast growing market, investments withdrew before a sector with little opportunities of growing. And consequently the preference to invest abroad. The demographic stagnation produced low levels of investment that at the same time caused inflation. What is more, English and Belgian investments had also an impact on the subsection, British to some extend.

But it was not the urge to invest what brought foreign companies to the Spanish market. It also existed an interest favoured by the diffusion and selling of technology and in order to give way out their products. Most of the companies that obtained a concession to installation and supply of water were, at the same time, pipes manufacturers. The material used in the supply network came from factories, established in their countries of origin. The most well known cases were those of the French company Société Générale d’Eaux de Barcelone (1882), standard-bearer of the companies Bonna, devoted to the production of pipes; and the same situation happened with Seville Water Works, for the Andalusian capital water supply. Broder has highlighted the multinational character of the phenomenon in Spain, both from the capital market perspective and high technology.

The technological patronage was obvious. The reading of the precise and detailed development projects that Sociedad de Aguas Potables submitted to Valencia City Council, in order to improve the water supply, allow us to know the considerable influence that foreign companies exerted. Obviously, these works—finished in 1907—were in the hand of two French societies: Sociétè Lyonnaise des Eaux and Sociétè de l’Eclairage de Paris.

In this same sense, Nuñez has described a similar situation for Belgian proceedings and trams in Spain. Basically, it was the same strategy that great electric machinery production companies used, highly interested in the selling of their engines and machinery for electricity production or development of trams, what lead them to set up electric companies.

Foreign companies connected with water supply were in charge of two different branches of activity: installations construction and the management or the running of the water system. Though they were two different business, and our interest is located in the second one, it is necessary to remember that both were linked most of the times and sometimes both branches were the same one in some companies. Foreign companies also controlled the subcontract market, by giving the service concession to another company.
According to the information provided by Costa Campi, investments made in the 19th century by foreign capital water companies, total or partial, rose to 40,670,400 pesetas. French capital was the prevailing one, with a 48.6% of foreign investment, followed by the English with a 34.56% and finally, the Belgian with a 16.82%. To be precise, Table 1 shows the breakdown of investment and the percentage in comparison with the total amount of foreign investment in Spain.

<table>
<thead>
<tr>
<th>FOREIGN COMPANY INVESTMENTS ON WATER SUPPLY IN SPAIN</th>
<th>Total Investments (pesetas)</th>
<th>% of the total foreign investment</th>
</tr>
</thead>
<tbody>
<tr>
<td>France</td>
<td>19,768,750</td>
<td>23.71</td>
</tr>
<tr>
<td>England</td>
<td>14,057,900</td>
<td>28.57</td>
</tr>
<tr>
<td>Belgium</td>
<td>6,843,750</td>
<td>16.45</td>
</tr>
</tbody>
</table>


Despite everything, the importance of national investment must not be underestimated. *Aguas de Barcelona*, one of the most important companies, was purchased by national shareholders in 1920, and the majority of the concessions were exploited by exclusively Spanish companies.

The investments volume made by foreign companies was smaller than in other fields of the service industries, due to a fundamental reason: water supply required a smaller investment in fixed capital than the one needed for gas, electricity or trams; but at the same time it presented little expansionist appeal, something that logically limited their investments.

From another perspective, among foreign promoters of supplier companies in Spain, it is seen on the one hand the presence of well situated tradesmen that, in a personal way, were interested in investments in Spain; on the other hand, the appearance of big companies that provided their own managers.

In the first case, we find French businessmen in most of the cases, attached to Spain or with very good commercial relationships with some Spanish regions. The proceedings in the 1860’s decade of Jean Bouchard and Luis Petit, or the later of Baradat, in La Coruña; and that of the Mouren brothers in Barcelona, all of them French businessmen, walked in that direction. It is interesting to notice the insistence and reiteration that the French engineer Victor Bazerque employs in Valladolid who, with his colleague L. Gatteau, tries to convince the Town Council with numerous arguments to be part of a water system society, all of them dated between October and December of 1864. It does not seem to be a bad business because, at the time of the French proposal, another one appeared coming from Spanish businessmen and engineers. Finally, the doubts and uncertainties of the Town Council left them without any response. A new request in order to obtain an authorization for the construction of supply and piping system in Gandía, from the English citizen Macnaughtan in 1895 seems to confirm this tendency. Everything seems to indicate that these were not isolated proceedings, but a consequence of the existing tendency in Spain in the second half of the 19th century: the coming of foreign businessmen to spread the new techniques that were imposing in the neighbouring countries.

In the second case, the origin of foreign investment in the potable water supply sector lay in multinational companies born in solid capitalist economies and capable of entering in different countries. The presence of national and foreign businessmen, at the head of these companies, had the intention of seeking for support in the country in order to serve as contacts to facilitate the
obtaining of the concession and to enter in dispute or in the auction. In these pages we have referred to different cases in Cádiz, Alicante, Las Palmas, Pamplona and Barcelona among others, so we will see how two more cases. When the British company *Docwra and Simpson* started the works in numerous cities of Castilla, La Mancha and Extremadura, it selected engineer Thomas Greenhill to represent that figure. The same function seems to have been practised, at the end of the 19th century, by the English businessman Ernest John Baylliss and the Catalanian Roberto Baldelló y Martínez, because with their proceedings in different Galician cities they wanted the *British and Foreign Trading Company Limited* to enter in the market.

