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Jorge García-Unanue José Luis Felipe Carlos Gómez-González Julio del Corral Leonor Gallardo

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Limitaciones Externas en las Finanzas de las Agencias de Servicios Deportivos Municipales Españolas

Jorge García-Unanue
IGOID Research Group, University of Castilla-La Mancha, Toledo, Spain
José Luis Felipe
School of Sport Sciences, European University, Madrid, Spain
Carlos Gómez-González
IGOID Research Group, University of Castilla-La Mancha, Toledo, Spain
Julio del Corral
Department of Economics and Finance, University of Castilla-La Mancha, Ciudad Real, Spain, and
Leonor Gallardo
IGOID Research Group, University of Castilla-La Mancha, Toledo, Spain

Abstract

Purpose – The purpose of this paper is to analyse the influence of the environment on the financial performance in public sports agencies at the local level.

Design/methodology/approach – The influence of the socio-demographic, socio-economic and political environment on the financial condition of municipal sports agencies in Spain from 2003 to 2011 was studied by several regression models.

Findings – The results show a negative influence of the size of the population and a positive influence of the municipal taxes per capita. The influence of the political context is not demonstrated. However, the set of variables only explain a small percentage of the variance.

Research limitations/implications – The main limitation of this study is the possible existence of other non-controlled environmental variables. However, this study approaches genuinely the effect of the environment on municipal sports agencies, which has important research implications as it shows additional information to be contrasted with other researches in different countries or regions.

Practical implications – The information provided in this study will be of great importance for managers to select more objectively other entities in benchmarking development.

JEL Classification — H72, L83

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Originality/value – Finally, this study uses a non-exploited database and redirects performance management studies to other areas of service provision such as sport.

Keywords Performance management, External constraints, Financial condition, Municipal government, Sports services

Paper type Research paper

Resumen estructurado

Objetivo – El objetivo de esta investigación es analizar la influencia del entorno sobre el rendimiento financiero de las agencias de servicios deportivos municipales.

Diseño y metodología – Se ha analizado la influencia del entorno socio-demográfico, socio-económico y político sobre la condición financiera de las agencias de servicios deportivos municipales en España, del 2003 al 2011, a través de diversos modelos de regresión.

Resultados – Los resultados muestran una influencia negativa del tamaño de la población y una influencia positiva de los impuestos municipales per cápita. La influencia del contexto político no queda demostrada. Sin embargo, el conjunto de variables utilizadas solo explica un pequeño porcentaje de la varianza.

Limitaciones e implicaciones de la investigación – La principal limitación de este estudio es la posible existencia de otras variables del entorno que no han sido controladas. Sin embargo, este estudio es pionero al analizar la influencia del entorno en agencias deportivas, lo cual conlleva implicaciones de investigación ya que muestra información para ser contrastada con nuevos estudios en otros países.

Implicaciones prácticas – La información proporcionada en este estudio será de utilidad para los gestores, al poder seleccionar de forma más objetiva otras entidades para el desarrollo de actividades de benchmarking.

Valor y originalidad – Por último, este estudio utiliza una base de datos no explotada, redireccionando los estudios de gestión del rendimiento a otras áreas de servicios concretas como la deportiva.

Palabras clave Limitaciones externas, condición financiera, gobierno municipal, gestión del rendimiento, servicios deportivos

Tipo de papel Trabajo de investigación

Introduction

Mainly based on the new public management, the local governments in the European Union have been involved in reforms represented by different ideological lines since the 1990s (Hood, 1991; Zafra-Gómez *et al.*, 2012). Among these reforms, the increase of the control and evaluation of results, the adaptation of management techniques from the private sector, or the decentralization of many of the provided services, are remarkable examples (Lapsley and Pallot, 2000). In Spain, the Regulatory Law of the Local Governments (LRBRL), updated in 2013, shows higher pressure from being exerted by the National Administration to get the municipalities[1] acting under the principles of financial stability, efficiency and sustainability with the explicit aim of expending no more than what is received.

The LRBRL defines a series of competencies of the Spanish municipalities related to the services that these towns should provide. "Promotion of sport and sports facilities" is included as one of these competences. Its management is progressively becoming more important in the municipal context. The last published figures show that more than 90 per cent of the public expenditure in sports is carried out through the municipal governments (Ministerio de Educación, Cultura y Deportes, 2013). Approximately, 80 per cent of the sports facilities belong to the municipal councils (Gallardo, 2007). Similarly, more than 50 per cent of the people who practice some kind of sport or physical activity are doing so through the activities and facilities offered by these local governments (García-Ferrando and Llopis-Goig, 2011). Therefore, municipal sport is the basis of the sport system in Spain. This system has allowed Spain to reach similar levels

of physical activity as countries such as France, Germany, Austria and the UK (European Commission, 2014). However, it is hard to find studies on this topic, and new studies are required to generate the necessary knowledge to help improve management.

