On the Political Determinants of Intergovernmental Grants in Decentralized Countries: The Case of Spain

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Abstract

This paper studies the effect of political variables on the gains obtained by Spanish regions in periodical bargaining of the intergovernmental financing agreements and on the regional distribution of discretional earmarked grants over the period 1987-2008. First, we find that the relationship between gains in transferred revenues and on regional public debt stocks depends on the period and the specific issues discussed in the corresponding negotiation, aside from political affinity. Second, we show that the most discretional program of earmarked grants is strongly driven by electoral strategy. National incumbents tend to allocate intergovernmental transfers where there are competitive regional elections. We also show that earmarked grants are allocated in those regions where the incumbent performs better in national elections and, especially, in those where there are more seats to be won. Hence we prove that both strategies are complementary rather than exclusive.

Key words: Intergovernmental grants, party systems, elections, subcentral public debt.

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1. INTRODUCTION

A growing body of literature argues that intergovernmental grants in fiscal federalism tend to be allocated according to political interests (Khemani, 2007: 465). Public agents face significant incentives in order to use public investment strategically. Nevertheless, the disagreement relies on the implemented strategy. A first set of authors have argued that in districted electoral systems, intergovernmental grants will be allocated in those regions in which there are more seats apportioned (Gibson et al., 1999; Porto and Sanguinetti, 2001; Samuels and Snyder, 2001; Rodden, 2002; Hoover and Pecorino, 2005; Pitlik at al., 2006). Other authors have posited that intergovernmental grants will be allocated exclusively depending on the presence of the same party in charge of the subnational unit (Khemani, 2003, 2007). Finally, another strand of literature has focused on electoral races as the central element driving the levels of government investment, whether it is centered on their own strongholds (Cox and McCubbins, 1986) or in breaking a tie in a constituency (Lindbeck and Weibull, 1993; Dixit and Londregan, 1996, 1998; Dahlberg and Johansson, 2002).

Previous studies have been especially focused on the incentives encouraging different strategies. However, there are still important efforts to be made in two analytical vectors. First, political strategies dealing with intergovernmental grants require the interaction of electoral outcomes and institutional context (León-Alfonso, 2007) to be considered together. Second, the subnational level of competition has received less attention in comparison to the national one. The focus has been particularly centered on political affinity among levels of government (Khemani, 2003; 2007) but the role played by regional elections has not been directly addressed. This paper fills that gap.

Spain provides a perfect case study to deal with these challenges. First, it is an evolving federation characterized up to now by periodical bargaining on its fiscal federal framework. The main issue discussed at all times is the amount of total revenues for regions and the criteria to distribute it among those regions. By and large, the main sources of revenues for regional governments are grants (both unconditional and conditional) and tax sharings. Second, Spain is a country with substantial variance in district magnitude across constituencies in national elections (Monroe and Rose, 2002),

so it presents a significant within-country change in incentives for resource allocation. Finally, the case of Spain is puzzling. Despite the theoretical expectations political variables have not been proven especially relevant in some pieces of research (Lago-Peñas, 2005; Gómez-Reino y Herrero, 2011) or, at best, there has been mixed evidence in others (Jarocinska, 2006; León-Alfonso, 2007).

The main contribution of this paper is to integrate the different explanations of intergovernmental transfers in the case of Spain. We focus on two different elements determining resource allocation done by national incumbents: increases of revenues for Autonomous Communities (ACs) or regions as a consequence of periodical bargaining on its financing system, and the most discretional program of earmarked grants: investment agreements made by the central government with subnational entities[1]. In this paper we show that no political variables affect the relative regional gains in the different bargaining process that have taken place. Only in the fourth system regional reform in 2009 was public debt stock positively correlated with the gains in the financing system despite the previous correlation being negative. Hence we show that the mechanism linking debt with higher transfers does not operate automatically and universally.

We also show that in the case of Spain the program of earmarked grants is driven by the electoral interests of the national incumbent, but the preferred strategy is different depending on incentives provided by each level of competition. On the one hand, earmarked grants tend to be allocated in regions where there is a narrow margin of victory in regional elections, back-warding the idea of tactical investment centered on swing regions (Lindbeck and Weibull,1993; Dixit and Londregan, 1996). On the other hand, incumbents tend to devote resources to those regions where they have better results at the national level, especially in those with more seats allocated. Therefore, they follow a "take care of your own" strategy when they focus on the national level (Cox and McCubbins, 1986; León-Alfonso, 2007). Then, both strategies are followed simultaneously by a political center interested in maximizing its chances of reelection in the national arena and securing as many subnational governments as possible.

[1] "Convenios de inversion" in Spanish.

The structure of the paper is as follows. In section 2, the literature on the political use of intergovernmental transfers and public investment is surveyed. The main hypothesis that has been presented by the literature is discussed and connected with the Spanish case. In section 3 we present the variables used, the specifications and the econometric methodology. The next section summarizes the empirical results and discusses their substantive implications. Section 5 concludes the study.

2. LITERATURE REVIEW

A growing body of political economy literature has been centered on how incumbents use intergovernmental transfers for strategic purposes. The central idea of this approach is that political parties and candidates use redistributive policies as an instrument in order to maximize their electoral results, aside from other normative or efficiency considerations. This argument involves two assumptions. First, it assumes that politicians are mainly self-interested rent-seekers and they principally care about (re)-election. Second, it assumes that voters are mainly interested in the private consumption derived from public policies investment.[2] Based on those premises, the literature has investigated the political determinants driving this strategic use of transfers.

