



Budget stability, financing and social responsibility in Spanish municipalities

*Estabilidad presupuestaria, financiamiento y responsabilidad
social en los municipios españoles*

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Abstract

In this paper, we analyze the most relevant relationships between budgetary stability, the Municipal Financing System (SFM) and social expenditure policies, as fundamental pieces to define the level of Corporate Social Responsibility (CSR) that can be assigned to Spanish municipalities. We have started from the budgets of the 9,500 municipalities and other local Spanish entities, presented to the Spanish Court of Auditors in 2014, and available on the website of the Ministry of Finance. Based on this information, we developed a database (more than 1,500,000 records, big data, treated by data mining techniques) to perform an exploratory analysis of the most significant factors explaining the relationship between budgetary stability, financial sufficiency and sustainability of welfare policies. Based on the above and the level of budgetary expenditures in the Basic Public Services programs (EA1) and the Social Promotion Protection Actions program (EA2), we propose two indicators to measure the level of CSR attributable to each municipality. The main findings of our research are summarized in three conclusions: that municipalities with budget deficits prioritize the reduction of their debt with financial institutions while delaying payment to their suppliers; that the relationships between the income and expenditure policies of each

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municipality have a direct impact on their level of CSR; and that, using a logit probability model, the hypothesis according to which the CSR of the municipalities can be explained by the size of their population and the way in which they are financed, is confirmed.

JEL Classification: H53, M14, H72, H75.

Keywords: Corporate social responsibility, Local administration, Budgets, Social expenses, Deficit, Surplus.

Resumen

En este trabajo analizamos las relaciones más relevantes entre la estabilidad presupuestaria, el Sistema de Financiación de los Municipios (SFM) y las políticas de gasto social, como piezas fundamentales para definir el nivel de Responsabilidad-Social-Corporativa (RSC) asignable a los municipios españoles. Para ello, hemos partido de las liquidaciones presupuestarias de los 9.500 municipios y otros entes locales españoles presentadas ante el Tribunal de Cuentas en 2014, y disponibles en la web del Ministerio de Hacienda. A partir de la información, elaboramos una base de datos (más de 1.500.000 registros, tratados mediante técnicas de *data mining*) para realizar un análisis de los factores más significativos que explican las relaciones entre *estabilidad presupuestaria*, *suficiencia financiera* y *sostenibilidad de las políticas de bienestar*. Partiendo de lo anterior y del nivel de gastos presupuestarios en el área de gasto (AG1) de *Servicios Públicos Básicos* y en el área de gasto (AG2) de *Actuaciones de Protección de Promoción Social* proponemos dos indicadores para medir el nivel de la RSC atribuible a cada municipio. Los principales hallazgos se concretan en tres conclusiones: que los ayuntamientos con déficit presupuestario priorizan la reducción de su deuda con las entidades financieras a la vez que dilatan el pago a los proveedores; que las relaciones entre las políticas de ingresos y gastos de cada municipio repercuten directamente en su nivel de RSC; y que, mediante un modelo de probabilidad *logit*, se confirma la hipótesis según la cual la RSC de los municipios puede ser explicada a partir del tamaño de su población y de la forma en que se financian.

Códigos JEL: H53, M14, H72, H75.

Palabras clave: Responsabilidad social, Administración local, Presupuestos, Gastos sociales, Déficit, Superávit.

Introduction

In the last decade the Spanish municipalities have faced huge budget deficits derived from the difficulty of controlling expenses in services such as health, education or dependency, etc. At the same time, they have found funding problems to make some of the social benefits entrusted to them sustainable. After the economic crisis and the great fiscal adjustments that Spanish municipalities have had to carry out, the prior to-crisis level of provision of essential public services, has been questioned.

In this sense, it has been demonstrated that the problems of budgetary stability, the financial sufficiency of the municipalities and the sustainability of welfare are closely interrelated. Following authors such as Albi and Onrubia, 2016, we defend the need to design a budgetary management control system oriented towards the results of the budget account of the organizations both internally and externally. In addition, in order to achieve a more efficient management of public spending, it is necessary to put in place an organizational-institutional model in accordance with the management requirements imposed by a new international economic scenario, in which public policies are due to coexist with the strong demands of resources and processes of fiscal consolidation with strong restrictions. Responsible Public Management is linked to two concepts: on the one hand, the Social Responsibility (SR)

associated with business management and, on the other, the Good Governance of the Public Administrations, as a commitment to human, labor and environmental rights and with the search for a more transparent public management.

With regards to the source of information used, in order to attain this objective, we have used a database with the budget accounts of the approximately 9,500 municipalities and local Spanish entities that have been audited by the Spanish Court of Auditors, the body in charge of overseeing the economic-financial management of the public sector.