The evolution of municipal sport has been reflected in new forms of management. Thus, decentralization mechanisms that still retain direct management have become very important. Decentralization is one of the most important changes that local governments have experienced. This process is called functional decentralization (Cuadrado-Ballesteros *et al.*, 2012, 2013a, b), or agencification (Andrews 2011; Zafra-Gómez *et al.*, 2014). This decentralization is based on the creation of units and agencies to which the management and the provision of specific services are transferred and for which independent budgets and decision-making capacity are required (Andrews, 2011). The aim of these types of reforms is to increase efficiency, flexibility and quality in the provision of services (Cuadrado-Ballesteros *et al.*, 2012, 2013a; Pérez-López *et al.*, 2015). Currently, the so-called autonomous organizations are the most widely extended kind of decentralized entity in Spain (Cuadrado-Ballesteros *et al.*, 2013a), also in charge of sport services (Gallardo, 2007). However, although they work with a great autonomy, they remain part of the municipal government. Therefore, the differences are not just between direct and indirect management, there are also important differences between direct centralized management and direct decentralized management, given that the latter include mechanisms of autonomy, discretion, responsibility, professionalism and greater budgetary independence.

As a result of this functional decentralization, the introduction of techniques to measure performance is much easier. These techniques are considered to be important tools to modernize the local government (Navarro-Galera *et al.*, 2008) and sports services (García-Unanue *et al.*, 2015). The performance measurement may be carried out using different methods, although the most common is to select a series of standardized indicators that quantitatively show the management results in different dimensions (Navarro-Galera *et al.*, 2008). In the case of the evaluation of sports services and sports facilities organizations, it is possible to find dimensions such as accessibility, utilization, finance and service quality (Liu *et al.*, 2009; Robinson and Taylor, 2003; Taylor and Godfrey, 2003). Among these dimensions, financial performance is the one that attracts the greatest interest (King, 2013; Taylor *et al.*, 2011).

There are several approaches to evaluate financial performance. One of the most commonly used methods by public entities at the local level in recent years is the measurement of the financial condition (Wang *et al.*, 2007; Zafra-Gómez *et al.*, 2009a, b). The financial condition is defined as the ability to adequately provide services to meet current and future obligations (Governmental Accounting Standards Board, 1987).

The financial condition can be measured through a series of indicators related to cash solvency and budgetary solvency, divided in turn into the concepts of flexibility, vulnerability and sustainability (Canadian Institute of Chartered Accountants, 2007; Greenberg and Hillier, 1995). This system was used in several recent municipal level studies (Pérez-López *et al.*, 2014; Zafra-Gómez *et al.*, 2012, 2014). Cash solvency refers to the ability to generate sufficient liquidity to meet short-term obligations. Flexibility refers to an organization's capacity to deal with change. Vulnerability, or independence refers to its level of dependence on external resources, and finally, sustainability measures the capacity of the organization to maintain its activities without incurring a deficit (Zafra-Gómez *et al.*, 2009a, b).

In the same way, it is usual to find a combination of several indicators in just one synthetic indicator with the aim of establishing global comparisons between different

entities and observing general differences in performance, as well as possible causes. Examples of the performance measurement at a general level (Andrews *et al.*, 2005, 2006), financial condition (Zafra-Gómez *et al.*, 2009a, b) and even performance measurement of sports services and sports facilities (Burillo *et al.*, 2011; Gallardo *et al.*, 2009) can be found.

However, for this measurement and performance control to be more useful in management, the organizations that are evaluated must take into account two aspects. First, the organizations must compare their results with each other with the aim of finding and adapting new strategies and better practices. According to the Audit Commission, this position acquired by the organizations is called process benchmarking (Audit Commission, 2000). Second, for these comparisons to be made, the organizations must be working in a similar environment as a reference organization because the differences in performance may be caused by non-controllable external factors, apart from bad decisions (Andrews *et al.*, 2005; Zafra-Gómez *et al.*, 2009a, b). For this reason, there are studies that analyse the influence of the environment on the general performance in municipalities (Andrews *et al.*, 2005, 2006), as well as others regarding financial condition (Zafra-Gómez *et al.*, 2009a, b). Nevertheless, these studies were focused on analysing complete local governments. In the sports services field, only the studies by Burillo *et al.* (2011) and Benito *et al.* (2012) are remarkable. In both cases, the authors used sports facilities indicators but not financial condition indicators. It is therefore important to analyse the effect of the environment on the financial condition in municipal sport services, as it is a growing area of service provision, important at local level in several countries.

Thus, the aim of this paper is to analyse the influence of the environment on the financial performance of local-level public sports agencies in Spain. By using a panel data of Spanish autonomous municipal organizations that provide sports services from 2003 to 2011, several regression models were estimated. Two synthetic indicators that represent the financial condition – calculated through budgetary information – were used as the dependent variable. Similarly, several indicators classified into socio-demographic, socio-economic and political context were used to represent the environment.

The rest of the paper is divided into to the following structure: in the next section, we present the theoretical framework regarding the environment's influence on the performance of local governments and sports services. Then, the methodology, the data used, and its analysis are shown, followed by the results of the study. Finally, the paper ends with a discussion of the results and the conclusions.

Literature review

According to the literature regarding the performance measurement in local governments, the environment is considered to be a group of factors that are beyond the immediate control of managers (Andrews *et al.*, 2005). These authors cited the political, economic, social, technological methodology (Johnson and Scholes, 2002) to determine the environment. However, they determine the difficulty of including the technological factor. Therefore, most subsequent studies summarize their factors as socio-demographic, socio-economic and political. Drawing on recent studies, we can highlight the study by Benito *et al.* (2013) on municipal spending on culture (in the Spanish financial system culture is most closely linked with sport), or the study by Benito *et al.* (2012) on the efficiency in the delivery of sports facilities. In both cases, they use these factors to represent the environment.