The first element that has been addressed is the (un)equal territorial distribution of political representation. According to this argument, Samuels and Snyder (2001) pointed out that policy agenda can be shaped by the level of *malapportionment* in the electoral system. This bias refers to those situations in which there are a mismatch between the share of legislative seats and the shares of population in a given district or region. When *malapportionment* is present, the payoffs in terms of representation are altered depending on the region, so politicians will try to take advantage of it. "In malapportioned systems, executives may thus face powerful incentives to build policy coalitions based on the 'cheap' support (for example, in terms of pork per vote) of legislators from overrepresented districts." (Samuels and Snyder, 2001: 667). Therefore,

[2] It is important to remind that depending on the author it holds under any circumstance (Cox and McCubbins, 1987) or it can be balanced by other elements such as partisan orientation (Dahlberg and Johansson, 2002)

there are good reasons for expecting investment and transfers to over-represented districts.

This hypothesis has been addressed in different studies. Porto and Sanguinetti (2001) analyzed the effect of districts' over-representation in Argentina's Congress in intergovernmental transfers. They showed that the federal government has tended to allocate important and continuing investments in those districts overrepresented in the Senate and the Chamber of Deputies over time. Similar studies have addressed this hypothesis considering the potential impact of the partisanship variable (Gibson et al., 1999) but did not introduce changes concerning the main argument: the assemblies' apportionment determines the strategic use of investment and transfers. Evidence has supported this argument in other contexts. Hoover and Pecorino (2005) analyzed the impact of disproportional representation in federal expenditures in the United States. Rodden (2002) followed a similar logic in the study of EU redistribution among countries and Pitlik at al. (2006) found that *malapportionment* in the upper house in Germany leads to disproportional states share of per capita transfers among *länder*.

However, this explanation fails to point out the mechanisms driving strategic allocation in those countries where the apportionment of the legislature is perfect. Does the incumbent strategic allocation argument no longer hold? The literature has offered two competing theoretical arguments.

The first model is based on the theoretical background presented by Cox and McCubbins (1986). They divide voters into three different groups: support voters, opposition voters and swing voters. According to their conception, electoral politics is viewed as a two person game in which candidates' attitude towards risk is the crucial factor driving the stability of redistributive politics. The authors apply the same logic as in an investment. They argue that risk-averse candidates will prefer to invest resources especially in core supporters because they expect a clear return in terms of electoral support. On the contrary, candidates' expectation of electoral support is lower among swing voters and even lower among opposition groups, so they will allocate little investment in those groups. This strategy is based on the mobilization of the core voters of a party and has been labeled as "Hold what you got" or "Take care of your own" (Cox and McCubbins, 1986: 383).

The second model is based on the papers by Lindbeck and Weibull (1993) and Dixit and Londregan (1996, 1998). It assumes that voters cast their ballots considering their ideological preferences and the consumption level promised by parties. According to that, authors distinguished between core voters, with strongly party attachment, and swing voters, indifferent between the parties on policy positions and more likely to switch their votes on the basis of particularistic benefits. Given the different preferences between the two groups, they suggest that incumbents will invest resources in districts until reaching the specific point in which swing voters decide to vote for them. Under some assumptions about the distribution of voters' preferences[3], this optimal point will be correlated with the closeness of last election (Dahlberg and Johansson, 2002). Then, swing states will be the primary target of strategic resource allocation; in those districts where there is higher competitiveness in an electoral contest, the marginal utility of public investment is also higher. Recent evidence has been centered on Swedish intergovernmental transfer programs to municipalities (Johansson, 2003; Dahlberg and Johansson, 2002) and has proven the robustness of the hypothesis[4].

The study by Boex and Martinez-Vázquez (2005) distinguished several explanatory models in order to establish the institutional mechanism of grant allocation. However, they considered different case studies together and found a high consistency in the role played by political factors driving it. In that which concerns the political allocation of resources, they stressed the voter choice model; the allocation of intergovernmental grants will be distributed to local governments in accordance with the fiscal preferences of the median voter. On the other hand, they also underline the important literature centered on institutional elements, especially regarding the hypothesis that "subnational government with powerful political interests can be expected to receive larger intergovernmental grants" (Boex and Martinez-Vázquez, 2005: 7). In a similar way, Veiga and Pinho (2005) showed that specific local considerations matters. They proved that the longer the time span of the mayor in office, the more funds are transferred to his/her municipality. They also introduce the relevance of political timing, pointing out that grants increase in election years.

[3] The assumption are symmetry and a single-peakedness distribution.

[4] Studies dealing with this hypothesis have been centered on those programs fulfilling some conditions: Intergovernmental grants have to be dependent on the incumbent decision, the investment should be disentangled form efficiency and equity criteria, resources can be easily connected to an election and voters can identify if they have (not) been rewarded. (Dahlberg and Johansson, 2002: 27)

Therefore, interaction between central and subnational has also been pointed out as a crucial variable. Literature has suggested that intergovernmental transfers can be directly related to the incentives that an "opportunistic center" has to guarantee that his party controls the state government. Khemani (2003) studied the case of Indian federalism and she argued that state governments are key bases in order to secure the incumbent party support at the national election; states can use instruments such as patronage in order to boost incumbents´ political support. Consequently "National governments have political incentives to ensure that their party controls state governments, for which purpose it attempts to bias the distribution of national resources to political affiliated states" (Khemani, 2003: 9). This argument has been proven when Khemani shows that states in India belonging to the same party have higher deficits, entirely financed by loans and transfers from the central government. In posterior research about India, Khemani (2007) proved that intergovernmental transfers are targeted to a particular type of partisan states. In specific, she pointed out that "transfers determined by the political agency are greater to those co-partisan states where the party controls a smaller proportion of districts or seats allotted to the state in the national legislature" (Khemani, 2007: 466).

