

# DO IDEOLOGICAL AND POLITICAL MOTIVES REALLY MATTER IN THE PUBLIC CHOICE OF LOCAL SERVICES MANAGEMENT? EVIDENCE FROM URBAN WATER SERVICES IN SPAIN

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**Abstract.**- According to the literature, local government decisions regarding the management of municipal services are mainly based on pragmatic reasons, ideological and political motives having little influence. However, in some municipal services, such as the urban water service, ideological and political factors could play a more relevant role when it comes to deciding the management alternative. The aim of this paper is to study the influence of ideological and political motives on the choice of management for the urban water service in 734 municipalities located in the south of Spain. One of our contributions is that we use a considerably more detailed set of variables representing political and ideological motives than most of the previous research. Similarly, the value of the variables that explain local politicians' decisions is that observed at the time decision making occurs and not at a later date. Our results reveal that the two largest parties disputing the centre of the Spanish political spectrum employ similar strategies when choosing a management alternative for the water service. However, the city councils governed by the most left-wing party are more reluctant to privatise. Finally, political variables such as stakeholder lobbying affect local government decision making.

**Keywords.**- Urban water services; local governments; privatisation; contracting-out; ideological and political motives; Public Choice.

**JEL Classification.**- L33, C25, H83.

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## 1. INTRODUCTION

Over the last quarter of a century, most industrialised countries, albeit to a different extent, have made changes to their legislation aimed at stimulating the contracting out of municipal services. In general, local governments have been given the power to choose who manages municipal services. As a result, some municipalities decided to contract out, while in others these services are still provided by the city or town council itself. At the same time, researchers have become increasingly interested in ascertaining the reasons behind the difference in behaviour of local politicians regarding the systems chosen for procuring municipal services. *Why do some local governments choose to contract out municipal services while others do not?* is the question that researchers have sought to answer.

Following the pioneer research by Ferris (1986), which analysed the causes behind cities in the United States contracting out municipal services, numerous papers have studied the determinants of local government decisions regarding the management of municipal services. Generally speaking, applied research highlights the fact that these decisions are mainly pragmatic (Bel and Fageda 2007, 2009a). Two of the main reasons found are the need to reduce cost inefficiencies and city councils' lack of financial capacity.

Likewise, the minimal importance given by the literature to variables representing ideological preferences and political motives when explaining the choice of management for municipal services stands out. On the one hand, researchers have placed more emphasis on analysing other types of determinants –such as those of an economic nature. For this reason, studies frequently omit variables representing ideology, political motives being only partially considered. On the other hand, the variables representing ideology are not normally significant when explaining local government decisions.

The choice of policy, the behaviour of politicians and their motives are issues that have been widely studied in the field of *Public Choice*. In general, this approach undertakes an economic analysis of political behaviour using the analytical tools typical of the neoclassical theory. The political system is considered a market in which the players –politicians and public employees– interact in pursuit

of their own personal interests. This view of politics and bureaucracy can be found in the seminal work by Downs (1957) and also in the research by Black (1958), Buchanan and Tullock (1962), Stigler (1965) or Niskanen (1971), among others.

The models based on the citizen-candidate approach, developed by Osborne and Slivinski (1996), Besley and Coate (1997) and Dixit and Londregan (1998) represent a significant advance in the analysis of *Public Choice*. This view goes beyond the Downsian approach to political behaviour, strictly opportunistic and selfish (Downs, 1957 and Lindbeck and Weibull, 1987), recognising that political motives in a democracy revolve around two interests. On the one hand, as in utilitarianism, politicians aim to win the elections to occupy a government post or maintain it. On the other hand, motives stem from politicians preferring to apply certain policies ahead of others.

Such political interests undoubtedly play an important role in local government decisions regarding the management of municipal services. However, it is reasonable to believe that said importance may vary from one service to another; for example, ideological and political motives will not foreseeably have the same influence on decisions regarding the management of services that are as different as social welfare, sports services or the urban water service. This suggests it is worth analysing the influence of ideological and political motives on each type of service.

Ideological and political motivations could be expected to have a greater influence on local government decisions regarding who will provide the urban water service, due to its characteristics. Although its management may be delegated to public or private firms, in most developed countries the provision of urban water services, as well as other services such as garbage collection, is the responsibility of the public sector because of the positive externalities they generate –public health. Furthermore, water is a special consumer good to which universal access must be guaranteed –at least to the level which is considered essential for life–, be affordable for any given level of income and must reach households in conditions that comply with certain standards of quality. Finally, the water industry is made up of local monopolies, which means the service is often subject to regulation and political control.

This research aims to analyse the determinants of local governments' choice of management system for the urban water supply, paying special attention to the ideological and political factor in said decisions. The analysis is undertaken using data from the period 1986-2006 for 734 municipalities in Andalucía, a Spanish region located in the south of the Iberian Peninsula. Our main contribution to the literature in this field of research is two-fold. Firstly, while previous studies usually only distinguish between left-wing and right-wing ideologies, we incorporate a wide range of variables that represent ideology, some of which have not been used previously in the literature. In the second place, the value of the explanatory variables is taken at the time the local government makes the decision on the management of the water service, instead of at a later date as is normally the case in most of the previous research.

The most noteworthy result in regard to ideological motivations is that the two largest parties disputing the centre of the Spanish political spectrum do not differ in the strategy they employ to choose a management alternative for the water service. However, the city councils governed by the most left-wing party are more reluctant to privatise. Finally, political variables such as stakeholder lobbying affect local government decision making.

The rest of the article is organised as follows. Section 2 provides a review of the literature. Section 3 describes the data and Section 4 explains the methodology and the results. The last section summarises and concludes.

## **2. REVIEW OF THE LITERATURE**

This section reviews the research that has included variables representing ideology and political behaviour in the analysis of local government decision making regarding the type of management chosen to run the provision of the urban water supply.