Socio-demographic context

The population size and density, as well as their effects, have been the most commonly studied aspects, in general terms, by the municipal administration (Benito *et al.*, 2012). These aspects have a direct influence on the expenditure per inhabitant, with a positive result for the population size, and without a clear tendency for the population density (Bastida *et al.*, 2009; Benito and Bastida, 2008; Solé-Ollé, 2006; Veiga and Veiga, 2007). The aforementioned aspects can also have an influence on budgetary results (Benito and Bastida, 2008; Pettersson-Lidbom, 2001; Solé-Ollé, 2006).

The effect that the percentages of the elderly and under 16 populations have on expenditures, revenues and budgetary results has also been studied. These variables were considered an approach to control of interest groups in the local governments (Hagen and Vabo, 2005). Overall, for the municipal governments, the results show a significant effect, which causes a worse budgetary result (Pettersson-Lidbom, 2001; Solé-Ollé, 2006), especially attending to the elderly population. Nevertheless, there are also studies in which this significant effect does not appear (Veiga and Veiga, 2007) and studies that show contradictory results depending on the model of analysis used (Borge, 2005; Hagen and Vabo, 2005).

Focusing on the sports sector studies, the most notable studies are the ones of Benito *et al.* (2012), regarding the efficiency of sports facilities provision at a municipal level, and Gallardo *et al.* (2009), regarding the quality that sports facilities offer at a regional level. Both studies suggest that larger and higher density populations result in a worse performance of sports facilities provisions.

Socio-economic context

The hypotheses suggest that a higher economic level of the population positively affects budgetary results, (Solé-Ollé, 2006). Thus, a higher level of income should be related to a higher growth of local governments (Benito *et al.*, 2012). However, another trend indicates that a higher economic level of the population could be related to lower pressure on certain services, which can lead to inefficiencies. Analysing recent research, a higher economic level has an influence on a higher per capita expenditure (Benito *et al.*, 2013; Bastida *et al.*, 2009; Benito and Bastida, 2008). However, some studies did not obtain significant results (Benito and Bastida, 2008; García-Sánchez *et al.*, 2011). Nevertheless, recent studies demonstrate that the effect of this variable could change depending on the sector or municipal area (Benito *et al.*, 2013; Stastna, 2009).

On the other hand, municipal taxes per capita level have also constituted a common variable in the socio-economic dimension. Previous studies usually associated a higher tax burden with higher public spending (Benito *et al.*, 2013; Solé-Ollé, 2006).

Concerning sports, the study by Benito *et al.* (2012) is remarkable as it shows a negative influence of the economic activity index on the efficiency of the provision of sports facilities at municipal level. Nevertheless, at regional level, Burillo *et al.* (2011) suggest a positive influence of the populations' economic level on the quality of sports facilities offerings.

Political context

The research on local governments has primarily focused on analysing whether political ideology, orientation and strength influence expenditures and financial performance, which is measured through variables such as the budgetary result. The most frequently used starting hypotheses indicate that the importance of progressive and left-oriented political parties (Hagen and Vabo, 2005), and a higher

number of different political parties in power (Borge, 2005; Ashworth *et al.*, 2005) cause worse budgetary results.

The studies that worked with the hypothesis of the influence of the political orientation on the municipal financial management have not been conclusive (Bastida *et al.*, 2009; Borge, 2005). One current idea is that modern societies tend to be similar and have the same problems and, therefore, political orientation does not have a clear effect on the municipal treasury (Bastida *et al.*, 2009). Moreover, this theory is sustained by the influence of legislation targeting budgetary stability, which restricts deficit management (Bastida *et al.*, 2009; Borge, 2005; García-Sánchez *et al.*, 2011). However, different results can be found if the municipal services areas are independently analysed (Benito *et al.*, 2013; Stastna, 2009). In contrast, several studies have demonstrated that greater political strength affects the budgetary result positively, and consequently results in a lower municipal deficit (Bastida *et al.*, 2009; Borge, 2005).

The only study carried out for the sports service area, and which uses efficiency in sports facilities provisions as a dependent variable, suggests that the towns governed by conservative parties are more efficient (Benito *et al.*, 2012).

Methods

Sample

The sample of this research is composed of autonomous municipal organizations of sports services. Data collection was delimited to this sample because all the entities have their own budgets that are regulated in a standard way by the same regulations, allowing for comparisons. Thus, given the budget classification structure in local governments in Spain in the period of analysis, this was the only way to develop an analysis of municipal sports services. While autonomous municipal organizations have separate budgets devoted to the service which they manage, in services managed by centralized direct management (i.e. without municipal specialized agencies), the budget to be allocated to sports services is included in the general budget of the municipality and is shared with other services such as culture. As such, the results of this study are comparable to other municipal governments that have voluntarily differentiated the income and expenditure budgets in the sports services area.

