# FISCAL IMBALANCES IN ASYMMETRIC FEDERAL REGIMES. THE CASE OF SPAIN.

Guillem López-Casasnovas

Joan Rosselló-Villalonga

January, 2014

*CRES-UPF Working Paper #201401-77*

**Fiscal Imbalances in Asymmetric Federal Regimes. The Case of Spain**

Guillem López-Casasnovas (UPF) and Joan Rosselló-Villalonga (UIB)

## Abstract

The dispute over the manner of computing fiscal imbalances is not a technical one. Different methods serve different purposes and, at least in Spain, these purposes are political rather than simply economic. They differ basically in the consideration that territorial jurisdictions may merit much more than simply being seen as a pure geographical aggregation of individual net fiscal residuals. However, even for those authors who limit those imbalances as the result of personal redistributive fiscal flows, our paper shows that this does not seem to happen in Spain. Indeed, on the expenditure side, we do not observe a systemic pattern for the regional flows that properly matches personal income differences. Regions with similar income levels receive clearly discretional resources from the central government in any of the two main approaches being considered. This is the case not just for the monetary flow method, but also for the tax benefit incidence approach, despite the way in which this spills over the externalities of what are assumed to be 'public goods'. In order to test whether this bias is political, purely random, or the result of a structural agglomeration or scale economies effect, we call for more data analysis. We need a panel data approach to the composition of the observed imbalances for a robust estimation of those factors. Transparency in this sense is the best solution for the argument, as well as being the best strategy for refocusing the fiscal territorial debate in Spain.

*Key words: Fiscal imbalances, tax-benefit incidence analysis, Spanish territorial transfers, regional cash multipliers.*

## I Introduction

A federal union is the result of an agreement. This allows creating a new political entity, either as the outcome of a positive sum game (as a result of the federation, the independent parts secure a win-win agreement), or as a way to avoid a negative one (all the parts of the union lose with the breakdown). Without a sense of mutual gain, a political (and fiscal) federal setting then becomes very unlikely. Indeed, Spain did not have the actual full set of 'provincial' entities existing before the union, as in the case of the Canadian Federation, at least over the past three centuries, to share the view of a commonwealth. Yet some historical communities may be tempted to secede given the observed low cost benefit analysis they experience by remaining in the Union (the Spanish Constitution). In this sense, a new Federal Pact can be Pareto superior with regard to alternative scenarios.

At any rate, and in general terms, the relationship between a single State and the Federation needs some checks and balances on the degree of accomplishment of the agreement. For this purpose, the monitoring of fiscal flows plays an important role for guaranteeing the soundness of the union. It helps, moreover, the necessary coordination in the geography of an inter-jurisdictional public finance. Tax revenue and the allocation of expenses are part of this calculation, particularly when fiscal powers are explicitly shared and expenditure benefits are decentralized.

The residuals arising from the territorial allocation of tax revenues and expenditure benefits acquire a different relevancy according to the controversies being associated to the loyalty manifested in the development of the pact. This is the Spanish paradox: on the grounds of fiscal federalism a pseudo union has been created by the Spanish Constitution (1978). Yet taking this pact seriously, the instruments of its day-to-day operation seem to prove that the agreement is not a federal one, but the result of a single fiscal central power from which discretional financial flows result. The strength of the political controversy depends on how homogeneous the sense of being part of the State is with respect to being part of the Union. This is reflected in the way in which net residuals from public funds may be interpreted: how big the difference is between the spending capability (Federal and State) and the revenue shared with the State as regards that of the State without that sharing. Given that these flows stem from the individual surplus and deficits between taxes paid and benefits received, this ultimately determines the nature of the cluster that accepts internal flows within the State and questions external, vertically imposed leveling transfers. Given this situation, the interpretation nonetheless looses political strength if fiscal residuals are computed in a unitary single State, under an exclusive fiscal sovereignty, as the result of discretional transfers without ex-ante entitlements on the expenses and tax revenues awarded to each part.

In general, however, in most countries under democratic regimes all the constitutive parts are interested in obtaining as much information as they can on those aspects related to interregional fiscal relations in order to justify their demands and actions. This is the case because very often there is a problem of asymmetric information, as although the Federal Government has access to these data, it is not the case for State or Regional Governments. In this environment, the lack of information may foster inter-jurisdictional conflicts and fiscal (de)illusion among their citizens (see Bird, R. and R. Ebel 2005).

We should mention here that we are not arguing that asymmetric federalism (or decentralization) is positive or negative per se. It will depend on whether the result of a decision made by the Central Government in consensus with the Regional Governments based on efficiency or equity arguments is better than a decision imposed by the Central or Federal Government.

Our aim in this paper is to address the positive effects that an increase in the transparency on interregional fiscal flows may have on intergovernmental relationships in the long run, and offer some clues on the current debate in Spain. We seek to analyze such effects in a country like Spain, which is rather asymmetric in terms of the 'clusters' (jurisdictions) it incorporates. Moreover, Spain forms a territorial jurisdiction characterized by the lack of real federal-type institutions (e.g., the absence of a chamber of territorial representation) in which Regional Governments may take part in the law-making process. Rules are enacted by the Central Government, which have an impact on citizens, even on those powers that were formally devolved to the regions.

In the next section, we analyze the process of decentralization in Spain, with special emphasis on the asymmetries that can be observed from a fiscal perspective. In section 3, we will refer to the Central Government's aversion to publish fiscal flows in Spain.

Section 4 analyzes the different approaches that can be implemented in the analysis of fiscal flows in Spain, and we present the results from several hypotheses tested. Finally, in section 5, we present our conclusions.

## II. The Spanish process of asymmetric decentralization.

### *II.1 A brief outline of the Spanish process of asymmetric decentralization*

The jurisdictional units that were established in the Spanish Constitution were not based either on historical factors or on efficiency arguments. They were created on a political basis exclusively. This explains the existence of the Autonomous Communities of Madrid and Murcia, for example, with no consideration at all for a minimum consensus among their population on the need to create them.

Under those premises, the process of devolution of powers over public services distinguished three groups of regions: 1) "Foral"[1] Territorial regions (FRs), 2) Historic Regions (HRs), 3) Other regions. There were significant differences across regions in the three groups. In short, the main difference between regions in group 1 and 2 with respect to those in group 3 was that FRs and HRs received most of the powers, including Health and Education, early in the nineteen-eighties, while those in group 3) received powers over Education and Health later on in 1998 and 2001, respectively. Still today, some regions wield specific powers over Justice, Security and Penitentiaries, while others do not.

The main difference between FRs and the other two groups of regions involves the mechanism according to which they obtain their fiscal resources. FRs collect all the tax revenues in the region (including those of the Central Government (CG)), and hold full responsibility for all expenditure, while for the 'ordinary' regions, the basic source is the transfer made by the CG according to certain pre-established parameters. The estimation of revenues associated to the devolution of any power over public expenditure was, and still is, based on the actual cost of the provision by the CG of that service in that region two years before the devolution took place. Given that the territorial allocation of public services (education, health, justice, etc.) was already rather diverse by that time, this procedure did not correct such differences, but rather perpetuated them instead. Additionally, this methodology might have motivated a strategic behavior by the CG that consisted in reducing investment and public expenditure on those powers that were expected to be devolved over the next few years[2]. A further problem facing this methodology involved asymmetries of

[1] A "Foral" region is one with its own historical charter or rights governing laws and taxation dating back hundreds of years, and in Spain's case this applies to the three Basque provinces of Alava, Bizkaia and Gipuzkoa, and Navarre, which form the Basque Autonomous Community and the Foral Community of Navarre, respectively

[2] We find a recent example in the process of devolution of Justice. This power has been transferred to most regions. However, by 2009, a few of them cancelled the devolution process. Since then, the Central Government has stopped any new investment in the courts, although in 2008 the CG announced major investments in this field over a five-year period.

information, because only the CG controlled all the information on the costs of providing those public services that were to be devolved.[3]

In addition to the former pitfalls, there is also asymmetry concerning the possibilities of Regional versus Central governments for implementing their own tax policy. It is obvious that regional taxes should not overlap federal taxes. However, the CG has traditionally opposed the creation of new taxes by the Regional Governments (RGs), even when these new taxes did not overlap Central taxes and RGs had the normative capacity to create them. In addition to that, the response of the CG has been rather different depending on which regions intended to levy some of those taxes. As an example of this, while some regions could tax bank deposits, some others could not, and even today no one knows for certain the prescriptive basis for such a decision.

The fact that most of the CG's public agencies are located in Madrid also provides a rather different picture to what we observe in Canada or Germany, where public agencies are distributed across the territory, based mostly on efficiency and equity arguments. Opponents to the territorial dispersion of public agencies argue that the allocation of those agencies should not be a reason of concern because they provide pure public goods, and all citizens receive the same benefits from their activities no matter where they are located. However, this centripetal process clearly distorts the territorial distribution of taxation (especially on personal income taxes and on consumption taxes). Additionally, the arguments in favor of centralizing public agencies clearly contradict the demands of the Spanish Government for some EU public agencies to be allocated in Spain.

[3] The most interesting example of such asymmetries is the process of devolution of healthcare management responsibilities. This was forced by the CG through an amendment to the legislation governing the procedure for transferring resources to RGs since 2002. The devolution was approved in December 2001 and began to be implemented in January 2002. RGs did not have the opportunity to check the estimation made by the CG of the costs of the provision to be transferred to them. The result of such asymmetry was that RGs claim to have received resources that were insufficient to fund the devolved power.

**Table 1. Tax revenue of Central Government by Territorial Tax Units**

| Region | Total Revenues pc (VAT, Consumption Taxes, Income Tax, Business Tax, Custom Tax) | | GDP pc Average = 100 |
|---|---|---|---|
| | 2012 | Average = 100 | 2012 |
| ANDALUSIA | 1 197 | 34 | 76 |
| ARAGON | 2 488 | 72 | 115 |
| ASTURIAS | 2 103 | 61 | 95 |
| BALEARIC ISLANDS | 2 244 | 65 | 110 |
| CANARY ISLANDS | 989 | 28 | 88 |
| CANTABRIA | 4 149 | 119 | 100 |
| CASTILLA-LA MANCHA | 1 196 | 34 | 80 |
| CASTILLA Y LEÓN | 1 280 | 37 | 100 |
| CATALONIA | 4 389 | 126 | 123 |
| EXTREMADURA | 862 | 25 | 69 |
| GALICIA | 2 049 | 59 | 93 |
| MADRID | 12 179 | 351 | 132 |
| MURCIA | 1 149 | 33 | 83 |
| NAVARRE | -397 | -11 | 131 |
| BASQUE COUNTRY | 1 673 | 48 | 139 |
| LA RIOJA | 1 997 | 57 | 115 |
| VALENCIA | 1 972 | 57 | 90 |
| **Total** | 3 473 | 100 | 100 |

Source: data from *Agencia Tributaria. Boletín Mensual*. Data from January-December 2012.

It should be noted, moreover, that the allocation of public infrastructures has traditionally been quite unbalanced. This argument can easily be observed in real life when we analyze the allocation of public investment on airports, railways and highways (see Bel 2010). Yet the observation could also be made concerning public hospitals, schools, etc. before the process of decentralization started in the nineteen-eighties. In fact, de la Fuente (2004) suggests that the allocation of public investment has not followed efficiency arguments, maintaining that this allocation has been ‘excessively redistributive’.

| **Table 2. Central Government Investment in the Autonomous Communities in 2012** | | | | |
|---|---|---|---|---|
| | **Total (thousands euros)** | **%** | **GDP (%)** | **Population (%)** |
| ANDALUSIA | 1,669,271 | 17% | 13% | 18% |
| ARAGON | 367,704 | 4% | 3% | 3% |
| ASTURIAS | 286,224 | 3% | 2% | 2% |
| BALEARIC ISLANDS | 72,596 | 1% | 3% | 2% |
| CANARY ISLANDS | 250,752 | 3% | 4% | 4% |
| CANTABRIA | 195,469 | 2% | 1% | 1% |
| CASTILLA-LA MANCHA | 486,134 | 5% | 3% | 5% |
| CASTILLA Y LEÓN | 1,386,846 | 14% | 5% | 5% |
| CATALONIA | 936,632 | 10% | 19% | 16% |
| EXTREMADURA | 346,732 | 4% | 2% | 2% |
| GALICIA | 1,339,664 | 14% | 5% | 6% |
| MADRID | 896,872 | 9% | 18% | 14% |
| MURCIA | 300,493 | 3% | 3% | 3% |
| NAVARRE | 49,272 | 1% | 2% | 1% |
| BASQUE COUNTRY | 313,246 | 3% | 6% | 5% |
| LA RIOJA | 91,607 | 1% | 1% | 1% |
| VALENCIA | 599,056 | 6% | 10% | 11% |
| Total Autonomous Communities | 9,588,571 | 100% | | |
| Non-territorial | 2,311,942 | 19% | | |
| Total Central Government | 11,900,513 | | | |
| (*) Investments in Ceuta and Melilla are not included. | | | | |

Last but not least, the distribution of deficit targets across regions is linearly set among regions. The asymmetry occurs because the economic position of each region is rather different. While some regions -those that receive more resources per capita from central transfers- can reach those targets without reducing expenditure, other regions –with a larger share of resources coming from their tax revenues- must introduce significant budget cuts. What is surprising is the fact that some of the regions that have to introduce larger budget cuts are those that have higher fiscal capacity and contribute the most to vertical and horizontal regional transfers, given the way in which the mechanism that allocates resources among regions operates.

