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Fiscal Imbalances in Asymmetric Federal Regimes. The Case of Spain

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Summary

The dispute over the manner of computing fiscal imbalances is not a technical one. Different methods serve different purposes and these purposes are political rather than simply economic. They differ basically in the consideration that territorial jurisdictions may merit. This is whether they are being seen much more than simply a pure geographical aggregation of individuals and their net fiscal residuals. 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. This is the case not just for the monetary flow method, but also for the tax benefit incidence approach, despite the way in which the externalities of what are assumed to be 'public goods' spills over. 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 for a robust estimation of those factors a panel data approach to the composition of the observed imbalances. Transparency in this sense is the best strategy for refocusing the fiscal territorial debate in Spain.

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

Clasification JEL: B41, H70, H77, D74.

1. 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 is not a federation itself since there is not a federal government that has received responsibilities from sub-national powers. Instead, Spain is a unitary state that has decentralized some of its spending responsibilities to the so called Autonomous Communities Yet some historical Communities may be tempted to secede given the observed low cost benefit analysis they experience by remaining in the Union and given the tough restrictions for larger levels of self-government, fixed by the Spanish Constitution. In this sense, a new sort of Federal Pact can be Pareto superior with regard to alternative scenarios.

If this is the case, some checks and balances on the degree of accomplishment of the agreement needs to be implemented. In addition, in the monitoring of fiscal flows plays an important role the necessary coordination of a multi-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.

Spain is today under this paradox: on the grounds of fiscal federalism a pseudo union has been created by the Spanish Constitution (1978), however, taking this pact seriously, nor the constitutional grounds nor the instruments of its day-to-day operation prove that the agreement is a federal one. The strength of the political controversy that this raises depends on how homogeneous the sense of being part of the Community is with respect to being part of the Union. This is reflected in how big the difference is between the spending capability and the revenue shared with the State as regards that without that sharing. Given that these flows stem from the individual surplus and deficits between taxes paid and benefits received, this leads to the degree of acceptance of the internal flows within the Community and the extent to which external, vertically imposed leveling transfers are questioned.

In general, however, under democratic regimes all the jurisdictional 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 that 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.

The aim of this paper is to address the positive effects that an increase in the transparency on interregional fiscal flows may have on intergovernmental relationships, and offer some clues on the current debate in Spain. Spain forms at present a territorial multi-jurisdiction characterized by the lack of 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. Very often responsibilities on tax policy and on public expenditure overlap [1] and controversies on "institutional loyalty" are common [2].

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. In doing this, it is very important to stress that we do not pretend to find concluding relationships between fiscal flows and some explanatory variables. The lack of data available makes unfeasible this task from the beginning. Testing whether some relationships exist, and if they are actually due to causality, is beyond the scope of our paper. Finally, in section 5, we present our conclusions and reinforce the argument that more transparency on fiscal flows is needed.

2. The Spanish process of asymmetric decentralization

2.1. A brief outline of the Spanish process of asymmetric decentralization

In this section we introduce some hints that suggest that the process of decentralization in Spain has been rather asymmetric. In fact, the jurisdictional units that were established in the Spanish Constitution were not based exclusively either on historical factors or on efficiency arguments. While some of them were based on historical factors (Galicia, Catalonia, Basque Country and Navarre, for instance), some of them were created on political reasons exclusively. Under those premises, the process of devolution of powers over public services distinguished however three different groups of regions: 1) "Foral" [3] Territorial Regions (FRs), 2) Historic Regions (HRs), and 3) Other Regions (ORs). 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 from now on), and hold full responsibility for all expenditure, while for the 'ordinary' regions (HRs and ORs), 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 with a two years gap since 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 [4]. A further problem facing this methodology involved asymmetries of information, because only the CG controlled all the information on the costs of providing those public services that were to be devolved [5].

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 [6].

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 those 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, the arguments in favor of centralizing public units clearly contradict the demands of the Spanish Government for some EU public agencies to be allocated in Spain. Finally, this centripetal process contributes to distort the territorial distribution of taxation (especially on personal income, consumption and corporation taxes). This process is so important that the mechanism according to which RGs receive their resources is based on an estimation of the territorial distribution of fiscal revenues rather than on tax revenues collected in each region. Data in table 1 suggests the relevance of this centripetal process.

Table 1
TAX REVENUE OF CENTRAL GOVERNMENT BY TERRITORIAL TAX UNITS

Region	Total Revenues pc (VAT, Consumption Taxes, Income Tax, Business Tax, Custom Tax)		GDPpc Average = 100
	2012	Average = 100	2012
Andalusia	1,197	34	76
Aragón	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-León	1,280	37	100

Table 1 (*Continued*)
TAX REVENUE OF CENTRAL GOVERNMENT BY TERRITORIAL TAX UNITS

Region	Total Revenues pc (VAT, Consumption Taxes, Income Tax, Business Tax, Custom Tax)		GDPpc Average = 100
	2012	Average = 100	2012
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.

Out of financing current expenditure, it should be noted that the allocation of public infrastructures has traditionally been quite biased too. In fact, a decade ago de la Fuente (2004) suggested that the allocation of public investment did not follow efficiency arguments neither, maintaining that this allocation has been ‘excessively redistributive’. We must note that being “excessively redistributive” does not mean that the investment has had the expected dynamic impact on growth rates of the recipient regions (therefore, it has been poorly efficient even in the recipient regions). This argument can easily be observed when we analyze the allocation of new public investments on airports, railways and highways (see Bel 2010) and in the past concerning the construction of public hospitals, schools and universities, before the process of decentralization started in the nineteen-eighties.

In table 2 we present the levels of public investment made by the Central Government in all Autonomous Communities. This includes real investment, from the Ministry of Public Investment-*Fomento* –and its public agencies– during the period 1997-2010. The average figure is compared with the territorial distribution of the population for the same period.

Last but not least in our analysis, 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 (they have the same target from rather different initial positions). 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 or they increase tax rates. What is surprising (see table 3) is the fact that some of the regions that have to introduce larger budget cuts –or increase tax rates of simply fail in achieving target deficits– 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.

Table 2
CENTRAL GOVERNMENT INVESTMENT IN THE AUTONOMOUS COMMUNITIES (% OF REGIONALIZED INVESTMENT AND POPULATION, AVERAGE 1997-2010)

	Investment	Population
Aragón	7.6%	2.90%
Asturias	4.5%	2.50%
Balearic Islands	1.2%	2.20%
Canary Islands	3.4%	4.39%
Cantabria	2.0%	1.29%
Castilla-León	10.1%	5.81%
Castilla-La Mancha	6.2%	4.33%
Catalonia	16.0%	15.73%
Valencia	7.8%	10.52%
Extremadura	2.0%	2.50%
Galicia	8.5%	6.38%
Madrid	13.2%	13.30%
Murcia	1.4%	2.98%
Navarre	0.1%	1.35%
Basque Country	1.7%	4.92%
La Rioja	0.6%	0.67%

Source: Caamaño and Lago (2012).

Having said that, the main source of asymmetry comes from the way in which the tax revenue sharing system operates in determining *who gets what* in terms of funds. In Spain, the CG allocates to RGs a percentage of the tax revenues collected (or estimated) in their territories: VAT, Personal Income and Special 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 75% of total revenues, this initial distribution of resources should allow, in principle, maintaining certain differences in revenue-raising capacities 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 (see table 6 for an idea of the size of this effect). This condition has been implemented in each one of the mechanism established in all 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, did not do so as much as they should due to budget limitations. This result comes from the fact that the theoretical necessities of the regions are somehow linked to the estimated cost of devolution. Finally, other Vertical Equalization Funds are in place 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 neither in terms of any sort of needs assessment of the regions nor regarding their fiscal capacity or income levels.

Table 3
REGIONAL FISCAL RESOURCES PER CAPITA (AVERAGE=100). 2012

	Tax Revenue		Total resources pc		Total resources pc*	
	Index	**Ranking**	**Index**	**Ranking**	**Index**	**Ranking**
Madrid	134.2	1	94.6	11	99.80	10
Balearic Islands	122.5	2	100.1	9	100.20	8
Catalonia	118.6	3	98.7	10	99.50	11
Aragón	115.1	4	116	4	110.40	5
Cantabria	114.5	5	125.1	1	125.20	1
Asturias	107.8	6	112.7	6	108.40	5
La Rioja	103.5	7	120	2	118.00	2
Castilla-León	100.8	8	115.8	5	108.00	6
Valencia	93.9	9	94	13	95.60	14
Galicia	92.3	10	110.8	7	104.30	7
Castilla-La Mancha	85.3	11	103.4	8	99.00	9
Murcia	83.9	12	93.7	14	95.70	13
Andalusia	79.7	13	94.4	12	96.50	12
Extremadura	76.6	14	117	3	111.80	3
Canary Islands	41.8	15	90.2	15	87.00	15
Total	**100**		**100**		**100**	
Coef. of Variation	0.25277		0.1098		0.09503	

Source: Generalitat de Catalunya.
* Corresponds to adjusted population.

The effect of such Vertical and Horizontal Equalization Funds can be observed in table 3 (Tax revenues correspond to all taxes of the system that allocates resources among Autonomous Communities; total resources correspond to the final distribution of financial resources –taxes plus transfers– among Regions –for the same level of responsibilities; and pc* refers to per capita adjusted population). The coefficient of variation of the initial territorial distribution of tax revenues doubles that of the final allocation of fiscal resources across regions, no matter if it is computed considering the simple or the adjusted population, 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 below the average, and vice versa. As a result, some inter-jurisdictional conflict emerges without effective mechanisms for resolution.

2.1. Mechanisms of coordination and solution of inter-jurisdictional conflicts [7]

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 can approve 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 to 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 (and vice-versa), causes an inter-jurisdictional conflict 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, under political partisan quotas, whereby one may interpret their decisions as potentially being biased. This has been the case of the CG against certain RGs over their new Regional Constitutions (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. We must take into account that the Constitutional Court acts once the CG or a RG has challenged a specific law. However, its decision is not automatically implemented to all similar laws approved by RGs, unless they have been also challenged by the CG. Therefore, the problem is not the Constitutional Court itself but the fact that the Central Government does not follow the same criteria for all regions.

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 sectorial 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.

3. 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 regarded by some RGs 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.

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. Indeed 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 structure of ´the State of the Autonomies'. 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, Navarre, Galician and Catalan territories) under an asymmetric regime with greater devolution (section 151 of the SC, which also includes Andalusia though it is not initially considered a historic nation).

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; new legislation was urgently required to avoid the split of the Province of Almeria from the Andalusia region and in general, 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 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 powers. This has strengthened 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 with the feeling that under the new situation did not mean there much to lose with secession.

Fiscal imbalances for Catalonia, plus the mirror of the FRs' privileges (almost two-thirds of higher per capita finance, as we shall see) and the systematic opposition of the CG to the demands of the Catalan Parliament for more self-government has pushed some Catalan citizens to call for political independence. The net fiscal residual of the Catalan tax-payers constructed on the basis 'as if' central revenues were allocated according to Catalonia's own fiscal capability, and no longer depending on what is felt as arbitrary transfers, has been a powerful tool for attacking what has been considered as discriminatory finance.

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 wish of the citizens. For this result, the sense of being part of the 'cluster', by accepting the internal redistributive flows, but questioning the external ones imposed by CG, is a key element.

According therefore to the purpose of the fiscal imbalance study, it is clear that two [8] 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 (not just geographical; also in terms of deciles, income sources or age cohorts). Another different methodology would calculate the territorial allocation of revenue from their own territorial tax bases, and expenditure flows from the CG to RGs. Alternative political scenarios can be applied 'as if' say a new fiscal agreement, a "Foral" type of regime, secession and others. Nevertheless, both offer substantial information on coordination and transparency for the fiscal accountability of governments.

3.1. Other relevant aspects and references to the Catalan case

In order to understand 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 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, to the institutions that on a sub-central level also represent the citizens in the territory? The ambiguity of the SC was a tool for swift democratic consensus on territorial cohesion after Franco's authoritarian regime. This led some scholars to see in Chapter VIII of the SC the grounds of a Federal Union. But at present 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 sort of 'federal' pact with the CG? Not clear answer again. Do, in fiscal terms, Catalan citizens say 'exist' or they are just 'Spaniards' who happen to live in Catalonia?

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 Catalan citizens sharing a priority political identification with the Catalan community more than for some other communities at large?