Like many other sectors, both world wars marked the process of relation with foreign promoters. The 30’s European economic crisis, the Spanish Civil War and the Second World War tightened the screws on the foreign businessmen withdrawal process and their progressive replacing with Spanish financial groups or City Councils, something that allowed them to control the water industry.

### 3. First landing and weighing up (1850-1900): French and British preponderance

In the second half of the 19th century the establishment of foreign companies specialized in potable water supply was made in a gradual way. The beginning of companies weighing up was detected between 1850 and 1880, the time when those companies were looking for interesting cities for their investment. From 1881 onwards the rhythm of introduction increased and Spain attended to significant coming of foreign investment until 1900.

#### TABLE 2

**FOREIGN COMPANIES IN SPAIN**

<table>
<thead>
<tr>
<th>Company</th>
<th>City</th>
<th>Social Address</th>
<th>Year of foundation</th>
<th>Nominal Capital</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCHNEIDER</td>
<td>Vitoria</td>
<td>Vitoria</td>
<td>n.f.</td>
<td>n.f.</td>
</tr>
<tr>
<td>JEAN BOUCHARD</td>
<td>Coruña</td>
<td>París</td>
<td>1860</td>
<td>n.f.</td>
</tr>
<tr>
<td>LUIS PETIT</td>
<td>Coruña</td>
<td>París</td>
<td>1863</td>
<td>n.f.</td>
</tr>
<tr>
<td>COMPANIA DE AGUAS DE BARCELONA</td>
<td>Barcelona</td>
<td>Liege</td>
<td>1867</td>
<td>n.f.</td>
</tr>
<tr>
<td>AGUAS POTABLES DE ZAMORA, S. A.</td>
<td>Mazarón</td>
<td>London</td>
<td>1868</td>
<td>45,000</td>
</tr>
<tr>
<td>DOCWRA Y SIMPSON</td>
<td>Zamora</td>
<td>London</td>
<td>1870</td>
<td>n.f.</td>
</tr>
<tr>
<td>CÁDIZ WATERS WORKS COMPANY LIMITED</td>
<td>Cádiz</td>
<td>London</td>
<td>1872</td>
<td>n.f.</td>
</tr>
<tr>
<td>GRAPPIN, CALVET Y ARCE</td>
<td>Barcelona</td>
<td>Barcelona</td>
<td>1876</td>
<td>n.f.</td>
</tr>
<tr>
<td>SEVILLA WATER WORKS Cº LTD., S. A.</td>
<td>Sevilla</td>
<td>London</td>
<td>1881</td>
<td>8,750,000</td>
</tr>
<tr>
<td>AGUAS DE SANTANDER, S. A.</td>
<td>Santander</td>
<td>Santander</td>
<td>1881</td>
<td>n.f.</td>
</tr>
<tr>
<td>AGUAS DE BARCELONA, S. A.</td>
<td>Barcelona</td>
<td>Barcelona</td>
<td>1882</td>
<td>40,000,000</td>
</tr>
<tr>
<td>ALICANTE WATER WORK LIMITED</td>
<td>Alicante</td>
<td>London</td>
<td>1883</td>
<td>n.f.</td>
</tr>
<tr>
<td>BAYLLISS &amp; BALDELLO</td>
<td>Coruña</td>
<td>London</td>
<td>1889</td>
<td>n.f.</td>
</tr>
<tr>
<td>CARTAGENA MINING &amp; WATER Cº LTD., S. A.</td>
<td>Cartagena</td>
<td>Manchester</td>
<td>1889</td>
<td>750,000</td>
</tr>
<tr>
<td>BRITISH AND FOREIGN TRADING COMPANY LIMITED</td>
<td>Coruña</td>
<td>London</td>
<td>1890</td>
<td>n.f.</td>
</tr>
<tr>
<td>SOCIEDAD INTERNACIONAL DE AGUAS</td>
<td>Reja</td>
<td>Madrid</td>
<td>1891</td>
<td>n.f.</td>
</tr>
<tr>
<td>DOEITSCH, D. L.</td>
<td>Huelva</td>
<td>London</td>
<td>1891</td>
<td>n.f.</td>
</tr>
<tr>
<td>BARCELONA BESOS WATERWORKS COMPANY LTD.</td>
<td>Barcelona</td>
<td>London</td>
<td>1892</td>
<td>n.f.</td>
</tr>
<tr>
<td>CORUNA WATERWORKS COMPANY LIMITED</td>
<td>Coruña</td>
<td>London</td>
<td>1893</td>
<td>n.f.</td>
</tr>
<tr>
<td>ABASTECEDORA DE AGUAS DE SEVILLA</td>
<td>Sevilla</td>
<td>París</td>
<td>1895</td>
<td>n.f.</td>
</tr>
<tr>
<td>AGUAS DE ALICANTE, S.A.</td>
<td>Alicante</td>
<td>Lieja</td>
<td>1898</td>
<td>5,000,000</td>
</tr>
<tr>
<td>DRAPIER, PLANCHON y Cía</td>
<td>Barcelona</td>
<td>Barcelona</td>
<td>1899</td>
<td>n.f.</td>
</tr>
<tr>
<td>ELCHE WATER WORKS</td>
<td>Elche</td>
<td>London</td>
<td>1900</td>
<td>n.f.</td>
</tr>
<tr>
<td>ANDALUSIA WATER COMPANY LTD., S. A.</td>
<td>Algeciras</td>
<td>London</td>
<td>1912</td>
<td>437,500</td>
</tr>
<tr>
<td>CITY OF LAS PALMAS WATER &amp; POWER Cº LTD., S. A.</td>
<td>Las Palmas</td>
<td>London</td>
<td>1913</td>
<td>3,125,000</td>
</tr>
</tbody>
</table>