The study discloses how the size of the municipalities, the different forms of financing, the volume and type of expenditure, as well as the net variation of financial liabilities (increase or decrease of debt of a financial nature), have an effect on the budgetary result (Deficit, Balance or Surplus). At the same time, the results show that there is a direct relationship between expenditure policies, financing methods and the situation of surplus or deficit presented by Spanish municipalities.

The main findings are outlined in three conclusions:

I. that municipalities with budget deficits prioritize the reduction of their debt with financial institutions while delaying payment to suppliers;

II. that the relationships between the income and expenditure policies of each municipality have a direct impact on their level of CSR; and that, by means of a logit probability model, the hypothesis is confirmed according to which the CSR of the municipalities can be explained based on the size of their population and the way in which they are financed.

The normative principles for a responsible public management in Spanish municipalities based on their budgets

In the last two decades, there have been important changes in the way of managing and administering public bodies that have led to various research works such as; Hughes; (1997); cit. Fernández Santos et al. (2008), Subirats Humet (2003), Pollitt, (2006), Lonti and Gregory, (2007), Portillo, M. J. (2009), Hildebrand and McDavid, (2011).

At the same time, a great interest has arisen in the elaboration of ethical and conduct codes for civil service employees and managers that has generated a new culture of the public sector. This institutional culture and the new control systems have also played a role in Spain and have developed in parallel to the citizen's concern of corruption in public life and the struggle to combat it. In 2005, the Good Government Code of the State General Administration was approved in Spain and, in 2009, the Spanish Federation of Municipalities and Provinces (FEMP) approved its own Code of Good Governance, proposing to the municipalities the adoption of the following two types of measures:

A) Measures to improve the management and quality of municipal democracy. By creating commissions to control public procurement and transparency in the granting of aid, while promoting citizens' electronic access to Public Services.

B) Participatory democracy measures, to complement representative democracy and to promote a relational administration.

In Spain, many municipalities have developed the recommendations of the FEMP, through citizen participation standards, good practice manuals, codes of conduct for their employees,

and service letters, etc. These recommendations for responsible management of public services are included in the Report of the Subcommittee of the Congress as follows: “*The State and Autonomous Communities Administration, the, Public Enterprises and Local Administration must be exemplary in the integration of the principles and practices of the RS in their own operation*”. They must integrate the principles of CSR both in their own activities and direct responsibilities and in their interactions with third parties, demanding a minimum level of SR to the companies with which they collaborate or contract. In reference to all those administrations that play a central role in health services, education, safety, environmental quality, social cohesion or the promotion of good business practices, etc. and to which corresponds the challenge of launching processes to create public value in more dynamic and demanding social and economic environments.

As pointed out by Melle Hernández, M. (2007), the traditional principles of action of the administration (transparency, budgetary discipline, independence, accountability and impartiality) should be joined by the concept of SR, in order to be able to consider a true Responsible Public Management (GPR). This author points out the following general principles of responsible management in Public Administrations:

1. Objective identification of sustainable practices and of all stakeholders (interested and/or affected parties), through a SR diagnosis.
2. Incorporation of the SR in the management and procedures, involving all interested parties and with the commitment of the management positions.
3. Adoption of formal SR codes, with policies in this regard and articulation of the dialogue with all stakeholders.
4. Ethical commitment, respect for diversity and equal opportunities, with an explicit recognition of the positive value of diversity, and
5. SR Reports with external verification.

In this context, the municipalities and Spanish local entities, in their relations with companies and with third parties, should define public policies with incentives for those companies that allocate resources to social benefits. In such a way that public spending (sustainable public procurement) can be linked to the behavior of socially responsible companies. At the same time, local administrations can also promote socially responsible investment (SRI) with SR incentives in financial markets. We refer, therefore, to the intrinsic values of Social Responsibility in the Public Sector and by extension to those that must be incorporated by the municipalities through their spending policies, control of the deficit and form of financing/funding. As Longo, F. (2012) points out, the creation of public value through changes in strategies that incorporate values of economic rationality, social responsibility, efficiency and control of public spending is essential

Brief review of the Spanish regulatory framework

In Spain, the commitment to SR in Public Administrations is evident in the different laws enacted in the last decade and oriented in the following three directions:

- a) to promote the active publicity of the administrations and public entities and of interrelation with the citizens, through internet websites;

b) to guarantee access to information (*Law 11/2007 of June 22, electronic access of citizens to Public Services*);

c) to establish the recommendations of good governance that public officials must comply with (*Law 2/2011, of March 4, on Sustainable Economy that establishes measures for the rationalization and containment of expenditure as well as to increase the fiscal transparency of public administrations*). This Law makes it clear that these measures must be carried out within the framework of sustainability and includes a section (Article 39: Promotion of CSR), pointing out, in particular, transparency in management, commitment to local aspects and the environment, respect for human rights, effective equality between women and men, and universal accessibility to public facilities and services. Efficiency is one of the important elements: art. 32.4 “*all expenses shall be evaluated in accordance with the principles of efficiency and simplification of the services provided, encouraging the productivity of the public sector*”.