Having said that, the main source of asymmetry is the system that determines *who gets what* in terms of revenues. In Spain, the CG allocates to RGs a percentage of the tax revenues collected (or estimated) in their territories: VAT, Personal Income and Consumption Taxes. However, there is a powerful horizontal mechanism of equalization aimed to ensure that all the regions have the same resources per capita in order to cover the costs of similar (average) levels of provision. This affects those considered to be the essential services (education, health and social services) of the welfare state. Given that horizontal equalization accounts for 70% of total revenues, this initial distribution of resources should allow, in principle, maintaining certain differences in revenue-raising capacities (regions with a larger tax base would receive higher amounts of resources). However, a second mechanism distorts this initial distribution by determining that all regions would be entitled to at least what they received in the past (this condition has been implemented in each one of the mechanism's five reforms). It actually means that those regions that were "over-financed" when powers were devolved will continue in this position, and that some regions that should significantly improve their funding according to the model do not do so as much as they should. This result is due to the fact that the theoretical necessities of the regions are somehow linked to the estimated cost of devolution. Third, there are other Vertical Equalization Funds that are designed to provide additional resources for those regions with 'particular' characteristics. Overall, as can be seen in the following table, the final allocation of resources has no systemic relationship either in terms of any sort of needs assessment of the regions or regarding their fiscal capacity or income level.

**Table 3. Regional fiscal resources per capita (average = 100) in 2012**

| | Tax Revenue | | Total Resources | |
|---|---|---|---|---|
| | **Index** | **Ranking** | **Index** | **Ranking** |
| Madrid | 134.2 | 1 | 95.4 | 11 |
| Balearic Islands | 121.7 | 2 | 100.8 | 9 |
| Catalonia | 119.1 | 3 | 99.4 | 10 |
| Aragon | 114.6 | 4 | 116.3 | 3 |
| Cantabria | 114.4 | 5 | 124.4 | 1 |
| Asturias | 106.6 | 6 | 112.6 | 6 |
| La Rioja | 103.2 | 7 | 120.7 | 2 |
| Castilla-León | 101.5 | 8 | 116.3 | 4 |
| Valencia | 93.7 | 9 | 93.6 | 13 |
| Galicia | 91.2 | 10 | 110.9 | 7 |
| Castilla-la Mancha | 85.4 | 11 | 103.4 | 8 |
| Murcia | 83.5 | 12 | 93.1 | 14 |
| Andalusia | 79.9 | 13 | 93.9 | 12 |
| Extremadura | 76.2 | 14 | 114.5 | 5 |
| Canary Islands | 42.2 | 15 | 88.3 | 15 |
| Total | 100 | | 100 | |
| Coeff. of Variation | 0.2517 | | 0.1108 | |

Source: Regional Government, the Generalitat, of Catalonia

The effect of such Vertical and Horizontal Equalization Funds can be observed in Table 3. The Coefficient of Variation of the initial territorial distribution of tax revenues doubles that of the final allocation of fiscal resources across regions, once the Equalization Funds have been implemented. More important is the fact that Equalization Funds introduce a significant change in the relative position of each region. Surprisingly, some regions with the highest tax revenues (well above the average) obtain total fiscal resources that are well beloww the average. As a result, some inter-jurisdictional conflict emerges without effective mechanisms for resolution.

### *II.1 Mechanisms of coordination and solution of inter-jurisdictional conflicts*[4]

Jurisdictional conflicts in Spain have different sources. First, although the Spanish political system is based on a bicameral structure, and formally there is a Senate in which regions are represented, the lawmaking process is biased towards the Congress, which leads and controls this process. In addition, the separation of powers between the Executive and the Legislative is almost non-existent, because legislation is always initiated by the Executive power (which is elected by the majority in Congress). This therefore means that the CG can enact legislation that affects the RGs without their consensus (i.e., the CG approves certain rules and regulations that increase regional public expenditure without providing additional fiscal resources to pay for them). This occurs because although sweeping powers have been devolved, the CG retains the possibility to decide on some aspects of the provision of those publicly provided goods (e.g., minimum services that should be provided in all regions, decisions on the wages and salaries of public servants, etc).

Second, if RGs consider that a regulation introduced by the CG[5] causes an inter-jurisdictional conflict (and vice-versa), there is a Constitutional Court with the responsibility to rule on whether or not laws that are challenged are in fact unconstitutional. The problem with this court is that all its members are elected by Parliament, whereby one may interpret their decisions as potentially being biased. In fact, the CG has occasionally challenged RG bills, and the court has adjudged them to be unconstitutional. This has been the case of the CG against certain RGs over their new Regional Constitutions (their Autonomous Community Statutes, referred to in Spanish as *Estatutos de Autonomía*), while this has not been the case with regard to identical rules passed by other RGs, which means that one region may implement such legislation while others cannot.

Finally, the lack of federal-type institutions in which Central and Regional Governments could resolve inter-jurisdictional conflicts is not compensated by the existence of adequate mechanisms of inter-jurisdictional cooperation or/and coordination. There are sectoral conferences, some of which deal exclusively with fiscal matters, in which there are no real multilateral bargaining processes, as they are designed as an instrument for validating the initiatives of the CG. This is based on the fact that the CG holds the majority in these conferences. At the most, the political bargaining process might be bilateral –with some regions- and in most cases it would simply be validated multilaterally ex-post by majority voting.

## III Transparency on fiscal flows. Why are fiscal imbalances questioned in Spain?

The dispute over fiscal imbalances arises from the dissatisfaction with the financial flows associated with the Spanish decentralization process. This has to do not only with the autonomous financing system itself, but also with what is felt by some RGs regarding the discretional exercise of centrally managed powers; the former is said to involve a strong redistribution bias; the latter, a lack of commitment by the financing policies which may affect the regional development.

[4] See Rosselló (2000).
[5] The same occurs when a RG perceives that the CG makes decisions on matters that correspond to them.

Overall, Spanish RGs demand a symmetric treatment in order to neutralize revenue differences due to fiscal co-responsibility, and an asymmetric one when they can benefit from some specific recognition that they attribute to their singularity (due to historic, linguistic or equity arguments).

Within this framework, we argue that the lack of information on fiscal flows helps to increase inter-jurisdictional conflicts. Very often, these conflicts are based on opportunistic arguments rather than on real data. Information on fiscal flows would allow shedding some light on the veracity of such arguments. The next section reflects this concern in the reality of the Spanish debate.

As we have seen, the Spanish Constitution (SC) of 1978 stated in its VIII Chapter ´the State of the Autonomies', that the Kingdom is not a Federation, nor a uniform Union: it is a single State, but with decentralized expenditure powers. At the beginning, Chapter VIII seeks to accommodate the reality of the historic nations (mainly the Basque and Catalan territories) under an asymmetric regime with greater devolution (section 151 of the SC), at least temporarily.

On the other hand, most of the Autonomous Communities (section 143) were recognized for administrative purposes, initially without much political focus on self-governance. Some of them were even a sort of artifice to complete the jigsaw puzzle with all the territories (some provinces even formed a community in which they did not share historic or economic links), together with the two 'North African' cities of Ceuta and Melilla. Size, history and culture did not inform a homogeneous division.

However, these administrative jurisdictions have gained political power in what has been called 'the most advanced fiscal federalism in Europe'. According to some views, this has served the main purpose of diluting over time those initial differences and blocking the devolution process with the argument that it made no sense to transfer to some RGs what could not be extended to all the autonomous communities (lack of technical capabilities in terms of self-management, scale diseconomies, etc), and has even led today to the recentralization of some of those powers in pursuit of the social cohesion of CG policies.

Since revenues were kept in central hands, with relatively low fiscal co-responsibility, it has been relatively easy for the CG to reduce those transfers to finance certain expenses, and even condition grants and financial liquidity to follow certain uniform policies. Due to the loss of coordination and the sense of economic and financial mayhem caused by the deficits of certain RGs, a part of public opinion -mostly in those regions that never sought self-government in the first place- have fostered political support in favor of recentralizing certain powers. This has not involved the claims of the two historic nations of Spain (the Basques and Catalans), for whom Federalism was thought initially to be a win-win process, and in a sense with the feeling that the new situation did not mean there much to lose with secession.

Fiscal imbalances for Catalonia (and for the RGs of the Mediterranean arc, too), plus the mirror of the FRs' privileges (almost two-thirds of potential increase in per capita finance, as we shall see) has pushed some Catalan citizens to call for political independence. The net fiscal residual constructed on the basis 'as if' revenues were allocated according to Catalonia's own fiscal capability, and no longer depending on arbitrary central transfers, has been a powerful tool for attacking what has been considered as discriminatory finance. The federal agreement has therefore lost its main constitutional purpose of reunifying the Spanish State.

This obviously leads the study of territorial imbalances towards a complex political arena in which the academic analyst does not have a comparative advantage in judging intentions, other than being accurate about the methodologies for serving any political purpose. In our view, this has to be taken as a given fact if the purpose stems from the democratic parliament, legitimately capturing the political strength of citizens as being part of the 'cluster'.

According therefore to the purpose of the fiscal imbalance study, it is clear that two[6] methodologies can be put in place. One has to do with the ultimate tax and benefit incidence in identifying the individuals' net fiscal residuals under any particular grouping. Another different methodology would calculate the territorial allocation of revenue and expenditure flows from the CG to RGs that may result from alternative political scenarios (new fiscal agreement, a "Foral" type of regime, secession and others). Nevertheless, both offer information on coordination and transparency for the fiscal accountability of governments.

### *III.1 Other relevant aspects and references to the Catalan case*

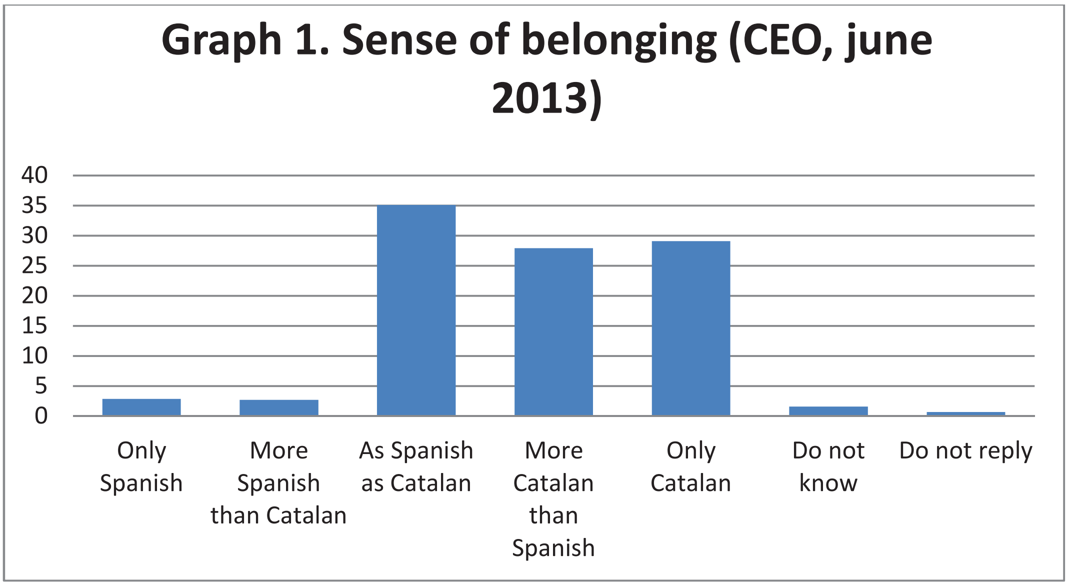
In order to understand the matter in hand (i.e., the financial relations between the Central Administration of the Spanish State and the Autonomous Communities), we first need to explore the answer to a series of key questions in the politico-constitutional arena. Specifically, we need to clarify the nature of the tax and spending powers of the two fiscal jurisdictions before conducting any economic analysis of the fiscal imbalance.