Sources: *Anuario de Sociedades Anónimas* (GARCEB), (1918-1923); *Anuario Financiero de Valores Mobiliarios* (AFVM) (1916-1918); *Anuario Financiero de Bilbao que comprende el historial de los valores públicos y de Sociedades Anónimas de España* (AFB) (1915-1972); *Anuario Financiero y de Empresas en España* (AFEE) (1983-1985); *Anuario Financiero y de Sociedades Anónimas de España* (AFSAE) (1916-1977); *Anuario Técnico e Industrial de España* (ATIE) (1913). n.f.: not found.
During the first decades (1850-1880) little defined activities are observed, those linked with that period of time that is known of the small companies in the first stages of the water sector, in other words, private investors that, with limited possibilities to face great investments to set up and expand the business, were obliged to transfer their rights to other companies with a bigger investment capacity. That is what happened in Cádiz, Barcelona and other Spanish cities.

The first step was made by the French and Belgians in Barcelona with the Compañía de Aguas de Barcelona. In this same stage Docwra and Simpson is prominent: since 1870, it worked to introduce house supply in different middle size Spanish cities. This London company performed the water supply works in Zamora, Talavera, Valladolid, Toro, Don Benito and Salamanca, among many other cities. The works were conducted by the British engineer Thomas Greenhill, and it seems that the company strategy was just to look for middle size cities in order to give way out to the materials it manufactured, without seeking the supply control but just the piping network construction\textsuperscript{14}.

Another important point to consider was the attempt of a British company to settle down in Cádiz. In the middle of 1868, once the deposit had been made in order to pay Matías del Cacho, for a private granted concession to build the water supply system, the works in the Piedad’s spring started. The great difficulties exceeded the technical and investment capabilities of the concessionaire company, so it had to request extensions of time to finish the works. Matías del Cacho’s financial difficulties caused him to sign a contract with a company from Manchester, with the goal to carry on with the works.

We are in front of a typical case of subcontract in which the Spanish company is obliged to subrogate the concession to other company, in this case a British one, with greater financial and technological possibilities. This situation lead them to extend the contract and execution time of the works and to reduce the flow of water. Their financial limitations led them to hand over their rights to an English company, Cádiz Water Works. However, the situation did not change and the concession expired because of inactivity of the British company. In the auction of the company, it seems probable that the French and British were interested on it, though it was the former who bade higher\textsuperscript{15}.

A similar situation happened in La Coruña because of the town incapacity, so the French company of Jean Bouchard (1860) was chosen. Since the 18\textsuperscript{th} century, with the growing of colonial commerce, the presence of French tradesmen is noticeable in the economy and it extended to different industrial branches such as the glass, the tanning and the gas factory. This initiative did not prosper and the supplying problems got worse. In this same city, a new concession was given to another French company in 1863, Luis Petit, with the same ending as the former one, due to economic and political problems starting from 1866\textsuperscript{16}.

In Barcelona, the first September, 1876, the company Grappin, Calvet y Arce was set up with French and Catalanian investments, with the 25% and the 75% of the capital respectively. Their concession contract had a very limited validity and they could only make business in a small part of the city, something that caused the disappearance of the business. The previously mentioned Compañía de Aguas de San Martí de Provençals (1878), suffered a similar fate. It was the result of the interests of a Catalanian businessman and French investors, and it was taken over by Aguas de Barcelona.

Though previous in time, but because of its importance, we will see the Compañía de Aguas de Barcelona at the end. It was the direct precedent of the future Aguas de Barcelona. This society was set up in Liege the June 19\textsuperscript{th} 1867, with the contribution of French and Belgian capital. In fact, the boards of directors were composed by French engineers and Belgian bankers.
But the fundamental investment was made by a bank, Crédit Général Liégeois and a water supply company, Compagnie Générale des Conduites d’Eaux. The company bought the rights of exploit in the waters property of the trade name Miguel Costa. The water distribution extended not only across the city of Barcelona but also through eight different towns of the suburbs starting from 1881, it had a 114 kilometres network. At the same time they were looking for new water deposits in Dosrius and improving the piping system with the construction of 17 new kilometres of galleries and the 37 kilometres aqueduct that brought the water to Barcelona was repaired. 

This brief summary of the first foreign water supply companies in Spain gives us a number of keys we can summarize in several points. First of all, the uncertain and hesitant beginning of the water supply system modernization, that became clear starting from 1850, once the previous decades economic and political stagnation was overcame. In second place, the acquisition by big companies of the rights and concessions of smaller ones that began house supply earlier on time; it is to say, small concession owners ended up being taken over. In third place, the economy of scale demanded from these companies to extend their service to the rest of the city in order to be profitable. Lastly, the financial interests combination –French banks in this case- with exclusively water supply companies, that at the same time heralded the Spanish dependency from British and French models. Likewise it shows the presence of Belgian and French capital, very characteristic of this type of investment.