A sample of autonomous municipal Spanish organizations of populations above 1,000 inhabitants, which provided sports services, during the period 2003-2011, was used. As a result of the lack of information from different entities in different years, as well as the incorporation and elimination of some autonomous organizations, the number of observations in a year ranges between 166 and 222 depending on the year. A total number of 1,844 observations were counted. Our analysis started with the year 2003 because this was the first year with the necessary available data for the proposed analysis.

Variables and data source

The measurement of the financial performance was carried out through one measure of financial condition, using a synthetic indicator (i.e. aggregate indicator). In doing so, we first selected several indicators related with cash solvency and budgetary solvency, which were defined in recent studies (Perez-López *et al.*, 2014; Zafra-Gómez *et al.*, 2012, 2014) (Table I). These indicators were calculated for each year and entity through data obtained from the Spanish Ministry of Public Administrations, adjusting the results to the Consumer Price Index for the base year of 2011.

Thereafter, the synthetic indicator was built to design a variable that represents the measure of the general financial condition (Andrews *et al.*, 2005, 2006; Benito *et al.*, 2012;

Element		Indicator	Definition	Relationship with financial condition
Cash solvency		Cash surplus index	Difference between net short-term receivables, liquidity and net short-term liabilities	The higher the value, the better the financial condition
		Liquidity index	Liquidity divided by net short-term liabilities	The higher the value, the better the financial condition
Budgetary solvency	Flexibility	Net saving index (euro) per capita	Difference between current budgetary receivables and current budgetary payables, annual amortization payment (per inhabitant)	The higher the value, the better the financial condition
	Independency	Self-financing	Current budgetary receivables, except current grants, divided by current budgetary payables, except current grants and interest payment	The higher the value, the better the financial condition
	Sustainability	Non-financial budgetary result index	Current budgetary payables, non-financial capital budgetary payables divided by current budgetary receivables, non-financial capital budgetary receivables	The lower the value, the better the financial condition
Other		Current expenditures (euro) per capita	Current budgetary payables per inhabitant	Complementary indicator

Table I.
Description of indicators that make up *de* financial condition measure

Burillo *et al.*, 2011; Zafra-Gómez *et al.*, 2009a, b). Concretely, the same methodology used by Burillo *et al.* (2011) and Gallardo *et al.* (2009) was followed for the case of sports services and sports facilities. For that purpose, the indicators related to financial condition were gathered. Thus, a financial performance measure that allows the comparison between sports autonomous organizations was created to observe the influence of the environment on the general financial condition.

The method used to construct the synthetic indicator was the following. The values obtained in each one of the indicators in Table I were standardized and aggregated. To do this, standardized punctuations were applied with an average value of 0 and standard deviation of 1 (Z scores). As the non-financial budgetary result indicator had an opposite-way scale in relation to a better or worse financial performance with respect to the rest of indicators, its standardized values were inverted before being added to the rest of the indicators. In this way, all the indicators acquire the same relative weight in the synthetic indicator.

The inclusion of the current expenditure per capita was the main problem found because of its ambiguity interpretation. Therefore, a higher expenditure per capita may be interpreted as a higher quantity of services or, in contrast, as inefficiency (Zafra-Gómez *et al.*, 2009a). Two indicators were calculated to resolve this problem. For the first one, the current expenditure per capita was included taking into consideration that a higher expenditure per capita is related to a better financial condition, as it has been interpreted in municipal scale studies (Buch-Gómez and Cabaleiro-Casal, 2011; Zafra-

Gómez *et al.*, 2009a). This indicator was denominated Financial Condition 1 (FC1). The second indicator was calculated following the same method but in this case, the indicator of the current expenditure per capita was not included. This indicator was denominated Financial Condition 2 (FC2). By doing this, the obtained results could be reinforced and more consistent conclusions reached.

A series of factors related to the socio-demographic, socio-economic and political environment, were selected as independent variables. For this purpose, variables accepted and used in previous studies whose objective was to observe the influence of the different towns' characteristics on the results of the financial management of the local governments, were taken as a reference.

The socio-demographic variables used were the size of the population and the interest groups. For the size of the population, the number of inhabitants was used, which was transformed logarithmically for all the cases as a control variable (Bastida *et al.*, 2009; Benito *et al.*, 2012; García-Sánchez *et al.*, 2012; Veiga and Veiga, 2007). For the interest groups, two variables were used: the percentage of the under 17 population and the percentage of the over 65 population in relation to the total population (Benito *et al.*, 2013; Borge, 2005; Hagen and Vabo, 2005; Solé-Ollé, 2006; Veiga and Veiga, 2007; Zafra-Gómez *et al.*, 2009a).

The variable used to represent the socio-economic environment was the economic level of the population and municipal taxes per capita. In the literature, there are different indicators used to represent the economic level of population variable. The per capita income or per capita GDP at municipal level were considered appropriate indicators (Andrews *et al.*, 2005). In the Spanish Economic Yearbook (La Caixa, 2006), we found a scale of 1 to 10 that classifies the towns according to their economic levels, which was used as an indicator in previous studies (Bastida *et al.*, 2009; Benito *et al.*, 2012; Zafra-Gómez *et al.*, 2009a). Nevertheless, it was not possible to find an indicator with those characteristics at a municipal level for more recent years. To solve this issue, we used another indicator with an obvious representation of the economic level of the population, called market share. This indicator shows the comparative consumption capacity of the towns and is expressed in terms of the participation that corresponds to each town according to a national base of 100,000 units (La Caixa, 2013). Concretely, the selected sample was divided by the number of inhabitants (Burillo *et al.*, 2011).