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 at present over four-fifths of the MPs. In addition to this, sociological surveys on the political 'sense of individuals being part of the cluster' are extremely clear in that respect.

In figure 1 we can see that Catalan citizens overwhelmingly first consider themselves to be Catalan, and only a few see themselves as just Spanish citizens. 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.

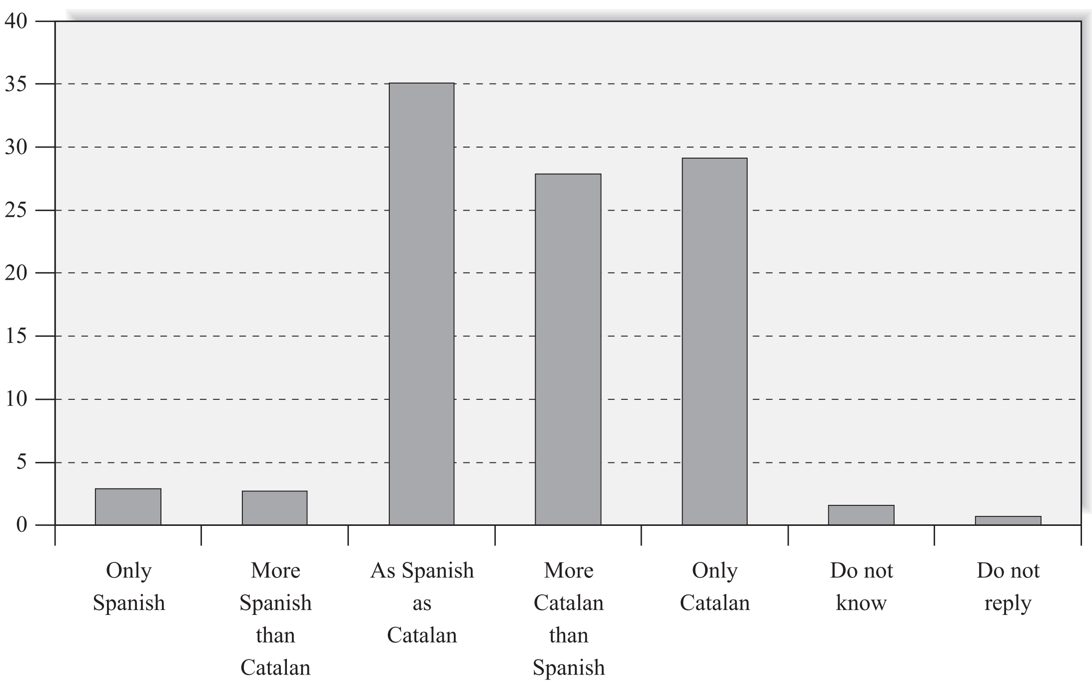

Figure 1. Sense of belonging (CEO, june 2013)

The *Centre d'Estudis d'Opinió* (CEO, Sept 2013) 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, 60% of the population favors an independent state and only one fifth of the population seems to support the current state of affairs.

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 has been commonly 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.

3.2. 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 or on the purpose to estimate fiscal flows in Spain.

As commented, 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 a casual ‘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 [9]. Fiscal imbalances are investigated in order to identify how many resources are returned to Generalitat from Catalan taxpayers’ contributions. This allows us to compare the actual and potential spending capacity of the Generalitat of Catalonia, in the sense of how much revenues it might have if it had direct access to the fiscal bases of Catalan citizens, say under a common tax bill. The way the Autonomous Community is financed is undoubtedly the main reason to focus on those imbalances, despite the fact that this regional financial arrangement is just part of the problem.

3.3. 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 provided 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 regions 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 were 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 thereafter for keeping a larger part of 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 solidarity according to that share of GDP (6.24%). Needless to say that "Foral" Communities do not contribute to *The Fund to Guarantee* the finance of *'Fundamental Public Services'* [10].

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 a reasonable benchmark; that is, the difference between the value added bases -production and consumption shares [11]. As the Basque Autonomous Community is wealthy, with more imports than exports, it is unlikely that this is to be the case. With regard to special consumption taxes, we again observe favorable adjustments to the Basque Government for alcohol, beer and tobacco (only petrol taxes seem to take the opposite sign). All these factors, plus 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 that indeed may vanish in this case with a potential Basque secession.

This provides a distorted mirror against the common system applied to Catalonia and to other high contributing regions, 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 those central revenues and expenses to FRs quite closely replicates the monetary flow methodology, far from that for computing the tax benefit incidence advocated for the rest of Spain. We observe for FRs nothing more than a payment for what the CG spends in the Basque territory, and in 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 several 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 are not, redistribution is already taking place. 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 very much diminished per capita finance capacity despite the fact that responsibilities for the public provision of the services are universal (in the sense of being population rather than income-based entitled). The wealthier Autonomous Communities (with the exception of Madrid) have therefore a number of additional handicaps for pursuing economic progress and for providing similar levels of essential public services at the same level of fiscal effort.

Moreover, redistribution should guarantee the leveling of most of the fundamental services of the welfare state, but not in terms of whatever RG expenditure is incurred. An efficiency target is missing in the present transfers policies, based from the beginning on actual costs. Certainly, out of the horizontal leveling among different communities, the CG may transfer, 'vertically', from their own shared revenues any extra finance for regional development it wishes, as the European Union does. But it is not clear that unlimited horizontal transfers should be imposed in targeting income inequality rather than finance capability differences for essential public services. The former is in fact more a question of regional development and support for private activities rather than a justification to subsidize 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 has indeed created very unequal and arbitrary transfers among the Spanish regions' (de la Fuente 2003, 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 2003). Moreover, without adjusting for differences in the purchasing power parities of those transfers inequity rises, 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', playing the role of the guarantee of the status quo from the initial transfer (see table 6). In favor of abolishing it, see de la Fuente (2013a) and Vilalta (2013, page 149). In brief, the regional financing system is described by most 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 understandably protesting against those imbalances as a kind of escape valve for their financial situation, despite the fact that the Autonomous Financing System is, as said, just a part of the fiscal deficits. The aim to correct the so-called 'drainage' has been seen by those regions as the solution of a sort of horizontal zero sum game, despite the fact that the regional finance regime is complemented by the net flows from the CG's direct actions (basically territorial investments) and by the less discretional Social Security flows (under the proportional, pay-as-you-go regime).

Nevertheless, the persistence of the situation has been qualified by Pérez and Cucarella (2013, page 101) on political economy terms 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 not the assumption that supporting the consequences of these debts is going to be better done by the CG 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 indebted regions, in order to find an explanation for the relative punished situation 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 alternative potential 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), revenue sharing computation in general has created a sense of 'derived fiscal power'. This goes however against the view of some analysts who would have preferred a solution that did not raise the view of a territorial entitlement, by simply integrating those tax revenues in the so-called Guarantee Fund (de la Fuente 2003, 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.

4. Fiscal flows: Pros and cons and methodological issues

As opposed to the Canadian and US [12] 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 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.

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, local community or income group. This approach is somehow an extension of the fiscal incidence method with all the common associated problems to this approach; this is the need of a general equilibrium setting and a large set of hypotheses on the actual workings of the economy at any moment in time.

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.

4.1. 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 welfare basis, and (ii) the method that focuses on the economic impact of the state action on the regions as a whole.

Again, in order to validate the interpretation of the results of each one of the two methods we need to answer to the question we put forward before: 'to whom does the money paid by citizens in any particular region belong?' This is required in order to accept the claim of the territorial jurisdiction for the difference between the observed and the alternative expenditure capacity, 'as if' it were entitled to finance its expenditure from its own tax bases. In this sense, for the CG to accept the existence of fiscal balances, a requirement is the recognition that citizens, who always are the ones paying taxes, may do so to the CG and RGs 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.

We will identify then here the *tax/benefit approach* (from now on TBI) as the personal welfare method based on the tax-expenditure incidence principles, and *the monetary flow impact* (MFI) being the one based on the aggregate economic effects on the territorial jurisdictions. In addition, some other variants exist, particularly in the TBI approach, given the complexity of the hypotheses they need to address. Indeed TBI calculations are more demanding for final personal welfare incidence and multiple assumptions and estimation parameters are required. This has been seen as the main difficulty in publishing official estimates, calling into question, from time to time, the legitimacy of the results of the fiscal balance in itself. This claim has been used in order to deny any purpose other than the aggregation of the individuals' net fiscal residuals. This is a fallacy, since the territorial 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.

4.1.1. *The Tax-Benefit Incidence approach to personal welfare*

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.

The TBI grounds then the analysis on the welfare impacts resulting from the fiscal residua and the derived excess burden, according to the principles of the personal incidence of the ultimate charge/benefit effects supported by the taxpayers. It aims to build a more sophisticated exercise, although when applied to a geographical setting –as in fiscal federalism– it becomes less relevant due to the aggregation levels of the calculations. This is due to the fact that in any personal welfare incidence analysis the distribution, and not just average weights, should matter. In fact, the concept of an ‘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 average differences of fiscal residua: the excess burden of taxes (the hidden cost of public funds) and the complementary and the substitution effects of the monetary and in-kind public services need to be taken into account. This usually proves to be rather difficult on an aggregate regional basis.

Moreover, a general equilibrium approach is aimed for a full tax-benefit incidence exercise. The 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, say, a rebate tax expenditure instrument, 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. This is required 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 economic perspective; under the scheme of differential or a balanced budget effect; in a given timescale (short/medium/long term), or even for the complete life-cycle of the individual, and certainly in accordance to the degree of openness of the economy in which the analysis is conducted. This adds to the details on the actual cycle the economy is in, the labor market characteristics, stock exchange and rates of change conditions, etc. Other factors may be important, too; for instance, to be precise about the 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), or under what technological restrictions of factorial substitution they act (which is to say, the elasticity in consumption and substitution factors, as pointed out at the Harberger's model of tax incidence).

There are indeed many uncertainties in the application of a complete TBI approach to fiscal balances. These are in brief some of the reasons (i) The lack of empirical evidence in the particular setting being analyzed; (ii) the use of 'proxies' not based on economic analysis, but rather on the momentary availability of data; (iii) lack of updating the empirical results to be adopted; (iv) extrapolation of 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; and finally (v) completely different time and place economic and cultural situations.

4.1.2. *The territorial impact of the monetary flows*

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 as a result of 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. The hypothesis of the internalization of flows between both the autonomous regions and local 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 sum of individual welfare 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 and not necessarily where they are produced (see Montasell and Sanchez, 2012).

The monetary focus allows calculating the balance as the difference between (i) the actual amounts 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 bases. 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 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 only ultimately in this sense, impacting on the welfare of citizens). It is a more limited exercise, more politically controversial (from this our claim for democratic legitimacy of the question and constitutional validation of the answer), less ambitious from an individual welfare perspective, but empirically more robust and clear on the purpose. It is no exempt of methodological problems (say on how to allocate some expenses and taxes on a territorial basis, on the caeteris paribus assumption for regional tax revenues, and on the interpretation of the residuals when some public goods have not been imputed to the region and this may require additional expenditure –and again with the positive impact of the linkages on the territory– against the negative net residual).

There is moreover an important methodological issue that must be addressed in both methodologies, which is the treatment of global fiscal surpluses and deficits at the central level. A consistent measure of fiscal flows requires that CG revenues must equal the allocated expenditures. There are several alternatives to do so, depending on whether we refer to deficits or surpluses. In any case, neutralization is required because otherwise, all RGs might present surplus fiscal balances. As expected, the method used to neutralize fiscal deficits or surpluses may have an impact on territorial fiscal balances, either from increasing future taxes, reducing expenses or a combination of both.

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 and politically controversial: 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.

At least in the Catalan case, the *inter-jurisdictional* MFI methodology is undoubtedly more adequate for the purpose of the Catalan Parliament in its claim of transparency of the fiscal flows with CG with regard to some alternative political scenarios. At any rate, 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 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 tax-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 UNDER 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-León	862	6
Cantabria	1,015	5	Galicia	1,081	4
Galicia	1,378	4	Castilla-La Mancha	981	5
Castilla-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 minor exceptions) that one region would move from one group to the other.

5. 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.