The presence of French and British companies in Spain became confirmed between 1881 and 1900. In this stage several foreign companies appeared devoted to cast iron pipes production and interested in the business of big cities water supply. The reason was that in this way they made sure the sale of their materials, and it made possible the arrival of private companies to this market. In Seville, starting from an English smelting pipes manufacturer, it appeared Seville Water Company Limited. It signed a contract for the water supply concession on March 4th 1882 for a 99 year period of time, something that did not happen because the supply management returned to the City Hall in 1957.

In the province of Seville it also appeared French and Belgian interests. The Sociedad Internacional de Aguas (1891) –subsidiary of Compagnie des Services d’Eau, its head-quarters in Brussels- worked in the field of water supply in many towns: Écija, Morón de la Frontera, Palma del Río and Carmona. Another company, Abastecedora de Aguas de Sevilla (1895), was more related with an irrigation pipe construction, though it seems that it was also devoted to the potable water supply in Lora del Río. Despite the limited references, we know that it was constituted in Paris, in September 1895. The nominal capital came to 2 million francs, although the paid out must have been minimum. In the constitution act stands out the intention to place 25,000 bonds of 500 francs each with a 5 per cent interest.

Companies connected to foreign capital and devoted to mining were also important. It was the case of Cartagena Mining & Water C. Ltd. (1889), that worked mines nearby the city. Anyway, the investment does not seem to be an important one, because the nominal capital amounted to 625,000 pesetas, a small quantity compared to the great down payment that this kind of companies demanded. In fact, water supply problems were so serious that in 1927 the city had to join the supply project started by the Mancomunidad de los Canales del Taibilla.

Huelva, an important mining centre, had also this type of initiatives. In the decade of 1880 it existed a French project for the implantation of a supply company that failed. In 1891 it was constituted Doetsch, D.L., an English company that carried out the water conduction to the city; and it seems that it was connected to mining business because its future was very close to the fluctuations of this sector.
Despite the improvements we have seen, the financial situation of Compañía de Aguas de Barcelona was calamitous; and this situation led the Crédit Général Liégeois, one of the company’s shareholder, to deal with one of the most important French companies of the moment, the Société Lyonnaise des Eaux et de l’Éclairage, in order to look for new financial contributions. As a consequence, on May 20th 1882, the Société Générale des Eaux de Barcelone was created in Paris, but in Spain it was called Sociedad General de Aguas de Barcelona, nowadays simplified in Aguas de Barcelona. This company, completely French in its capital, was born with 15 million francs, including the value of the primitive Belgian company. Eventually, the capital and the management was Spanish. In the first 38 years most of the shares were in French hands and it was co-directed, if not totally controlled, by the head company in Paris.

Subsequently, in 1920, the French company sold all the shares to a group of banks, and among them we have to highlight the banks of Barcelona, Bilbao, Hispano Colonial, Banca Arnús, Sindicato de Banqueros, and the public company Arnús-Gari. Basically, this type of transactions is part of a vertical expansion or it can also be the consumer companies promotion of their own products; in the case of water industry it became clear in the acquisition of creation of companies devoted to water treatment, pipe manufacture, etc.

Barcelona Besós Waterworks Company Ltd. was founded in 1892 in London, with the aim of extracting water from the Besós river and to supply the city with the installation of a engine house in San Andrés. The City Hall handed it over the Compañía General Anónima de Aguas de Barcelona’s assets. Its path was not much better than that of its Spanish predecessor and the business turned out to be as ruinous as the first one. To avoid a bigger economic disaster, all the assets were sold to Aguas de Barcelona in 1895.

Drapier, Planchón y Cía. was constituted in 1899, a combination of French, Catalanian and Santander investment interests. Its ephemeral life and the take-over by Aguas de Barcelona is a sign of the precarious situation the company had since the beginning.

Aguas de Santander was founded in 1881 and the capital was Belgian, French and Spanish. Its nominal capital was established in 4.5 million pesetas, and the paid-in capital was 3.6 million. Along the 20th century it became one of the most profitable companies devoted to potable water supply.

In La Coruña –medium size city in the northwest part of Spain, with a moderate demographic growth and low industrialized-, the attempts in the 1880 decade still were being unstable. The company of a Frenchman, Baradat, presented a project to bring the waters to the city and to installation of cast iron pipes. Although this attempt did not have great success, it was useful to establish the basis of the official submission to the construction of the supply system. Ten years later, the company Bayliss & Baldelló (1889) requested a concession. The company had English and Spanish capital and at the same time handed the rights over to another English company, British and Foreign Trading Company Limited. The difficulties found in the concession clauses to carry out the works, caused the transfer of the business to Corunna Waterworks Company Limited (1893), an English firm established to take part in the city supply. But the conflicts did not stop and the relationship between the company and the City Hall went worse until 1903, when the High Court declared the concession of the river Barcés waters lapsed to the water supply of La Coruña.

Alicante, located in the east coast of Spain, had an annual growth rate of 1.5 between 1860 and 1900, and a population of 40,000 people at the end of the century. It was another city in which foreign investment and the City Hall coincided. The City Hall, in the second half of the
19th century, had only found transitory solutions, so the logical consequence was the appearance of private initiatives.

Around 1880, José Carlos de Aguilera y Aguilera – aristocrat and an important figure of local politics – got from the district council the supply concession, that was inaugurated in 1881. Nevertheless, he sold his rights in the summer of 1883 to a British business, Alicante Water Work Limited, at the same time he sat on the board of directors of the company27. The British firm tried to get the monopoly for a 50 year period, but the demands of other companies were a big difficulty. In 1891, Enrique Caucurte, owner of wells in the town of Sax, and Victoriano Blasco, took legal actions against the monopolization of the business.