Regarding information, it must be public (*Law 19/2013, of December 9, on transparency, access to public information and good governance*); to help restore trust in institutions with a double scope: on the one hand, increase and reinforce transparency of public activity through obligations of active disclosure for all public administrations and entities; and on the other, recognize and guarantee access to information; specifically its art. 8: “*Economic, budgetary and statistical information*” lists the different items that must be published, and the consequences in case of non-compliance.

Regarding the control of commercial debt, *Organic Law 9/2013, of December 20, on Control of Commercial Debt in the Public Sector* establishes the obligation for Public Administrations to make disclose their average payment period (PMP) to suppliers, (generating a monitoring tool for commercial debt and the obligation for the Administrations to include details on payment to suppliers in their treasury plans .

In addition to the regulatory framework described, the Ministry of Employment and Social Security has published “*The Spanish Social Responsibility Strategy 2014-2020 for companies, public administrations and other organizations to move towards a more competitive, productive, sustainable, integrative and productive society and economy*”. This Strategy defines the vision, principles, objectives, action lines and planned measures in the field of SR and its integration in education, training and research. However, in the case of Spanish municipalities, information on performance indicators and budget management is still very scarce and insufficient to test the efficiency of spending and compare the level of services provided with its form of financing (Tax Rate / Transfer Rate).

Aims of the research and description of the empirical study

We aim to analyze the most relevant relationships between budget stability (showing its deficit or surplus) and the municipal financing system (Tax Rate / Transfer Rate). In accordance with the principle of budgetary stability, we have carried out an exploratory analysis according to the population of the municipalities and in relation to the grouping by autonomous communities.

Contribution of the SR model as a strategy for the budget management of the Spanish Local Administrations: Specific objectives

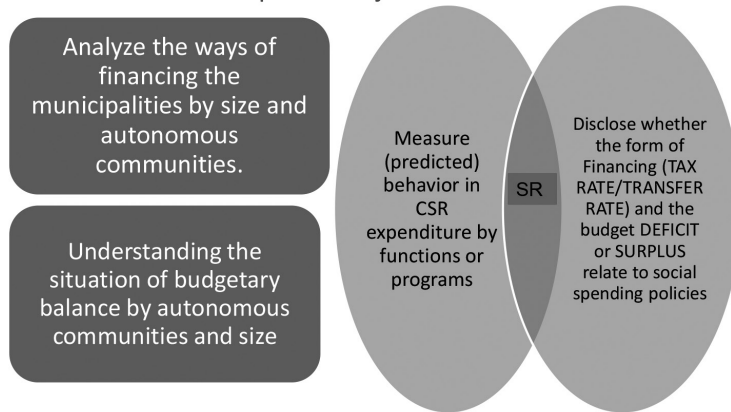


Figura 1. Objetivos

Likewise, we have analyzed the most relevant characteristics of local funding to disclose the strengths and weaknesses of the current municipal financing/funding system (MFS) and discover possible correlations with the spending policies they carry out. To do this, we have explored and analyzed the relationships between budget management and the percentage and per capita expenditure allocated to the area of expenditure (EA1) of *Basic Public Services* and in the area of expenditure (EA2) of *Actions of Protection of Social Promotion*.

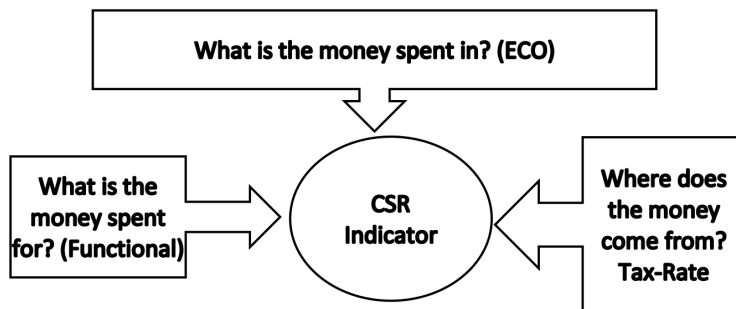


Figure 2. Relationship budget and CSR

The two areas of expenditure EA1 and EA2 are representative of the social benefits entrusted to the municipalities and, therefore, representative of Corporate Social Responsibility policies attributable to the Spanish municipalities. In this sense, it is fundamental to analyze how they are spending and in what services they do it and, at the same time, to know the origin of the resources that finance them and to define an indicator of CSR in each municipality.

Therefore, the fundamental objective is to have a predictive/explanatory model of municipal CSR and for this we intend to contrast the following hypothesis:

H1: The CSR of the municipalities can be explained based on the size of their population and the way in which they are financed

Description and methodology

In order to have a database of budgetary results with which to perform an exploratory/descriptive and predictive analysis, data mining techniques have been used (Chamizo et al, 2015), once processed, coded and transformed the initial information, the objective data is selected, objective data that is then the basis for the development of models that facilitate the interpretation and evaluation of them with the ultimate goal of generating knowledge.