5.1. 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 opponents of fiscal balances who argue that fiscal deficits are simply due to the effects of fiscal policy on the territorial distribution of income (wealth). That explains why we test the relationship between fiscal flows and GDP, and also the relationship between the components (revenues and expenditure) of fiscal deficits and GDP. Therefore, it is important to realize that if we do not find such relationships it is not that our arguments are not valid, but that those of the opponents might be false.

Before conducting this exercise, we must mention two facts that distort the data enormously. The first one is the ‘capital of the state’ (Madrid) effect. Once the information has been explored corresponding to 2007 (this is the first year when this type of data is available) we observe that tax revenue collection in Madrid Regional Tax Agency (it is a territorial unit that belongs to the Revenue Service, known as *Agencia Tributaria)* is well above (three times) Madrid’s relative importance in the GDP terms, as can be seen in figure 2. This data is introduced for comparative purposes only. It refers to tax revenues collected at each territorial unit of the Revenue Service, and includes Consumption Taxes (including VAT), Income Tax, Business Tax and others. This explains, regardless of the methodology implemented to compute fiscal balances, why this initial distribution of tax revenues is modified.

The second distortion is that introduced by “Foral” Regions (FRs). In this sense, data for Navarre and the Basque provinces in the previous figure 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

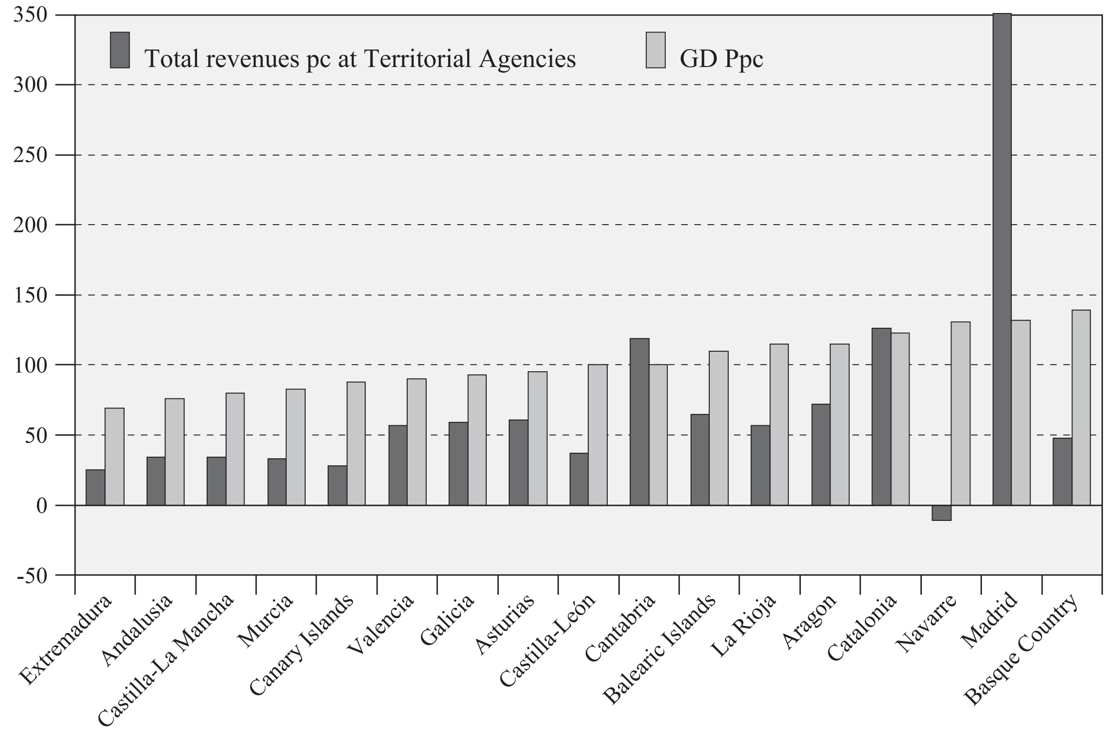

Figure 2. Differences between Revenuespc and GDPpc, 2012

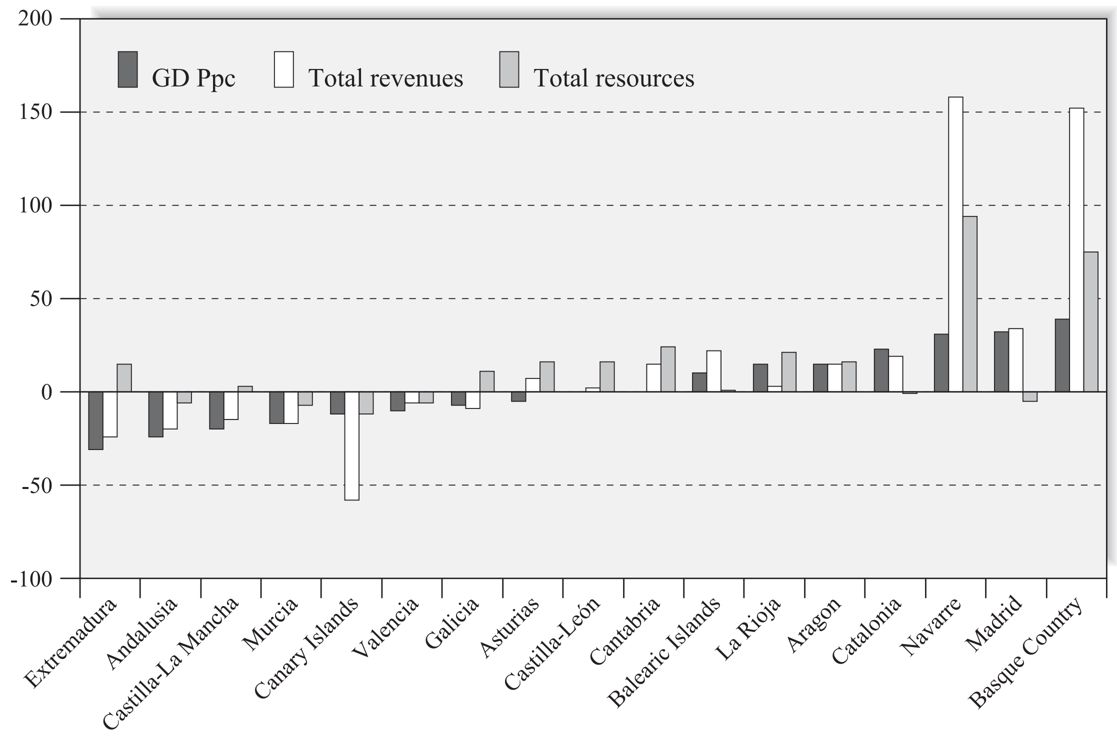

Figure 3. GDPpc, Total Revenuespc and Total Resourcespc (0 is the average in pc terms), 2012

explains the negative observed revenues for Navarre). The following figure 3 clarifies the real position of FRs, in which we compare final resources available to RGs according to the different mechanism of foral and ordinary regions (Total revenues correspond to territorialized tax revenues and total resources correspond to the final financial resources available).

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 figures 4 and 5, it seems clear that there is a negative correlation between fiscal balances and per capita GDP.

Therefore, apparently rich regions present negative 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.

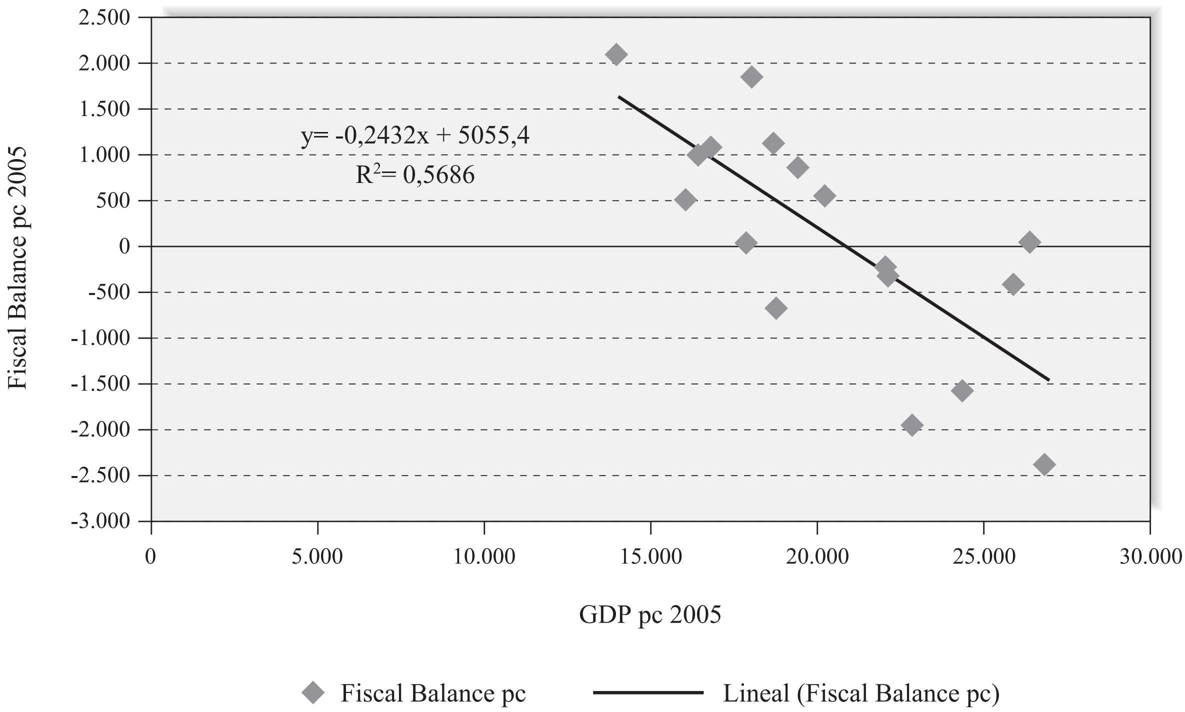

Figure 4. Fiscal Balance (TBI) pc vs GDPpc 2005

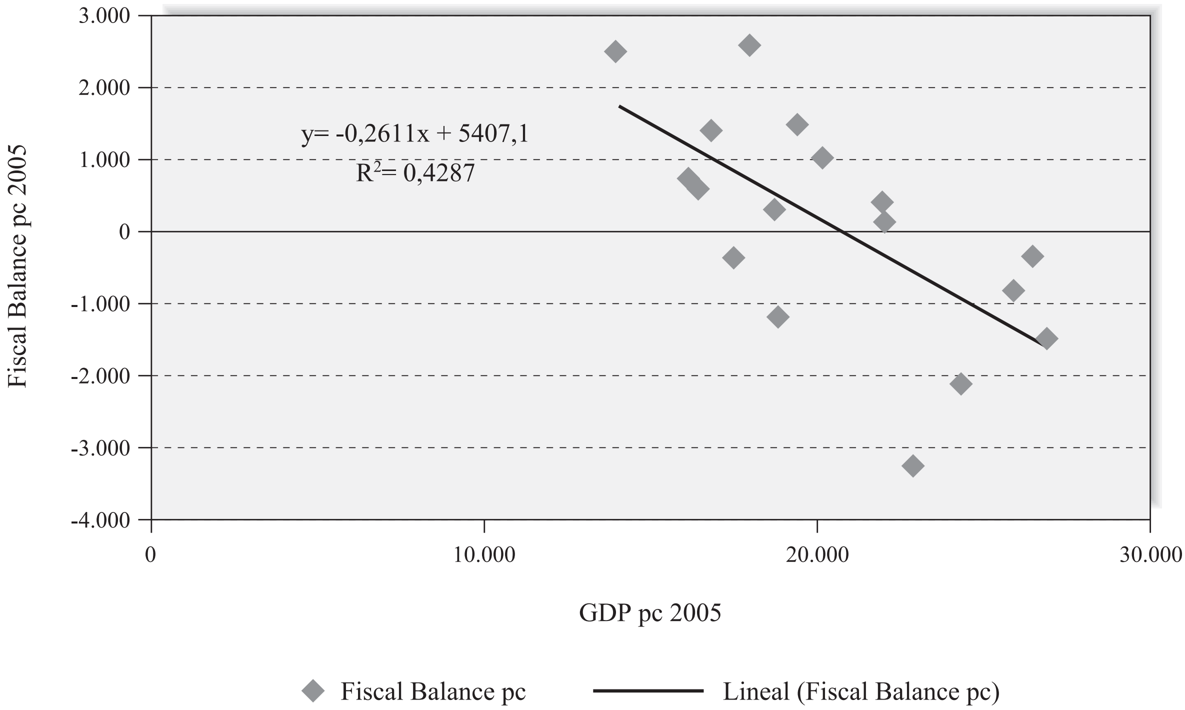

Figure 5. Fiscal Balance (MFI) pc vs GDPpc 2005

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 figures 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 figures 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 figures 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.