Despite the fact that all these factors may affect strategic resource allocation of national incumbents, little effort has been made in order to integrate them together in the same explanatory model. In order to do so, the Spanish case offers a perfect case study to test the strategic allocation of investments and intergovernmental grants for different reasons. The Spanish Constitution allowed a decentralization of the country which led to the creation of 17 Autonomous Communities (ACs). Due to historical and political reasons, two opposite financing systems emerged. Two ACs (the Basque country and Navarre), collect all taxes in their territories and transfer a part to the central state depending on its service provision. On the contrary, grants (both unconditional and conditional) and, to a lesser extent, tax sharing, have been, by and large, the main source of revenues for the remaining 15 ACs. Then, agreements on those instruments involve periodical renegotiation and opening up the possibility of rent-seeking (Lago-Peñas, 2005: 442).

There is a second reason to use Spain as a case study. A number of papers have been centered on how the electoral system can shape incentives towards public spending, the size of the government or the levels of redistribution (Persson and

Tabellini, 2003; Boex and Martínez-Vazquez, 2005; Iversen and Soskice, 2006). By far, district magnitude has been considered the main element that shapes the electoral revenue that incumbents can obtain when they allocate resources, so the flow of intergovernmental transfers can be affected by those countries in which district magnitude is not a constant across constituencies. This is the case of Spain, a country with important variance in district magnitude across constituencies in national elections (Monroe and Rose, 2002). This within-country difference is relevant to the extent that the marginal utility of intergovernmental transfers is higher in those regions in which a higher number of national seats are allocated when the "take care of their own" strategy is the preferred one. Thus, this hypothesis can only be tested in countries in which there is important variance in district magnitude in the national electoral system like the case of Spain.

Finally, the case of Spain is puzzling and the research dealing with the Autonomous Communities is scarce in general. In Lago-Peñas (2005) this topic is partially addressed in the discussion of regional debt bailout. Some evidence suggests that political affinity helps to explain the size of per capita investment agreements in those regions under the common financing system during the period between 1992-1996 and the relative gains in the financing system in 1991 (not in 1986). Nevertheless, those results should be considered with caution[5]. In the case of investment agreements, Jarocinska (2006) discarded the relevance of political variables on its distribution over the period 1986-1996. However, in the case of direct transfers of the central state managed by the Autonomous Communities, she found that political affinity between regional and national government does not involve more per capita resources. Nevertheless, it affects voters' loyalty because the percentage of "swing voters" is a relevant explanatory factor.

Leon-Alfonso (2007) provides evidence about the relevance of swing voters and partisan affinity. Her main contribution is centered on pointing out how the relative importance of both components changes with the institutional design. The lower the decentralization is, the more important the role played by partisan affinity and the less

[5] In short, the coefficients are statistically significant at a 10% level, the sample discards temporal-series analysis because it uses averages calculated between 1986-1996, and, fundamentally, the political affinity variable is roughly measured. It is considered that an autonomous community has political affinity if, during the period 1986-1996, most of time the party in office has been the same as the national incumbent PSOE.

important the role played by swing voters. Gomez-Reino and Herrero (2011) change the scope and center their interest on explaining the annual evolution of the several grant programs to regions. Despite analyzing different political factors such as the affinity in the party ruling at the two levels, electoral margins, legislative agreements of single-minority governments at the national level with subnational parties or the incumbent electoral support in ACs, none of them proved to be statistically significant. Our contribution is threefold. First, the gains in ordinary and regulated resources in reform moments are analyzed. Second, we estimate more complete specifications including political and economic mechanisms. Third, we encompass arguments dealing with the strategic use of intergovernmental transfers in order to shed new light on the puzzling case of Spain.

3. VARIABLES, DATA, SPECIFICATIONS, AND ECONOMETRIC METHODS

In order to test the systematic influence of the previously mentioned variables on the Autonomous Communities´ resource distribution, we focus on those processes and instruments in which their influence should be strongest. First, we analyze the relative gains involved by periodical bargaining and reforms of the financing of regions, excluding the particular cases of the Basque Country and Navarre. We have set aside the analysis of intra-period variation because granted revenues are mostly driven by exogenous and common cross-region growth rates[6]. Second, we pay attention to the most discretional program of earmarked grants from central administration to regional governments, the so called "investment agreements".

Therefore, two different endogenous variables will be analyzed. First is the gains (*GAIN*) obtained by each one of the 15 Autonomous Communities under the common regional financing system[7] on the bargaining of the successive systems for the periods

[6] All in all, we recognize that over the analyzed period the central government was constantly devolving expenditure powers to the ACs, including health care and education. This devolution takes place within a bilateral commission in which a political negotiation determines the cost of sustaining public services at the pre-devolution level. Then, the central government commits to transfer an amount of resources equal to that cost of maintenance. Of course, within this political negotiation, some regional gains could take place, by overestimating the cost of providing services.

[7] The Basque Country and Navarre have their own financing system, bilaterally negotiated between the central government and each of the regions.

1986-1991, 1992-1996, 2002-2008, and 2009-2013[8]. It is computed as the variation in revenues provided by the regional financing system due to the reform: $GAIN_{it} = \frac{\Delta\, REVENUES_{it}}{REVENUES\ OLD\ SYSTEM_{it}} \cdot 100$, where subindex i= 1,…,15 indicates region and t = 1,…,4 indicates reform. Second, the so-called "investment agreements"; earmarked grants distributed on a project basis (*GRANTS*) to all 17 Spanish Autonomous Communities over the period 1986-2001. As clarified above, these agreements are the grants category that can be more discretionally assigned by the central government. This variable is expressed in Euros per capita.