Our source of information is the budgetary accounts of 2014, of the approximately 9,500 municipalities and other Spanish local entities, submitted to the Spanish Court of Auditors. From these accounts we have obtained the following two databases (Table 1):

Tabla 1

Database 2	Database 1
Only municipalities	Only municipalities included in database 2
Only expenditure areas (1 digit)	Only income budget chapters (1 digit)
Only Chapters of expenses (1 digit)	

- Database 1: based on the economic classification of Income and Expenses, with 1,116,212 records. The following parameters have been included for both for income and expenses of each municipality and local entity: population, amount of net recognized rights/obligations for all chapters (1 digit), articles (2 digits), concepts (3 digits) and subconcepts (5 digits). Database 1 provides a total of 1,045 variables to our study.

- Database 2: based on the functional classification of the budget, in order to analyze which public services the municipalities spend on, with 551,849 records. It refers to the amount of net recognized obligations of the functional classification of the expenditure budget (there is no functional classification of the revenue budget). This database also includes the economic classification of the expenditure budget, but exclusively at the chapter level, as well as the number of inhabitants of each municipality. Database 2 provides a total of 1,132 new variables (i.e. not considering those already included in Database 1).

The model sought is a regression line that allows explaining / predicting whether a municipality will obtain a positive value in CSR based on the way to obtain its income.

$$CSR = f(v_1; v_2; v_3; \dots, v_n)$$

$$CSR = ct + \alpha_1 v_1 + \alpha_2 v_2 + \alpha_3 v_3; \dots, \alpha_n v_n$$

Results obtained from the exploratory study

Characterization of Spanish municipalities according to the form of financing, population range and budget result (Deficit / Surplus)

Analyzing the income items of the economic classification of the budget (Table 2) we

observe that, for 2014, Spanish municipalities were financed mainly through taxes (Tax), in 46.02%, followed by transfers (Transfer) with 36.93%. However, making the analysis by autonomous communities¹ (CCAA) there are significant differences between communities, exceeding 50% of funding by transfers, the communities of Galicia with 70.71%, Extremadura 70.25%, Andalusia 70.07%, Aragon 59.21% and Canary Islands with 54.02% and, in the rest, the most used financing is that of taxes (Tax).

Table 2
 Distribution of financing forms by municipalities of Autonomous communities

CCAA	Transfer	Tax	Distributed	Others 5+6	Suma
Andalucía	70.07%	22.21%	7.72%	0.00%	100.00%
Aragón	59.21%	23.94%	16.22%	0.63%	100.00%
Canarias	54.02%	40.23%	5.75%	0.00%	100.00%
Cantabria	21.05%	65.26%	13.68%	0.00%	100.00%
Castilla y León	30.96%	38.81%	27.47%	2.76%	100.00%
Castilla-La Mancha	14.66%	66.15%	17.64%	1.56%	100.00%
Cataluña	25.78%	67.33%	6.67%	0.22%	100.00%
Com. Foral de Navarra	0.00%	60.00%	40.00%	0.00%	100.00%
Ceuta	0.00%	0.00%	100.00%	0.00%	100.00%
Com. de Madrid	11.84%	81.58%	6.58%	0.00%	100.00%
Com. Valenciana	16.41%	75.38%	8.02%	0.19%	100.00%
Extremadura	70.25%	17.63%	12.12%	0.00%	100.00%
Galicia	70.71%	23.23%	6.06%	0.00%	100.00%
Illes Balears	6.15%	90.77%	3.08%	0.00%	100.00%
La Rioja	24.05%	52.53%	20.25%	3.16%	100.00%
Melilla	100.00%	0.00%	0.00%	0.00%	100.00%
País Vasco	0.00%	0.00%	100.00%	0.00%	100.00%
Principado de Asturias	28.57%	58.44%	12.99%	0.00%	100.00%
Región de Murcia	4.88%	85.37%	9.76%	0.00%	100.00%
Total	36.93%	46.02%	15.89%	1.16%	100.00%

Source: The authors 2017

Then, after analyzing the expenditures and income of chapters 1 to 8 of the budget, the municipalities are identified by autonomous communities disclosing deficit² (11% of the total) or those that present a surplus (89% of the total), in order to know the relation of the deficit or surplus with the net variation of its financial liabilities.

In relation to those with a deficit, (11% of the total) we observe that almost 51% (Table 3) presents a negative variation of financial liabilities, which means that they are reducing their debt with financial institutions and, at the same time, delaying payment to suppliers. 41.96% of the municipalities present a net variation of zero financial liabilities (neither increase nor decrease the debt); and 7.38% increase the debt with financial entities (Table 2).