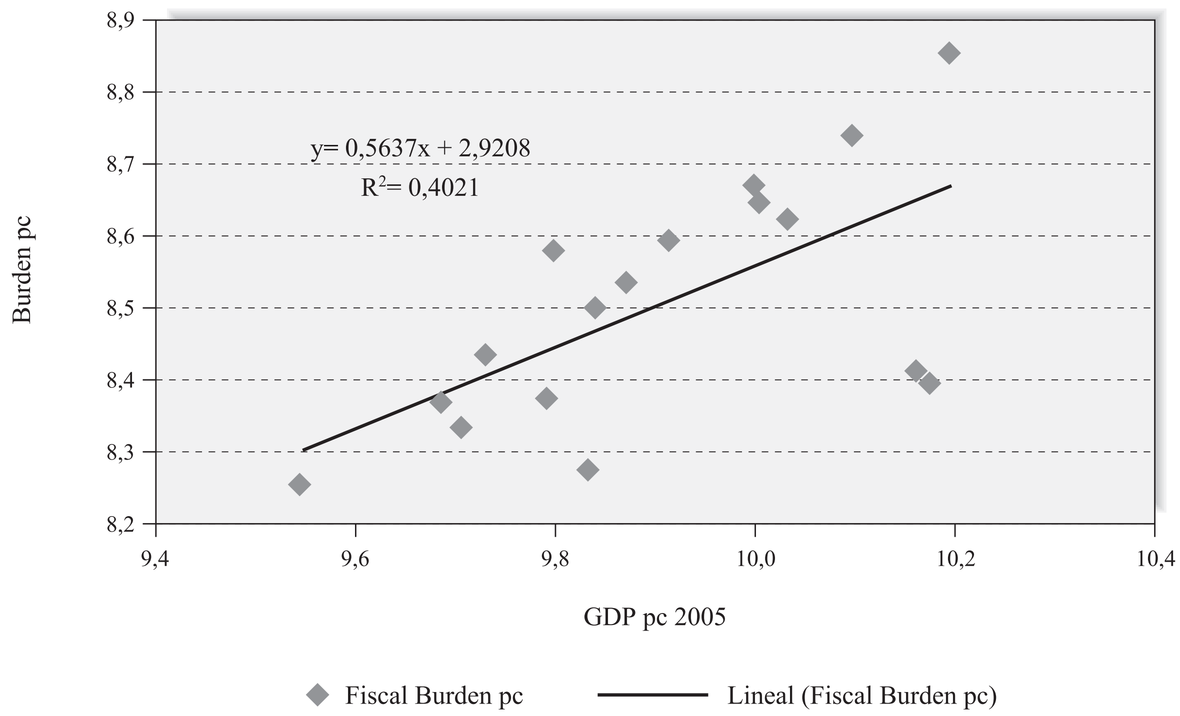

Figure 6. Fiscal Burden pc (TBI) vs GDPpc 2005

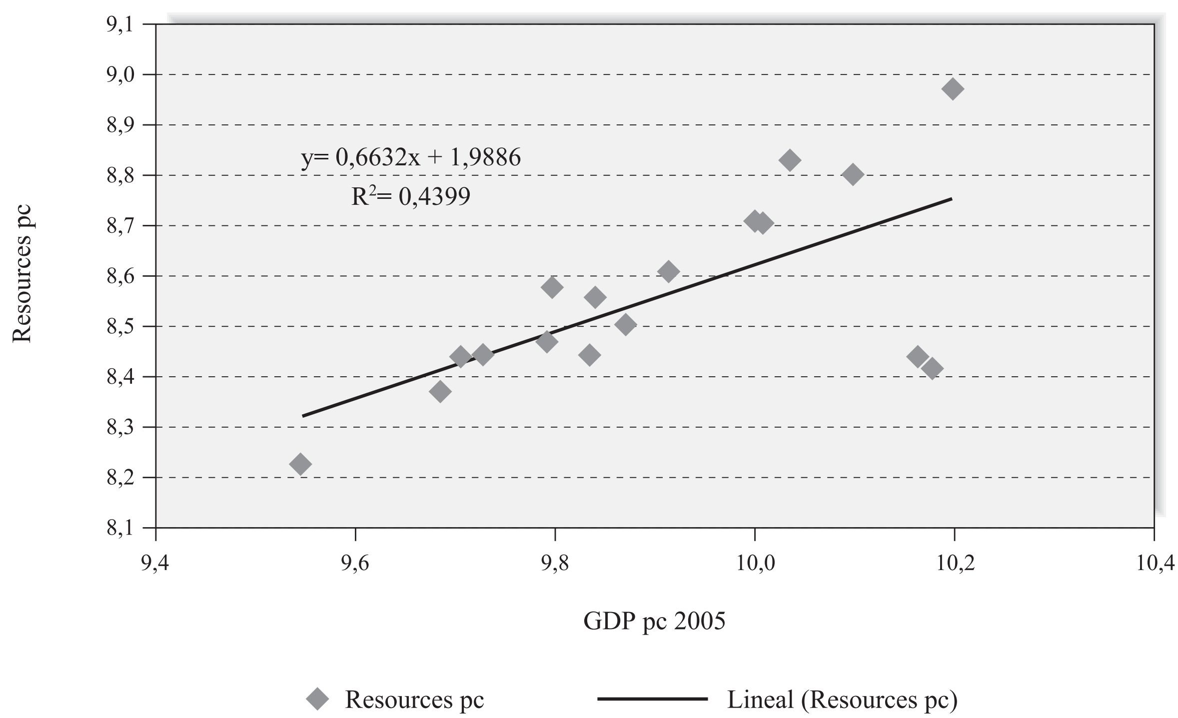

Figure 7. Resources pc (MFI) vs GDPpc, 2005

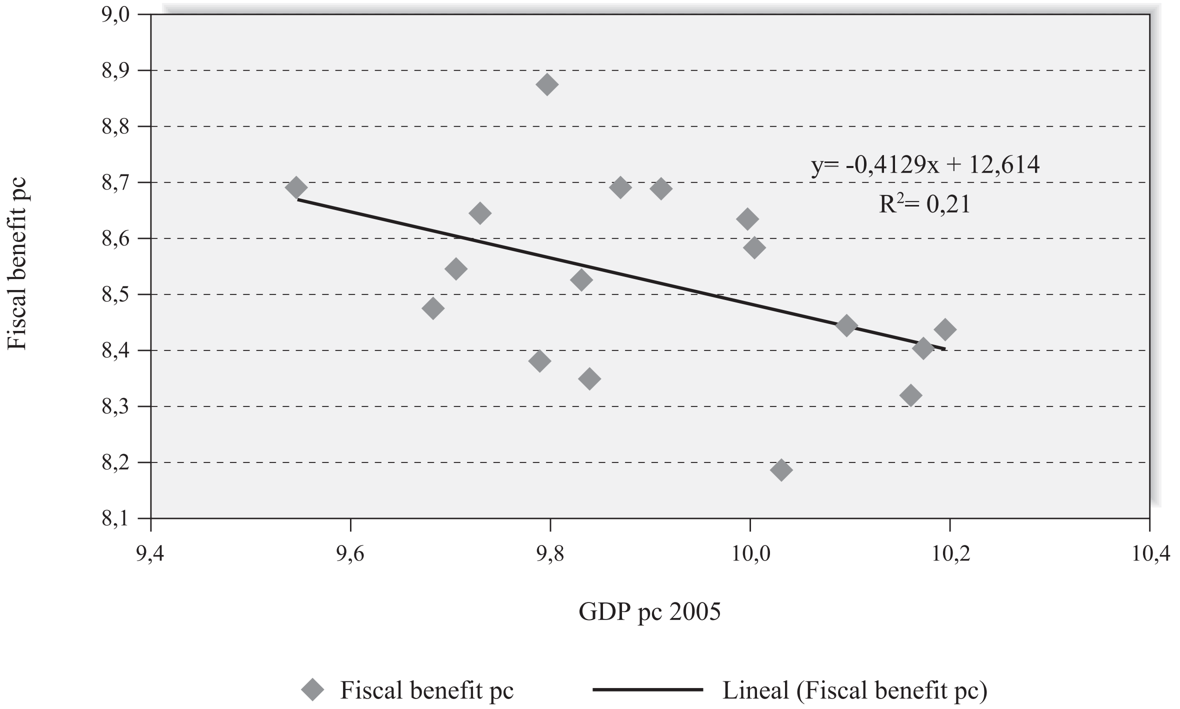

Figure 8. Fiscal Benefit (TBI) pc vs GDPpc, 2005

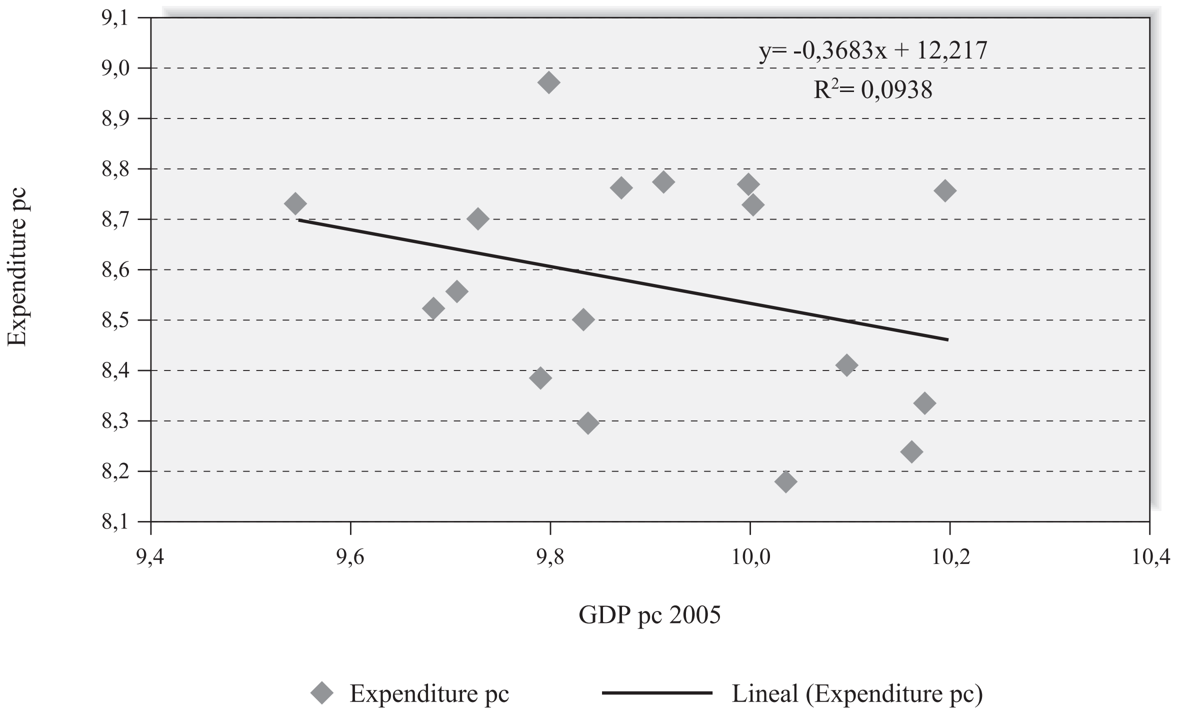

Figure 9. Expenditure pc (MFI) vs GDPpc, 2005

In the following figures (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 (which can be interpreted as fiscal capacity) 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 with respect to the initial distribution of fiscal capacities.