The first question for which the SC fails to provide a clear answer refers to the entitlement of those fiscal powers that allow allocating revenues (and expenses) on a RG basis. In other words, to whom do the taxes paid by citizens 'belong'? Solely to the State (CG) or partially too, '*ab initio*', to the institutions that on a sub-central level also represent the citizens in the territory? Despite the fact that the initial ambiguity of the SC was a tool for swift democratic consensus on territorial cohesion after Franco's authoritarian regime, which led some scholars to see in Chapter VIII of the SC the grounds of a Federal Union, today it is interpreted by the Constitutional Court in day-to-day operational practices as single-state sovereignty.

The second question concerns whether a RG in a territory is something more than the sum of the individuals of which it is composed. In this sense, beyond 'individual fiscal balances' (or tax-benefits residua), can we speak of territorial fiscal balances? Is a RG a political subject for agreeing a 'federal' pact with the CG? Thirdly, we need to question whether there is a 'cluster' (with a homogeneous sense of the parts pertaining to it) in order to claim transparency in fiscal relations between inter RGs and extra RGs versus CG financial flows, or do several clusters exist at the same time? Are, for example, Catalan citizens actually only Spanish citizens that 'happen to live' in a Catalan municipality, or do they share a priority political identification with the Catalan community of individuals at large?

[6] In Ruggeri (2009), we find a third alternative, the "economic gain" approach. However, we do not know of any empirical study that has followed this approach.

In our view, at least as concerns Catalonia, there is enough political evidence for it to be considered a political entity (the representation in the Catalan parliament of the parties advocating for this is over four-fifths of the MPs in 2013). This parliament has called, both in the past and in the present, for transparency in the fiscal relations with the Central Spanish Administration, given the belief that the taxes paid and the benefits due to Catalan citizens belong at least partly to the representative Catalan Government. In this sense, sociological surveys on the political ‘sense of being part of the cluster' are extremely clear in that respect. In the next graph we can indeed see that Catalan citizens first consider themselves to be Catalan, and only a few see themselves as simply Spanish citizens.




The *Centre d’Estudis d’Opinió* (CEO) also holds regular polls studying the political opinion of Catalan citizens. The following table contains the answers to the question "Which kind of political entity should Catalonia be with respect to Spain?”. As can be seen, almost half of the population favors an independent state, and only one fourth of the population seems to support the current state of affairs.

In addition, there is a growing feeling of 'exclusiveness' in the sense that the number of citizens who feel they are 'just Catalans': being 'only Catalan' and 'more Catalan than Spanish' in June 2013 was ten times the number who considered themselves Spanish.

| Table 4. CEO Poll: Which kind of political entity should Catalonia be with respect to Spain? | | | | | | |
|---|---|---|---|---|---|---|
| **Date** | **Independent state (%)** | **Federal state (%)** | **Autonomous community (%)** | **Region (%)** | **Do not know (%)** | **Do not reply (%)** |
| June 2005 | 13,6 | 31,3 | 40,8 | 7 | 6,2 | 1,1 |
| July 2007 | 16,9 | 34 | 37,3 | 5,5 | 5,4 | 1 |
| July 2009 | 19 | 32,2 | 36,8 | 6,2 | 4,2 | 1,6 |
| December 2009 | 21,6 | 29,9 | 36,9 | 5,9 | 4,1 | 1,6 |
| 2011 1st series | 24,5 | 31,9 | 33,2 | 5,6 | 3,5 | 1,3 |
| 2011 2nd series | 25,5 | 33 | 31,8 | 5,6 | 3,4 | 0,8 |
| 2011 3rd series | 28,2 | 30,4 | 30,3 | 5,7 | 3,9 | 1,5 |
| 2012 1st series | 29 | 30,8 | 27,8 | 5,2 | 5,4 | 1,8 |
| 2012 2nd series | 34 | 28,7 | 25,4 | 5,7 | 5 | 1,3 |
| 2012 3rd series | 44,3 | 25,5 | 19,1 | 4 | 4,9 | 2,2 |
| 2013 1st series | 46,4 | 22,4 | 20,7 | 4,4 | 4,9 | 1,2 |
| 2013 2nd series | 47 | 21,2 | 22,8 | 4,6 | 3,5 | 0,9 |
| Source= CEO (several years) | | | | | | |

How all this fits into the Spanish constitutional, economic and financial setting is another matter. The 1978 SC, as it is currently understood, permits an interpretation of the multijurisdictional entitlement of rights to taxation. Taking advantage of this ambiguity, and based on the theory of fiscal decentralization, it is possible to take as given the recognition of more than one fiscal relationship between the citizens and their representative administration, either in a central or local jurisdiction: citizens pay taxes, but they do so in more than one jurisdiction, central and regional, that has a parliament, with political powers and the corresponding tax revenues. Revenues of RGs are not a pure transfer of central funds; resources may be considered to be allocated 'ab initio', as the result of the constitutional agreement, and may be not open to negotiation or released on a discretional basis by the CG.

### *III.2 The Catalan fiscal imbalance as a reflection of the absence of normative redistributive criteria*

As there is no unanimity in the answers to the questions posed in the previous section, there has been no agreement on the need to estimate fiscal flows in Spain or on the reason for doing so. Moreover, for some authors fiscal balances are no more than the aggregation of individual fiscal residua on a territorial basis, following the tax-benefit incidence principle, without any entitlements for revenue allocation that might prevail over it. This position, nonetheless, disregards the institutional nature of the Autonomous Communities by considering them no more than just an 'umbrella' that groups individuals together.

In the Catalan case, however, the call for the full transparency of the fiscal flows between the Spanish CG and the *Generalitat* of Catalonia has a history dating back almost one hundred years. It investigates fiscal imbalances as a way of identifying how many resources are recovered from Catalan taxpayers' contributions. This allows us to compare the spending capacity of the *Generalitat* of Catalonia, and how much it might have if it had direct access to the fiscal bases of Catalan citizens under a common tax bill. As commented, we believe that the way the Autonomous Communities finance themselves is the main reason to focus on those imbalances, despite the fact that this regional financial arrangement is just part of the problem. Inbox 1 captures some of the reasons for these claims.

---

***INBOX 1: Catalonia and Spain's fiscal relationship according to some ex-ante principles***

The aim of this insert is to address the controversy surrounding fiscal balances regarding a set of principles that ought to shape, according to our view, the regional redistribution activities of the central state. From these benchmarked criteria, one may obtain a better idea of the nature of interregional solidarity funds. With this in mind, in *Anàlisi dels fluxos redistributius territorials a l'Estat Espanyol* (an Analysis of Regional Redistributive Flows in the Spanish State, see Lopez-Casasnovas and J. Pons 2005) we have identified thirteen principles that might be followed. Here is a summary of the principles:

*Principle 1*
*In keeping with the goal of redistributive transfers, it appears logical to limit the funds to concrete areas of spending, linked to those factors that generate the consequences they are meant to correct, alongside a selective application (not linked to unconditional global financing).*

*Principle 2*
*It appears reasonable that in the differential between the primary incomes generated by Autonomous Communities and the final available income (this difference being an approximation of the general contribution to collective consumption), all Autonomous Communities need to participate in a prearranged minimum per capita amount.*

*Principle 3*
*As a result of changes in taxes and grants as part of the fiscal leveling process, it should not be possible to generate a change in the ranking position, with respect to the real disposable per capita income of an Autonomous Community that is a net supplier of funds. In such a situation a protection clause should come into effect to correct the transfer.*

*Principle 4*
*Redistribution needs to concentrate on bringing the level of spending capacity of the different Autonomous Communities closer to their fiscal effort, rather than independently leveling while disregarding their financial capacity.*

*Principle 5*
*The redistribution funds need to be established and allocated in a conditional spending procedure. The continuity of benefits of fiscal surpluses needs to be linked to the evaluation of their effectiveness.*

*Principle 6*
*A clause that allows for the revision of the deficit balance of an Autonomous Community should be used if its income per capita falls below some predetermined benchmark (e.g., European regional average growth).*

*Principle 7*
*No Autonomous Community should keep a positive fiscal balance if its primary income is, from the outset, above the Spanish average.*

*Principle 8*
*The relative variation in the income of any Autonomous Community should be reflected in the opposing direction to changes in its fiscal balance.*

*Principle 9*
*The continuity of a positive fiscal balance needs to be accompanied by an improvement in the indicators of the internal personal distribution of the income of which the region is a beneficiary.*

*Principle 10*
*Under normal circumstances, no regional fiscal balance should surpass the difference in the relative participation in terms of income and its relative participation in terms of the population (as upper and lower limits).*

*Principle 11*
*It makes sense to estimate the financial requirements of an Autonomous Community more closely linked to the difference between those observed and those predicted levels of expenditure from a needs determination formula, rather than simply by a comparison of their own levels with average state levels.*

*Principle 12*
*Since redistributive funds have a role in balancing the fiscal needs and capacities of different regions, both aspects should be reflected in their fiscal balances.*

*Principle 13*
*As individual solidarity is embedded in the progressivity of the income tax schedule, differences between the regional share of GDP over total GDP and the participation of the region in total collected income tax revenue should set the limit to the redistribution process.*

In G. Lopez and J. Pons (2005), we calculated the amount of transfers for each Autonomous Community following those principles, and we compared them with the existing arrangements in Spain. It is worth noting that, at present, the redistribution system implemented by the Spanish State Administration upholds only one (number six) of the above principles.

---

### *III.3 Fiscal imbalances and the financing system of the Autonomous Communities*

There are three main pitfalls to the regional financing system in Spain, and they lie behind the political controversies that fiscal imbalances create in the opinion polls.

(i) The distorted 'mirror' of the “Foral” Regime. As Zubiri (2013) points out, a complete fiscal autonomy is possible within the Spanish Constitution, as proven by the case of the three Basque Provinces and Navarre. Their fiscal powers are shaped by the agreements with the Provincial Governments (*Diputaciones*) pursuant to the Harmonization Act, 1989 passed in the eighties under the auspices of the same political parties at regional and provincial level. The legal content (*'el fuero'* - the charter or rights) has allowed for a fiscal economic privilege (*'el huevo'* - the egg, the content).

This has resulted from the way that the 'contribution' from the Basque Autonomous Community to the CG has been defined as a compensation for those services still managed by the CG on behalf of the former. Indeed this privilege has involved some negative, rather than positive, contributions; despite the fact the Basque provinces are some of the wealthier areas in Spain. This surprising situation is due to the way in which the CG has estimated the costs of those 'common services': initially they were grossly overestimated in order to achieve a higher contribution according to the Basque share in the Spanish GDP. However, at the same time, this allowed reducing that amount whenever new powers have been devolved to the Basques. It is important to remark that the coefficients for the territorial allocation of revenues to compensate for those expenses were consistent with the parameters typically used for the cash-benefit methodology of fiscal imbalances.

The actual costs of the central services still managed in the Basque Autonomous Community by the CG before the decentralization were not considered, as they were for all the other Autonomous Communities. The accepted share, for the financial contribution first and then later for keeping the region’s own tax revenues, was based on the 1980 GDP share of the Basque Autonomous Community with respect to the Spanish GDP. It did not follow, for example, the differential above-average per capita income, as a proxy for the general regime contribution to leveling national services. Out of this, only for the so-called Inter-territorial Compensation Fund (less than 1.4% of the total non-transferred expenses) do we observe a proportional contribution to GDP (6.24%).

"Foral" Communities do not contribute to *The Fund to Guarantee* the finance of *'Fundamental Public Services'*[7].

In addition, Zubiri (2013) shows that VAT territorial compensation mechanisms for differences between revenue collection and taxes paid is far from what can be considered the benchmark; that is, the difference between the value added bases - production and consumption shares[8]. As the Basque Autonomous Community is rich, with more imports than exports, it is unlikely to be the case (Zubiri, op. cit.). With regard to special consumption taxes, we again observe favorable adjustments to the Basque Government for alcohol, beer and tobacco (only petrol taxes take the opposite sign).

A non-transparent final adjustment for the so-called 'financing compensations' leaves the Basque Government with a negative (!) contribution (around 280 million euros). This situation permits an extra per capita finance for the Basque Autonomous Community and Navarre that is 40 to 60% higher than under the common regime (page 213 in Zubiri 2013). In similar terms, Monasterio (2010) and Monasterio (2013) have referred to other aspects of those privileges.

This provides a distorted mirror against the common system applied to Catalonia which has been kept in place regardless of the party in power or in opposition and despite the fact the regime has been criticized as fiscally extremely unjust.

Finally, it should be noted that the different focus on allocating revenues and expenses quite closely replicates the benefits-tax cash flow methodology for calculating fiscal imbalances, being far removed from that for computing the tax benefit incidence. We observe here nothing more than a payment for what the CG spends in the Basque territory, and in now estimating expenditure needs according to certain central standards.