¹ Also known as Regional Governments.

² Understanding Budget deficit as the difference between the Net Recognized Rights of chapters 1 to 8 of the economic classification of the Revenue Budget and the Net Recognized Obligations of chapters 1 to 8 of the economic classification of the Budget of Expenses when this is negative. Consequently, we speak of Surplus when this difference is positive.

Table 3
 Net Variation of Financial Liabilities in Municipalities with a Deficit by Autonomous Community

CCAA	Reducing Debt	No Variation Debt	Increasing Debt	Sum
Andalucía	70.42%	19.72%	9.86%	100.00%
Aragón	53.33%	40.00%	6.67%	100.00%
Canarias	50.00%	50.00%	0.00%	100.00%
Cantabria	33.33%	41.67%	25.00%	100.00%
Castilla y León	28.40%	67.20%	4.40%	100.00%
Castilla-La Mancha	52.80%	44.80%	2.40%	100.00%
Cataluña	65.33%	14.67%	20.00%	100.00%
Com. de Madrid	82.35%	11.76%	5.88%	100.00%
Com. Valenciana	69.09%	20.00%	10.91%	100.00%
Extremadura	63.79%	34.48%	1.72%	100.00%
Galicia	64.86%	29.73%	5.41%	100.00%
Illes Balears	85.71%	0.00%	14.29%	100.00%
La Rioja	33.33%	66.67%	0.00%	100.00%
Principado de Asturias	30.00%	40.00%	30.00%	100.00%
Región de Murcia	57.14%	14.29%	28.57%	100.00%
Total	50.67%	41.96%	7.38%	100.00%

Source: The authors 2017

By autonomous communities (CCAA) it is found that in more than half of them, priority is given to the reduction of debt with financial entities.

The Balearic Islands (Illes Balears) stand out, 85.71% of municipalities with deficit spend their income to reduce debts with financial institutions. This same situation is observed in the municipalities of the Community of Madrid in 82.35%; Comunidad Valenciana at 69.09%; Catalonia with 65.33% and Murcia with 57.14%. All of them also have the common characteristic; they are financed mainly by taxes (Table 1). At the same time, these communities are reducing debt with financial institutions. It is observed that the municipalities of the communities of Andalusia in 70.42%, Extremadura in 63.79% and Galicia in 64.86%, are financed mostly by transfers.

The municipalities that present surpluses represent 89% of the total, that is, some 6,134 municipalities have a surplus. Of these, 65% are reducing debt and, the municipalities of Navarre and País Vasco stand out with a reduction of 100%, followed by those of Murcia and the Balearic Islands with 94%, Comunidad Valenciana and Catalonia with 83% and those of the Community of Madrid in 74% (Table 4). All of them, with the common characterization of financing mostly via taxes (Table 2). Consequently, we observe that both municipalities with deficits, as well as those with surpluses, characterize them by reducing their debt with financial institutions

Table 4
 Net Variation of Financial Liabilities in Municipalities with a Surplus by Autonomous Community

CCAA	Surplus			Sum
	Reducing Debt	No Variation Debt	Increasing Debt	
Andalucía	84.99%	11.18%	3.83%	100.00%
Aragón	63.49%	34.31%	2.20%	100.00%
Canarias	84.34%	8.43%	7.23%	100.00%
Cantabria	59.04%	32.53%	8.43%	100.00%
Castilla y León	44.05%	55.24%	0.72%	100.00%
Castilla-La Mancha	55.97%	42.48%	1.55%	100.00%
Cataluña	83.03%	12.61%	4.36%	100.00%
Com. Foral de Navarra	100.00%	0.00%	0.00%	100.00%
Ceuta	100.00%	0.00%	0.00%	100.00%
Com. de Madrid	74.07%	22.96%	2.96%	100.00%
Com. Valenciana	83.16%	16.63%	0.21%	100.00%
Extremadura	63.61%	34.10%	2.30%	100.00%
Galicia	84.23%	15.38%	0.38%	100.00%
Illes Balears	94.83%	5.17%	0.00%	100.00%
La Rioja	49.66%	50.34%	0.00%	100.00%
Melilla	100.00%	0.00%	0.00%	100.00%
País Vasco	100.00%	0.00%	0.00%	100.00%
Principado de Asturias	73.13%	25.37%	1.49%	100.00%
Región de Murcia	94.12%	2.94%	2.94%	100.00%
Total	64.99%	32.99%	2.02%	100.00%

Source: The authors 2017

To our exploratory analysis we have added the categorization of the municipalities according to the size of their population, as shown in table 5 and previous to the cluster analysis

Table 5
 Grouping of the Spanish municipalities according to their population size