After reviewing the literature, we found it striking that ideological factors and political behaviour had received so little attention as explanatory variables behind local government decisions regarding the management of the urban water service. Furthermore, in keeping with most of the research carried out for other mu-

municipal services, the results of the few studies of the urban water service support the thesis that pragmatic reasons are more decisive than ideological and political motives.

The main reference for the relationship between ideological and political motivations and the decision regarding who manages the urban water service is the series of papers written by Germà Bel and collaborators for the northeast of Spain. Bel and Fageda (2008) analyses the management choice for the rubbish collection and water supply services. The authors include a variable representing the degree of industrial activity as a proxy of the influence of lobbies. In addition, they incorporate a variable denoting the political party that the Mayor belongs to, another of the percentage of votes won by conservative parties in the national elections and a series of variables that combine the two foregoing variables. The conclusion is that the influence of political interests is more relevant than ideology when explaining privatisation decisions.

Bel *et al.* (2009) explores the causes behind the privatisation of rubbish collection and water services in small towns including, among others, a dichotomic variable to distinguish whether a mayor is left or right-wing. The results show that ideological factors are not relevant when it comes to explaining the decision, while other variables such as the financial situation of the town are. Similarly, Bel and Fageda (2009b) concludes that ideological and political factors do not play an important role in local government decisions to share the management of the municipal distribution service with private firms.

Martínez-Espiñeira *et al.* (2009), in a study also carried out for Spain, include a variable that represents the ideology of mayors: left-wing *versus* right-wing. The main result is that when towns are governed by left-wing mayors, the water service is less likely to be contracted out to private firms. Another important finding is that in cities where economic activity is more intense, the likelihood of the private sector entering the market is greater, due to the fact that higher profits are also expected.

Miralles (2009) and González-Gómez and Guardiola (2009) employ a duration model to analyse decisions to contract out the municipal water service. Both stud-

ies are carried out on a sample of Spanish towns. On the one hand, Miralles (2009) finds that the proximity effect, financial stress and the pressure exercised by lobbies influence the decision to privatise. However, the paper also underlines the fact that the statistical significance of these variables can change over time. Likewise, it is concluded that ideology is only minimally significant when explaining privatisation trends. González-Gómez and Guardiola (2009), on the other hand, includes a variable to distinguish between towns governed by right-wing and left-wing political parties. They conclude that ideology is not a decisive factor in the decisions taken by local governments to contract out. In this research, the authors conclude that the complexity of the environment, economies of scale, financial constraints and local government stability are the factors that have the greatest influence on the decision.

In the research by Tavares and Camões (2007) on the provision of five municipal services in Portugal, the variable representing the ideology of the party in power in the local government was not statistically significant in the choice of manager in the areas of environment, water supply or rubbish collection. The variable that represents the interests of lobbies, made up of public employees in the town, was not representative either. In the research carried out for France by Ménard and Saussier (2000) and Carpentier *et al.* (2006), no variables representing ideology are included to analyse local government decisions regarding the management of the urban water service. The first of the two papers concludes that the likelihood of the service being delegated to a private company is greater when providing the service is expected to yield higher profits. The second paper concludes that towns tend to delegate management to private companies when the conditions surrounding the provision of the service are more complex.

### **3. DATA AND VARIABLES**

The study is carried out using data from the period 1986-2006 for 734 municipalities, which represent slightly more than 95% of the municipalities in the region. In Andalusia, as in the rest of Spain, management of the urban water service is shared by the various legal organisms. *Figure 1* shows the relative importance of each in 2006. As can be observed, in 59% of municipalities, the urban water service is provided by the local government itself, whereas the remaining 41% have exter-

nalised the service to either a public company (15% of municipalities) or a private firm (26%). The last figure also includes public-private partnerships, whose management is similar to that of private firms, due to business decisions, as mentioned previously, being taken by the private partner.

The question worth asking in view of this information is *what factors influence local government decisions regarding the management of the urban water service?* More specifically, this research seeks to ascertain the role that ideological and political factors play in said decisions. In order to do so, we have included a complex set of variables representing ideology and political behaviour, apart from the factors commonly considered in this type of study, such as municipality size, financial stress or income per capita. Although we would have liked to incorporate other explanatory variables into the analysis, statistical constraints made this impossible. All the variables used in the research and their respective statistical sources are described in *Appendix 1*.

According to Downs (1957), the main objective of political parties is to win the elections. As a result, the number of political parties would affect the workings of democracy to a great extent. In a two-party system, both would strive to win by defending the ideas and measures that the majority of citizens-voters would be willing to support. These circumstances could lead to ambiguous situations where the ideological stances of the two parties are concerned and also result in the two coming closer<sup>1</sup>. It is therefore no surprise that the empirical studies that have represented ideology with dichotomic variables that distinguish between left and right-wing ideologies have failed to detect a relationship between ideology and local government decisions on the management of municipal services. However, in this paper we uphold that in multiple party scenarios<sup>2</sup>, local government decisions can be related to ideological stances, not only in theory, but also in practice.

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<sup>1</sup> Hotelling and Downs' median-voter theorem states that if two majority parties take a political stance based on a central position, they expect to receive half of the undecided votes. However, if either of these parties departed from a central position, they would receive less than half of the votes.

<sup>2</sup> Spain is a multiple party democracy, although in some municipalities the scenario could be considered bipartisan due to the minimal support received by minority parties.

In order to capture the effect of ideological and political factors on the decision regarding who should manage the urban water service, we firstly consider a series of variables that represent the ideology of the Mayor, also bearing in mind whether or not he or she enjoys majority or minority rule. In the period under analysis, we find as many as four either national or regional political parties in local governments in Andalusia, as well as some small independent parties which, generally speaking, only act on a local scale. In our opinion, decision making regarding the management of municipal services, and in particular urban water services, should go beyond merely distinguishing between left and right, such that the peculiarities of the parties on either side of the political spectrum can be relevant.