The victory of the republicans in the 1891 elections affected in a clear way the problem of the concessions. The new councillors gave the concession to Enrique Caucurte, what caused a dispute with the Marquis of Benalúa, who paralysed the works of piping from the wells of Sax. Its financial situation seemed to be precarious because he was in conversations with English companies28.

Another private enterprise in this same city connected with foreign capital, was that of Juan Leach Giró29, an enterprising tradesman, who since 1877 wanted to enter in the water supply business. When the situation was at a standstill in 1895, Leach bought extensive plots of the so called Laguna de Villena30. Only when the water supply problem in the city was discussed, around the nineties, he decided to invest in an active way. He began paying for the engineering studies and in January of 1897, a group of workers started to place the first pipes.

The project was financed by Belgian capital, the bigger investor next to the French and British in the field of water supply. The new company that took part in the project was Compagnie Générale des Conduites d’Eaux (1867) and it fabricated and installed pipes as most of the companies that obtained a concession. Behind the Belgian company was Crédit Géneral Liégeois, a bank that invested in Spain and for some years, was the responsible for the supply in Barcelona. It can be seen how Belgian investment responded to global criteria, highly connected with its intermediary function31.

Leach kept to himself the supplying, while the foreign company obtained the concession, with a monopoly system, to supply the city with water during sixty years. In October 1898 the new supply system was inaugurated. It was made by the company founded in August of the same year, with the trade name of Société d’Eaux d’Alicante32, that took over the previous one. The capital came to 3,000,000 francs and the head office was in Liege. The Spanish businessman who was the architect of the initial project, Juan Leach, managed to take part in the company’s profit because he was a shareholder. He assumed the rights to manage the firm through his presence in the board of directors. At the same time, both the Marquis of Benalúa and the British company Alicante Water Work resigned.

In 1900, another British company with its headquarters in London, Elche Water Work (1900), tried to obtain from the Belgian firm the water supply rights of the city of Alicante, though they never reached an agreement. This company was the concessionaire of the supply in Elche.

The rules made by Aguas de Alicante caused many problems among the users, because of the high price list for the installation and home connection to the water system. At the same time, industrial consumption was too high to be paid by little craftsmen, something that generated great dissatisfaction. The concession contract with the City Hall obliged the company to hand over, for free, 250 daily cubic metres for public fountains33. The water price was considered so
high that it was usual that water carriers still kept carrying water from public fountains to the houses. This was considered by the company unfair dumping, and it sent several complaints to the City Hall to stop the water carriers business. The company considered that the activities of these water carriers contravened the concession clauses. In 1926, the company Aguas Potables y Mejoras de Valencia purchased almost the whole of the shares of the Alicante’s company. The company had been in the hands of Compagnie Générale des Conduites d’Eaux, and the new owner took care of the direction and the business’ exploitation.

In this stage, the referred cases show how the implantation process of the Sistema Moderno de Agua Potable (Modern Potable Water System) was very slow. The main reason for this was the great investments required for the first establishment, the long amortization period and the lack of a clear rentability of companies in these first moments. The absence of bidders in most of auctions in these decades is a prove of it. Those who appeared were businessmen that tried to obtain good terms in the concession specifications. Later on, they would hand over the concession to bigger company, a foreign company in most of the cases. Some other times, it was the foreign companies that looked for an association or hiring of a important public person of local economic and political life, in order to be given more easily by the ruling groups goahead.  

Everything could have been solved with a faster economic and demographic growth. In this case, investments would have been profitable in a little time, the scale could have been bigger since the beginning and recoupings, faster. Basically, the reason for so a slow implantation of water companies lies in the low Spanish economy growing rate.

We cannot forget the speculating character of some proceedings: businessmen that wanted to obtain the concession in order to hand it over lately, favourable conditions, to a preferably foreign company. But in many occasions it was the interest to develop the business in a limited part of the city what prevailed. In order to do this, it was necessary to overcome unwillingness of citizens to subscribe the service and the lack of knowledge about the new requirements –technical, economic and financial- that involved the home potable water supply. On the other hand, the necessary expansion through the rest of the city centre, made impossible the continuity of little companies. These small companies were not prepared to expand their sphere of influence, so they ended up disappearing, handing over their rights or being taken over by more powerful companies.

At the same time, great companies, more experienced in the management of the service and more prepared to built the network system, had more facilities to enter the capital market. For these companies, the main strategy in their international spreading was the attraction of those markets that could consume their own products, and a prove of that interest was these companies’ tendency to request the free importing of their material. The protectionist tendency of Spanish politicians and the 1891 tariff, favoured the progressive reserve of some of these companies, usually subsidiaries of powerful and complex financial holdings companies.

Anyway, the water supply at the end of the century was a centre of attention for investors. Expecting a profitable business, investors undertook the first stages of the projects, but they were limited in resolution and coherence and with an almost invalid capacity of assuming the high costs of the first establishment. And consequently they sold business, partially or totally, to foreign companies or national investors with more financial resources. Anyway, it is necessary to highlight in this stage the appearance of important companies, such as Aguas de Barcelona and Aguas de Santander among the most representative. Despite the intermittences, a greater consistence in the initiatives is observed in the field of water supply.
Now, we have to see the reasons for French, Belgian and English investors and businessmen to invest in Spain. Why did they invest in water services?; Why not metallurgical industrialists promoted their business abroad?; Which were the conditions to do it?