Population range	n° of municipalities	n° inhabitants	% inhabitants	% n° of municipalities
<10 000	4 126	1 247 531	2.91%	59.28%
10 000-50 000	2 699	18 632 491	43.49%	38.78%
100 000-250 000	79	5 686 153	13.27%	1.14%
50 000-100 000	41	6 784 290	15.83%	0.59%
250 000-500 000	9	3 012 276	7.03%	0.13%
>500 000	6	7 483 692	17.47%	0.09%
Total	6 960	42 846 433	100.00%	100.00%

Source: The authors 2017

It is observed that 59.28% of the number of municipalities of less than 10,000 inhabitants receive 2.9% of the total population. However, 43.49% of the population lives in municipalities that are in the range of 10,000-50,000 inhabitants and represent 38.78% combining all the analyzed criteria (form of financing, budgetary result, net variation of financial liabilities [NVFL) and population), allows us to establish the categories (cluster) listed in Table 6

Table 6

Cluster analysis of the Spanish municipalities according to population, form of financing, budgetary result and NVFL

Clusters	Nº	Nº	% Cum.	% Cum.
	Municipalities	Inhabitants	Inhabitantes	Municipalities
1 10 000-50 000-Tax-Surplus-Reducing Debt	1 378	12 322 167	28.76%	19.80%
2 50 000-100 000-Tax-Surplus-Reducing Debt	32	5 513 067	41.63%	20.26%
3 >500 000-Tax-Surplus-Reducing Debt	4	5 184 630	53.73%	20.32%
4 100 000-250 000-Tax-Surplus-Reducing Debt	62	4 428 468	64.06%	21.21%
5 250 000-500 000-Tax-Surplus-Reducing Debt	8	2 758 758	70.50%	21.32%
6 10 000-50 000-Transfer-Surplus-Reducing Debt	590	2 542 048	76.43%	29.80%
7 >500 000-Repertido-Surplus-Reducing Debt	1	1 602 386	80.17%	29.81%
8 10 000-50 000-Repertido-Surplus-Reducing Debt	137	797 321	82.03%	31.78%
9 10 000-50 000-Tax-Deficit-Reducing Debt	118	738 820	83.76%	33.48%
10 Remainder Categories	4 630	6 958 768	100.00%	100.00%
Total	6 960	42 846 433		

Source: The authors 2017

We can see that the first 5 clusters, which coincide in the form of financing, result and VPNF, represent 70.5% of the population and 21.32% of the number of municipalities. We can therefore conclude that the majority of the Spanish population lives in municipalities that are financed via taxes, have surpluses and reduce debt to financial institutions.

Classification of the municipalities according to their form of financing and CSR rating

With the results obtained of the exploratory/descriptive analysis (forms of financing and their relationship with the indebtedness), we have classified the municipalities in response to the form in the financing and level of budget expenditure for the area of expenditure (**EA1**) of basic public services and the area of expenditure (**EA2**) activities of protection of social promotion. This enables us to propose two indicators that measure the level of CSR attributable to each municipality.

To define our first CSR indicator, we have calculated the average expenditure in these two areas of expenditure, resulting in 38.11%.

CSR Indicator I = % of expenditure in EA1 + EA2 equal to or greater than 38.11%

With this indicator, we have categorized the municipalities in two groups: Group 1, municipalities with social responsibility, to those who are above that mean and, group 2, municipalities that are below this mean and therefore, with scarce or null level of CSR.

To obtain our second indicator, we have calculated the average per capita expenditures in the two areas of expenditure (EA1 and EA2), of the total number of municipalities, in order to reinforce the previous indicator with a more robust model. The average per capita expenditure in the area of expenditure 1 and, in the area of expenditure 2 of the municipalities is €488.95

CSR Indicator II = per capita expenditure in EA1 + EA2 equal to or greater than 488.95 euros.

These two indicators allow us to build the variable dichotomous dependent (CSR) that will adopt the value 1/true and 0/False defined as:

- True, the municipality has CSR, when the% of expenditure in the areas of expenditure (EA1 + EA2), with respect to the total budget, is higher than the overall average of 38% and at

the same time, the per capita expenditure in them is equally higher than the average of 488.95 euros

- False, the municipality does not have RSC, in any other case.

By doing an analysis of the total of the municipalities studied and grouping according to the indicators described, it has been found (table 7) that 2,739 municipalities (39%) do not meet any of the two indicators of CSR selected (no CSR). With a single indicator of SR (no CSR), is a group of 2,497 municipalities, 35.88% and 1,724 municipalities, 24.77% would be above these two means (Yes, they have CSR) and therefore would be closer to policies of Social responsibility, and We will label as municipalities of budgetary management oriented to the CSR (our dependent variable). Analyzed each group is observed that:

1°. Municipalities that do not present values equal to or greater than the average in any of the indicators, are financed mainly by taxes the (41.47%) and by means of transfers would be (40.20%).