(ii) The way in which redistribution and solidarity have been understood in the general financing system of the RGs, lacking a clear and transparent regime, has created multiple problems. As applies in fiscal federalism, if the financial capability to afford fundamental services across jurisdictions is the same despite the fact that the financial contributions have not been the same, redistribution is already implicit in the system. There has been a trend in a rather distorted way for contending that central transfers should not provide equal but rather lower resources per capita for those major contributing communities. This has left some RGs with a lower per capita finance capacity despite the fact responsibilities for the public provision of the services are universal (in the sense of population rather than income-based). The wealthier Autonomous Communities in Spain have therefore a number of additional handicaps for pursuing progress, and are under greater pressure to make expenditure cuts or are permanently installed in deficit imbalances and debt.

Moreover, redistribution should guarantee the leveling of some of the fundamental services of the welfare state, and not in terms of whatever RG expenditure is incurred. Certainly, out of the horizontal leveling among different communities, the CG may

[7] This is how the Horizontal Equalization Fund is referred to in the new system for financing the Autonomous Communities (2009)

[8] Figures are for share of income (6.24), consumption (6.75) and foreign markets (5.7)

transfer, 'vertically', from their own shared revenues any extra finance for regional development, as the European Union does. But it is not clear that horizontal transfers should eliminate income inequality -rather than finance capability- differences, with this being more a question of regional development and support for private activities rather than subsidizing public employment. At any rate, these questions of income redistribution should not involve the ordinary compensation mechanisms for the financial sufficiency of decentralized powers (Vilalta 2013), and they should be closely monitored, holding the beneficiaries fiscally accountable for the way expenses address the causes of inequality.

As a result of the former interpretation of 'solidarity' flows, and contrary to what some politicians from the beneficiary regions argue, 'the actual system creates very unequal and arbitrary transfers among the Spanish regions' (de la Fuente 2013(a) page 41). Instead of having a vertical leveling fund with no 'footing' in the status quo, 'the system plays with an infinite number of small funds and sub-funds that evolve in a rather random unexplainable way' (de la Fuente 2013) and without adjusting for differences in the purchasing power parities of those transfers, in itself a source of inequity as advocated by López-Casasnovas and Padró (2000). 'The system as it works at present does not make sense, it is very complex, it focuses on a particular redistributive equilibrium without a coherent pattern of equity (de la Fuente 2013(a) page 150) and with the so-called 'Sufficiency Fund', which has guaranteed the previous status quo from the initial transfer (in favor of abolishing it, see de la Fuente 2013 (a) and Vilalta 2013, page 149). The regional financing system is described by those authors as a sort of zombie that uses fiscal imbalances as the main argument for evading reality.

The Autonomous Communities with higher fiscal deficits have been protesting against those imbalances as a kind of escape valve for their financial situation, despite the fact that the Autonomous Financing System is just a part of the fiscal deficits. The aim to correct the so-called ‘drainage’ has been seen as the solution in a sort of horizontal zero sum game. The regional finance regime, however, is complemented by the net flows from the CG’s direct actions (basically territorial investments) and less discretional Social Security ones (under the proportional, pay-as-you-go regime).

Nevertheless, the persistence of the situation has been qualified by Pérez and Cucarella (2013, page 101) as ‘unstable and inequitable’ and having 'promoted a continuous political bargaining instead of favoring sound budgetary programming for a long-term horizon, with sequential deficits and debts with increasing financial costs’. For these reasons, the above-mentioned authors remark that 'the new fiscal adjustments stated in relative terms against what is believed to be very high regional indebtedness is not supported empirically, as it is the assumption that supporting the consequences of these debts is going to be better supported by the central state given what is believed to be a higher elasticity of its fiscal bases from a potential economic recovery (Pérez and Cucarella, 2013, page 83). For those regions, in order to find an explanation for the relative punishment of the regional debt, we need to look at certain other factors, as the way in which the autonomous financing system operates. The caveats that the process generates force some RGs to focus on the territorial allocation of tax revenues. Although the production and consumption index for VAT is not always well-defined and updated with regard to the actual rather than the legal size of the regional population (see Rotellar 2013 page 108), this computation has created a sense of 'derived fiscal power', This goes against the view of some analysts who would have preferred a solution that did not raise the view of a new territorial entitlement, by integrating those tax revenues in the so-called Guarantee Fund (de la Fuente 2013 (a), footnote 7, page 48).

This section has covered most of the arguments behind the claim for rebalancing fiscal imbalances or calling for the end of the fiscal agreement. In the next section, we explore 'how' these imbalances are estimated in the literature.

## IV Fiscal flows: pros and cons and methodological issues

As opposed to the Canadian and US[9] tradition of transparency with regard to the information on fiscal flows, such data are rather scarce in Spain. There are several sources of information, but they are mostly incomplete. On the one hand, the State Budget contains partial information on the territorial distribution of public investment by the CG. This information excludes transfers to regions for financing public investment –or public expenditure- that is overseen by RGs in accordance with the CG. On the other hand, the budget contains incomplete information on transfers received by RGs aimed at financing their provision of public services in period *t*. This information is rather partial, but it is complemented by the CG in period *t+2,* when it provides detailed data on the final territorial distribution of fiscal resources.

By accepting a demand made by Catalonia, in 2007 the Spanish Parliament mandated the calculation for the whole of Spain of those regional fiscal balances. This occurred after several experts reached an agreement on the methodology to be implemented (*Instituto de Estudios Fiscales*, 2008). However, this information was provided for the years 2001-05, and has not been updated.

Critics to publishing fiscal flows, and in particular fiscal balances, use three different arguments: first, the estimation of fiscal flows is subject to conceptual problems and critical gaps in the database. The study of fiscal flows requires more detailed data than usually exist. This means that many assumptions are needed concerning the regional incidence of federal taxes and expenditures. As a result, there is significant subjectivity in the estimates, being open to manipulation for political purposes. Secondly, fiscal flows are of little use or relevance in determining good policy. Even when fiscal flows have been estimated using the best methodologies, they do not provide information concerning the factors that explain the results. Finally, regions do not pay taxes, individuals do. Therefore, the aggregation of people in territorial units has little to do with the factors determining the allocation of most flows. The argument is that the distribution of fiscal flows reflects the distribution of income across individuals.

On the other hand, it can be argued that one may derive several positive outcomes from the availability of data on fiscal flows: information on fiscal flows is essential in order to evaluate the results of equalization transfers, both from a vertical and from a horizontal perspective; to monitor the outcome of those policies implemented by the federal government that are designed to foster economic convergence (within and between regions) and to scrutinize the results of stabilization policies that are settled

[9] Statistics Canada's Provincial Economic Accounts and the US Bureau of the Census provide data on the allocation of federal expenditure (and investment) across the Provinces and States, respectively.

based on a risk-sharing approach. Finally, transparency on fiscal flows helps to improve the mechanism of coordination and cooperation between the federal government and the states, as well as among the states themselves. Accountability and fiscal co-responsibility are two of the main principles of fiscal federalism, and they cannot be achieved without adequate information on fiscal flows. Fiscal flows should thus be the instrument for policy-makers to understand the results of their initiatives. Therefore, the availability of data on fiscal flows is essential for democracy because they allow for a better control of policy-makers' decisions. The positive effect of fiscal flow transparency on democracy occurs both in federal regimes and in decentralized economies without federal structures, even in unitary countries (such as France).

As commented, fiscal balances are based on fiscal flow data. However, depending on the particular methodology we use to estimate them, we will obtain a result that may go beyond the concept of fiscal flows. If this follows a revenue-expenses 'cash flow' approach, net fiscal flows will indicate the difference between what residents actually contribute to the federal government (based on federal taxes collected in that region) and what they receive from the federal government, based on where federal transfers and public expenditure are located. The difference between this residual and what it would be if the RG acceded to its full financial capability is then straightforward.

However, if fiscal flows are analyzed under the 'tax-benefit incidence' approach, what we obtain is the aggregate individuals' welfare impact on the regional allocation of public expenditure and transfers, net of federal taxes collected (or estimated) in that region. This approach is somehow an extension of the fiscal incidence approach.

Given that there are two methodologies, a simple question arises. Which one is better, which one is more accurate? The tax-benefit approach is seemingly more complete because it estimates the welfare impact of federal policies on the territory. However, due to the lack of data, this approach requires adopting many hypotheses on tax and expenditure incidence that weaken the proposal. In particular, there is a shortage of studies available to researchers in Spain for applying those calculations from different assumptions on the tax and expenditure incidence (for instance, tax-income elasticities at regional level, estimates of static and dynamic impacts of public investment, cross-border externalities of public expenditure, tax exports, pure public goods, general equilibrium effects, etc). In addition to this, the purpose of the estimation of fiscal balances may vary according to some other political requirements.

### *IV.1 Two methods for two goals and the corresponding empirical approaches*

From this perspective, the study of fiscal jurisdictional relations allows for two different methods according to the political mandate they serve. There is not in this sense a methodological dispute, but rather there are different aims and objectives behind the precise manner in which fiscal balances are calculated. Broadly speaking, these are: (i) the method that looks at the redistributive effect of the fiscal relations on a personal equity basis, and (ii) the method that focuses on the impact of state action on the regions as a whole.

Again, each one of the two methods has to do with the answer to the question we put forward before: 'to whom does the money paid by citizens in any particular region belong?' In this sense, for the CG to accept the existence of fiscal balances, a requirement is the acceptance that citizens, who always pay taxes, do so to the CG and RG in an equal manner. As a consequence, fiscal balances imply the acceptance '*ab initio'* that more than just one fiscal jurisdiction is entitled to tax revenues. Therefore, central and regional jurisdictions, each of them in an autonomous manner, can make their own decisions in terms of financing and disposable resources as a part of the federal pact.

Among the above-mentioned methods, we will identify the *tax/benefit (expenditure) incidence* (from now on TBI) as the method based on the tax-benefit incidence principle, with MFI being the one based on *the monetary flow impact*. In addition, some variants exist, particularly in the TBI approach, given the complexity of the hypotheses they need to address. The need for multiple assumptions and estimation parameters for TBI calculations has been seen as the main difficulty in publishing official estimates. This has even called into question the legitimacy of the results of the fiscal balance in itself in order to deny any purpose other than the aggregation of the individuals' net fiscal residuals. This is a fallacy, since the MFI, and not the TBI approach, has been the most common claim for fiscal balances, at least in the Catalan case. Finally however, with a sufficiently large academic consensus, it has been possible to consider that both methodological approaches are legitimate, always keeping in mind that both methods, as commented, respond to different purposes.

The TBI has a long academic tradition, as it is linked to a study of the personal redistribution effects of the public budget in terms of the effect of the net tax burden on individual welfare. This approach does not indeed require a multi-jurisdictional context, as it is common to fiscal federalism. The widening of the tax/benefit focus to beyond the individual realm is certainly possible, both on a functional and/or a territorial level, but it is based on a common premise: a sole jurisdiction and a unique fiscal relationship between the administration (the CG) and its citizens. Within this framework, the territory in which individuals are located is essentially the result of a statistical artifact, and it does not have any relevant political role to play.

On the other hand, from a cash flow impact analysis (MFI), the basic estimation between two fiscal jurisdictions is carried out in terms of resources that add and drain the fiscal action of the central jurisdiction (CG) over the peripheral one (RGs), either directly or through the macro effects induced by the spending and finance flows, both in the autonomous regions and locally. The hypothesis of the internalization of flows between these last two areas of financing and expenditure is a common feature of this approach, except for those budgetary items relating to in-and-out transfers. The consideration of the regional aggregate, macroeconomic impact on the combined activity and collective well-being of the group prevails in the analysis, well above the simple sum of individual residuals of the contributors and beneficiaries that form part of it. This last impact of the monetary focus is similar in its methodology to that applied by *Eurostat* to European fiscal flows: tax revenues are attributed to territories in which the units that contribute to economic activity are located, and to spending impacts where resources are used, consumed or invested. Besides this, if compensations or leveling-out transfers are needed, they should result from a retrospective adjustment based on a constitutional bilateral agreement.

In similar terms, the monetary focus allows calculating the balance as the difference between (i) the actual volume of resources spent according to the decision-making capacity of the jurisdiction in the territory and (ii) its tax revenues 'as if' that jurisdiction had full control over its own fiscal base. This attempts to account, on the expenditure side, for the differential benefits that available resources allow for the community, directly creating employment or affecting contributions, intermediary consumption and so on, and/or indirectly through transfers of the decision-making capacity over these resources to the autonomous institutions that represent their citizens. On the financial side, revenue raising capacity is calculated in a similar way to the per equation of fiscal capacities in traditional fiscal federalism, or as in the "Foral" agreements (for the Basque Provinces in Spain), by the so-called, for instance, 'points of connection'. In other words, this view allows evaluating how much spending capacity is 'recovered' from the centrally levied taxes on the region, with respect to its own potential fiscal capacities. The result of the monetary focus perspective on the fiscal balance therefore shows the difference between the potential resources arising from the RGs' own fiscal capacity and the spending effectively available, and how this different capability may affect the regional macroeconomic situation (and ultimately in this sense, impacting on the welfare of citizens).