The explanatory variables considered are the following:

1. The first set of political variables tries to capture the extent to which the national incumbent is centered on "taking care of your own" (Cox and McCubbins, 1986). The variable *NATIONAL ELECTION* measures the vote share obtained by the party in national government in each autonomous community. Despite there being four nationwide parties and different subnational parties in the Congress[9], during the studied period only single party governments have been formed by PSOE (center-left) and PP (center-right) parties at the national level. This variable takes into account national electoral cycle (PSOE until 1996; PP 1996-2004 and PSOE since then). If it is confirmed that national governments allocate more intergovernmental transfers in those communities where they do better, the optimal allocation threshold should be greater in those regions where there are a higher marginal utility, that is, in those where more seats are allocated. Therefore, if national votes prove to be statistically significant, we will test the interaction of vote shares of national incumbents (*NATIONAL ELECTION*) and the percentage of seats of the lower chamber "Congreso de los Diputados" allocated in each Autonomous Community (*DISTRICT MAGNITUDE*).

[8] In the reform for the period 1997-2001 there were no increases in resources transferred to regions.

[9] Spanish party system during almost all studied period have been formed by two-and-a-half national parties (PSOE, PP, IU/PCE) and different subnational parties addressing the representation of national minorities, especially those from Catalonia (CiU) and Basque Country (PNV).

On the other hand, the *REGIONAL ELECTION* variable measures the vote share of the national party in regional elections. For both *NATIONAL ELECTION* and *REGIONAL ELECTION* variables, lagged values are used in order to capture the idea that the national incumbent will reward those districts where it received more votes in previous election[10]. For the both of the same variables the expected coefficient is positive; the national incumbent will allocate more transfers where he has received more votes.

There are no relevant differences between the national and the regional electoral system. On the one hand, the Congress of Deputies is composed of 350 members directly elected for a four-year term of office. The constituency is each one of the 50 provinces with a minimum of two seats allocated. Ceuta and Melilla elect one member. The remaining 248 seats are allocated among the fifty provinces in proportion to their populations. Electors cast a ballot for a single list and the seats in each constituency are apportioned according to the D´Hondt method (Proportional Representation). On the other hand, the size of regional parliaments is proportional to the population of the Community, despite that in 13 of them the district is the province, in Asturias, Murcia and Canary and Balearic Island the constituency is below this territorial level (Lago, 2004). All the autonomous electoral systems have adopted, in tune with the Chamber of Deputies electoral system, the D'Hondt formula. In our analysis, Autonomous Community will be taken as the basic territorial unit.

Third, we introduce in the specification political affinity (*AFFINITY*) between national and subnational incumbents (Khemani, 2003, 2007)[11]. This variable is defined in a different way in specifications [1] and [2] presented below. In specification [1] the variable is coded 1 if there is the same party in national and subnational government when the agreement is signed and 0 otherwise. In the case of investment agreements we adopt more severe criteria. Variable is coded 1 when the same parties are in both governments during both the passing and execution phases of the budgetary process. Additionally, we test if the political

[10] We have introduced the lagged variable in order to avoid endogeneity problems. The central argument is that those districts where the national incumbent gets better electoral results will be rewarded with more intergovernmental transfers in the next period.

[11] In the case of coalition governments at the regional level, we consider that there are political affinities if at least one of its members has the same political colour as the national incumbent.

affinity effect is stronger in electoral years (Veiga and Pinho, 2005).We have defined an *ELECTORAL YEAR* variable, which has value 1 in those years where national elections are held and 0 otherwise[12]. In the econometric specification we include the interaction of political affinity (*AFFINITY*) and electoral year (*ELECTORAL YEAR)* as well as the constitutive terms of the interaction in order to avoid biases in the coefficients (Brambor et al, 2006)[13].

2. The second set of variables is centered on the extent to which national incumbents devote their investment efforts in those regions where there are more swing voters (Lindbeck y Weibull, 1993; Dixit y Londregan, 1996, 1998; Dahlberg y Johansson, 2002). We have measured regions as swing depending on the electoral competitiveness according to Dahlberg and Johansson (2002) and using the raw margin of votes between the first and the second party (*v1-v2*) (Söderlund et al., 2011). The *NATIONAL DISTANCE* (*REGIONAL DISTANCE*) variable measures the vote share difference between first and second party at the national (regional) level in each region. The higher both variables is the less competitive is the election in this region and, as a consequence, lower intergovernmental transfers and gains of financing system is expected.

3. The last set of political variables focuses on the electoral gain of territories receiving transfers. Figure 1 shows the expected strong correlation between population and seats allocated shares. However, this relationship is not exactly proportional. Less populated regions tend to be over-represented in the Parliament. This fact is graphically represented by a regression line with a slope below the unity (0.86). On the one hand, more populated territories are more relevant in order to secure the national incumbent re-election. But on the other, according to the logic of strategic investment in case of *malapportionment*, more per capita resources in small territories should be allocated because the vote/seat ratio tend to increase with population size. Therefore, we have introduced two

[12]We can include both this variable and individual fixed-effect thanks to the existence of asymmetries in electoral cycles in the different Autonomous Communities. On the contrary, we have to set aside those variables in the case of the equation for *GAIN* due to the low between-variation across regions. We also tried to define the variable in alternative ways, coding 1 in pre-electoral years and 0 otherwise; and also coding 1 in both electoral and pre-electoral years, and 0 otherwise. Results did not significantly change

[13] In the case of the interaction between *NATIONAL ELECTION* and *DISTRICT MAGNITUDE*, the latter is not included as independent regressor because its within-variation is close o zero and then multicollinearity with individual fixed-effects was extremely high.

extra variables in the specifications. The variable *POPULATION* is defined as the population share of each autonomous community. Ceuta and Melilla have been excluded because they are outliers in their relation seats/ population. The second variable, *SEATS,* is the ratio between seats and total population (expressed in millions of inhabitants) for each region. Ceuta and Melilla have been excluded again.