The two parties that enjoy the most support at national and regional level and which are striving to corner the centre of Spanish politics are the *Partido Socialista Obrero Español* (PSOE) and the *Partido Popular* (PP). PSOE is a centre/left-wing party, while PP is a centre/right-wing party. *Izquierda Unida* (IU) is situated further to the left of PSOE on the political spectrum. There is also a regional party in Andalusia called *Partido Andalucista* (PA), which defends the interests of the region in the national parliament, but its ideological proposals are eclectic. Finally, on a local scale, there are independent parties that are normally created following a rift between one of the parties with the most representatives in the local government and some of its members.<sup>3</sup>

Moreover, as mentioned above, in order to include the variable representing the ideology of the Mayor, we distinguished between governments with majority and minority rule. Decision making is easier for a majority government. Firstly, because the government does not need to seek support from other political parties to pass measures and, secondly, because a mayor is more strongly supported by citizens-voters. The variables included to represent majority governments are *PP MAJORITY*, *PSOE MAJORITY*, *IU MAJORITY* and *PA MAJORITY*, while the variables representing minority governments are *PP MINORITY*, *PSOE MINORITY*, *IU MINORITY* and *PA MINORITY*.

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<sup>3</sup> Independent parties were not included in our empirical analysis for two reasons. In the first place, because the sphere of activity of these parties normally only affects one town making results difficult to interpret due to their heterogeneity. In the second place, it is necessary to exclude some variables linked to ideology in order to avoid multicollinearity problems when estimating the model.



Let us remind readers that *Appendix 1* includes a description of all the variables used in this research.

The political transition to democracy that took place in Spain in the second half the 1970s resulted in a decentralised model of government divided into four levels: national, regional, provincial and local. In order to capture the possible influence of the ideology of higher levels of government on the decisions taken by local governments, the variable *PROVINCIAL GOVERNMENT* was used. This variable is dichotomic and takes a value of 1 when local government ideology coincides with the ideology of the next level of government, the provincial government.<sup>4</sup>

The variable *GOVERNMENT SWITCH* was included so as to verify the possible influence of a mayor's stability in office. This variable tells whether a mayor is enjoying a second term in office or whether he or she has won the elections for the first time. A certain degree of vote immobility is common in Andalusia. As a result, local governments have had the same ideology over the sample period in approximately two thirds of the municipalities.

Politicians' behaviour can also be influenced by their interest in remaining in their posts. On the one hand, the objective of remaining in office will make them more vulnerable to the pressure of lobbies, while on the other hand, the objective of being re-elected may determine when certain decisions are taken during the term. It would be logical to expect unpopular measures such as privatising the urban water service to be adopted in the early years of the term of office, in the hope that voters would have forgotten about them by the next elections. In order to represent the pressure exerted by lobbies, the following variables were included: *INCOME PER CAPITA AND PUBLIC EMPLOYMENT*.<sup>5</sup> Meanwhile, to verify the possible relationship between the political cycle and decision making the variable *POLITICAL CYCLE*

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<sup>4</sup> Initially, the research did not take into account whether the ideology of the local government coincided with that of the national government, as the influence should come from the level of government immediately superior. In contrast, we did consider including a variable representing coincidence of ideologies between the local and regional government. However, we were unable to include it in the model due to the high degree of correlation with the variable *PROVINCIAL GOVERNMENT*.

<sup>5</sup> Trade union membership has also been used in other studies to indicate the strength of lobbies. However, this indicator does not represent the power of trade unions in Spain, as they are funded by transfers from the government rather than membership fees.

was introduced, a dichotomic variable that denotes whether the decision to externalise is taken during the first or the second half of the legislature.

Concluding the set of political and ideological variables, information representing political initiatives aimed at encouraging associationism among municipalities has been included. Regional government acknowledgement of the existence of urban agglomerations, captured by the variable *URBAN AGGLOMERATION* and also the creation of consortiums, variable *CONSORTIUM*, are legal bodies that facilitate the joint provision of services under one sole manager for a group of municipalities.

Finally, the general variables included to explain local political decisions regarding the management of the urban water service are *POPULATION*, *FINANCIAL BURDEN* and a variable that represents the complexity of providing the service, *CAPTATION SYSTEM*, which informs whether water is captured by mechanical means or simply through the force of gravity.

The likelihood of externalising the service can be expected to increase the larger the municipality, measured by the variable population. There are several reasons for this relationship. The water supply is more complex to manage in large municipalities, which can lead local governments to resort to the know-how of private firms to provide the service. Likewise, transaction costs related to controlling the service and the investment per inhabitant necessary to provide the service tends to be lower in larger municipalities. Both these circumstances increase expected profits, making large cities more attractive for private firms (Ménard and Saussier 2000; Martínez-Espiñeira *et al.* 2009).

The lack of financial resources necessary to provide the water service has been one of the main reasons why Spanish local governments have resorted to privatisation (Bakker 2002). Privatisation allows local governments to guarantee the provision of a general interest service and at the same time maintain a healthy financial situation. The inclusion of the financial burden of the local government is precisely aimed at capturing this effect. Finally, the difficulty that the environment entails for managing the water service figures prominently in local government decisions regarding its provision. In this sense, more complex environments should increase the likelihood of the service being externalised (Carpertier *et al.* 2006).

*Table 1* presents information describing the sample for the variables used in the research. Data are provided for all municipalities, as well as for those which have contracted-out the urban water service.

Finally, in reference to the explanatory variables used, one of the contributions of this research is that they are measured at the time the decision to contract out the water service was taken rather than at a later date, as is the case in most previous studies. This is particularly important when a long sample period is being studied, as is the case in our research. As indicated by Bel and Fageda (2007), the value of the explanatory variables at time  $t$ , when the data are observed, may differ substantially from the value at  $t-n$ , when local governments took the decision to contract out. By considering the temporary nature of the variables, we expect to enhance the explanatory power of our model. Other papers that have considered the time factor of variables are Miralles (2009), González-Gómez and Guardiola (2009) and González-Gómez *et al.* (2010).