The TBI, according to the principle of the personal incidence of the ultimate charge/benefit effects supported by the taxpayer, grounds the analysis on the welfare impacts resulting from the fiscal residua and the derived excess burden. It aims, therefore, to build a more sophisticated exercise, although when applied to a geographical setting –as in fiscal federalism - it may lack empirical robustness. This is due to the fact that in any aggregation the distribution, and not just average weights, should matter in TBI. In fact, the concept of average (regional) taxpayer in the TBI approach needs to be accompanied by its distribution ('who benefits at the expense of whom'). Welfare incidence is more than fiscal residua: the excess burden of taxes (the hidden cost of public funds) and monetary and in-kind services need to be taken into account in a different way. This usually proves to be rather difficult on a regional basis.

Moreover, a general equilibrium approach is required for a full tax-benefit incidence exercise. A set of assumptions on the way markets work needs to be hypothesized, too. As the Public Finance Theory reminds us that in order to uncover the ultimate effect of a tax-benefit incidence (or a rebate tax expenditure, usually ignored in TBI), the basis of the calculations may diverge requiring an empirical knowledge of the particular situation in which the budgetary effects operate in order to set the right imputation parameters: for example, from a partial equilibrium point of view in a single sector, or from a global one; under the scheme of differential or a balanced budget effect; given a timescale (short/medium term), or for the complete life-cycle, and according to the degree of openness of the economy in which the analysis is conducted. This adds to the details on the cycle the economy is in, labor market characteristics, stock exchange conditions, etc. Other factors may be important, too; for instance, to be precise about the market conditions under which the economy operates (competitive markets, oligopolies, monopsonic power, and so on), trade union pressure (e.g., for the hypothesis of a backward incidence or not), under what technological restrictions of factorial substitution they act (which is to say, the elasticity in consumption and substitution factors, as per Harberger), and so on.

There are indeed many uncertainties in the application of a complete TBI approach to fiscal balances. These are some of the reasons:

(i) The lack of empirical data in the particular setting being analyzed.
(ii) The use of 'surrogated' theories not based on economic analysis, but rather on the momentary availability of data.
(iii) Not updating the empirical results to be adopted.
(iv) Taking results from studies dealing mainly with other country experiences, and therefore specific conditions (types of taxes and benefits) and distinct idiosyncrasies (of responses to incentives) that may not correspond to the actual exercise.
(v) Completely different time and place situations (say a particular state in the USA, in the sixties, with taxes with a different configuration to ours, etc.)

To summarize, we have seen that the charge/benefit approach does not require the existence of a territorial jurisdiction with its own tax department, since it focuses on a more personal allocative focus, whoever is in charge of the distribution. Secondly, TBI has greater academic aims, but it is more empirically demanding. Plenty of biases and uncertainties may appear by following this approach when applied to fiscal federal balances (based on average 'territorial' profiles rather than individual fiscal welfare residua). On the other hand, from a monetary perspective, MFI is academically less ambitious, but much simpler to apply: how much revenue a jurisdiction might have 'as if' it had direct access, under a common tax bill, to its own fiscal capacities, and how many resources it has as a result of CG transfers. It certainly serves a different objective than the MFI (macroeconomic impact of territorial flows, and only indirectly individual welfare from the public action), and so the estimated results differ in the way in which TBI and MFI should be interpreted.

In brief, at least in the Catalan case, the *inter-jurisdictional* MFI methodology is undoubtedly more adequate for the purpose of the transparency of fiscal balances. TBI may also be applied thereafter *intra-jurisdictionally*. Moreover, inter-jurisdictional 'average individual' applications of TBI, as a surrogate of tax-payers' welfare residua on a territorial basis, do not match federal fiscal imbalances that are today on the political agenda. In this sense, to use the difficulties of the TBI approach to deny the estimation of MFI imbalances is in our view wrong.

The data in Table 5 indicate that the two estimation procedures do indeed have a different impact on the size of fiscal flows. In particular, we observe that the cost-benefit analysis significantly reduces the size of fiscal balances (imbalances). However, the group of regions with a positive (or negative) fiscal balance does not change significantly depending on the empirical methodology. Madrid, Catalonia, Balearic Islands and Valencia present unbalanced fiscal flows regardless of the methodology. The same occurs with Extremadura, Asturias, Canary Islands, Castilla-León, Castilla-la-Mancha, Cantabria, Andalusia and Galicia, which present positive fiscal balances.

| Table 5. Fiscal Balances, alternative methodologies. 2005 | | | | | |
|---|---|---|---|---|---|
| Monetary Flow analysis Fiscal Balance pc (euros) | | | Tax-Benefit incidence Fiscal Balance pc (euros) | | |
| | 2005 | Rank | | 2005 | Rank |
| BALEARIC ISLANDS | -3,246 | 1 | MADRID | - 2,381 | 1 |
| CATALONIA | -2,117 | 2 | BALEARIC ISLANDS | - 1,955 | 2 |
| MADRID | -1,494 | 3 | CATALONIA | - 1,587 | 3 |
| VALENCIA | -1,188 | 4 | VALENCIA | - 680 | 4 |
| NAVARRE | -823 | 5 | NAVARRE | - 392 | 5 |
| BASQUE COUNTRY | -357 | 7 | LA RIOJA | - 330 | 6 |
| MURCIA | -374 | 6 | ARAGÓN | - 209 | 7 |
| LA RIOJA | 145 | 10 | MURCIA | 27 | 10 |
| CANARY ISLANDS | 300 | 9 | BASQUE COUNTRY | 53 | 9 |
| ARAGÓN | 402 | 8 | CANTABRIA | 548 | 7 |
| CASTILLA-LA MANCHA | 582 | 7 | ANDALUSIA | 491 | 8 |
| ANDALUSIA | 730 | 6 | CASTILLA Y LEÓN | 862 | 6 |
| CANTABRIA | 1,015 | 5 | GALICIA | 1,081 | 4 |
| GALICIA | 1,378 | 4 | CASTILLA-LA MANCHA | 981 | 5 |
| CASTILLA Y LEÓN | 1,470 | 3 | CANARY ISLANDS | 1,118 | 3 |
| ASTURIAS | 2,582 | 1 | ASTURIAS | 1,839 | 2 |
| EXTREMADURA | 2,486 | 2 | EXTREMADURA | 2,098 | 1 |
| Source: IEF (2008) | | | | | |

Therefore, the discussion on the methodology would affect the position of a region in the ranking of the group of regions with positive or negative fiscal balances, but it would not mean (with some exceptions) that one region would move from one group to the other.

## V Data Analysis

Although there are many contributions regarding the methodological aspects of fiscal balances, the availability of data restricts any kind of attempt to build empirical evidence on the sign and robustness.

In this section, we will analyze the data available, which come from two different sources. On the one hand, we have data on fiscal balances for all the Autonomous Communities for 2005. As mentioned in the previous pages, this information was released by the Central Government in 2008. Since then, no other studies have been conducted by official agencies. Therefore, all we can do is attempt to find relationships based on the cross-sectional analysis of both TBI and MFI methodologies.

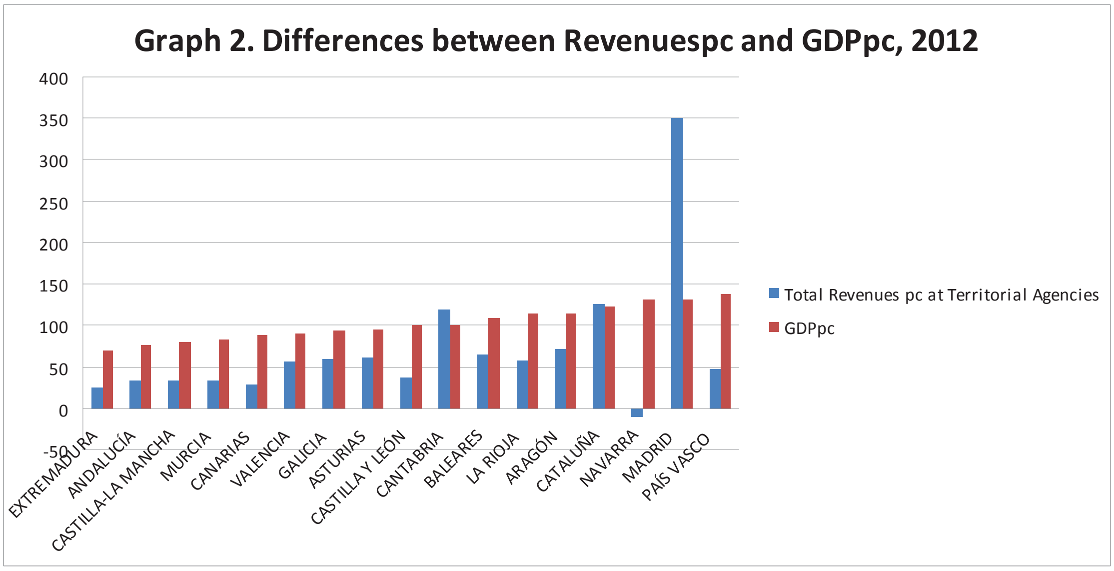
On the other hand, the Catalan Government has conducted empirical research on fiscal balances since 1970. However, the series of estimations that has been published uninterruptedly starts in 1986. Nevertheless, these data have some shortcomings. First, data on fiscal balances are available since 1986, following the MFI approach, while results under the TBI are available only from 2002. Second, the series on population and GDP are homogeneous only for the period from 1996 onwards. Finally, we need to consider that the estimation results under the MFI methodology change in 2002 with regard to previous years.

### *V.1 Fiscal Balances in Spain, 2005. Testing some hypotheses*

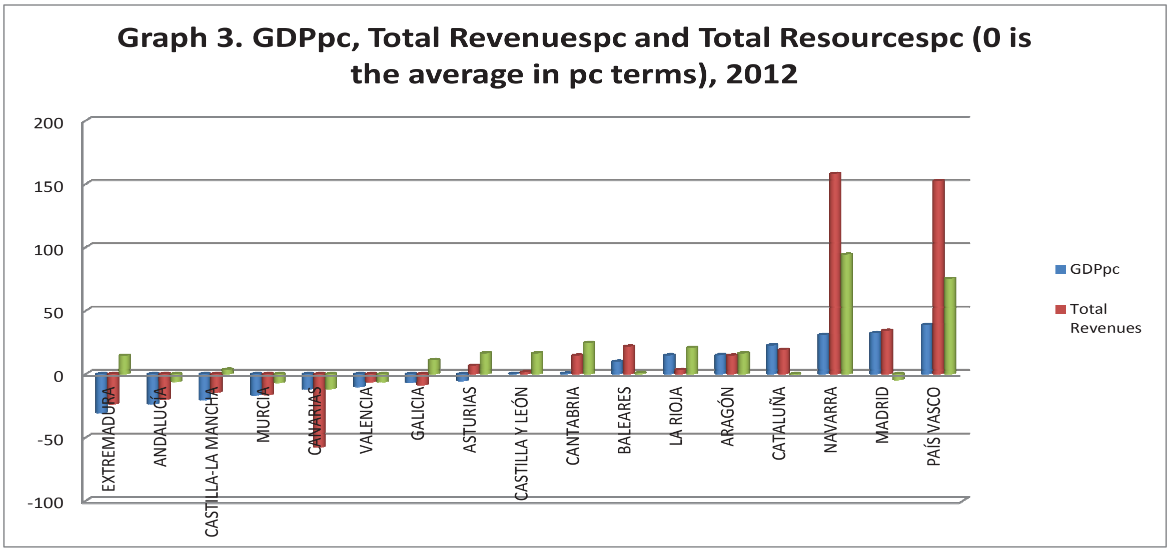
At this stage, as commented above due to data limitations, any research faces an uphill challenge to build robust evidence. The lack of observations does not allow for clearer-cut tests, either because of low degrees of freedom or the absence of more refined data.

In this section, we test some of the arguments that are often used by both opponents of fiscal balances and those who are in favor.

Before conducting this exercise, we must mention two facts that distort the data enormously. The first one is the Capital (Madrid) effect. Once the data have been explored, we observe the relevance of the effect Madrid has as the Regional Tax Agency collecting revenues for the whole of the Spanish economy, well above (three times) its relative importance and weight in the GDP per capita terms, as can be seen in Graph 2 (see also Table 1).