The income from municipal taxes was obtained for the municipal central government budget for each municipality and year. The values were adjusted by Consumer Price Index and divided by the population.

The municipal political environment was represented by political strength and orientation. Political strength was measured through the Hirschman-Herfindahl Index for two main reasons. First, it is a measure commonly accepted in the literature (Bastida *et al.*, 2009; Hagen and Vabo, 2005); and second, the study carried out by Borge (2005), in which the use of different variables were used to represent the political strength experimentally, concluded with the superiority of the Hirschman-Herfindahl Index as an explicative variable. The Hirschman-Herfindahl Index is calculated using the following formula:

$$\sum_{i=1}^{n} \frac{S_i^2}{S^2}$$

S is the total number of city councillors in town; S_i is the number of city councils of the party.

The index takes the maximum value of 1 if a single party holds all the seats in the local council and it takes the minimum value of $1/P$ when the seats are shared equally between the parties P represented in the council. Hence, the closer it is to 1, the greater the political strength.

For political orientation, as with political strength, there are different approaches to measurement. The left/right hypothesis was selected (Bastida *et al.*, 2009; Benito *et al.*, 2012, 2013; Hagen and Vabo, 2005). To calculate this, following Bastida *et al.* (2009), we assigned a value of 0 to the city councillors of the parties with left or progressive orientation and a value of 1 to the city councillors of the parties with right or conservative orientation (Table II). After that, the result was added and divided by the total number of councillors, while the councillors of parties whose political orientation cannot be clearly distinguished were excluded.

The descriptive statistics of each one of the obtained variables are presented in Table III.

Concept	Definition
Conservative	The group of conservative parties include political groups like Partido Popular (PP); Coalición Canaria (CC); Convergència i Unió (CIU); Euzko Alderdi Jeltzalea-Partido Nacionalista Vasco (EAJ-PNV); Partido Aragonés (PAR); Unión del Pueblo Navarro (UPN); Unió Valenciana (UV); Coalición Canaria-Partido Nacionalista Canario (CC-PNC), etc.
Progressive	The group of progressive parties include political groups like Partido Socialista Obrero Español (PSOE); Izquierda Unida (IU); Bloque Nacionalista Galego (BNG); Esquerra Republicana de Catalunya (ERC), Izquierda Unida Comunidad de Madrid (IUCM); Partido de los Socialistes de Cataluña-Progrés Municipal (PSC-PM); Partido Socialista de Andalucía (PSA); Partido Andalucista (PA); Chunta Aragonesista (CHA); Iniciativa per Catalunya Verds (ICV); Asamblea de Izquierdas (A-IZ), etc.

Source: Pérez-López *et al.* (2014)

Table II.
Political sign

Variable	Source	Mean	SD
FC1	Ministry of Public Administrations of Spain[a]	0.000	3.188
FC2	Ministry of Public Administrations of Spain[a]	0.000	2.822
Size of the population	National Statistical Institute of Spain	69,311.13	157,615.6
Percentage of young people	National Statistical Institute of Spain	14.835	2.755
Percentage of elderly people	National Statistical Institute of Spain	15.246	4.602
Market share per inhabitant	Spanish Economic Yearbook (La Caixa, 2013)	0.002	0.000
Political orientation	Ministry of Interior of Spain	0.406	0.224
Political strength	Ministry of Interior of Spain	0.410	0.140
Municipal taxes (euro) per capita	Ministry of Public Administrations of Spain	396.059	223.385

Notes: FC1, financial condition with current expenditures per capita; FC2, financial condition without current expenditures per capita. The descriptive statistics were calculated with no logarithms. The average and the standard deviation correspond to the data set (1,844 observations used). [a]The calculation method is explained in the methodology

Table III.
Descriptive statistics

Data analysis

Several regression models were estimated in order to evaluate the possible influence of external factors on the financial condition (FC1 and FC2). Concretely, three models for each dependent variable were used in an effort to find greater consistency in the results. Since the database has a time series and cross-sectional structure, the pooled models could present shortcomings in panel data due to the possible existence of unobservable heterogeneity (Hagen and Vabo, 2005). For this reason, the first and second models were estimated based on specific equations for panel data. In this case, it was possible to choose between random effects (RE) and fixed effects models (FE). The Lagrange multiplier test indicated that the RE should be employed rather than pool models ($\chi^2 = 919.21$, $p < 0.001$ for FC1 and $\chi^2 = 446.58$, $p < 0.001$ for FC2), and the F-test also indicated the use of FE rather than pool models ($F = 6.38$, $p < 0.001$ for FC1 and $F = 4.35$, $p < 0.001$ for FC2). The FE models allow the explanatory variables to be correlated with specific individual effects, while the RE models assume that all explanatory variables are uncorrelated with individual effects. If the condition above is satisfied, the RE models are more efficient than the FE models. If the condition is not satisfied, the FE models will remain consistent while the RE models will be biased. The Hausman Test, which states that the null hypothesis is no correlation between heterogeneity and regressors, was used to determine the most appropriate model (Arellano, 1993). Nevertheless, the results were not clear ($\chi^2 = 12.16$, $p = 0.059$ for FC1 and $\chi^2 = 10.74$, $p = 0.097$ for FC2). Thus, if $p < 0.10$ is taken as reference, the Hausman test results indicated the use of FE specifications instead of RE specifications, but both FE and RE results are shown in the table (as we can see in the next section, the results are similar).