## 5. METHODOLOGICAL NOTES AND RESULTS

### 5.1. Methodological Notes

When choosing the manager of the urban water service, local governments must first decide whether to continue providing the service themselves or, on the contrary, to contract out. Once this decision has been taken, if a local government opts for the latter, it must then choose one of two possible alternatives: a public company or a private firm.<sup>6</sup> Considering the nature of this decision process, it can be modelled using a probit selection model (Van de Ven and Van Praag, 1981), which is a specification for a binary outcome of the well-known Heckman sample selection model (Heckman 1979).

The result of the first choice is represented by the observed binary variable *CONTRACTING-OUT*, which takes a value 1 if the local government contracts out the urban water service and 0 if the service continues to be provided by the council. Let us now assume that behind this observed variable there is a latent unobserv-

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<sup>6</sup> It is worth recalling that this research also considers public-private partnerships as private firms to all practical effects.

able variable, namely  $CONTRACTING-OUT^*$ , so that  $CONTRACTING-OUT=1$  if  $CONTRACTING-OUT^*>0$  and  $CONTRACTING-OUT=0$  if  $CONTRACTING-OUT^*\leq 0$ . The result of the second binary choice, which is only observable if  $CONTRACTING-OUT=1$ , that is if the local government decides to contract out the urban water service, is represented by the variable  $PRIVATISATION$ , which takes a value of 1 if the service is contracted out to a private firm and 0 if it is contracted out to a public firm. Also, behind this decision there is a latent unobservable variable,  $PRIVATISATION^*$ , such that  $PRIVATISATION=1$  if  $PRIVATISATION^*>0$  and  $PRIVATISATION=0$  if  $PRIVATISATION^*\leq 0$ . This might be formalised as follows:

$$CONTRACTING-OUT = \begin{cases} 1 & \text{if } CONTRACTING-OUT^* > 0 \\ 0 & \text{if } CONTRACTING-OUT^* \leq 0 \end{cases} \quad (1)$$

$$PRIVATISATION = \begin{cases} 1 & \text{if } CONTRACTING-OUT = 1 \text{ and } PRIVATISATION^* > 0 \\ 0 & \text{if } CONTRACTING-OUT = 1 \text{ and } PRIVATISATION^* \leq 0 \\ -- & \text{if } CONTRACTING-OUT = 0 \end{cases} \quad (2)$$

Introducing two sets of independent variables, namely  $X_{CONTRACTING-OUT}$  and  $X_{PRIVATISATION}$ , to explain our latent variables allows us to define a two-equation system. The first equation describes the probability of experiencing the selecting event,  $Probit(CONTRACTING-OUT=1 | X_{CONTRACTING-OUT}) = \alpha X_{CONTRACTING-OUT}$ , while the second one, which is only defined if  $CONTRACTING-OUT=1$ , represents the outcome of the second choice,  $Probit(PRIVATISATION=1 | X_{PRIVATISATION}) = \beta X_{PRIVATISATION}$ ;  $\alpha$  and  $\beta$  being two vectors of unknown regression parameters. Considering the particular variables used in this research to explain the decisions of contracting-out and privatisation, the two-equation system can be linearly stated as:

$$\begin{aligned} CONTRACTING-OUT^* = & \alpha_0 + \alpha_1 PP \text{ MAJORITY} + \alpha_2 PSOE \text{ MAJORITY} + \alpha_3 IU \text{ MAJORITY} + \\ & \alpha_4 PA \text{ MAJORITY} + \alpha_5 PP \text{ MINORITY} + \alpha_6 PSOE \text{ MINORITY} + \\ & \alpha_7 IU \text{ MINORITY} + \alpha_8 PA \text{ MINORITY} + \alpha_9 PROVINCIAL \text{ GOVERNMENT} + \\ & \alpha_{10} GOVERNMENT \text{ SWITCH} + \alpha_{11} INCOME \text{ PER CAPITA} + \\ & \alpha_{12} PUBLIC \text{ EMPLOYMENT} + \alpha_{13} URBAN \text{ AGGLOMERATION} + \\ & \alpha_{14} CONSORTIUM + \alpha_{15} POPULATION + \alpha_{16} SQUARE \text{ OF POPULATION} + \\ & \alpha_{17} FINANCIAL \text{ BURDEN} + \alpha_{18} CAPTATION \text{ SYSTEM} + \varepsilon_{CONTRACTING OUT} \end{aligned} \quad (3)$$

$$\begin{aligned}
PRIVATISATION^* = & \beta_0 + \beta_1 PP \text{ MAJORITY} + \beta_2 PSOE \text{ MAJORITY} + \beta_3 IU \text{ MAJORITY} + \\
& \beta_4 PA \text{ MAJORITY} + \beta_5 PP \text{ MINORITY} + \beta_6 PSOE \text{ MINORITY} + \beta_7 IU \text{ MINORITY} + \\
& \beta_8 PROVINCIAL \text{ GOVERNMENT} + \beta_9 GOVERNMENT \text{ SWITCH} + \\
& \beta_{10} INCOME \text{ PER CAPITA} + \beta_{11} PUBLIC \text{ EMPLOYMENT} + \beta_{12} POLITICAL \text{ CYCLE} + \\
& \beta_{13} URBAN \text{ AGGLOMERATION} + \beta_{14} CONSORTIUM + \beta_{15} POPULATION + \\
& \beta_{16} SQUARE \text{ OF POPULATION} + \beta_{17} FINANCIAL \text{ BURDEN} + \\
& \beta_{18} CAPTATION \text{ SYSTEM} + \varepsilon_{PRIVATISATION}
\end{aligned} \tag{4}$$

where  $(\varepsilon_{CONTRACTING \text{ OUT}}, \varepsilon_{PRIVATISATION})$  is a zero-mean unit-variance bivariate normal random variable with correlation  $(\varepsilon_{CONTRACTING \text{ OUT}}, \varepsilon_{PRIVATISATION}) = \rho$ .