2° The municipalities that present values higher than the average in One of the indicators, and at the same time is financed mainly, via taxes represent 55.47% of the total while the 30.80% of the total is financed via transfers

3° The municipalities that present values higher than the average in both indicators are financed slightly by means of transfers (40.66%) compared to those which are financed through taxes (39.62%)

We can see in table 7, that if we group the municipalities that at least have in one of the two indicators of CSR, values above the average, they represent 60.65% of the total of the municipalities and, that are financed mainly by means of taxes 48.99% and , 34.83% mostly obtain funding through transfers. (Table 7)

Table 7
municipalities according to their form of financing and CSR

Main funding system	CSR Indicators				Total
	0 Indicators (NO CSR)	1 Indicator (NO CSR)	2 Indicators (Yes CSR)	1 or 2 Indicators	
Others 5+6	1.24%	0.56%	1.86%	1.09%	1.15%
Combined	17.09%	13.18%	17.87%	15.09%	15.88%
Tax	41.47%	55.47%	39.62%	48.99%	46.03%
Transfer	40.20%	30.80%	40.66%	34.83%	36.94%
Total	100.00%	100.00%	100.00%	100.00%	100.00%
N° Municipalities	2.739	2.497	1.724	4.221	6.960
% Municipalities	39.35%	35.88%	24.77%	60.65%	100.00%

Source: The authors 2017

Classification of the municipalities according to their form of financing, CSR and indebtedness

In relation to public-debt spending that comprises the net recognized rights of program 0 (Public Debt) which must include the recognized interests (Chapter 3, Financial expenses) and the amortization of financial debt (Chapter 9, financial liabilities) of the Economic classification of expenditure. It has been found, that half the Spanish municipalities devote 5.62% of the expenditure budget to "public debt" with a per capita expenditure of €63.06 (table 8). The

highest average per capita expenditure, €75.5, is presented by municipalities that are financed via taxes (tax) and represent an average of 7.19% of the expenditure. The municipalities whose form of financing is a combination of taxes and transfers spend €67.84 per capita, with 5.36% of the expenditure. The third place, is occupied by municipalities that are financed via transfers with €46.14 per capita and 3.89% of interest expenditure and debt amortization. The largest per capita expenditure in indebtedness (€128.55) is presented by the category of municipalities with an indicator of CSR and financing via other income (Chapter 5 and 6)³, in percentage terms the highest value corresponds to the municipalities showing 1 indicator of CSR and are financed in a combined way with 9.79% of the expenditure.

Table 8
 Form of financing, CSR and indebtedness

Financiación Class	% of expenditure on public debt/total expenditure				Per capita expenditure on public debt in euros/inhabitant			
	0 Ind	1 Ind	2 Ind	Total	0 Ind	1 Ind	2 Ind	Total
Other 5+6	1.48%	5.66%	0.92%	1.99%	29.66	128.55	19.98	43.10
Combined	2.78%	9.79%	4.53%	5.36%	32.11	106.97	80.34	67.84
Tax	4.48%	9.69%	6.64%	7.19%	44.24	90.57	96.93	75.50
Transfer	3.58%	4.82%	3.37%	3.89%	39.33	48.47	54.26	46.14
Total	3.79%	8.18%	4.82%	5.62%	40.01	79.98	75.19	63.06

Source: The authors 2017

Proposal of a model of regression Logit to explain the CSR

From the study of the previous findings using IBM SPSS statistics 22, a test is made and reveals the majority not normality of the about 170 independent variables. Because of non-normality, non-parametric correlations (Kendall) are calculated and are significantly associated with the CSR dependent variable: Population, taxes, transfers, other income, transfers per capita, Per capita taxes, other per capita income.

With the seven selected variables a multivariable analysis is carried out, applying a logit model, to explain the value of the dependent variable CSR according to these independent variables. With this purpose was used the software GRETL 1.9.91 CVS (GNU Regression, Econometric and Time Series Library)

Model 1 After several trials has proved to be the one that correctly predicts a greater number of cases and has lower value of the criterion of Akaike, so it becomes our proposed model. The model reveals that the seven variables studied (population, taxes, transfers, other income, transfers per capita, taxes per capita and other income per capita), are sufficiently significant and contribute to explain the CSR of the Spanish municipalities, except the absolute value of the transfers received and other income (c5 + c6) both because of their elevated P-value.

³ Chapter 5 of income “patrimonial income” includes the net recognized rights by interest and dividends; Leases, administrative concessions, forestry and agricultural exploitations and equity gains. Chapter 6 “Alienation of Real Investments” comprises the rights recognized net by sale of land, plots and other real investments.