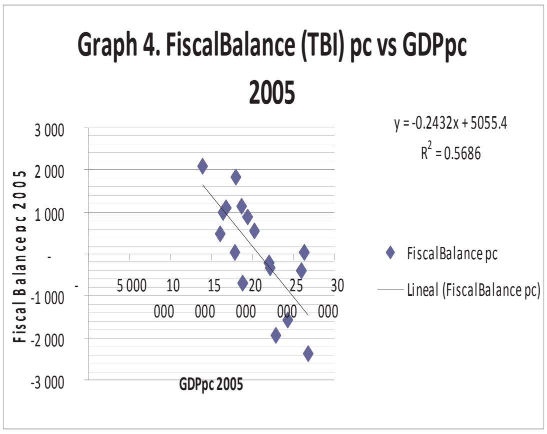


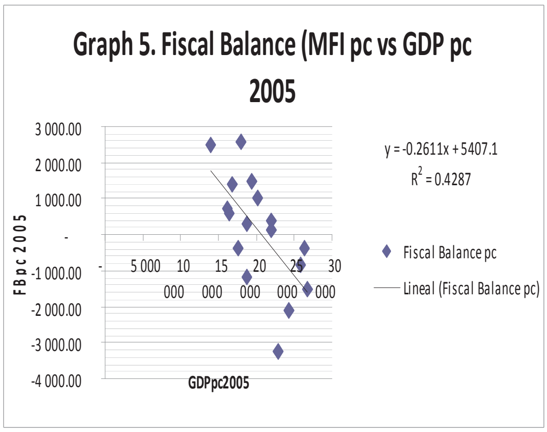

The second distortion is that introduced by "Foral" Regions (FRs). In this sense, data for Navarre and the Basque provinces in the previous graph do not correspond with real tax revenues, but on the effect that FRs have on the Central Tax Agency (taxes are collected in both regions, and then there are some adjustments with the Central Tax Agency; this explains the negative revenues for Navarre). The following graph (3) clarifies the real position of FRs.




One of the arguments that we may want to test is whether those regions with higher overall fiscal drainage are in that position because they have relatively higher per capita resources.

At first sight, it seems that the data validate this hypothesis, regardless of the methodology. As we can see in graphs 4 and 5, it seems clear that there is a negative correlation between fiscal balances and GDPpc.

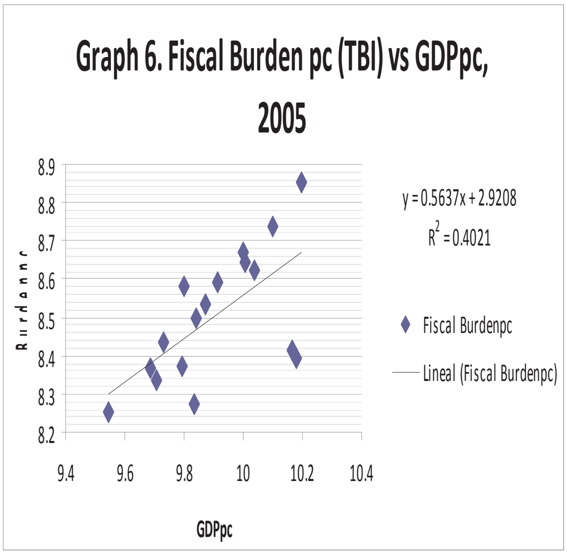


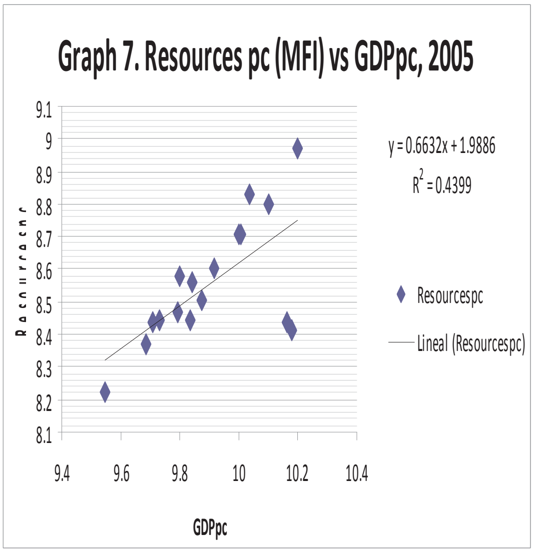




Therefore, apparently rich regions present fiscal imbalances, while poorer regions present positive fiscal balances. However, certain clarifications need to be considered.

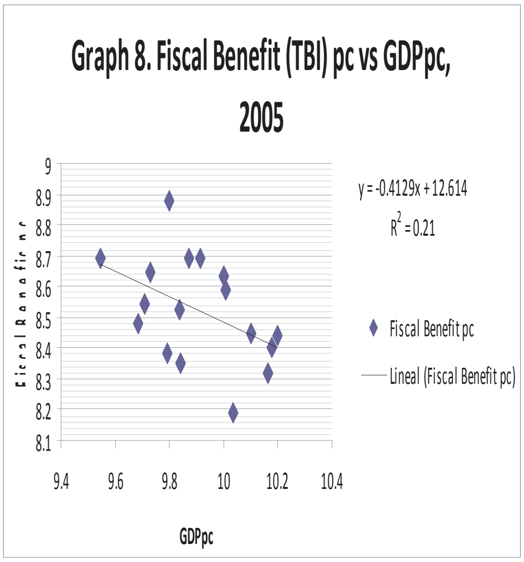
The first one is that regions with a similar GDPpc have different fiscal balance positions. For instance, while some rich regions present negative fiscal imbalances, others record positive ones. This suggests that fiscal balances do not depend exclusively on the level of regional wealth.

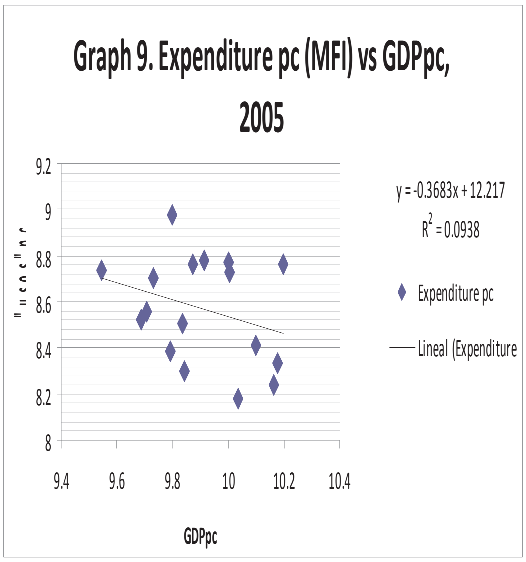
The second is that fiscal balances have two components: tax revenue collection from the CG in that territory, and public expenditure (and investment) by the CG in that region (whether direct or indirectly estimated). When we itemize fiscal balances, we observe several interesting results. On the one hand, fiscal revenues (regardless of the methodology) are correlated with GDPpc (see graphs 6 and 7, in which the data correspond to logarithms).



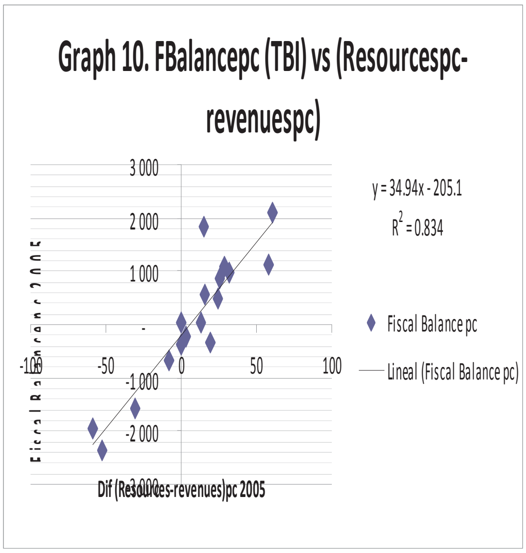

On the other hand, although one might expect that public expenditure by the CG is also associated to GDPpc (the CG supposedly devotes more public resources to those regions with lower income levels), the data suggest that the distribution of this expenditure is not inversely correlated to GDPpc (in graphs 8 and 9 we observe that there is a negative correlation, but it is very weak). Again, we can observe a high level of dispersion among regions.

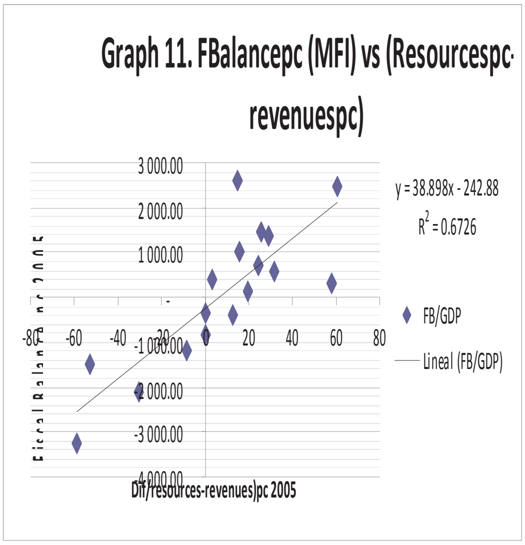



We should note that the weak correlation observed in the previous graphs is somewhat suprinsing, given the fact that the spending levels (measured in any of the methodologies) of the CG in any region include not only public expenditure and investment, but also transfers to RGs, and in particular, those designed to finance specific programs, as fiscal balances incorporate regional transfers that are determined in the mechanism itself. According to this, the CG transfers resources to RGs in order to guarantee they have sufficient resources to finance their responsibilities in social expenditure (education, health, social services, etc). Again, this would reinforce the argument of those who claim that CG expenditure across RGs depends on the level of income in those regions. As can be seen, however, this argument is not supported by the data.

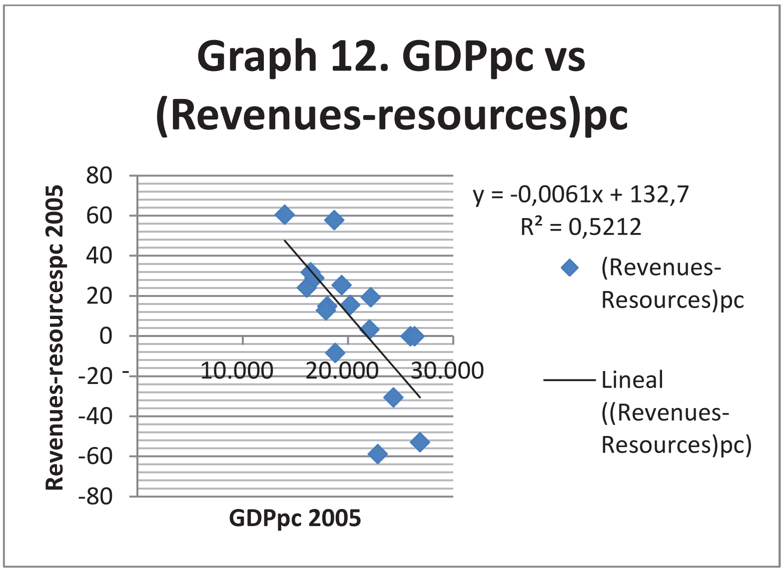
In the following graphs (10 and 11), we show the correlation between fiscal balances and the effect that stems from the way in which the CG transfers resources to RGs. The data indicate a positive relationship between fiscal flows and the results of that mechanism. We show this effect by plotting the difference between Total Regional Revenues per capita and Total Resources per capita (i.e., resources available after the Vertical and Horizontal Equity Funds have been implemented), which represents the gain or loss of resources introduced by such a mechanism.



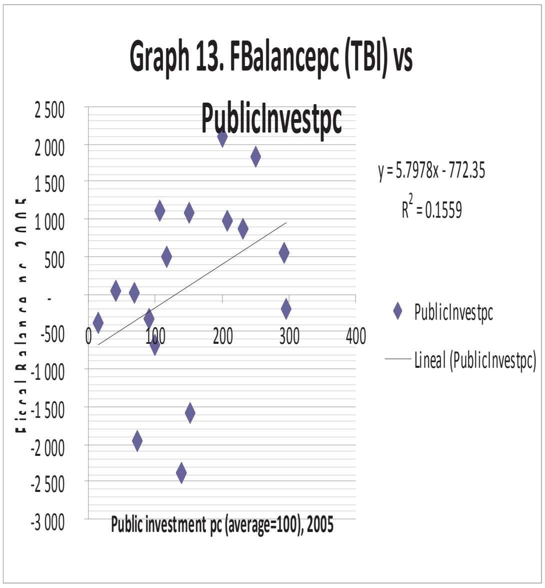

The observed result might be explained by the fact that the mechanism according to which RGs receive their transfers corrupts any initial allocation of resources based on objective variables. Such initial distribution deviates from the expected one due to the rule that determines that no region may receive fewer transfers than it did with the preceding system. This rule has been implemented five times, which takes the effect back to the moment when powers were devolved. That is, the mechanisms that have been implemented since 1982 perpetuate any regional disparities that existed before powers were devolved to the RGs.