We have talked about the middlemen character of Belgians in the international technological and capital market. Generally, foreign banks were interested in setting up financial policies of straight-line and short term credits. At the same time, it is clear that the accumulated experience of English and French companies in the first stages of industrialization had caused an important specialization in the development of metallurgical, railway, tram and electric companies. This outstanding position allowed the metallurgical industrialists to settle down their business in Spain with the aim of selling their products. As a consequence, and thanks to the connection with the field of water supply, they entered in this sector.

Likewise, the foreign companies interest for Spanish mining industry is related with the development of steel industry, especially in Great Britain. The new techniques, with the use of Bessemer’s converter, required a great amount of non-phosphoric mineral. As the English deposits were empty, they chose the Spanish ones. It is clear that metallurgy and mining represents a typical case of Spanish businessmen incompetence to solve the problems linked to the development of a sector of complex technology, expanding, and with important international ramifications. Because of the absence of Spanish businessmen, the foreign took its place moved by the appeal of their home countries’ great markets. In a way, something similar happened with the water supply business.

4. Withdrawal and return of foreign companies during the 20th century.

In the first half of the 20th century, approximately between 1901 and 1939, the appearance of new foreign companies was reduced. A gradual withdrawal of foreign companies established in Spain is noticeable. Some abandoned their activity and some other sold their business to Spanish companies. This new tendency seemed to respond to the consequences of the First World War and the following economic crisis. This situation caused the stopping of investment initiatives and the purchase by Spanish investors of some of these companies. From here on, it was not only financial resources what was at stake, but also the technological capacity. The decline of France and Great Britain in comparison with the bursting in of the United States and Germany in the technological field and their presence in Spain is an example. The cautiousness of French, British and Belgians in the field of water supply in the 20th century, contrasts with their huge presence in the last third of the 19th century, and their projects in towns with a low industrial tradition and limited economic development39. The investment and presence of foreign companies decrease is clear in the first half of the 20th century40.

In any case, the two cases described next –Algeciras and Las Palmas-, show that the behaviour of foreign companies was quite similar to the strategies followed in this sector during the 19th century.

At the beginning of the 20th century, Algeciras had a population of 10,000 people, but its port activity was important. Its role as a link with the African continent and its proximity to Gibraltar, provoked the interest of British investment in this area. An important potable water company established in the city, Andalusia Water Company Limited, S.A. set up the 3rd of May, 1912. As it was frequent in many companies, its financial trouble caused, in 1916, the sale of its rights to the Sociedad Fomento de la Bahía de Algeciras41.

It is significative the case of Las Palmas de Gran Canaria, a city with a great commercial appeal because of its port. It was ranked first in the number of ships, passengers and tonnes of
So the construction of the port was an essential element for the economic development of the island, together with the construction of the water network, electricity supply and sewers, both represented the most important proportion of the investments on the island in the first decades of the 20th century. The companies that controlled the maritime traffic—mainly foreign—pointed out the importance of the place and contributed building the port facilities. At the same time, the showed great interest in the other fields of the Canarian economy, specially those related to foundations and city services, that were being developed at that time. Belgians, Germans, French or English companies monopolized the concession market in issues such as street lighting, telephone or water supply and sewers. Quintana Navarro has evaluated the foreign and national investments in the transition period from the 19th to the 20th century. It can be seen the existed contrast between twenty concessions that were given to foreign companies. The global amount of these initial investments came to more than 2.5 million pesetas, and the eight concessions given to Spanish companies did not reach even the 600,000 pesetas in their total investment. It is obvious that the growing foreign investments in the introduction of these services had as a consequence a lot of rivalries and confrontations with national firms, in order to take the control of administrative concessions.

In Las Palmas, before the First World War, the presence of foreign capital in some public services supply was important. Many of these companies had significant interests in maritime trade, and part of their profits were set aside for urban service investments.

Water supply in the city of Las Palmas was a difficult problem to solve, even more with the construction of the new port. If the water supply had always been insufficient, it was even more in those moments because of the growing maritime traffic, when water was a more valuable good. At the beginning of the 20th century everyone tried to solve this situation. A project was written up and approved at once: the construction and exploitation of a supply system was allocated to the English company City of Las Palmas Water and Power Co. Ltd.

In this moment the tension and the great pressure between the City Hall and the companies that wanted to get a concession was natural. So many were the disputes that the companies had to face in order to obtain the concession. That happened between the English company City and the Sociedad de Fomento de Gran Canaria, because both companies wanted the water supply concession in the city: after many litigations between 1919 and 1912, it was granted to the English company. In some occasions, in order not to arouse too much distrust, British companies used the figure of official representants of the Canary Isles, that applied for the concessions in their name. Its nominal capital was established in 3.1 million pesetas and bonds were issued with 5.9 million (5% interest) and 2.5 million pesetas (6% interest). The economic crisis that came after First World War, affected specially Great Britain. The consequence was suspension of interest payments for a period of two years, after the peace treaty was signed.

Despite the two mentioned cases, it was clear the consequences of the First World War in the taking over of the foreign capital by Spaniards. The breaking-off and alteration of the traditional financial circuits that, directly or indirectly supplied these companies with the capital, and the necessity to adjust to the new economic and social conditions in their home countries, was the cause for a structural change in the proportion of the investors. So these companies were finally controlled by Spanish investors, as was the case of Aguas de Barcelona, in 1920, as we saw before.