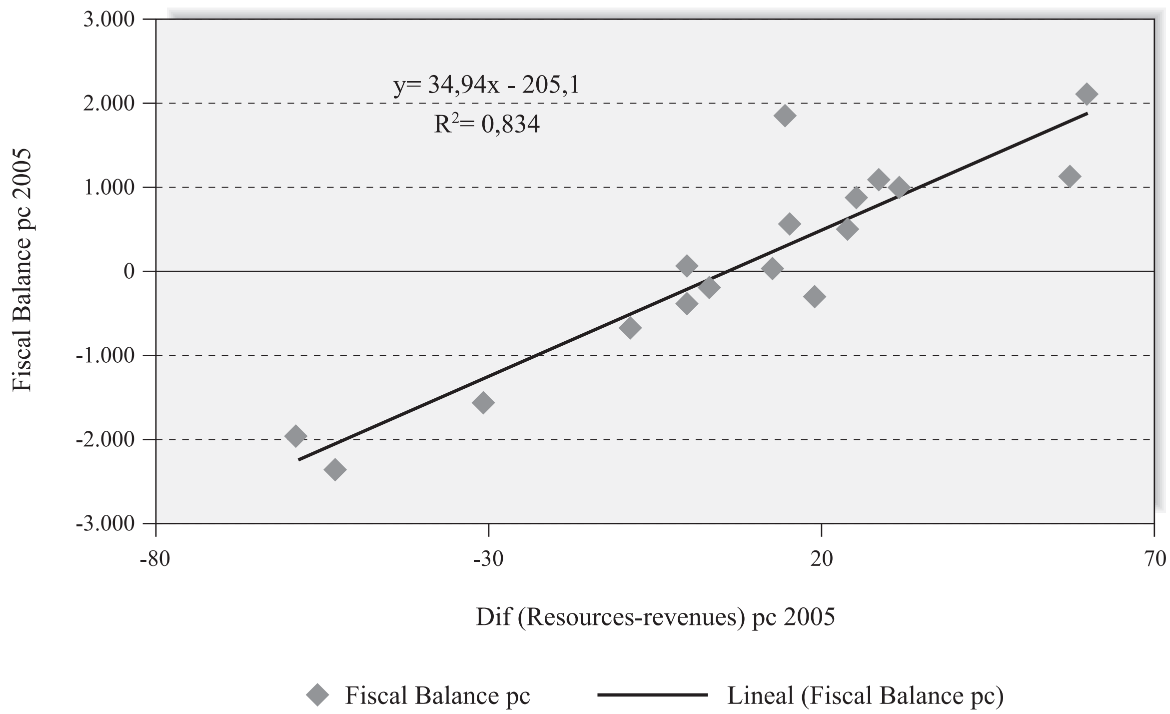

Figure 10. FBalancepc (TBI) vs (Resourcespc-revenuespc)

The observed result might be explained by the fact that the mechanism according to which RGs receive their transfers, in particular through vertical equalization 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 resources 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. One should also notice that this effect has been reduced progressively as far as the CG has introduced additional resources. The increase has been specially relevant for those regions with a negative Global Sufficiency Fund contribution, since the effect for those regions of such a Fund was to restrict the theoretical gains from the model. Table 6 introduces the size of such adjustment in 2006 [13].

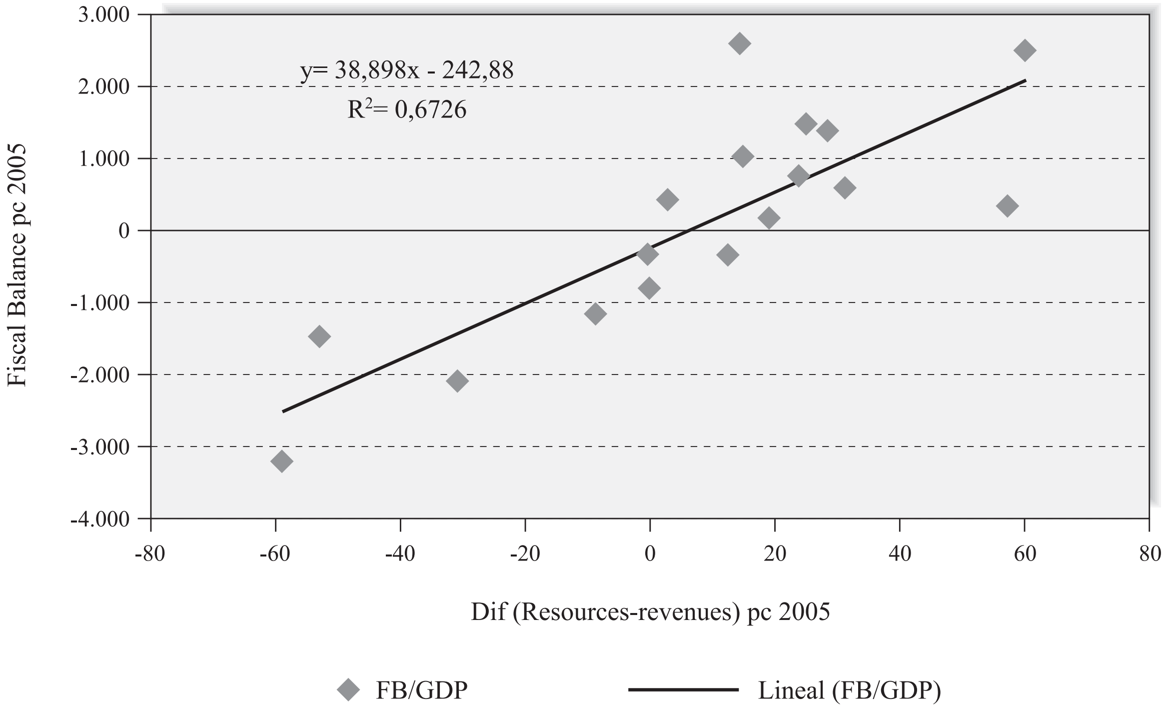

Figure 11. FBalancepc (MFI) vs (Resourcespc-revenuespc)

Table 6
THE SIZE OF THE STATU QUO EFFECT (FOR THE SAME LEVEL OF RESPONSIBILITIES). 2006 (thousand euros)

	Tax Capacity (1)	Statu Quo Fund (2)	Total Resources (3)	Statu Quo (%) (4)=(2)/(3)
Andalusia	9,784,547	8,217,125	18,001,672	45.6%
Aragón	2,238,183	1,055,083	3,293,265	32.0%
Asturias	1,655,125	1,064,344	2,719,469	39.1%
Balearic Islands	2,040,488	–263,964	1,790,536	–14.7%
Canary Islands	1,293,518	2,944,999	4,238,517	69.5%
Cantabria	896,315	587,645	1,483,960	39.6%
Castilla León	3,683,863	3,005,497	6,689,359	44.9%
Castilla-La Mancha	2,388,574	2,323,488	4,712,062	49.3%
Catalonia	13,330,838	1,703,095	15,033,933	11.3%
Extremadura	1,132,611	1,900,469	3,033,081	62.7%
Galicia	3,607,764	3,441,230	7,048,994	48.8%
La Rioja	482,164	321,894	804,058	40.0%
Madrid	13,048,458	–1,131,782	11,916,676	–9.5%
Murcia	1,712,903	1,079,651	2,792,554	38.7%
Valencia	7,233,349	2,366,797	9,600,146	24.7%

Source: "Liquidación del modelo de Financiación 2001, 2006". Ministry of Public Finance.

More importantly, the following figure (12) indicates that regions with similar GDPpc have signifficantly different levels of resources, which suggests that the pitfalls we mentioned in the previous paragraph are quite significant (see also table 3: the data corresponds to the mechanism to provide financial resources to Autonomous Communities).

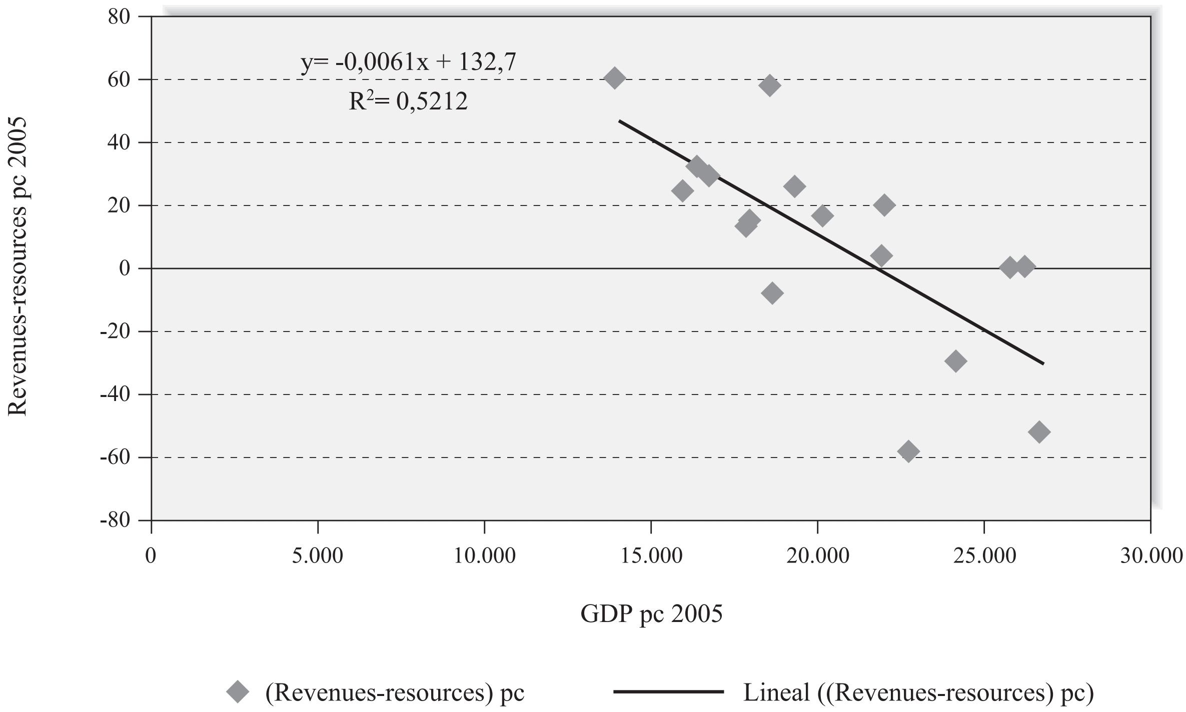

Figure 12. GDPpc vs (Revenuespc-resources)pc

It can be observed too that the regional distribution of the CG Public Investment, being this one of the main components of fiscal balances, is also rather discretional.

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. In this sense, public investment would help regional convergence.

However, this argument is again spurious (see figure 13, 14 and 15). According to the data, although it is true that fiscal balances are (weakly) correlated with regional public investment, the correlation between public investment and GDPpc is almost non-existent. Data does not seem then to support the argument that the CG invest largely in the poorest regions.