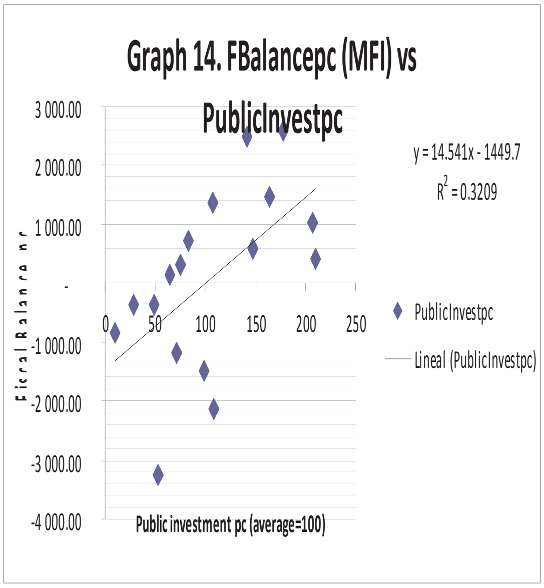
More importantly, the following graph (12) indicates that although the results of that mechanism are correlated to GDPpc, the fact that regions with a similar GDPpc have signifficantly different levels of resources suggests that the pitfalls we mentioned in the previous paragraph are quite significant (see Table 3 also).



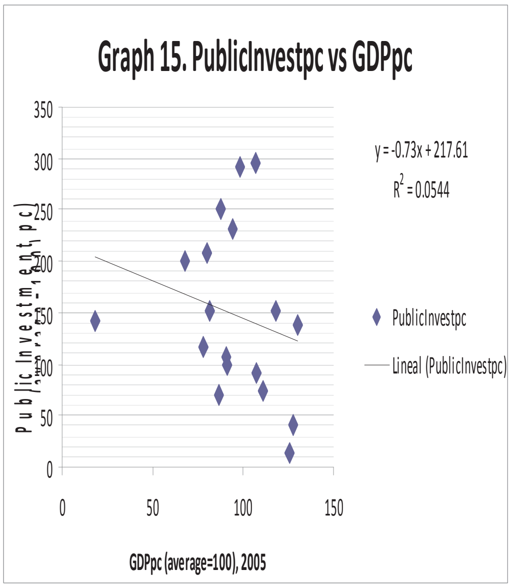

We want to finish this initial analysis by observing the regional distribution of another of the main components of fiscal balances, namely, CG Public Investment.

One may argue that the regional allocation of public investment by the CG is designed to improve the stock of public capital of those regions with lower levels of GDPpc. The argument is that those regions with lower capital endowments attract more private investment if their stocks of public capital are improved. Therefore, public investment would help regional convergence.




However, this argument is again specious (see graph 13, 14 and 15) according to the data, because although it is true that fiscal balances are (weakly) correlated with regional public investment, the correlation between public investment and GDPpc is non-existent.

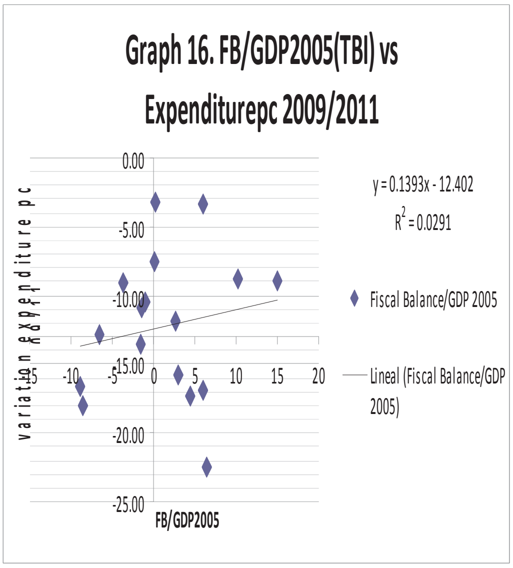



In general, it seems that fiscal balances are not explained exclusively by GDPpc levels.

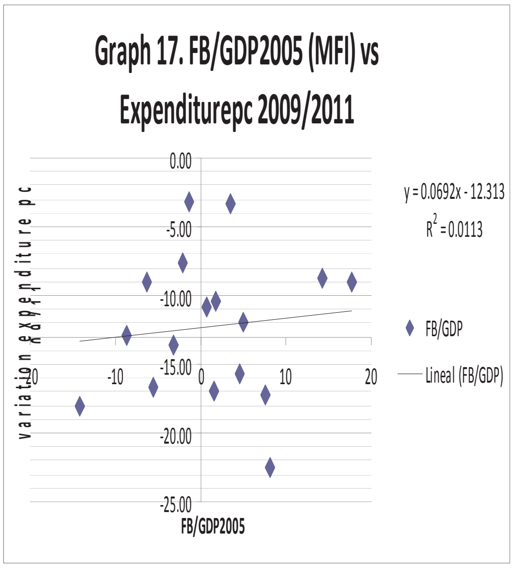
A further argument we would like to test is whether those RGs that are left with less finance (those with negative unbalanced fiscal flows) have to adjust expenditure to a greater extent than the rest, in a situation where tax revenues decrease. We hypothesize in this section that those Autonomous Communities with greater unbalanced flows, ceteris paribus, will have to adjust their budget expenses to a greater extent; that is, by having lower per capita expenses due to the lower remaining fiscal resources.

This hypothesis is not supported by the data, as we can see in graphs 16 and 17. The data suggest that those regions with negative fiscal imbalances in 2005[10] did not have to reduce their expenditures more than the other regions. At any rate, those regions with greater fiscal drainage do not seem to require any greater restraint in their per capita budget expenses, as could otherwise be expected given the need to adjust for a weaker financial situation.

[10] One may argue over the expediency of using fiscal balances data from 2005. But according to the evidence we have for Catalonia from 1986 to 2010, the FBalance/GDP ratio has been quite stable, and has changed little from 2005 to 2009.



Graph 16. FB/GDP2005(TBI) vs Expenditurepc 2009/2011

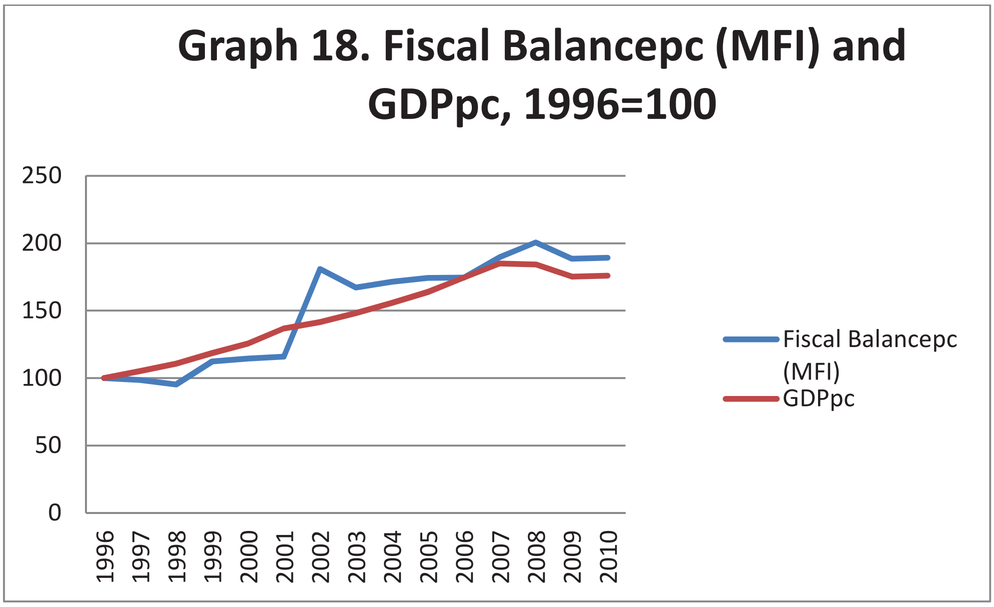


Graph 17. FB/GDP2005 (MFI) vs Expenditurepc 2009/2011

*V.2 Time series analysis. Fiscal Balances for Catalonia, 1986-2010*

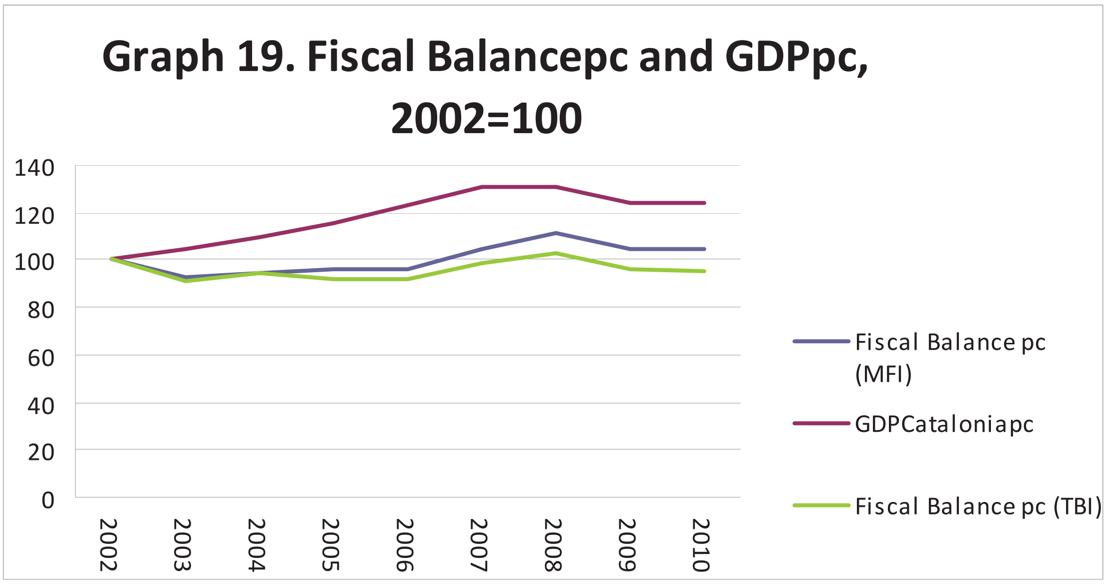
As we have already mentioned, the data on fiscal balances for Catalonia are available from 1986 onwards under the MFI methodology. However, homogeneous population data are only available since 1996. In any case, this series of fiscal flows allows us to show that although fiscal flows have been negative for Catalonia since 1986, the evolution of such flows follows two different behavior patterns before and after 2002.

When analyzing the Catalan case (see graph 18), we indeed observe that after 2002 the imbalance increases well above per capita GDP, while it was just the opposite before that year.



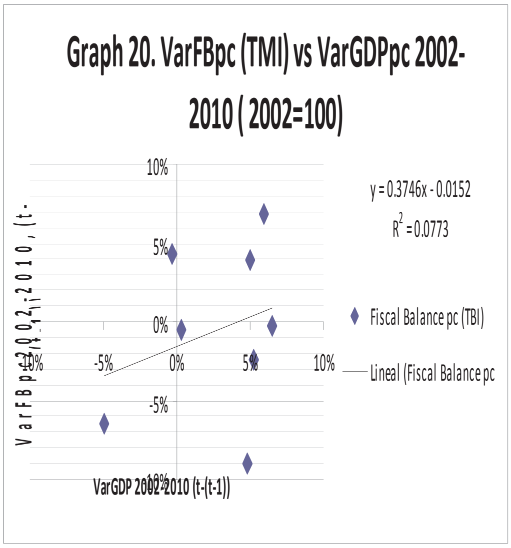
Graph 18. Fiscal Balancepc (MFI) and GDPpc, 1996=100

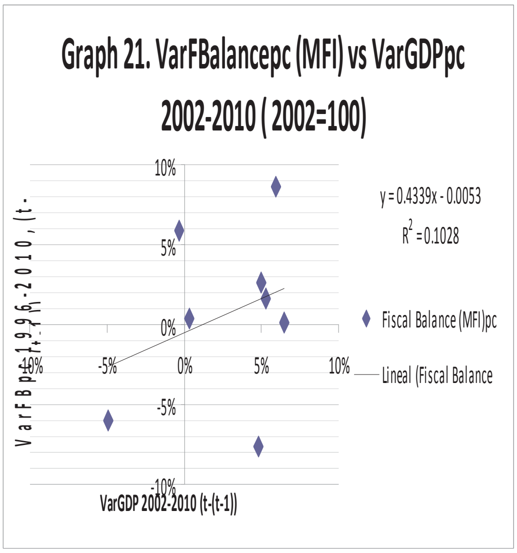
It is important to remark that differences in methodologies affect the absolute value of fiscal flows, but not their sign. If we compare fiscal balances since 2002, we observe (graph 19) that the evolution of these flows has been very similar, and in both cases they evolve below the evolution of GDPpc. As expected, data analysis since 2002 seems to prove that fiscal residuals reflect different regional GDP for both estimation procedures.