Finally, with the aim of controlling the effect of previous financial performances on the current performance, a Generalized Method of Moments for panel dynamic estimator was implemented (Arellano and Bover, 1995; Blundell and Bond, 1998). Furthermore, this method allows to control for possible endogeneity problems that usually appear in such studies, using the lagged independent variables as an instrument (Benito *et al.*, 2013). As in previous studies, all independent variables except dummy variables were treated as endogenous in dynamic models (Benito *et al.*, 2013; García-Sánchez *et al.*, 2012).

All models included the effect of the year as a control variable. Data analysis was carried out using Stata version 13.0.

Results

Table IV shows the results derived from the implemented data analysis.

Insofar as the socio-demographic variables, the influence of population size has a clear interpretation. All models show a significant coefficient with a negative sign.

The percentage of the young population remains negative in all models except the dynamic model for FC1, with significant coefficients in the case FE. In contrast, the effect of the percentage of the older adult population presents a positive sign in FE and dynamic models, with significant values in the latter.

In the case of socio-economic factors, the economic level of the population shows a negative sign in all cases, but only significant values in both dynamic models. However, the municipal taxes per inhabitant variable shows the opposite sign and significant coefficient in all models. Higher taxes per capita in the municipal governments are related to better financial performance of their municipal sports agencies.

Regarding political variables, it was not possible to find a clear interpretation. The signs of the coefficients change in different models. Furthermore, only political strength showed a little signification in three models with negative signs in both FE models and with a

Table IV.
Influence of the variables of the environment on financial condition

	FC1	FC1	FC2	FC2	FC1	FC2
Constant	5.887 (2.743)**	42.766 (18.893)**	5.682 (2.501)**	33.083 (18.935)*	12.080 (5.458)**	19.483 (5.592)***
$FC1_{-1}$	–	–	–	–	0.162 (0.029)***	–
$FC2_{-1}$	–	–	–	–	–	0.124 (0.029)***
Size of population	−0.399 (0.125)***	−3.781 (1.694)**	−0.291 (0.108)***	−2.804 (1.698)*	−0.424 (0.216)**	−0.571 (0.212)***
Percentage of the population under age 17	−0.094 (0.058)	−0.220 (0.117)*	−0.112 (0.052)**	−0.208 (0.118)*	0.045 (0.121)	−0.090 (0.118)
Percentage of the population over age 65	−0.013 (0.037)	0.068 (0.105)	−0.009 (0.033)	0.020 (0.105)	0.135 (0.045)***	0.109 (0.044)**
Economic level of the population	−659.775 (662.500)	−1,187.471 (926.364)	−701.873 (615.617)	−952.334 (964.466)	−7,075.5 (1,425.2)***	−7,484.5 (1,405.7)***
Municipal taxes per inhabitant	0.004 (0.001)***	0.004 (0.001)***	0.002 (0.001)***	0.004 (0.001)***	0.008 (0.001)***	0.005 (0.001***
Political orientation	−0.107 (0.580)	−0.169 (0.829)	0.088 (0.532)	−0.237 (0.831)	−0.010 (1.210)	0.406 (1.184)
Political strength	−0.397 (0.799)	−1.848 (1.051)*	−0.340 (0.744)	−1.916 (1.053)*	2.399 (1.420)*	2.423 (1.399)
Type of model	RE	FE	RE	FE	Dynamic	Dynamic
R^2	0.10	0.05	0.04	0.04	–	–
Number of observations	1,844	1,844	1,844	1,844	1,260	1,260

Notes: RE, random effects; FE, fixed effects. In all the models the effect of the year was controlled through dummy variables. All variables in the dynamic models are treated as endogenous. Standard errors in parenthesis. *$p < 0.10$; **$p < 0.05$; ***$p < 0.01$

positive sign in the dynamic model for FC1. Therefore, the primary conclusion is that political variables do not affect the financial condition of the municipal sports agencies.

Finally, the coefficient of the lagged dependent variable is positive and significant, which shows an in incremental behaviour of the financial condition.

Discussion

The influence of the environment on different representative measures of the performance was studied in the scientific literature. In general, it is considered that part of the results can be attributed to factors that are out of the control of the managers, such as general (Andrews *et al.*, 2005, Andrews, 2011) and financial performance (Borge, 2005; Hagen and Vabo, 2005; Zafra-Gómez *et al.*, 2009a, b). Nonetheless, the investigation of this effect in specific services is limited, thus different results can be obtained depending on the area of the services (Stastna, 2009). This is especially relevant in the case of municipal sport agencies in Spain, despite their weight in the municipal and sport system.