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

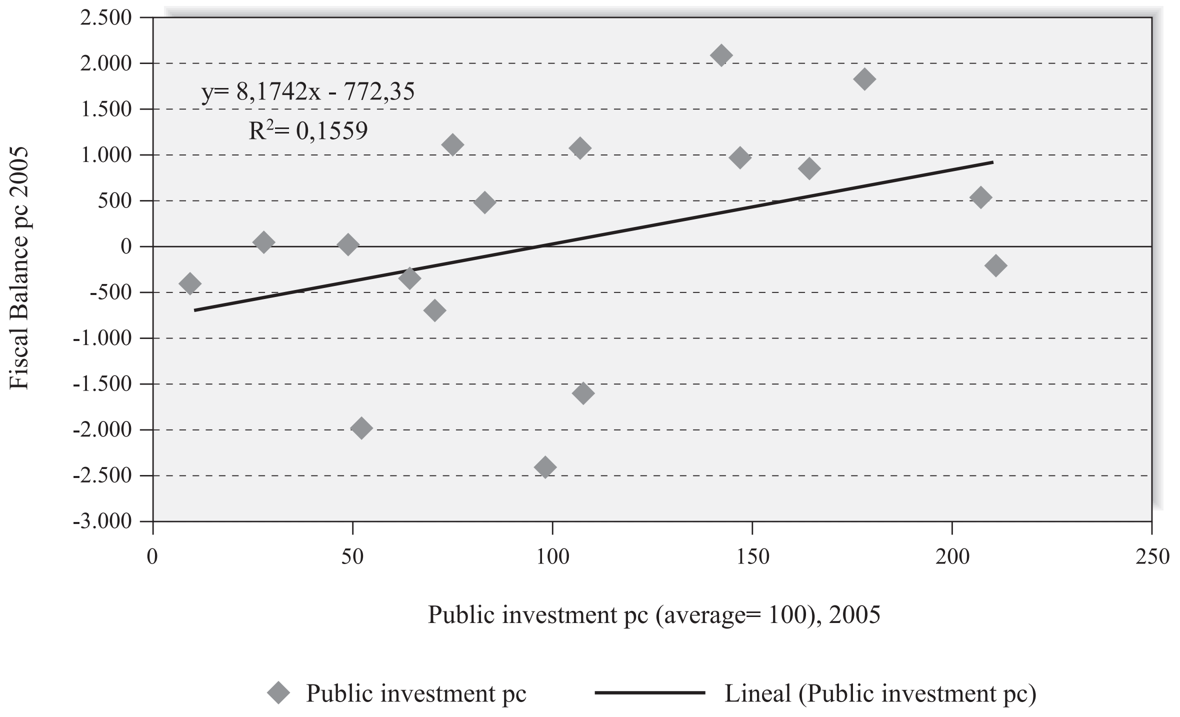

Figure 13. FBalancepc (TBI) vs PublicInvestpc

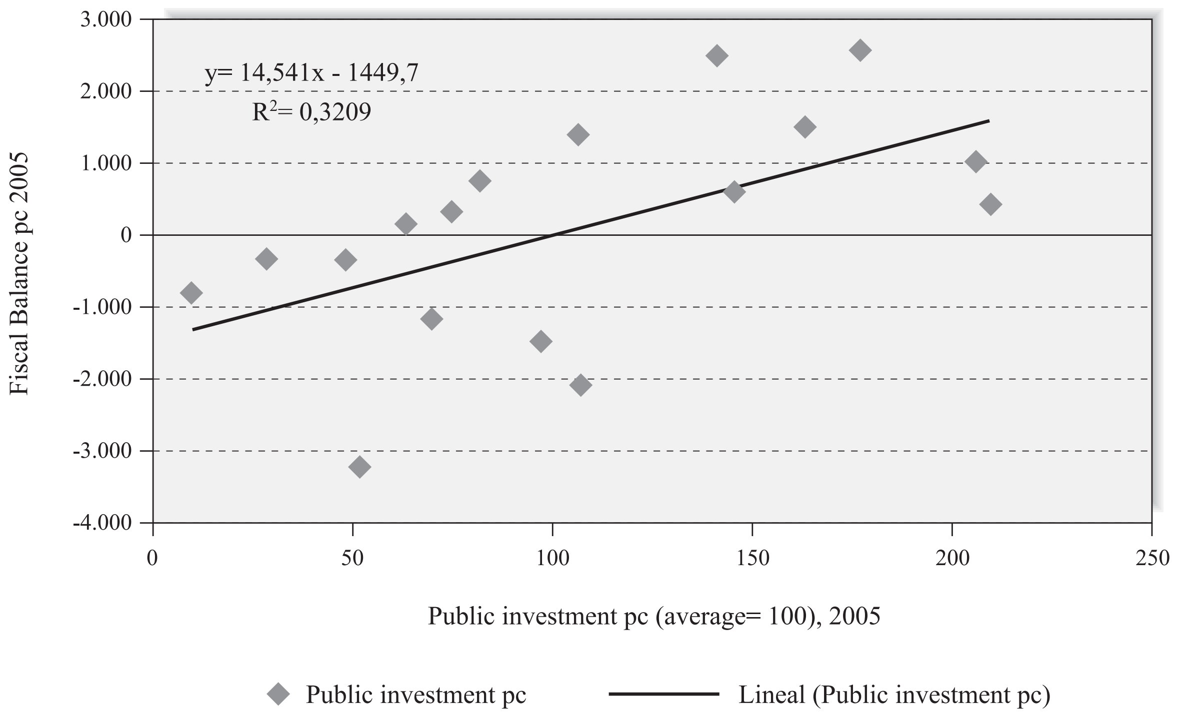

Figure 14. FBalancepc (MFI) vs PublicInvestpc

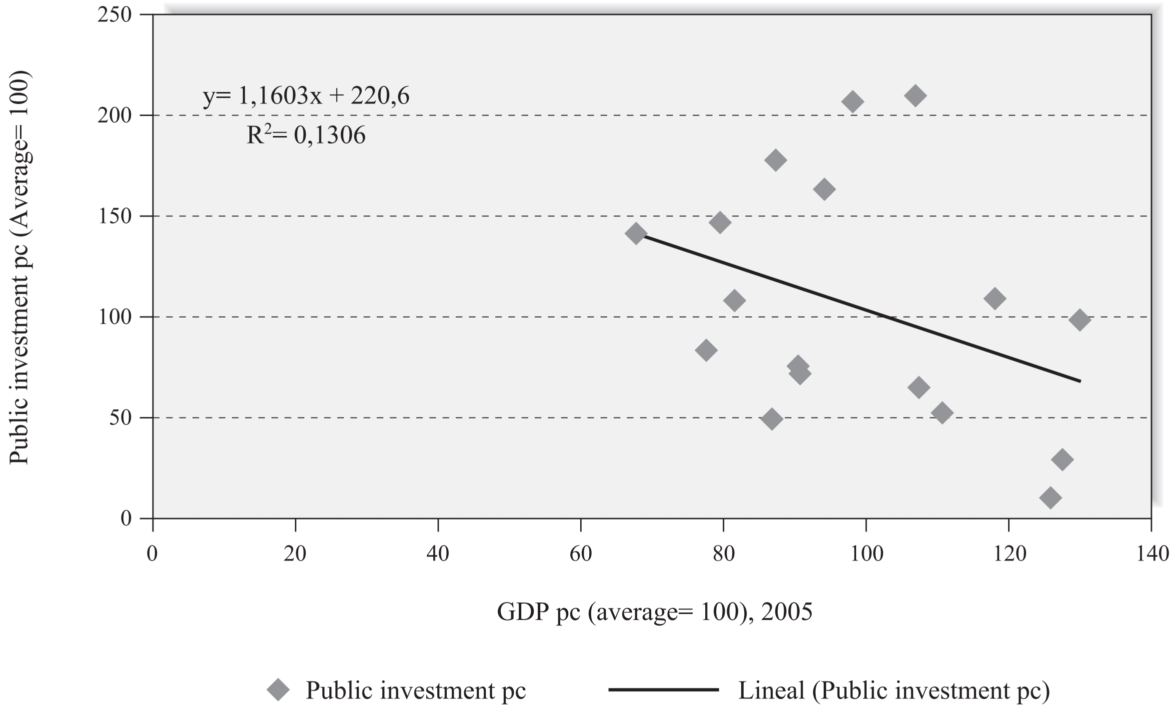

Figure 15. PublicInvestpc vs GDPpc

A further argument to test –and this is our argument not that of the opponents to fiscal balances– 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 of the regions, mainly 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, 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 figures 16 and 17. The data suggests that those regions with negative fiscal imbalances in 2005 [14] did not have to reduce their expenditures more than the other regions during the period 2009-2011. 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. One possible explanation to this result is that we do not take into account the level of debt. That is, regions may have postponed budget cuts by incurring in more fiscal deficit and issuing additional debt. In fact, as it can be seen, during that period, all but two regions failed to complete deficit targets.

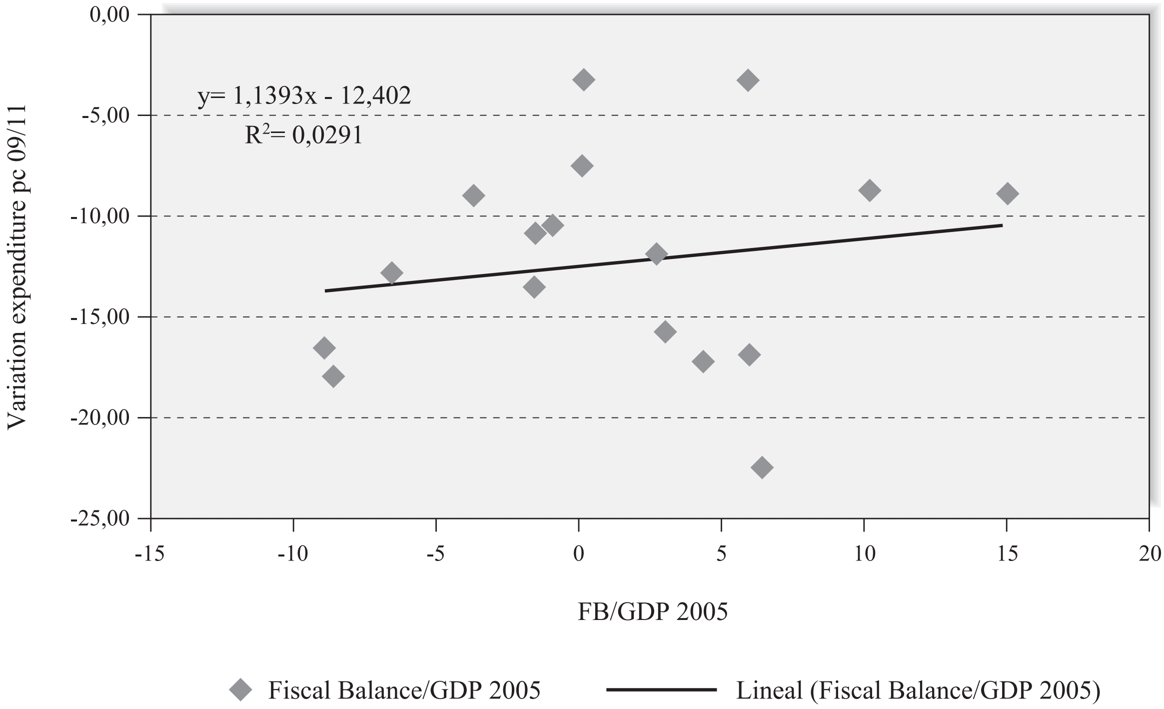

Figure 16. FB/GDP2005 (TBI) vs Expenditurepc 2009/2011

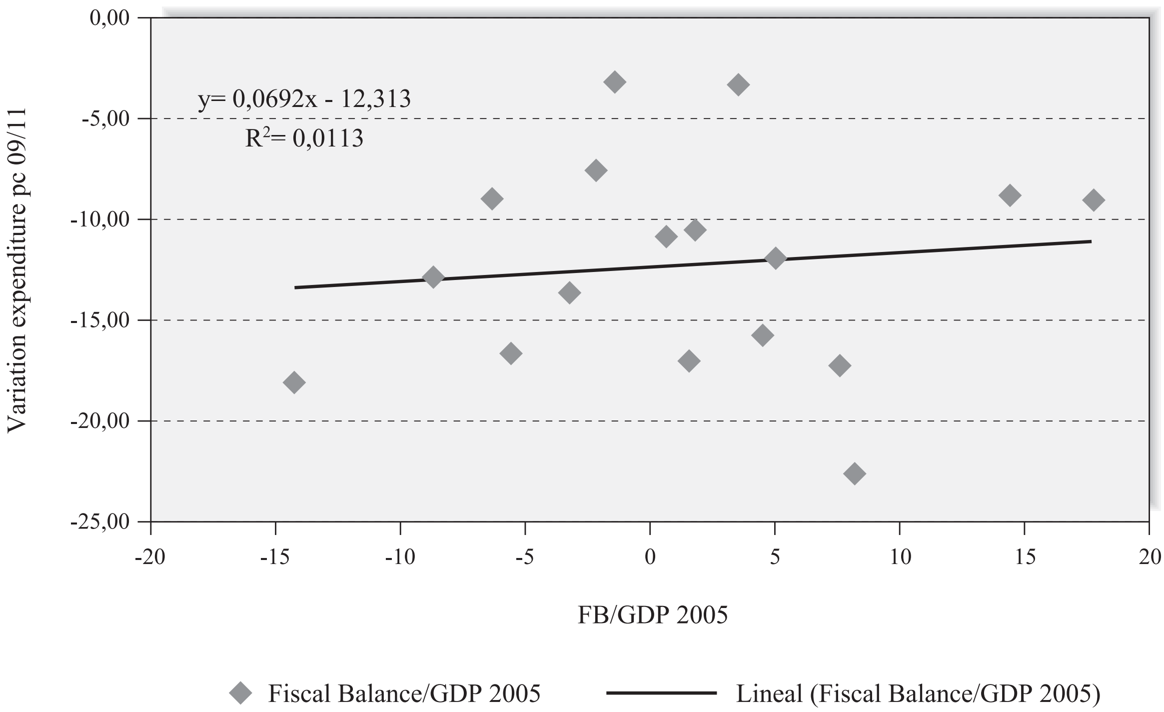

Figure 17. FB/GDP2005 (MFI) vs Expenditurepc 2009/2011

5.2. 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 figure 18), we indeed observe that after 2002 the imbalance increases well above per capita GDP, while it was just the opposite before that year, 1996 being the reference year).