The estimation of this two-equation probit selection model yields unbiased estimates of the parameters of interest when the error terms of expressions (3) and (4) are correlated. Nonetheless, when the errors are uncorrelated each separate equation can be consistently estimated yielding unbiased estimates of the parameters of interests (Cameron and Trivedi 2009). In this paper, we have estimated our two-equation probit selection model by maximum likelihood using *Stata 10* software. However, at standard confidence levels, the estimated correlation between the errors is not significantly different from zero (the *p-value* for the likelihood-ratio test is 0.695), and the hypothesis that the two equations are independent cannot be rejected.

Then, in *Table 2* we present the results from the estimation of equations (3) and (4) independently. The sign of the estimated parameters of each significant explanatory variable yields its effect, either positive or negative, on the likelihood of contracting-out and privatisation, respectively. Additionally, the magnitude of this effect is quantified by the marginal effect.

## **5.2. Results: Determinants of the Decision to Contract out**

The equation of the determinants of the decision to contract out is globally significant according to the *Wald test* (the *p-value* is negligible). Similarly, with a *pseudo-R<sup>2</sup>* of 0.343, the goodness of fit is high in comparison to similar studies. The percentage of correct answers provided by the model stands around 80% for both results, as shown by the classification of observations in *Table 3*.

As regards the variables representing the ideology of the local government, the municipalities governed by the two parties with the most support, PSOE (centre-left) and PP (centre-right), are more likely to contract out the urban water service. This result holds regardless of both parties having a majority or minority government. However, the variables representing the left-wing government IU and the regional party PA are not significant when explaining the decision to contract out the municipal water service. It is consequently worth highlighting that the strategies of the two largest parties disputing the centre of the Spanish political spectrum do not differ as regards the decision to contract out the urban water service.

The estimated sign and statistical significance of the parameter associated to the variable *PROVINCIAL GOVERNMENT* shows that when parties of the same ideology coincide in the municipal and provincial government, the probability of the service being contracted out is greater. Likewise, the negative sign and significance of the variable *PUBLIC EMPLOYMENT* reveals that municipalities with a larger proportion of public employees are more reluctant to contract out the urban water service. In this sense, it is reasonable to believe that water service workers are the first to oppose contracting out, as this could entail significant changes in their working conditions. The pressure exerted by these civil servants may later receive the support of workers in other public services, who may think they will be the next to be affected by the local government's policy to contract out.

The results also show that administrative acknowledgement of the existence of urban agglomerations and the creation of consortiums boost the contracting out of the water service. The municipalities that are part of these associations contract out the management of the urban water service to a body that centralises the activity for the entire area. As highlighted in the literature, the strategy aims to make the most of the significant economies of scale that exist in the water industry (González-Gómez and García-Rubio, 2008).

Finally, in reference to the rest of the variables included in the model, but not directly related to political or ideological aspects, the following results are worth highlighting. In the first place, the larger the municipality, as measured by the variable *POPULATION*, the greater the likelihood of the urban water service being contracted out. However, it is a decreasing effect and the probability of contracting

out can even fall when a municipality surpasses a certain size. This is a common result in the literature which can be explained by the reasons given in Section 2. These include the fact that the water supply service becomes more complex the larger the town, which can lead some councils to seek the know-how of an external manager.

In the second place, in light of the sign obtained for the variable *FINANCIAL BURDEN*, the local governments with financial problems opt more for contracting out the municipal water service. Seeking out an external manager is one way of guaranteeing the provision of general interest services and, at the same time, to correct local government financial imbalances. Finally, in the municipalities where water captation requires the use of mechanical means, variable *CAPTATION SYSTEM*, the likelihood of contracting out the service is greater. This result is also an indication of the relationship that exists between the technical complexity of providing the water service and contracting out.

### **5.3. Results: Public or Private Management?**

The model of the determinants of the urban water service, public or private, after the decision has been made to contract out, is globally significant according to the *Wald test* (the *p-value* is 0.001). However, with a *pseudo-R<sup>2</sup>* of 0.137, the goodness of fit is slightly worse than for the previous model. The model also has slightly less forecasting power, recording between 68% and 74% (*Table 4*). The variable *PA MINORITY* was not included in this model due to perfect multicollinearity problems. Likewise, a new variable has been introduced, *POLITICAL CYCLE*, which indicates whether the decision to privatise is taken in the first half of the legislature or the second. This variable aims to capture the possible influence of the political cycle in local government decision making. If it is taken into account that simply announcing the privatisation of the water service normally sparks an adverse reaction from the general public (González-Gómez *et al.* 2009), it is logical to assume that this measure would be adopted early on in the legislature, in the hope that voters will have forgotten about it by the next elections.<sup>7</sup>

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<sup>7</sup> While it would have been desirable to verify whether the variable *POLITICAL CYCLE* also affected the decision to contract out the service, this was not possible, as including this variable in the equation of

As regards the variables representing political ideology, only *IU MAJORITY* is significant. The negative sign of the parameter estimated suggests this left-wing party rejects delegating the management of the water service to a private firm. According to the estimated value of the marginal effect, *ceteris paribus*, if IU holds a majority, the probability of privatising decreases by 37.4%. In other words, the city councils governed with a majority by IU are not as in favour of contracting out the urban water service as other political parties. Furthermore, when this happens, they are more inclined to delegate management to a public company. Meanwhile, the two largest parties that occupy the centre of the political spectrum, PSOE and PP, are once again seen to have the same strategy when choosing a manager, either public or private, of the urban water service. The need to occupy the centre of the political spectrum leads these two parties to converge in many of their political decisions.

As is the case with the equation of contracting out determinants, the variable *PROVINCIAL GOVERNMENT* has a positive sign and is statistically significant. In this case, coinciding government signs also appear to favour the decision to privatise. The variable *POLITICAL CYCLE* is statistically significant and has a positive sign, hence contradicting our expectation that the most unpopular decision, that of privatising the urban water service, would be taken in the first half of the legislature. However, this result could be due to the drawn-out procedure of public calls for proposals and concession licences under Spanish law and also to bureaucracy, which substantially delay privatisation. As a result, even if the decision to privatise is taken in the first half of the legislature, it is highly possible that it will not take effect until the second half.