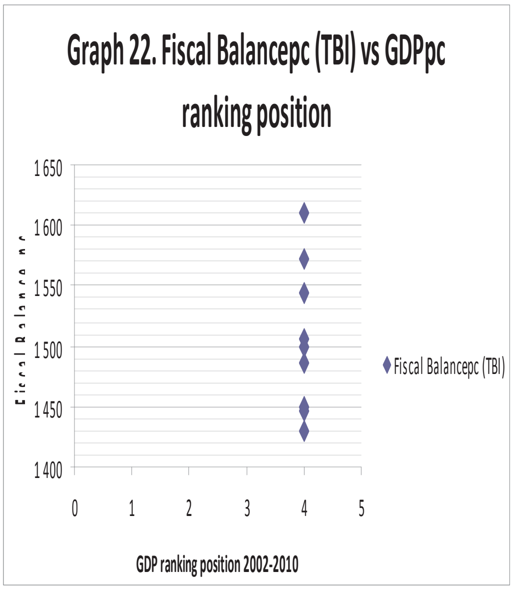

Nonetheless, the trend shows that GDPpc evolves well above the evolution of the fiscal residual. The residual pc is mostly stable when GDPpc rises over time. However it should not be considered simply a spurious relationship, but one that is still emerging once the trend effects are eliminated. Having done this, the relationship between the variation of GDPpc and that of fiscal residuals did disappear for either methodology (see graphs 20 and 21).

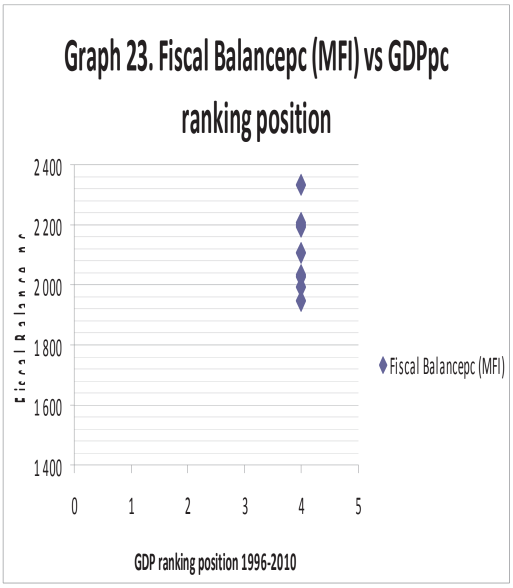
The implication of this lack of causality is that GDPpc reductions in rates of growth do not lead to similar variations in fiscal imbalances, which means that fiscal imbalances can have procyclical effects.



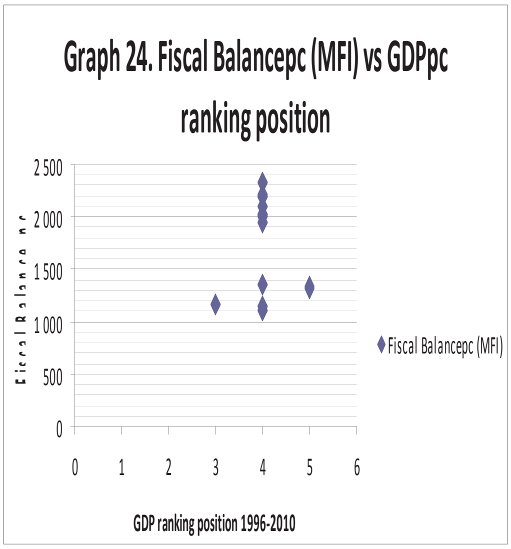



Therefore, the results suggest that it may well be the case that the relative position of each Autonomous Community in the regional ranking, and not the absolute variations in their GDPpc, is the main determinant of those residuals. In this case, the fiscal imbalance might be evolving with the relative ranking of the Autonomous Communities, and not with the differences in absolute values. Again, it seems (graphs 22 and 23) that this argument is not supported by the data.



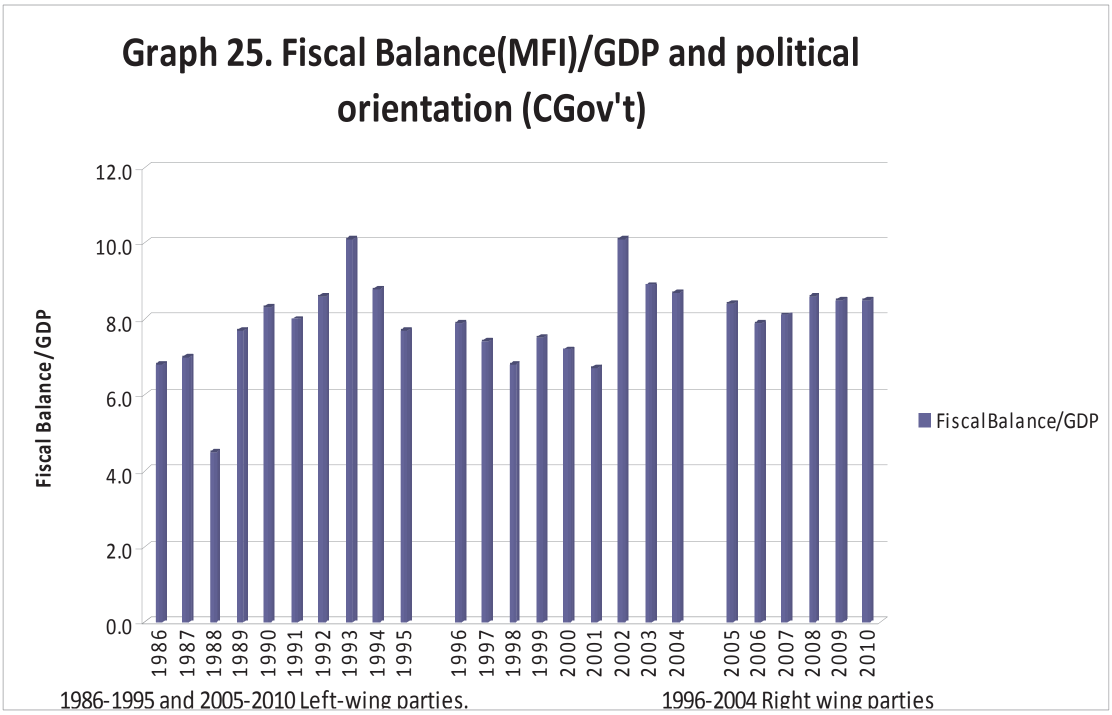




During the 2002 to 2010 period, the relative position of the GDPpc of Catalonia with respect to all the other Autonomous Communities has remained unchanged for both methodological approaches, although the fiscal residual pc records large differences. Regarding the MFI estimation, we can see a larger time interval with the same result: changes in the rankings (above or below fourth position) do not imply differences in the residuals.




Finally, our last test is on how fiscal drainage responds to Public Choice assumptions on political cycles and the sign of the ideology of the political parties in power in the CG.

We observe for the Catalan case that Public Choice theories, which stand for liberal right-wing parties pursuing less interventionism and with less propensity toward the redistribution of wealth, and socialist parties moving in the opposite direction, do not seem to apply with regard to fiscal imbalances and the political orientation of the CG.




## IV Concluding remarks

Most of the questions analyzed in this paper have important political roots that supersede empirical approaches and methodological debates. To allocate revenue and expenses on a territorial basis is not value-free. It needs to frame the balance within a federal setting, and according to a fiscal agreement to be reached among jurisdictions. Otherwise, if we cannot guarantee the rights to revenues and expenses of RGs as regards the CG, the territorial aggregation is simply the sum of individuals' net fiscal residuals under the tax and benefits incidence approach, with no jurisdictional meaning other than the discretional flows of the CG. This latter consideration is not however the real debate on fiscal imbalances today in Spain. At least in the Catalan case, the focus is the difference between the result of computing CG monetary flows and the potential outcome from achieving full financial empowerment under scenarios other than that of the present fiscal drainage.

Despite being unable to present robust statistical relations due to a lack of data (either time series and/or cross-sectional), certain results suggest that some of the arguments for disregarding fiscal balances, such as simply reflecting different territorial income levels, do not seem fully supported. On the other hand, per capita fiscal balances and GDPpc may be linked to each other by one of the ingredients of the imbalance, namely, the revenue component. However, those aspects involving expenditure levels, either direct or induced by the CG to the RGs, do not show a clear-cut relationship between the higher spending levels and greater social needs of RGs with lower per capita resources. This can be seen in the way that the CG's 'productive' investments are located nationwide in Spain and in the way that RGs are financed. In this latter case, although the leveling mechanisms of the model are assumed to guarantee equal resources to finance 'essential' public services, the final allocation of resources deviates from GDPpc levels. This is the case even if we consider differential costs in the provision of services.

The fiscal imbalance can then be reasonably viewed as the result of current spending and investment decisions made by the CG without a clear pattern of fiscal need, rather than often being informed by arbitrary or discretional decisions that cannot be explained from merely an economic perspective.

## References

Agencia Tributaria (Spanish Tax Authority) (2012). Monthly Newsletter.

Bel, G. (2010), "La racionalización de las infraestructuras de transporte en España". *Cuadernos Económicos de ICE*, no. 80.

Bird, R. and R. Ebel (2005): "Subsidiarity, Solidarity and Asymmetry". International Tax Program, WP 0509, University of Toronto.

Centre d'Estudis d'Opinió. Baròmetre d'Opinió Política (Catalan Public Opinion Survey). June 2013.

De la Fuente, A. (2004),"Second-best redistribution through public investment: a characterization, an empirical test and an application to the case of Spain". *Regional Science and Urban Economics* 34(2004) 489-503.

de la Fuente, A. (2013a), "Algunas propuestas para la reforma del sistema de financiación de las Comunidades Autónomas de Régimen Común" in Propuestas para la reforma de la financiación autonómica. Revista del Instituto de Estudios Económicos, nos. 1 and 2/2013.

Instituto de Estudios Fiscales – Institute of Fiscal Studies (2008), Las Balanzas Fiscales de las CC.AA españolas con las AA. Públicas Centrales 2005. IEF, July 2008.

López-Casasnovas, G. and J. Pons Novell (2005). *Anàlisi dels fluxos redistributius territorials a l'Estat Espanyol.* Fundació Josep Irla.

López Casasnovas and G. Padró (2000) *L'index de capacitats territorials de compra i l'espai social de Catalunya*". CLIP 6, IEA.

Monasterio, C. (2010), "Federalismo Fiscal y sistema foral, ¿un concierto desafinado?" Revista de Hacienda Pública Española, no. 192, pp. 59-104.

Monasterio, C. (2013), “Corresponsabilidad fiscal, ¿el eslabón perdido del Estado Autonómico?” in Propuestas para la reforma de la financiación autonómica. Revista del Instituto de Estudios Económicos, nos. 1 and 2/2013.

Pérez, F. and V. Cucarella (2013), “Financiación Autonómica y endeudamiento: lecciones de la experiencia para el nuevo modelo” in Propuestas para la reforma de la financiación autonómica. Revista del Instituto de Estudios Económicos, nos. 1 and 2/2013.

Presupuestos Generales del Estado – Spanish State Budgets (2012). Green Paper.

Rosselló, J. (2000), “Non-Institutional Fiscal Federalism. *Journal of Public Choice and Public Finance*. vol XVIII, no. 2/3, 2000. 31-154

Rotellar, J.M. (2013), “Hacia un sistema de financiación racional. Problemas del sistema actual y soluciones a los mismos” in Propuestas para la reforma de la financiación autonómica. Revista del Instituto de Estudios Económicos, nos. 1 and 2/2013.

Ruggeri, G. C (2009), “Regional fiscal flows: measurement tools”. IEB Working Paper 2009/4.

Vilalta, M. (2013), “Análisis del modelo de financiación autonómica del 2009: revisión o final de ciclo” in Propuestas para la reforma de la financiación autonómica. Revista del Instituto de Estudios Económicos, nos. 1 and 2/2013.

Zubiri, I. (2013), “Una evaluación de la metodología, aplicación y justificación de los Sistemas Forales” in Propuestas para la reforma de la financiación autonómica. Revista del Instituto de Estudios Económicos, nos. 1 and 2/2013.

Universitat Pompeu Fabra Barcelona

CRES CENTRE DE RECERCA EN ECONOMIA I SALUT

www.upf.edu/cres