Table 9
Model 1 LOGIT with 7 variables

Model 1: Logit, using the observations 1-6960				
Dependent Variable: CSR - QML standard errors				
	<i>coefficient</i>	<i>std. error</i>	<i>z</i>	<i>p-value</i>
const	-1.98368	0.0885258	-22.4080	<0.00001 ***
Population	-0.000126983	5.68433e-05	-2.2339	0.02549 **
Tax	1.69175e-07	5.11053e-08	3.3103	0.00093 ***
Transfers	8.11902e-08	8.51028e-08	0.9540	0.34007
Other Income	-2.21937e-08	4.50701e-08	-0.4924	0.62242
Transfer per cápita	0.000719239	8.67453e-05	8.2914	<0.00001 ***
Tax Per cápita	0.0004987	0.000122544	4.0696	0.00005 ***
Other Income per cápita	0.000762506	0.000192897	3.9529	0.00008 ***
Mean dependent var.	0.250936	S.D. dependent var.		0.433584
McFadden R-squared	0.083502	Adjusted R-squared		0.081376
Log-likelihood	-3448.495	Akaike criterion		6912.990
Schwarz criterion	6967.444	Hannan-Quinn crit.		6931.798

Source: The authors 2017

Discussion and conclusions

According to the objectives we have raised, in this exploratory study we have found that the budgetary stability, the financial sufficiency of the municipalities and the sustainability of social welfare are closely interrelated. As for our first objective, we have highlighted that the majority of municipalities, 46.02%, obtain fundamentally their income from local taxes (Tax Rate). However, when grouped by autonomous communities there are significant differences between the municipalities of each. In the autonomous communities with a lower "per capita" income level, their income from municipalities comes mostly from transfers or from the state or from the autonomous community to which they belong. At the same time, we have found that, although budgetary stability varies according to the different autonomous communities, as it is a principle established by both the Government of Spain and the institutions of the European Union, only 11% of the Spanish municipalities present deficits and prioritize the reduction of their debt with financial institutions. However, both deficit and surplus municipalities reduce debt to financial institutions and dilate payment to suppliers. As a result, it seems that the form of financing or the origin of the income does not condition the fulfillment of the budgetary stability.

In addition, by cluster analysis combining the factors of; form of financing, budgetary result, net variation of financial liabilities and population we know that the majority of the Spanish population lives in municipalities that are financed via taxes, have surpluses and reduce debt to financial institutions.

At the same time, this exploratory analysis confirms that a characteristic of the budget management model is that it is strongly rooted in a purely legalist tradition and little-oriented of results and efficiency in the management of Services, so that the sustainability of local administrations can be jeopardized. In this sense, expenditure control is a common concern for the various public organizations that offer services and, therefore, the application of the resource to its rightful extent, within the framework of legality, becomes a necessary condition.

With regard to the relation of the budget and the social items, relations have been demonstrated between the system of financing of the municipalities (SFM) and the percentage of expenditure and per capita in the programs of social expenditure selected (EA1 and EA2). That is, from the economic classification of the budget, in the income-related items, we have identified the type

of funding by municipality and autonomous Communities, as well as the expenditure programs where they are applied. In our study we found that 39.35% of municipalities do not have among their priorities social programs, in addition to being the least contributing to reduce their debt, compared to 24.7% of the total municipalities that do comply with social spending programs Proposed and also devote funds to reduce debt.

According to our knowledge, this is the first study in which has been defined CSR indicators from the expenditures obtained from the budget settlements and also categorize the municipalities according to their level of CSR. Consequently, we have discovered to what extent the way to obtain the income the Spanish municipalities, can explain their commitment to the policies of social expenditure and consequently be factors that explain the level of CSR assignable. Specifically, in our study, 48.99% of the Spanish municipalities, which are financed with taxes, meet the two indicators and therefore have a higher level of CSR. However, to the municipalities whose majority source of income is the transfers from the State or the autonomous community, can be attributed a lower level of CSR.

This study, therefore, shows that the origin of the income of the public entities can condition the type of expenditure policies that they carry out, their efficiency and level of CSR. Consequently, the relations between the income and expenditure policies of each municipality have a direct impact on their CSR level. In addition, we have been able to ascertain the relationship between the level of expenditure devoted to the devolution of debt and interest, the level of CSR to meet the two indicators and how to obtain the income. From this relationship between these three factors we can conclude that the municipalities financed with taxes better comply with the indicators of CSR and with the budgetary stability that those that are financed by means of transfers.

In this paper we also note the importance of analyzing the data of the budget settlements because from this and appropriate indicators on social policies and CSR, we can model the behavior of the Spanish municipalities before Certain budget items. For this purpose we have formulated the logit model of probability, which has allowed us to confirm the hypothesis that the CSR of the municipalities can be explained from the size of their population and the way they are financed.

Therefore, it is necessary to develop indicators of public ethics that show us the cost and usefulness of the services and allow their evaluation. Local administrations must evolve into a good government that incorporates the principles of SR (complete transparency, accountability, environmental sustainability, dialogue with its stakeholders and alliances with multiple groups of Interest).

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