After analysing the influence of the environment on decentralized sports services at the municipal level, there is a significant influence on financial performance. This analysis was carried out through a set of variables classified as socio-demographic, socio-economic and political factors. However, this influence does not have much weight in the total variation that the analysed entities present as they have a low-explanatory power. The results of this study coincide with previous studies that also evaluated the influence of the environment on the indicators related to financial condition, which presented R^2 values of lower than 0.10 (Zafra-Gómez *et al.*, 2009b).

However, knowing which environmental specific variables or factors may have a significant influence on performance is important, even though this influence is low. Thus, sports services will increase their objectivity when looking for other entities for comparison and adopt new management practices.

The size of the population has a negative effect on the financial condition, so that the sports services of the biggest towns will face more difficulties in keeping the financial management solvency and obtaining good financial results. This interpretation matches with the findings of Benito *et al.* (2012) and Gallardo *et al.* (2009) in relation to the management of public sports services at a local and regional level. These studies suggest that populations bigger in size and with higher concentrations make the management of sports facilities and activities more difficult in relative performance terms. Zafra-Gómez *et al.* (2009a, b) obtained similar results for financial conditions at municipal level. Thereby, a good approach to more objectively compare the performance of different organizations in relation to this factor is to select entities according to the ranking that stands out as the minimum public services in Spanish legislation (populations of 5,000 inhabitants or less, populations between 5,001 and 20,000 inhabitants, populations between 20,001 and 50,000 inhabitants and populations over 50,000 inhabitants).

Regarding the influence of the two groups of interest, a general significant influence is not observable for older people. However, some interpretations can be made regarding the influence of the percentage of young people. This could be related to the activities provided by the municipal sports services. In this way, these entities usually assume the greater part of the service delivery of municipal sports schools in the town while sports services for older people are shared with social services and special attention programs (Liu, 2009; Liu *et al.*, 2009). Moreover, the way in which the sports schools for young people are offered and the political strategies related to them from

the municipal sports services make them a less profitable activity than those offered for adults (García-Unanue *et al.*, 2015).

At the municipal level, it is not possible to find clear results in the recent literature about the influence of interest groups on the local governments' performance. Andrews *et al.* (2005) do not consider the influence of interest groups on performance measured through the Comprehensive Performance Assessment in English cities when compared with other environmental measures. Similarly, other studies (Borge, 2005; Hagen and Vabo, 2005; Veiga and Veiga, 2007) analysed budgetary results and found that only the older adult population seems to have an influence, although clear conclusions could not be drawn. Zafra-Gómez *et al.* (2009a, b) found the distribution of the population's ages to have some influence on financial condition, but generalized conclusions were not drawn because of some contradictory results. Therefore, as noted by Borges (2005), the size of the interest groups is a poor indicator of influence.

The variable used to approach the possible influence of the population's economic level does not show any significant result except in the case of the dynamic regressions (although the coefficients are negative in all cases). This, in contrast to the majority of findings in other municipal level studies (Borge, 2005; Solé-Ollé, 2006), even though García-Sánchez *et al.* (2011) found that the economic level of the population did not have a significant influence on the deficit. Nonetheless, Benito *et al.* (2012) found a negative association between economic development and the efficiency of sport facilities provision. A high-economic level in a town could be related with a high demand of more expensive sports with large infrastructures and, therefore, greater difficulties in making such services profitable in the public sector. Moreover, seen from the opposite side, a population's lower economic level could lead to a greater demand for basic sports services to implemented by the public administration rather than the private sector, which is usually more expensive. This could lead to higher occupancy of basic sports facilities, which are cheaper to maintain and require less qualified staff, and thus, lead to higher revenues.

In our case, a possible explanation for not achieving conclusive results is related to the measure used to approach the population's economic level. As expressed by Andrews *et al.* (2005) and Bastida *et al.* (2009), the best measure to show the economic level of the population must be related to the income per capita or GDP per capita. However, as it occurs in this study, if this data are not reliably available at a national level, it is necessary to use other measures that can get close to this concept. In line with this, Burillo *et al.* (2011) in a regional level analysis, used GDP per capita and market share per capita (the same variable that was used in this study) as possible explicative variables of the level of development of sports facilities (measured through a synthetic indicator that was created using the same methodology as that used to create the dependent variable for this study). The results show similar correlation values and the same sign for both variables; however, the GDP per capita variable acquired an acceptable level of significance while the market share per capita, did not.

As for municipal taxes per capita, the effect is positive and significant in all cases, showing a clear influence of this variable in the financial performance of the municipal sports agencies. Municipal level theories suggest that greater municipal revenues lead to a situation of comfort and less pressure, which could lead to less efficient management (Benito *et al.*, 2012). However, this accommodation of municipal governments could also result in an increased capacity to make transfers to their respective autonomous sports organizations (which do not have tax revenues in their budgets). This, in turn, could lead to its greater financial solvency.

Clear conclusions cannot be drawn in terms of political orientation as there is no clear influence of the political context in the financial condition of the municipal sport agencies. Political ideology has a different sign among models and no significant value. These results support other recent studies (Bastida *et al.*, 2009; Pérez-López *et al.*, 2014), which did not find any influence of political orientation on the financial condition at a municipal level. The results are also consistent with the study by Borge (2005), as different signs were found in the coefficients of the different regression models used. The political strengths show negative signs in static models, positive signs in dynamic models, and no relevant significant coefficient. In the case of FE, a higher political strength results in worse economic results, contradicting the most generalized theory (Ashworth *et al.*, 2005). Nevertheless, a clear interpretation cannot be extracted with all the models.