Municipalities that belong to an urban agglomeration are less likely to contract out the management of the urban water service, as indicated by the sign and significance of the variable *URBAN AGGLOMERATION*. Regional government acknowledgement of the existence of an urban agglomeration is precisely linked to the intention of promoting joint management of services in the municipalities that

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the contracting-out determinants would have created significant multicollinearity problems. Nevertheless, the political cycle is more likely to affect the decision of privatising than contracting out, as people are less opposed to contracting out to a public company than to the privatisation of the service.



are members of the agglomeration. In such cases, the regional government itself could act as a promoter of public management of the water service.

In line with the results obtained by other researchers, the estimated signs for the parameters that accompany the variables *POPULATION*, *INCOME PER CAPITA*, *FINANCIAL BURDEN* and *CAPTATION SYSTEM* suggest that private firms tend to procure the urban water service in municipalities where their activity is expected to yield higher profits. Private firms prefer to operate in the most populated cities where mechanical means are not required to extract the water. In these cities, the investment per inhabitant and, therefore, the average cost of the service, are lower. Furthermore, they prefer cities with a higher average level of income, where profits will foreseeably be higher and there will be fewer problems related to managing the payment of bills. Finally, private firms avoid providing the urban water service in municipalities with serious financial problems. The reason is that a concession awarded by such municipalities would probably require demanding investment plans to be undertaken, as the water supply networks can be expected to be in worse condition due to said financial problems.

## **6 SUMMARY AND CONCLUSIONS**

The research on the determinants of local political decisions regarding the management of municipal services generally concludes that said decisions are based on pragmatic reasons, while ideological and political motives are of little importance. While not intending to refute this assertion, in this paper we argue that in the case of certain municipal services, such as the urban water service, a more in-depth analysis is required of how ideological and political motivations can influence local political decisions regarding their management.

The aim of this paper is to analyse the influence of ideological and political motives on the choice of management for the urban water service made by the local governments of 734 municipalities located in the south of Spain, for the period 1986-2006. Unlike most previous research, we included a detailed set of variables representing ideological and political motivations. Furthermore, as proposed by recent studies, the values of the variables that explain government decisions are observed at the time they are taken rather than at a later date.

In reference to our findings, the answer to the question *do ideological and political motives really matter in the public choice of urban water service management?* would be that they do have a certain influence. As regards ideology, IU –the most left-wing Spanish political party– is less in favour of contracting out the service than PP and PSOE –on the centre-right and centre-left respectively of the Spanish political spectrum. Likewise, if the service is contracted out, the likelihood of privatisation is significantly lower when IU governs with a majority. In other words, IU prefers public management of the urban water service, either run by the town council itself or through a public company, ahead of other management options.

Similarly, the strategies of the two largest parties that dispute the centre of the Spanish political spectrum, PP and PSOE, are not significantly different where the management of the urban water service is concerned. When both parties are in power, either with a majority or minority, the probability of the service being contracted out is greater. Moreover, once the decision to contract out has been taken, no differences are observed between the two parties in regard to their choice of either public or private management.

As far as political motivations are concerned, we find that local governments are less likely to contract out the urban water service in municipalities with a larger proportion of public employees. In such cases, city councils can give in to the pressure of public employees and not contract out the service. Likewise, the fact that there is a greater probability of the water service being privatised in areas where the service is expected to yield higher profits appears to confirm lobbies' influence over local government decisions. In contrast, our expectations in regard to the existence of a political cycle in decision making were not fulfilled, as the likelihood of the urban water service being privatised is greater over the last half of local governments' terms. This could above all be due to the drawn-out administrative procedures demanded by Spanish legislation in order to privatise municipal services.

Finally, the results of this study enable us to make some recommendations for future work in this field of research. In the first place, in order to capture the influence of ideological variables on local government management choices, it may not be enough to distinguish between left and right-wing parties. Instead, and information permitting, it would be preferable to introduce variables that represent

the ideology of all political parties. The largest parties, normally those which dispute the centre of the political spectrum, tend to converge in many of their decisions. Researchers are therefore more likely to find differences in political decisions when the parties that are closer to ideological extremes are taken into account.

In addition, and in the second place, we recommend distinguishing between the different forms of management that a local government can opt for. The reason is that the influence of political and ideological factors on contracting out may differ, as in fact was the case in this research, to the influence they have on the choice of public or private management. Finally, insofar as it would improve the explanatory power of the models, we recommend including the value of explanatory variables at the time local government decisions are taken and not at a later date, as is the case in the best part of the research carried out in this field. This issue is particularly important when variables are subject to significant changes over time.

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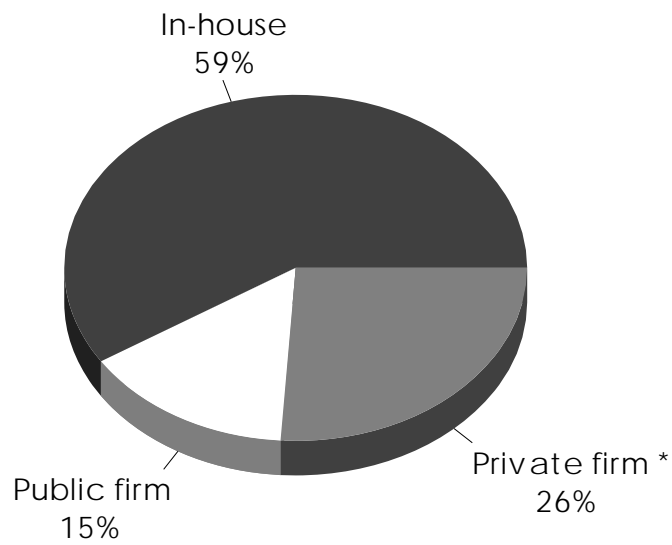
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#### TABLES AND FIGURES