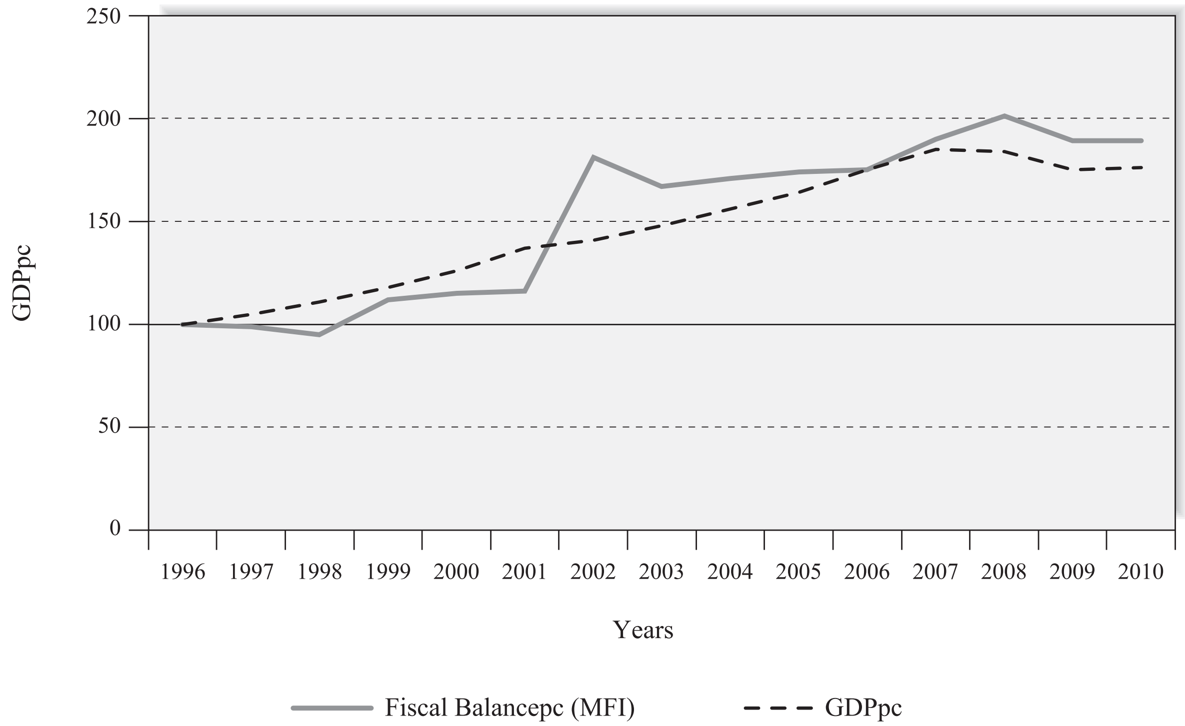

Figure 18. Fiscal Balancepc (MFI) and GDPpc, 1996=100

However, if we compare fiscal balances since 2002 (2002 is the reference year in figure 19), we observe that the evolution of flows has been very uniform and they evolve below the evolution of GDPpc. As expected, data analysis since 2002 seems to prove that fiscal residuals reflect different regional GDPpc for both estimation procedures.

The reason of this apparent contradiction is that the reference year in both figures is different. In addition, in figure 18, the methodological change implemented may have introduced some distortions in the results. Still, it is important to remark that differences in methodologies affect the absolute value of fiscal flows, but not their signs.

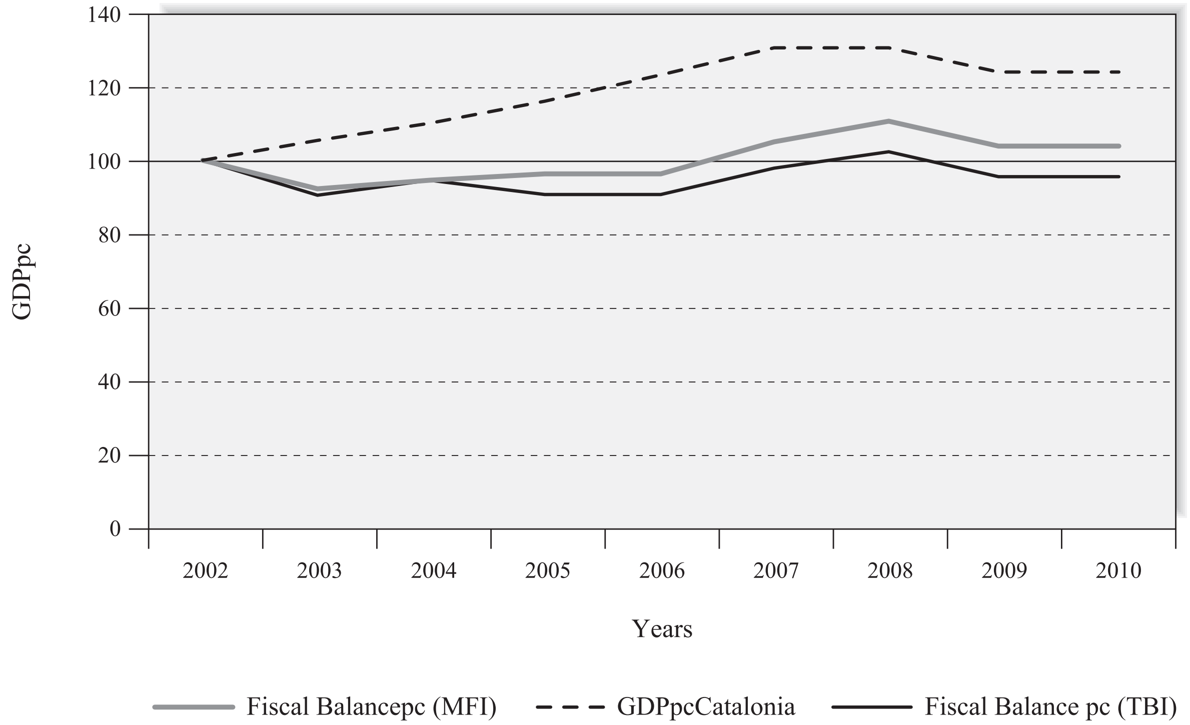

Figure 19. Fiscal Balancepc and GDPpc, 2002=100

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, once the trend effects are eliminated the relationship between the variation of GDPpc and that of fiscal residuals did disappear for either methodology (see figures 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 pro-cyclical effects. In addition to this, the observed lack of correlation of variables taken in differences suggests that the correlation between Fiscal Balances and GDPpc may be spurious.

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, although the fiscal residual per capita 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.

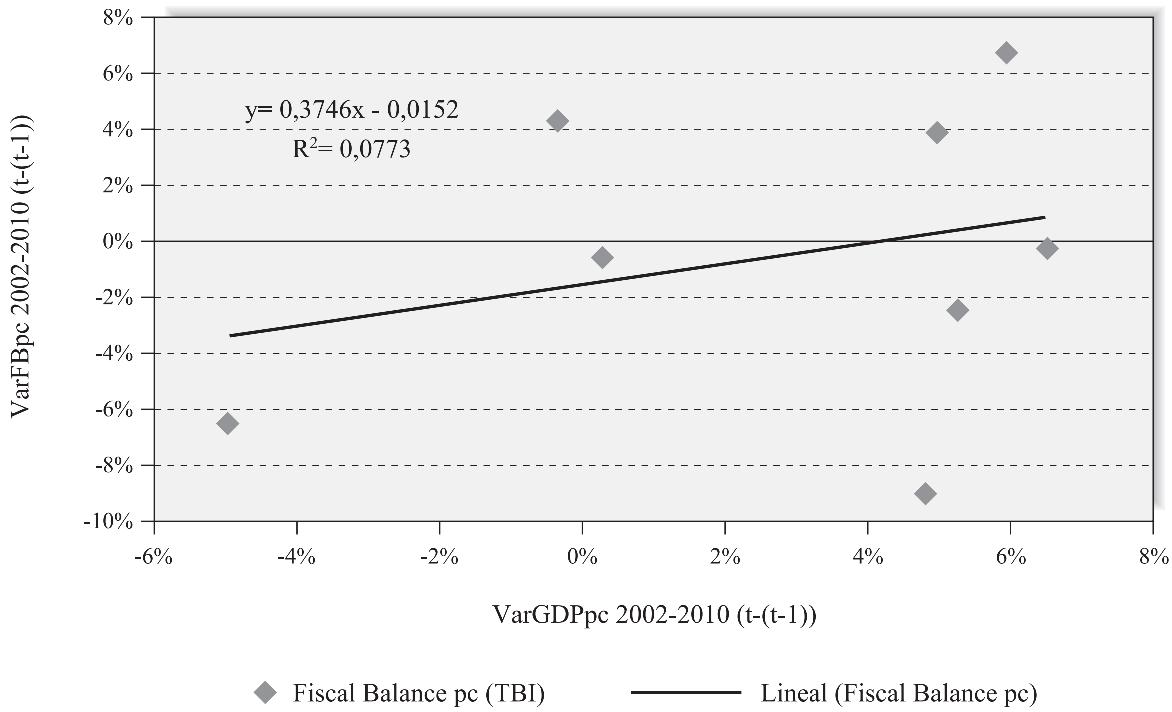

Figure 20. VarFBpc (TMI) vs VarGDPpc 2002-2010 (2002=100)

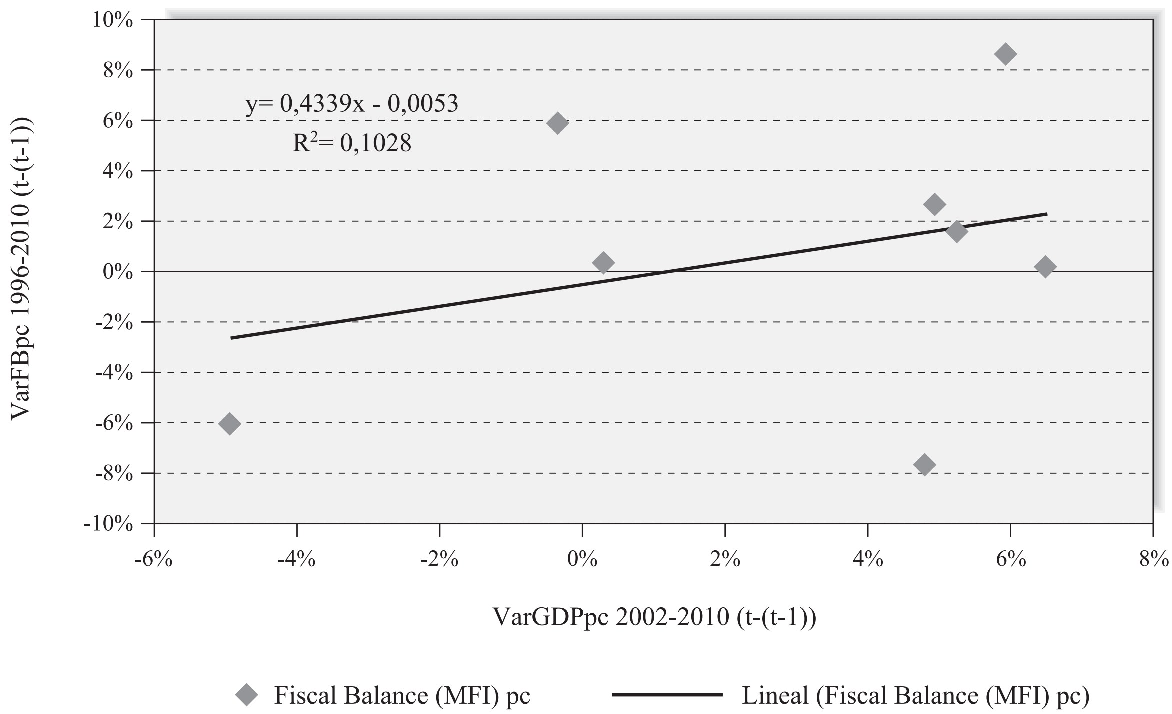

Figure 21. VarFBalancepc (MFI) vs VarGDPpc 2002-2010 (2002=100)