4. We also explored the relevance of economic variables to explain both endogenous variables. Preliminary estimates included up to three variables: per capita GDP, unemployment rate, and percentage of population over 65. However, those variables were scarcely significant, with t-statistics below 1. Consequently, they were dropped from econometric specifications.

5. Finally, the debt stock of regional governments (*DEBT*) is included as regressor. This inclusion is justified by the literature on bailouts to regional governments[14]. Its core idea is that subcentral governments expecting to be bailed out from financial problems by the central government will opt to carry larger deficits and hence larger debt stocks. A positive and statistically significant coefficient would mean that there are implicit bailouts to those regional governments with more debt. The variable is expressed in thousands of Euros per capita. We have taken the value at the end of the previous year to the implementation of financing system reforms or investment agreements.

[INSERT FIGURE 1 HERE]

Data sources are the following: Population data have been obtained from the National Statistics Institute of Spain (http://www.ine.es). Data on investment

[14] In Lago-Peñas (2005) this literature on bailouts of regional governments is surveyed. In this paper, the determinants of regional deficits and bailout expectations are also analyzed, using data for Spain over the period 1984-1999.

agreements are taken from BADESPE (http://www.ief.es). Data is available for the period 1986-2001. To measure the regional gains involved by bargaining on the financing system we rely upon the estimates by Utrilla (2002) for the reforms driving the periods 1987-1991, 1992-1996 and 2002-2008 and by Bosch (2011) for the period starting in 2009. Electoral and political data are gathered from the official website of the Home Ministry (http://www.interior.gob.es/) and the several sites from this website devoted to national and regional elections.

Econometric Specifications and methodology

The following three econometric specifications are estimated:

$$GAIN_{it} = \alpha_i + \lambda_t + \beta_1 \cdot NATIONAL\,ELECTION_{it-1} + \beta_2 \cdot AFFINITY_{it} + \beta_3 \cdot REGIONAL\,DISTANCE_{it} + \beta_4 \cdot NATIONAL\ DISTANCE_{it} + \beta_5 \cdot DEBT_{it-1} + \varepsilon_{it} \quad [1]$$

$$\begin{aligned} G_{it} = {} & \alpha_i + \lambda_t + \beta_1 \cdot NATIONAL\,ELECTION_{it-1} + \\ & + \beta_2 \cdot NATIONAL\,ELECTION_{it-1} \cdot DISTRICT\,MAGNITUDE_{it} + \\ & + \beta_3 \cdot REGIONAL\,ELECTION_{it-1} + \beta_4 \cdot AFFINITY_{it} + \beta_5 \cdot ELECTORAL\,YEAR_{it} + \\ & + \beta_6 \cdot ELECTORAL\,YEAR_{it} \cdot AFFINITY_{it} + \beta_7 \cdot REGIONAL\,DISTANCE_{it} + \\ & + \beta_8 \cdot NATIONAL\ DISTANCE_{it} + \beta_9 \cdot DEBT_{it-1} + \varepsilon_{it} \end{aligned} \quad [2]$$

$$Fixed\ Effects_i = \alpha + \gamma_1 \cdot \overline{POPULATION_i} + \gamma_1 \cdot \overline{SEATS_i} + \mu_{it} \quad [3]$$

In all cases, subindex i and t indicate region and year, respectively, and ε is a white-noise random error. As stated above, data for Navarre and the Basque Country are set aside for estimating specification [1]. Moreover, some variables are dropped from this specification due to several reasons related with the short time span of the sample. Insofar as between-variation of *ELECTORAL YEAR* is very low for the four analyzed years, multicollinearity with time-effects was very high. Correlation between *NATIONAL ELECTION* and *REGIONAL ELECTION* was troublesome in this case and the former was excluded.

For the endogenous variable *GAIN,* four cross-sections are merged, yielding 60 observations (15*4). Insofar as both time and cross-section dimensions of the sample

are small, the use of specific panel data or time-series cross-section (TSCS) econometric techniques is discarded. On the contrary, we rely on OLS estimators, replacing standard residuals by general-form heteroskedasticty robust errors. Finally, according to the Breusch-Godfrey autocorrelation test, there are no problems in this respect. All the estimates are performed using the software Eviews 7.2**.** This specification is centered on the impact of political affinity and debt stocks on the gains in negotiations, where short-term electoral considerations are more difficult to be taken into account.

In the case of specification [2] the first step is the analysis of the data generator process of variable investment agreements (*GRANTS)*. Hence several unit root tests were performed. One of the tests assumes the existence of common unit roots (Levin. Lin y Chu). The rest of them assume the existence of idiosyncratic unit roots (Im, Pesaran y Shin, Fisher-PP, Fisher-ADF). In all cases, intercepts and time trends were included to avoid specification biases. The results are straightforward: Variable *GRANTS* is I(0) or stationary, and p-values were well below 0.01. The straight consequence of this result is that the specification is formulated with the variables expressed in levels. In order to deal with both heteroskedasticity and contemporaneous correlations in the random error, OLS standard errors are replaced by Panel Corrected Standard Errors (PCSE). Concerning autocorrelation, the first order coefficient was very low, around 0.2 and hence not troublesome.