Figure 1.- The management of urban water services in Andalusia, 2006



\* Including public-private partnerships

Table 1.- Sample description

Variable	All municipalities (734)				Municipalities contracting-out (301)			
	Mean <sup>a</sup>	Standard deviation	Minimum	Maximum	Mean <sup>a</sup>	Standard deviation	Minimum	Maximum
CONTRACTING-OUT	0.4108	-	0	1	-	-	-	-
PRIVATISATION	-	-	-	-	0.6445	-	0	1
PP MAJORITY	0.1376	-	0	1	0.0831	-	0	1
PSOE MAJORITY	0.3488	-	0	1	0.5149	-	0	1
IU MAJORITY	0.0518	-	0	1	0.0299	-	0	1
PA MAJORITY	0.0217	-	0	1	0.0099	-	0	1
PP MINORITY	0.0463	-	0	1	0.0465	-	0	1
PSOE MINORITY	0.0858	-	0	1	0.1595	-	0	1
IU MINORITY	0.0354	-	0	1	0.0232	-	0	1
PA MINORITY	0.0191	-	0	1	0.0131	-	0	1
PROVINCIAL GOVERNMENT	0.8079	-	0	1	0.8870	-	0	1
GOVERNMENT SWITCH	0.4578	-	0	1	0.9401	-	0	1
INCOME PER CAPITA	2,253	899	369	8,100	2,427	1,056	386	8,100
PUBLIC EMPLOYMENT	9.14	5.44	0	42.62	8.00	3.53	0	23.62
POLITICAL CYCLE	-	-	-	-	0.6943	-	0	1
URBAN AGGLOMERATION	0.2221	-	0	1	0.3355	-	0	1
CONSORTIUM	0.2882	-	0	1	0.3953	-	0	1
POPULATION	7.36	24.75	0.1	503.25	13.42	36.69	0.1	503.25
FINANCIAL BURDEN	3.739	2.857	0.001	25.597	5.016	2.997	0.074	25.323
CAPTATION SYSTEM	0.7043	-	0	1	0.8372	-	0	1

<sup>a</sup> The mean for the qualitative variables represents the percentage of cases with value 1.

Table 2.- Determinants of the choice of the manager of urban water services

Variable	In house <i>versus</i> contracting-out			Public firm <i>versus</i> private firm		
	Estimated parameter <sup>a</sup>	Standard error	Marginal effect <sup>b</sup>	Estimated parameter <sup>a</sup>	Standard error	Marginal effect <sup>b</sup>
PP MAJORITY	0.6784***	0.2237	0.2648	-0.1760	0.3725	-
PSOE MAJORITY	1.1690***	0.1552	0.4371	-0.1672	0.2469	-
IU MAJORITY	-0.1636	0.2598	-	-0.9792**	0.4826	-0.3744
PA MAJORITY	-0.6072	0.5449	-	-0.2057	0.7161	-
PP MINORITY	0.7737***	0.2741	0.3010	-0.0242	0.3881	-
PSOE MINORITY	1.4937***	0.2409	0.5249	0.2826	0.3034	-
IU MINORITY	0.2279	0.3012	-	0.0986	0.6252	-
PA MINORITY	-0.4084	0.4897	-	-	-	-
PROVINCIAL GOVERNMENT	0.6210***	0.1704	0.2149	0.5433*	0.3031	0.2111
GOVERNMENT SWITCH	-0.1579	0.1474	-	0.1792	0.2181	-
INCOME PER CAPITA	8.4e-5	6.7e-5	-	2.0e-4***	0.8e-4	0.7e-4
PUBLIC EMPLOYMENT	-0.0403***	0.0110	-0.0152	-0.0094	0.0235	-
POLITICAL CYCLE	-	-	-	0.4590***	0.1735	0.1741
URBAN AGGLOMERATION	0.5128***	0.1476	0.1993	-0.4176**	0.1797	-0.1577
CONSORTIUM	0.7018***	0.1340	0.2705	-0.0880	0.1693	-
POPULATION	0.0232**	0.0090	0.0087	0.0342***	0.0108	0.0127
SQUARE OF POPULATION	-4.7e-8***	1.7e-8	-1.8e-8	-1.4e-8***	4.8e-8	-5.1e-8
FINANCIAL BURDEN	0.1143***	0.0273	0.0433	-0.1123***	0.0392	-0.0417
CAPTATION SYSTEM	0.5578***	0.1305	0.2005	-0.5489**	0.2394	-0.1852
CONSTANT	-2.5070***	0.3165	-	0.1291	0.5491	-
Log pseudo-likelihood		-326.12			-168.91	
Wald test ( $\chi^2$ ) <sup>c</sup>		201.05 (0.0000)			41.90 (0.0011)	
Pseudo R <sup>2</sup>		0.343			0.1377	
Observations		734			301	

<sup>a</sup> \* Significant at 10%, \*\* significant at 5% and \*\*\* significant at 1%.

<sup>b</sup> The marginal effects are only presented for statistically significant variables.

<sup>c</sup> Probability of no significance of the model between brackets.

Table 3.- Prediction power of equation (3): determinants of contracting-out

<i>Observed</i>	<i>Classified</i>		Total
	In house (0)	Contracting-out (1)	
In house (0)	374	59	433
Contracting-out (1)	86	215	301
Total	460	274	734
Hits	81,3%	78,4%	

Table 4.- Prediction power of equation (4): determinants of privatisation

<i>Observed</i>	<i>Classified</i>		Total
	Public firm (0)	Private firm (1)	
Public firm (0)	47	60	107
Private firm (1)	22	172	194
Total	69	232	301
Hits	68,1%	74,1%	