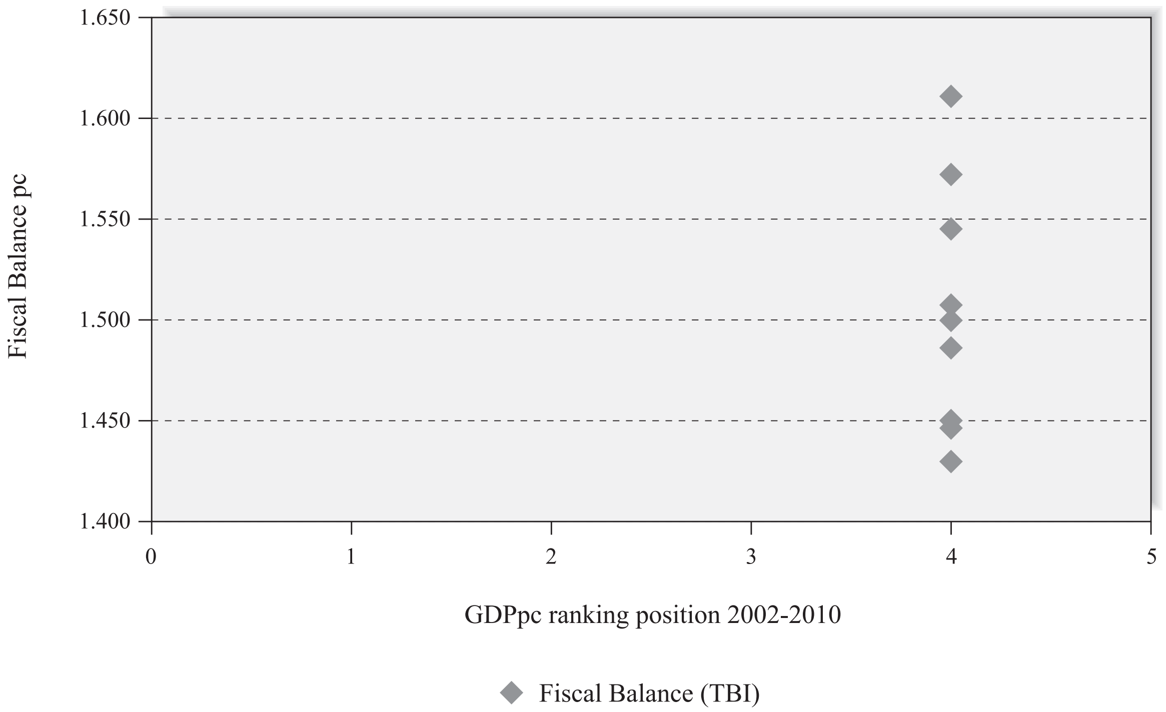

Figure 22. Fiscal Balancepc (TBI) vs GDPpc ranking position

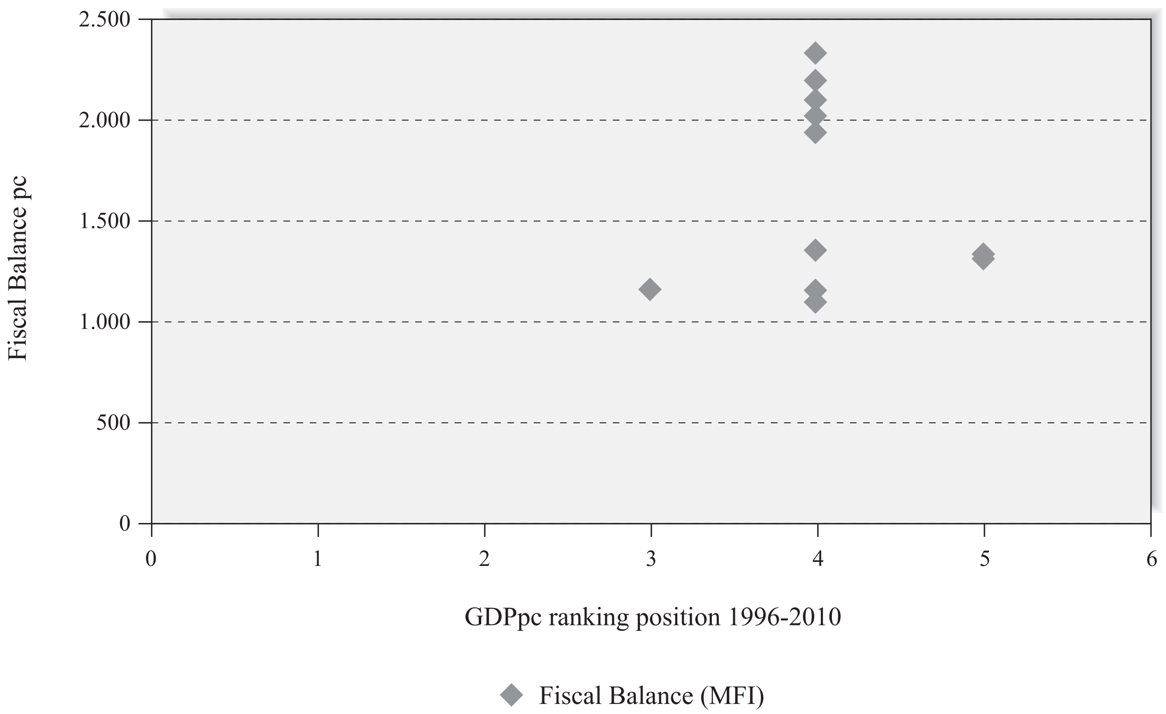

Figure 23. Fiscal Balancepc (MFI) vs GDPpc ranking position

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.

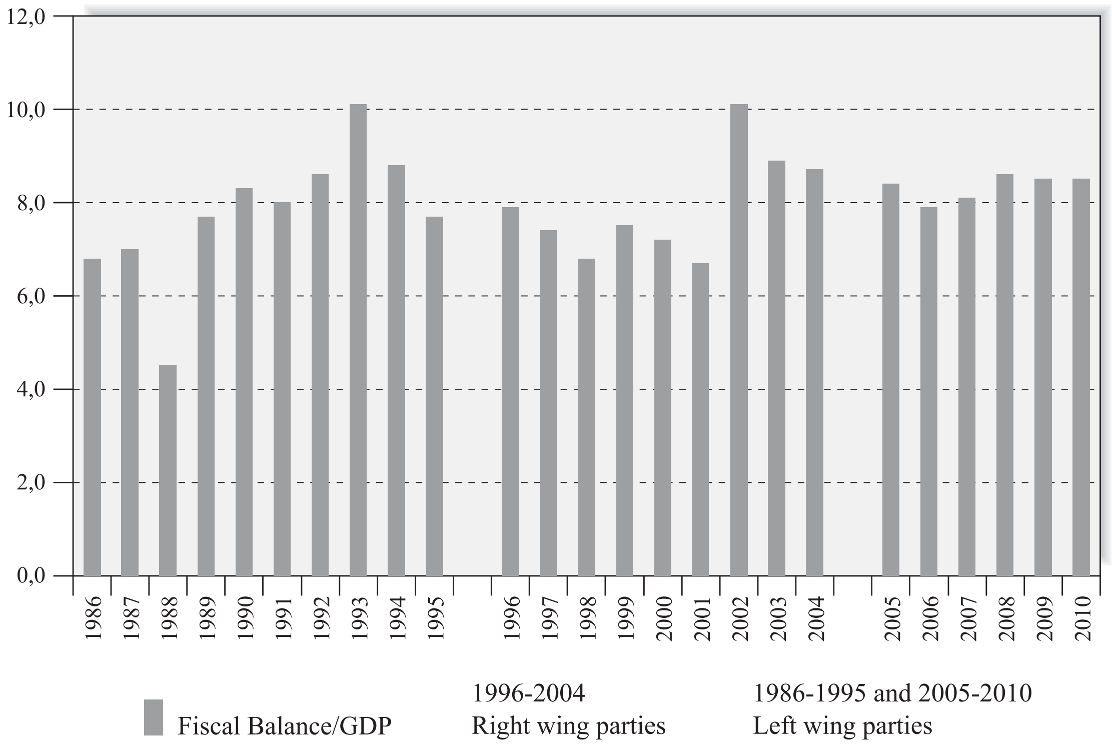

Figure 24. Fiscal Balance (MFI)/GDP and political orientation (CGov't)

6. Concluding remarks

Most of the questions analyzed in this paper have important political roots that supersede empirical approaches and pure methodological debates. To allocate revenue and expenses on a territorial basis is not value-free. It needs to frame the balance within a constitutional setting, and a particular fiscal agreement among jurisdictions. We need for this something more than a simple territorial aggregation of the sum of the individuals' net fiscal welfare residuals, as estimated under the tax and benefit incidence approach. This latter consideration is not however what informs 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 fiscal capacity from achieving full financial empowerment under scenarios other than that of the present fiscal drainage.

Out of the normative frame that we have taken 'as given' we have moved this paper into the empirical arena, claiming that transparency is at any rate a necessary condition for an appropriate analysis of fiscal unbalances. Despite being unable to present conclusive statistical relations due to a lack of data (either time series and/or cross-sectional), most of the results suggest that some of the arguments for disregarding fiscal balances, such as they simply reflect 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 largely 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.

Notes

1. In most responsibilities the Central Government fixes the basic rules under which responsibilities will be developed by regional governments and to which extent they can decide on that responsibility. However, rules can be passed in the Central Parliament without the support or regional governments even though these governments have to implement –and finance– such rules.
2. See "LOFCA", Law 22/2009 and Law 2/2012.
3. 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 Guipuzkoa, and to Navarre, which form the Basque Autonomous Community and the Foral Community of Navarre, respectively.
4. 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 court facilities, although in 2008 the CG had announced major investments in this field over a five-year period.
5. The most interesting example of such asymmetries of information 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 some RGs claim to have received resources that were insufficient to fund the devolved power.
6. With regard to this tax, the Constitutional Court decided that RGs could implement it. However, CG did create exactly the same tax with a zero tax rate. In fact, the CG is transferring additional financial resources to those regions that did charge the tax, but not to those who had created it but could not implement it.
7. See Rosselló (2000).

8. 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.
9. See Balcells (2004) –page 694– for a summary, and Castells (1979), Castells *et al.* (2000), Colldeforns (1991), Departament Economia i Finances (2004, Gasch and Hombravella (1974), López and Martínez (2000), Martínez (1997), Petit (1965), Trias Fargas (1960).
10. This is how the Horizontal Equalization Fund is referred to in the new system for financing the Autonomous Communities (2009).
11. Figures are for share of income (6.24), consumption (6.75) and foreign markets (5.7).
12. 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.
13. Data for 2005 is not offered because for that year no information is availalable on the specific responsibilities of the jurisdictions, and it does not allow for a homogeneous comparison among regions.
15. 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.

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Resumen

La controversia sobre los mecanismos para calcular las balanzas fiscales no es técnica. Distintos métodos de cálculo sirven para distintos propósitos y ésos son políticos más que económicos. La diferencia fundamental está en su concepción sobre el concepto de jurisdicción territorial. Esto es, si estas jurisdicciones son algo más que agregación de individuos que residen en una determinada zona geográfica con sus residuos fiscales. En este sentido, incluso para aquellos autores que interpretan los saldos fiscales como el resultado de las políticas fiscales redistributivas, nuestros resultados señalan que esto no es lo que está sucediendo en España. De hecho, por el lado del gasto, no observamos un patrón sistemático para los flujos de gasto que se ajuste a las diferencias observadas en niveles de renta. Regiones con similares niveles de renta reciben distintos flujos de gasto por parte del gobierno central. Este es el resultado observado no solamente para el método del flujo monetario, sino también para el enfoque de carga-beneficio, a pesar de la forma en que se computan los efectos desbordamiento de los que se asumen como bienes públicos. De cara a comprobar si este sesgo territorial es político, puramente aleatorio o el resultado de efectos de aglomeración o economías de escala, es necesario que disponer de más datos sobre flujos fiscales para trabajar con datos de panel. En este sentido, la transparencia es la mejor estrategia para ajustar el enfoque del debate territorial en España.

Palabras clave: balanzas fiscales, análisis de incidencia impositiva, transferencias interregionales.

Clasificación JEL: B41, H70, H77, D74.