Both time and individual fixed-effect are included in the specifications [1] and [2]. While time fixed-effects accounts for common shocks, individual effects control for the existence of systematic biases in the allocation of resources to the different regions[15]. The extremely low within-variation of both *POPULATION* and *SEATS* led to a serious multicollinearity problem with individual fixed-effects. For this reason, instead of including both variables in the original regression, estimated individual fixed effects in column (1) of both Tables 3 and 4 are regressed on both variables in specification [3] to check if they are relevant to explain the systematic differences across regions in the amount of perceived grants.

4. RESULTS

[15]Performed formal tests backed up the need of introducing both sorts of fixed-effects.

Tables 1 and 2 report the main descriptive statistics for the variables in specifications.

[INSERT TABLE 1 AND TABLE 2 HERE]

Table 3 summarizes the estimates of specification [1]. In the first column none of the variables are statistically significant at the standard levels despite variable *DEBT* being marginally significant. In order to analyze in more detail the effect of this variable, it is interacted with a set of four dummy variables (*T1* to *T4*) to check for changes in the effect of this variable over time[16]. The results provide interesting evidence. During the eighties, when debt stocks were low, this variable does not matter at all. This situation changes in the ´90s. The variable is marginally significant. In the next decade the effect is statistically significant at a 10% level or lower. What is most surprising is the change in the coefficient sign between the third and fourth reforms. In terms of Spanish GDP, regional public debt was almost the same at the time of both reforms, but the coefficient is negative in the first case and positive in the second[17]. Why is it that in one period the higher the debt of the autonomous community, the higher the gains received, while in the second period the opposite is true?

[INSERT TABLE 3 HERE]

First, reforms of federal financial relationships are based on multilateral bargaining between the central government and autonomous communities. Nevertheless, the demographic and electoral importance of Catalonia and its strong preference in favor of decentralization made this region the main agent in negotiations.

[16] Variable *T1* is coded 1 for observations corresponding to the first reform (1987) and 0 otherwise. The same procedure is followed for the other three reforms in 1992 (*T2*), 2002 (*T3*) and 2009 (*T4*).
[17] Linear simple correlation between both variables for the reform in 2002 is -0.41

The financial system reforms have depended to a higher extent on the parliamentary majorities in the Congress and the extent to which Catalan nationalist parties were decisive in the support of the national incumbent (Leon-Alfonso, 2008: 218). This factor was important in 2009 negotiations. The national government was a single majority party in parliament and it depended on the support of Catalan parties´ MPs. Therefore, the central government was a much weaker player during this period compared with absolute majority periods[18]. While it is true that the 1996 agreements took place under the same circumstances, regional governments in 2009 were stronger political actors than in 1996, because of the decentralization process itself. The share of regional governments in total public sending in Spain increased from 23% to 36% over this period (Lago-Peñas and Lago-Peñas, 2011).

Second, until 2001 those Autonomous Communities with more debt were the ones with higher levels of decentralization and powers, especially those with higher per capita GDP: the less developed (Galicia and Andalusia) enjoyed higher per capita budgets thanks to grants from both Spanish and European regional policy (Lago-Peñas, 2005 and 2006). The 2001 financing reform was in the middle of an expansive cycle and the problems related with the management of deficits, debt and fiscal consolidation were not a priority. The core of this reform was centered on the transference of health care systems in 10 AC which, as was said, were the ones with lower debt stocks (Ruiz-Huerta and Herrero, 2004). The health care system was, in fact, the main element driving the reform. "Health care financing is one of the main difficulties in the negotiation of the new model (…) This competence will involve important amounts of spending, so Autonomous Communities are demanding that the national government provide guarantees enough that health care administration will not be a total disaster. The central government is in conditions of creating a fund with extra help to cover unplanned spending"[19].

Nevertheless, in 2009 fiscal consolidation, debt and deficits were the key concerns. For example, the regional minister of finances from Catalonia argued that the economic crisis will reduce revenues and will create deficit. Nevertheless: "the [financing] system reform was necessary because it is structural, permanent, a new

[18] PSOE enjoyed absolute majority in Parliament 1982-1993 and Popular Party 2000-2004.
[19] Newspaper "La Vanguardia". Friday, June 1 2001. p.19.

model affecting our income structure. It is a qualitative change. A different thing is the economic crisis. Even with a better model we still have deficits because it happens everywhere, even to better financed states". However the regional minister posited that: "The entry of 2,150 million of Euros in 2009 thanks to the new financing model will allow us to have fewer deficits than what we would have had with the previous one"[20]. The fact that those Autonomous Communities with more debt had lower per capita financing allowed a relative improvement (Bosch, 2011).

Definitively, the mechanism linking debt with higher transfers does not seem to operate automatically and in a universal sense. It depends on the relative importance of subnational entities' debt, the relative power of the central government and regions in debt and the problems or challenges addressed as priorities in each discussion about the allocation of funds.

[INSERT TABLE 4 HERE]

Estimates of specification [2] are reported in columns 1 and 2 of table 4. In column 3 the individual fixed-effects estimated in the first column are regressed again on variables with extremely low within-variation. In column 1 variables with statistical significance lower than 10% are *NATIONAL ELECTION*, *ELECTORAL YEAR*, and *REGIONAL DISTANCE*. Estimated signs are the expected except in the case of the second one. A negative coefficient of *ELECTORAL YEAR* points out that regional elections negatively affect the implementation of agreements, contrary to Veiga and Pinho's (2005) hypothesis. Finally, insofar as the interaction between *AFFINITY* and *ELECTORAL YEAR* is not significant, there is no evidence supporting the idea of special investment efforts in electoral year in those communities with the same parties in national and regional governments.