After the Second World War, we can see the return of foreign companies to the Spanish territory, mainly after 1980. Its main feature is that they are mainly devoted to the technical
advice of the supply, it is to say, the management was in the hands of the City Hall, mainly, and these companies collaborated in the construction, improvement and maintenance of the supply. It has also been appreciated in this stage the interest that some French companies showed to enter in the Spanish market.

Though in the first decades of the Franco’s regime the tendency initiated in the previous stage continued, it is to say, the decrease in foreign investment; we can see a growing tendency to the establishment of these companies in Spain. Since 1960, mainly, is observed the appearance of foreign companies devoted to technical advice in the field of water supply. They were the City Hall’s technical managers or the designer of the projects. Some companies of this type are Degremont and Ranney Española. In more recent stages –especially since 1980- it can also be observed the presence of French and North American multinationals specialized in the management of different public local services: water, rubbish, etc. For example, Lyonnaise des Eaux-Dumez was incorporated in 1990 to the business of water supply in Spain through Aguas de Barcelona. Anyway, in these moments we lack perspective to analyse the situation and the consequences of these actions, though it is very clear the effort made by these companies to take control of the Spanish local services market.

5. A foreign investment balance of the water sector in Spain.

The first companies devoted to home potable water supply appeared in those countries with the highest capitalist development. England, France, Belgium, and Germany reached, especially since 1850, a great importance in this sector and not only in Spain but also in other European countries. Those great companies that made the first installations introduced themselves in other countries, Spain among them.

Foreign investment in Spain was directed to big industrial cities, mainly. Catalonia absorbed a great part of the foreign capital. Barcelona and Seville were two cities with important investments on them. The city of Barcelona monopolized Belgian investment aspirations in the first place, and later those of French and English; Seville, on the other hand received mainly English capital. Once the sector got importance, in the decade of 1880, foreign companies started to clear the Spanish market from those little Spanish businessmen, incapable of facing the required investments to settle down in this sector. It happened specially in middle or great size towns, and with a high population growing rate.

Another important area was Cartagena and Alicante. The mining interests of some companies caused their attraction to the field of water supply, and this was the case of Cartagena Mining, of Belgian origin and focused on mining in Mazarrón.

Nevertheless, along the 20th century many different factors appeared that limited the spreading of foreign capital. In the first place, it seems to be related with the breaking-off of the traditional international material supply circuits, particularly pipes made in these companies’ home country. Secondly, the period of time included between 1914 and 1922, First World War and the following economic crisis, brought with it financial alterations that caused important capital retreat and the attempt of some companies to finish as soon as possible their business, so national investors took over the foreign capital. Almost at the same time, a big number of national capital companies were created and they started to compete with the foreign ones. Though there was a retreat, these companies could wake up the Spanish businessmen and investors –that were attracted by these kind of activities-, and played an important role for the beginning and development of the sector.
Now we are going to analyze the real reasons of water supply investment in Spain. Everything seems to indicate that foreign investment in the sector of potable water supply laid in multinational companies born in solid capitalist economies and capable of entering in a third country. Their technological and financial preminence, together with their experience in this sector, were some of the reasons of their arrival.

In a more concrete way, British actions seem to be connected with the search for new markets to give way out to the products made by pipe manufacturers. Costa Campi has highlighted the link that existed between this industry and the water supply industries that came to Spain. It is unlikely that this same reason can be applied to the French and Belgians, who seemed to be more interested in financial activities. Sometimes, a modest profit suggests the idea of many deceptions and a few achievements. But the length of this activity, despite the setbacks, seems to be caused by the image of a poor and backward Spain that did not know how to exploit its wealth, and with a limited investment capacity. From this perspective, French saving and financing saw Spain with Emile Péreire’s eyes: «Europe’s California, rich in land and mines, nothing required to spread across but the establishment of a modern communications network and competent businessmen»; it is to say, everything that France could provide.

Lastly, it can be important to bring up the question that Tortella makes himself when speaking of the presence of foreign businessmen in Spanish mining: Why did not Spanish businessmen assume the initiative? It is supposed that Spanish businessmen could be in a better position to know the conditions, the public concessions. The local elements were a kind of bridge with the foreign, and even more lately they ended up taking over the company. We have just to remember what happened in Cádiz, Pamplona, Barcelona and Las Palmas, among many other cities. But the answer seems to be clear: the foreign knew better the evolution and the characteristics of the business, and consequently, they had more means to invest in the long term.

All in all, the Spanish businessmen attitude in the water supply sector was not so stubborn as in many other sectors, because it did not require a complex technology or needed to be linked with important international markets or circuits, in order to give way in or out the product. The presence of foreign businessmen in this sector was important, but in a lower level in comparison with other sectors, and it is explained by the tendency of the most industrialized countries to invest in those more lagged behind, especially in the second half of the 19th century. This fact did not exclude the absolute dependency of Spanish businessmen from British or French technology.

NOTES

1 At the beginning of that century, an English company negotiated with the municipality of Toledo, with the purpose of bringing up the water to the houses located in the upper part of the town. In exchange, each inhabitant had to pay a fee. These inventions were carried out by Ricardo Jones in 1725, and are collected in the Historical Public Archive of Toledo. At the end of the 18th century, in 1765, the French Pedro Courton made a similar invention to elevate the water to this same city. MORA, G. (1980), pp.113-123.