One of the main strengths that are attributed to functional decentralization through autonomous organizations in Spain is the freedom to carry out autonomous and flexible management. Their financial results, represented through budgetary indicators, must not be influenced by the tendencies about the expenditure and the use of the deficit, which can be associated with different political ideologies or different opinions that can be found in the municipal administration (Cuadrado-Ballesteros *et al.*, 2013b). Likewise, the introduction of budget balance constraints by legal regulations could detract from the importance of the influence of political variables (Borge, 2005). This effect has been suggested in Spain through the introduction of legislation for budgetary balance in 2002, which influences the level of deficit with which the local governments work (García-Sánchez *et al.*, 2011). This limits the flexibility of budgetary management (Bastida *et al.*, 2009; Pérez-López *et al.*, 2014).

Conclusions

Although slight, a negative influence of the size of the population was found. The autonomous sports organizations that provide services to towns with a higher number of inhabitants obtain worse financial results. In the same way, higher municipal taxes per capita in a municipality are related with the better financial condition of its autonomous sports organizations. Conversely, the influence of the political context is not demonstrated.

The main implication is that the autonomous municipal sports organizations that compare themselves to other entities in order to improve will have to approach environmental factors to carry out a more objective evaluation. Concretely, autonomous sports organizations should find towns with a similar number of inhabitants and whose municipal governments obtain similar municipal tax revenues per capita. Furthermore, this study adds new knowledge that supports the idea that the assessment of performance by authorities, such as financial performance, must also take into account the environmental factor.

It must be considered that by selecting the independent variables used to represent the environment, our goal was not to create a high-quality explicative model, The model was used only to determine whether some variables related to the environment could have an influence on the financial and budgetary performance and to what degree. The variation that remains unexplained could be associated with other variables related to the environment that could not be controlled, thus leading to the primary limitation of the study. Nevertheless, the selection of variables was based on previous studies in which their influence and explicative level in municipal finances were demonstrated. Therefore, according to Andrews *et al.* (2005), the central part of the

financial performance variation in these cases could be explained by the organization, decisions, strategies and heterogeneous management used by the autonomous municipal sports organizations due to their flexibility.

For these reasons, future studies should be developed in two ways. First, they should try to calculate and include more environmental variables, and perform analyses combining environmental and internal management variables with the aim to achieve predictive models. Second, sport management studies should look for a way to analyse what happens with other management forms (i.e. direct centralized management and indirect management).

Note

1. The municipality is the basic local entity of the territorial organization of the state in Spain, with legal personality and full capacity to fulfil its purpose.

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About the authors

Jorge García-Unanue obtained a PhD in Sport Sciences. At present, he is a Member of IGOID Research Group and his research interests are focused on public sport and sport management. He teaches in the field of Sport Management in the Faculty of Sport Sciences at the University of Castilla-La Mancha and at the European University of Madrid. He has published in journals such as *Systemic Practice and Action Research*, *PLoS ONE*, *Journal of Sports Sciences* or *European Journal of Sport Science*. Jorge García-Unanue is the corresponding author and can be contacted at: Jorge.garciaunanue@uclm.es

José Luis Felipe obtained a PhD in Sciences of Physical Activity and Sport and at present teaches and research in the field of Sport and Recreation Management in the Faculty of Sport Sciences at the European University of Madrid. He participates in several research projects in the IGOID Research Group and he has published in journals such as *Systemic Practice and Action Research*, *PLoS ONE* or *European Journal of Sport Science*.

Carlos Gómez-González is a PhD Student in Sports Sciences at the University of Castilla-La Mancha. He enjoyed annual international stays at the University of North Carolina at Greensboro (USA) and Comenius University of Bratislava (Slovakia) during his studies and now he has been awarded an Excellence Scholarship for Research at the University of Zurich (Switzerland) for next year. He has contributed to scientific congresses such the 8th World Congress on Science and Football in Copenhagen or the 7th ESEA Conference in Sports Economics in Zurich (accepted for oral presentation).

Julio del Corral obtained a PhD in Economics and is an Associate Professor in the Faculty of Law and Social Sciences at the University of Castilla-La Mancha (Ciudad Real), teaching microeconomics. His research interests are focused on efficiency and productivity analysis, sport economics and applied econometrics. He has published papers in journals such as *International Journal of Forecasting*, *Journal of Sport Economics*, *Sport, Business and Management: An International Journal* or *Food Policy*.

Leonor Gallardo obtained a PhD in Sciences of Physical Activity and Sport and is a Professor of Sport Management in the Faculty of Sport Sciences at the University of Castilla-La Mancha (Toledo). She is the Director of IGOID Research Group. She is a Senior Conference Speaker about Sport Management and Leadership and counts with several published papers in journals such as *Social Indicators Research*, *European Journal of Sport Science*, *European Planning Studies* or *International Journal of Information Management*. She also worked as a consultant in the Spanish National Sports Council and is the Coordinator of the Editor's Team for III National Census of Sports Facilities.