The variable measuring the electoral distance between the first and the second party at the regional level (*REGIONAL DISTANCE)* gives evidence in favor of the strategic investment of national governments in contested regions. The higher the electoral distance between the principal parties of the regional election (less competitive

[20] Newspaper "La Vanguardia". Sunday, August 9 2009. pp-59-60.

election), the lower the investment in investment agreements is. The electoral result of the incumbent at the regional elections (*REGIONAL ELECTION*) is not statistically significant.

On the contrary, the electoral distance of the two main parties at the national level in a given region (*NATIONAL DISTANCE*) does not affect investment agreements, but the vote share of the party at the national level in the previous election (*NATIONAL ELECTION*) does[21]. Therefore, at the national level the preferred strategy is to "take care of your own". When this variable interacts with district magnitude in the model (*NATIONAL ELECTION * DISTRICT MAGNITUDE*) it presents a positive and statistically significant result (column 2 of Table 4). This means that national incumbents do not "take care of their own" to the same extent in all regions but it is strategically determined by the potential seat gains of each region. The levels of investment will be higher in those regions where the national incumbents have more electoral support in previous election and have more seats at stake.

This evidence points out that hypotheses about the strategic use of investment agreements are complementary; one or the other will be preferred depending on the kind of election. There exist different optimal investment thresholds depending on the electoral contest. In the case of regional elections the optimal level of provision depends on the strategy of maximizing the possibilities of changing a swing region irrespective of the levels of support the national incumbent has. Nevertheless, in national elections the aim is different because the potential threshold of investment is higher. The challenge is not to change swing regions (which do not affect the final result because national constituencies are provinces) but rather to mobilize the national incumbent strongholds as much as possible, especially those regions where more seats are allocated.

The argument of strategic use of intergovernmental transfers is similar to the one by Khemani (2007) when she says that, among co-partisan states, the ones in which it is preferred to invest are those with a lower proportion of seats controlled by the national incumbent. There is a kind of swing state among those owned by the party. However,

[21] Insofar as variables *REGIONAL ELECTION* and *NATIONAL ELECTION* are correlated (r=0.8), this result could be explained by multicollinearity. However, the first variable was not significant when the second one was dropped either. The interaction between *REGIONAL ELECTION* and *DISTRICT MAGNITUDE* was neither significant at 10% level nor lower.

the explanation of our interaction is partially different because in Spain there is an importance variance in district magnitude (Monroe and Rose, 2002). Therefore, the expected utility of investment will vary depending on the number of seats allocated. If a "take care of your own" strategy is assumed, the expected electoral revenue will be higher, relative to the more seats that Autonomous Community has. This explains the positive sign of the interactive effect.

Finally, *POPULATION* and *SEATS* are not statistically significant in column 3 of both Tables 3 and 4. In the case of the second one the explanation can be related to the misadjustment between the Autonomous Communities and the district in national elections, the province. The *SEATS* variable considers the share of MPs per capita of the Autonomous Community. However, marginal seats linked with competitiveness (Blais and Lago, 2009) and *malapportionment* (Samuels and Snyder, 2001) should be calculated at the provincial level. Therefore, it is possible that its insignificant effect is driven by this problem, impossible to be solved with available data[22].

5. CONCLUDING REMARKS

Political officials in evolving federations may be tempted to use intergovernmental transfers and grants with strategic purposes. However, there is still an important lack of understanding on the institutional settings driving that behavior and the preferred tactic. In this paper we have addressed two different policies related with territorial resource allocation from the center: the gains of the Spanish regions or Autonomous Communities in the periodical negotiations of their financing system and the most discretional earmarked grants made by the central government to regional governments. This paper tests whether political variables related with electoral contests and their interaction are relevant in explaining their relative assignment across territories. We have shown that gains in the system of financing are unrelated to strategic use. The main factor driving those gains is regional public debt stocks. All in

[22] It can be argued that the share of seats by Autonomous Community can distort the results if there are important differences in district magnitude within regions. All in all, the only region where internal variation is really relevant is Catalonia (standard deviation of 12.8 seats compared with the mean of 1.86). Econometric results did not change when Catalonia was dropped to estimate specification [3].

all the sign and magnitude of its effect depends on more factors, in particular the specific issues discussed in the inter-territorial negotiation.

However, the situation is quite different in the case of intergovernmental transfers. Our argument is that two crucial elements will drive the preferred strategy in terms of their allocation: the arena of competition and the expected marginal gain. In regional contests, the national incumbents tend to allocate intergovernmental transfers in order to break a tie in elections and gain the subnational government. Nevertheless, the strategy is different in the case of national elections. In this case, the incumbent will prefer to distribute more money in those regions where it performs better in order to mobilize their voters, especially in those regions in which there are more seats to be won. Then, both strategies are followed simultaneously by a center interested in maximizing its chances in national elections and securing as many subnational governments as possible.

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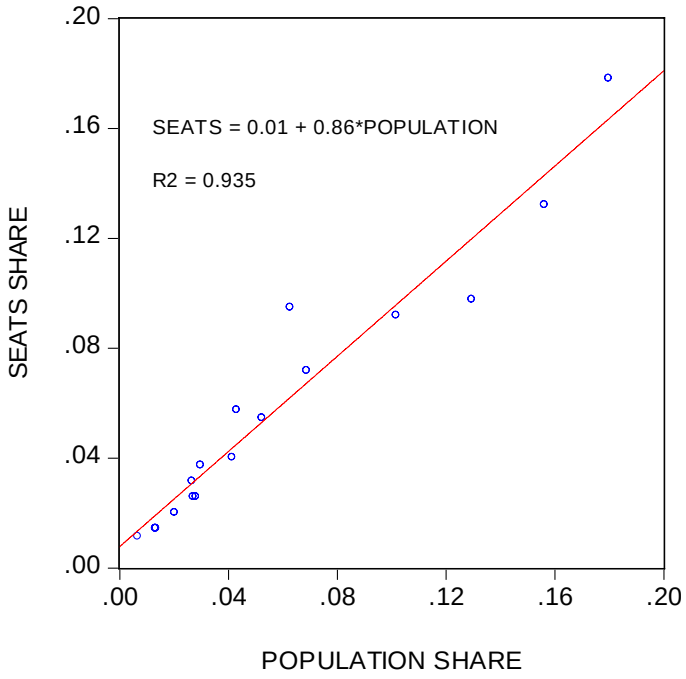
Figure 1: Relationship between population and seats shares.
Aggregated data for regions in 1996