2 We have early examples. In 1839, a company founded by Carlos Jouvielle, Adam Weidmann y Compañía, tried to install machines to elevate water from the Pisuerga river and to filter it for the supply of the city of Valladolid. The place chosen was the same one of the engineer Zubiaurre, though they confused it with the one of Juanelo Turriano: «they request the place of the machine of Juanelo in the right edge of the Pisuerga river because it is the only safe place to place those machines and the construction of the building that should contain it». GARCÍA TAPIA, N. (1984), p. 313.

To provide a sufficient flow of water, 22,073 m³ for water supply with a daily average of 6,000 cubic metres.

The proposal was to provide a sufficient flow of water, 22,073 m³, to «feed all public water potable fountains, drinking troughs, and public irrigations at present time, and lately to clean the sewer that are to be built». GIGOSOS, P. & SARAVIA, M. (1993), p. 13.

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The company presented a number of modifications to the initial conditions, that were accepted by the City Hall. For example, the time to the realization of the works was 3 years. The company gave for free 200 cubic metres to clean the sewers. In case of a fire, the City Hall could use any amount of the water required for free. At the same time, the district council received 10% of the water sales made outside the city. The concession revision was in 75 years and the City Hall recovered the supply property without paying anything. The City Hall also committed itself in a favourable condition to bigger companies, mainly French, English and Belgian companies.

In 1825, these lands were given by Ferdinand VII to the General Elio´s son, but they were lately transferred to the Junta de Bienes Nacionales, from which the Marquis of Remisa and Segismundo Moret bought the lands. VIDAL OLIVARES, J. (1986), p.163.

Within a few years the trade name was the Spanish translation Sociedad de Aguas de Alicante, that in the text has been simplified in Aguas de Alicante. AFSAE (1930), p. 195; AFB (1948), p. 408

It is interesting to observe the evolution that this company experimented. The foundational capital was established in 3 million francs, divided in 12,000 shares of 250 francs each. To the Compagnie Générale de Conduites des Eaux corresponded 12,200 shares, as a way of paying concessions, lands, artesian wells and the distribution network of the city of Alicante. In 1919 the capital was increased to 4 million francs, creating 4,000 new shares, with a valour of 250 francs each in order to buy the channel from Sax to Novelda. Again, in January of 1923, the capital was increased up to 6 million francs, creating 8,000 francs, again the valour of each one was 250 francs. When in 1926 Aguas Potables y Mejoras de Valencia bought the business, paid for the shares to the Belgian company 1,136.70 francs for each share. AFB (1934), p. 388.

Its direct knowledge allowed them to go into very good conditions to these concessions, in order to sale later on the business in a favourable condition to bigger companies, mainly French, English and Belgian companies. MARTÍNEZ LÓPEZ, A. (1995), p. 368.


AFSAE (1927), pp. 512-515.


Its population had grown from 10,758 inhabitants in 1860; 29,294 in 1900 and up to 41,329 in 1930. It had a very high growing rate. Reher, D. S. (1994), pp. 27-29.


The total number of companies, their trade name, nationality, etc. give us enough clues in order to have an idea of the foreign capital importance: the Belgian company SELP, devoted to electric lighting and trams; or the English companies CITY, SNST, Swanson, Miller and Elder Dempster, devoted to water supply, telegraph, the construction of La Luz’s port, telephone and transport between islands, respectively; and the English Blandy and Grand Canary Coaling, interested in different portuary services. Pérez García, J. M. & Noreña Salto, M. T. (1992), pp. 468-469.

Between 1881 and 1902 the works of the best port of the Atlantic area were finished, during the first decade of the 20th century. Pérez García, J. M. & Noreña Salto, M. T. (1992), pp. 464.

The price, a hundred thousand pesetas/litre per second, gives us an idea of the problem that the city of Las Palmas had because of the expensive water. Revista de Obras Públicas (1926), p. 328.

In 1925 the company had built 28 galleries what improved in great manner the flow, more than 100 litres per second after the works, something that was necessary in the city due to its poor water supply. Revista de Obras Públicas (1926), p. 328.


We have to take into account that we are dealing with one of the main French companies, as well as one of the most important worldwide. In the ranking made by Business Week in 1992 in order to establish the first 1000 world companies, it occupied the number 19 in France and the number 397 worldwide. Business Week, 13.VII.1992, pp. 68-69; García Ruiz, J. L. (1994), p. 295.


REFERENCES


Anuario de Sociedades Anónimas (Garceb), (1918-1923): Estudio económico financiero de las existentes en España, Madrid, Ed. de José García Ceballos, Suc. de Rivadeneyra.

Anuario Financiero de Valores Mobiliarios (AFVM) (1916-1918), Madrid.

Anuario Financiero de Bilbao que comprende el histórico de los valores públicos y de Sociedades Anónimas de España (AFB) (1915-1972): Aguas, Bilbao, Banco de Vizcaya.


ANUARIO TÉCNICO E INDUSTRIAL DE ESPAÑA (ATIE) (1913): Empresas y sociedades de abastecimiento de aguas, Madrid.


BRODER, A. (1981): Le rôle des interets économiques étrangers dans la croissance de l'Espagne au XIXe siècle, 1767-1924, These d'Etat, Université de Paris I.


ESTADÍSTICA DE OBRAS PÚBLICAS (1895-1900): Compañías concesionarias de abastecimientos de aguas, Madrid, Ministerio de Fomento.