*Appendix 1. Variables: Description and sources*

<i>Variable</i>	<i>Description</i>	<i>Source</i>
<i>CONTRACTING-OUT</i>	Dummy variable that takes a value of 1 if the council has contracted out urban water services at the end of the period 1986-2006 and 0 otherwise	Town councils and public and private firms
<i>PRIVATISATION</i>	Dummy variable that takes a value of 1 if the council has privatised the management of urban water services at the end of the period 1986-2006 and 0 if the service has been contracted out to a public firm	Town councils and public and private firms
<i>PP MAYORITY</i>	Dummy variable that equals 1 if PP was in power in the local government with the majority of votes when the decision of contracting out was taken. If the municipality did not contract out, it equals 1 if this party was in power with a majority of votes at the end of the period. Otherwise, this variable takes a value of 0	Home Office (Local Elections Results) and Ministry of Regional Policy (Register of Mayors)
<i>PSOE MAYORITY</i>	Dummy variable that equals 1 if PSOE was in power in the local government with the majority of votes when the decision of contracting out was taken. If the municipality did not contract out, it equals 1 if this party was in power with a majority of votes at the end of the period. Otherwise, this variable takes a value of 0	Home Office (Local Elections Results) and Ministry of Regional Policy (Register of Mayors)
<i>IU MAYORITY</i>	Dummy variable that equals 1 if IU was in power in the local government with the majority of votes when the decision of contracting out was taken. If the municipality did not contract out, it equals 1 if this party was in power with a majority of votes at the end of the period. Otherwise, this variable takes a value of 0	Home Office (Local Elections Results) and Ministry of Regional Policy (Register of Mayors)
<i>PA MAYORITY</i>	Dummy variable that equals 1 if PA was in power in the local government with the majority of votes when the decision of contracting out was taken. If the municipality did not contract out, it equals 1 if this party was in power with a majority of votes at the end of the period. Otherwise, this variable takes a value of 0	Home Office (Local Elections Results) and Ministry of Regional Policy (Register of Mayors)
<i>PP MINORITY</i>	Dummy variable that equals 1 if PP had a minority of votes and was in power in the local government when the decision of contracting out was taken. If the municipality did not contract out, it equals 1 if this party was in power with a minority of votes at the end of the period. Otherwise, this variable takes a value of 0	Home Office (Local Elections Results) and Ministry of Regional Policy (Register of Mayors)
<i>PSOE MINORITY</i>	Dummy variable that equals 1 if PSOE had a minority of votes and was in power in the local government when the decision of contracting was taken out. If the municipality did not contract out, it equals 1 if this party was in power with a minority of votes at the end of the period. Otherwise, this variable takes a value of 0	Home Office (Local Elections Results) and Ministry of Regional Policy (Register of Mayors)

*Appendix 1. Variables: Description and sources (Continuation)*

<i>Variable</i>	<i>Description</i>	<i>Source</i>
<i>IU MINORITY</i>	Dummy variable that equals 1 if IU had a minority of votes and was in power in the local government when the decision of contracting out was taken. If the municipality did not contract out, it equals 1 if this party was in power with a minority of votes at the end of the period. Otherwise, this variable takes a value of 0	Home Office (Local Elections Results) and Ministry of Regional Policy (Register of Mayors)
<i>PA MINORITY</i>	Dummy variable that equals 1 if PA had a minority of votes and was in power in the local government when the decision of contracting was taken out. If the municipality did not contract out, it equals 1 if this party was in power with a minority of votes at the end of the period. Otherwise, this variable takes a value of 0	Home Office (Local Elections Results) and Ministry of Regional Policy (Register of Mayors)
<i>PROVINCIAL GOVERNMENT</i>	Dummy variable that equals 1 if the ideology of the provincial and municipal governments coincides when the decision of contracting out was taken, and 0 if it does not coincide. If the municipality did not contract out, it takes the corresponding value at the end of the period	Home Office (Elections Results)
<i>GOVERNMENT SWITCH</i>	This dummy variable equals 1 if the municipality contracts out and the decision is taken by a recently elected government, if the municipality did not contract out and if there has been a change of government during the period considered. Conversely, it takes a value of 0 if the municipality contracts out and the decision is taken by a government already established in power, if the municipality did not contract out and if there has been no change of government during the period	Ministry of Regional Policy (Register of Mayors)
<i>INCOME PER CAPITA</i>	Euros per inhabitant. If the municipality contracts out, it takes the value from the year before contracting out. In the case of not contracting out, it takes the average value over the period	Andalusia Regional Government (Department of Economic Affairs and Public Finances)
<i>PUBLIC EMPLOYMENT</i>	Percentage of public employment. If the municipality contracts out, it takes the value from the year before the decision. If not, it takes the average value over the period.	Andalusia Regional Government (Department of Economic Affairs and Public Finances)
<i>POLITICAL CYCLE</i>	Dummy variable that takes a value of 1 if the municipality contracts out within the two first years of government and 0 if it contracts out in the third or fourth years of government	Town councils and public and private firms
<i>URBAN AGGLOMERATION</i>	Dummy variable that takes a value of 1 if the municipality belongs to an urban agglomeration and 0 otherwise	Andalusia Regional Government

*Appendix 1. Variables: Description and sources (Continuation)*

<i>Variable</i>	<i>Description</i>	<i>Source</i>
<i>CONSORTIUM</i>	In the case of contracting out, this dummy variable takes a value of 1 if the council was integrated in a consortium the previous year and 0 otherwise. In the case of not contracting out, it takes a value of 1 if the municipality belongs to a consortium in the middle of the period and 0 if not	Ministry of Regional Policy (Register of Consortiums)
<i>POPULATION</i>	Population in 1,000s of inhabitants. If the municipality contracts out, it takes the value from the year prior to contracting out. In the case of not contracting out, it takes the average value over the period	National Institute of Statistics (Municipal Census)
<i>FINANCIAL BURDEN</i>	Sum of financial expenditures over sum of ordinary revenues of the local government. In the case of contracting out, this variable takes the value at the year before the decision was taken. In the case of not contracting out, it takes the mean over the period	Ministry of Economic Affairs (Local Corporations Budget)
<i>CAPTATION SYSTEM</i>	Dummy variable taking a value of 1 if water is captured using mechanical means and 0 if it is captured using the force of gravity	Ministry of Regional Policy (Local Infrastructures and Equipment Survey) and Ministry of Health and Consumption (Consumption Water National Information System)