Sources: INE (www.ine.es), Ministerio del Interior (http://www.infoelectoral.mir.es/min/) and own elaboration.

Table 1: Descriptive statistics of variables in Equation [1]. Stacked data

	Mean	Median	Maximum	Minimum	Standard Deviation	Observations	Number of cross sections
GAIN	7.27	6.40	32.10	0.80	5.33	60	15
NATIONAL ELECTION	44.89	44.05	60.70	22.80	7.78	60	15
AFFINITY	0.62	1.00	1.00	0.00	0.49	60	15
DEBT	0.53	0.40	2.43	0.00	0.55	60	15
REGIONAL DISTANCE	13.34	13.32	29.79	0.15	7.06	60	15
NATIONAL DISTANCE	12.72	10.75	34.40	0.20	8.92	60	15
POPULATION	0.06	0.04	0.18	0.0066	0.053	60	15
SEATS	9.10	8.80	13.31	5.75	1.87	60	15

Table 2: Descriptive statistics of variables in equation [2]. Stacked data

	Mean	Median	Maximum	Minimum	Standard Deviation	Number of Observations	Number of cross sections
GAIN	14.24	10.16	131.85	0.006	14.86	272	17
NATIONAL ELECTION	41.39	40.80	58.10	18.00	8.93	272	17
REGIONAL ELECTION	38.44	39.46	54.28	9.51	10.11	272	17
AFFINITY	0.51	1.00	1.00	0.00	0.50	272	17
ELECTORAL YEAR	0.26	0.00	1.00	0.00	0.44	272	17
*ELECTORAL YEAR * AFFINITY*	0.099	0.00	1.00	0.00	0.30	272	17
REGIONAL DISTANCE	12.45	12.01	32.73	0.150	7.574	272	17
NATIONAL DISTANCE	10.60	9.20	34.40	0.20	8.11	272	17
DEBT	0.39	0.33	1.62	0.000	0.37	272	17
POPULATION	0.058	0.040	0.18	0.006	0.049	272	17
SEATS	9.58	9.15	15.38	6.32	2.08	272	17

Table 3: Econometric estimates of equation [1] and [3]

Equation	**[1]**	**[1]**	**[3]**
Intercept	3.03 (0.40)	5.87 (3.87)	3.20 (0.92)
NATIONAL ELECTION$_{-1}$	0.00 (0.00)		
AFFINITY	0.28 (0.15)		
REGIONAL DISTANCE	0.18 (0.85)		
NATIONAL DISTANCE	-0.04 (0.22)		
DEBT$_{-1}$	4.01 (1.55)		
*DEBT$_{-1}$ *T1*		12.48 (0.33)	
*DEBT$_{-1}$ *T2*		10.80 (1.43)	
*DEBT$_{-1}$ *T3*		**-4.09*** **(1.68)**	
*DEBT$_{-1}$ *T4*		**5.29**** **(2.16)**	
POPULATION			-20.28 (1.55)
SEATS			-0.21 (0.66)
Number of observations	60	60	15
F-Statistic (p-value)			0.34
R^2	0.511	0.557	0.166

Notes: Estimates in column 1 and 2 include both individual and time fixed-effects. Computed t-statistics in columns [1] and [2] are robust to general form heteroskedasticity. *, ** means statistical significance at 10%, 5% level.

Table 4: Econometric estimates of equations [2] and [3]

Equation	**[2]**	**[2]**	**[3]**
Intercept	9.29 (1.52)	**16.9**** **(2.23)**	-8.05 (0.88)
NATIONAL ELECTION$_{-1}$	**0.40*** **(1.94)**	-0.10 (0.31)	
*NATIONAL ELECTION$_{-1}$*DISTRICT MAGNITUDE*		**0.05**** **(2.24)**	
REGIONAL ELECTION$_{-1}$	-0.18 (1.14)	-0.20 (1.27)	
AFFINITY	3.08 (1.06)	3.76 (1.25)	
ELECTORAL YEAR	**-3.58*** **(1.84)**	**-3.18*** **(1.63)**	
ELECTORAL YEAR AFFINITY*	1.26 (0.35)	0.59 (0.16)	
REGIONAL DISTANCE	**-0.29**** **(2.24)**	**-0.27**** **(2.09)**	
NATIONAL DISTANCE	-0.08 (0.58)	-0.10 (0.32)	
DEBT$_{-1}$	-0.002 (0.39)	-0.001 (0.22)	
POPULATION			9.450 (0.28)
SEATS			0.8 (0.95)
Number of observations	272 (17*16)	272 (17*16)	17
R^2	0.476	0.484	0.06

Notes: Estimates in columns 1 and 2 include both time and individual fixed-effects and rely on PCSE proposed by Beck and Katz (1995) to compute t-statistics. *, **, *** means statistical sighnificance at 10%, 5% y 1% levels, respectively.