
“If you want me to stay, pay”

Peter Claeys and Federico Martire



Institut de Recerca en Economia Aplicada Regional i Pública
Research Institute of Applied Economics

Universitat de Barcelona

Av. Diagonal, 690 • 08034 Barcelona

WEBSITE: www.ub.edu/irea/ • CONTACT: irea@ub.edu

The Research Institute of Applied Economics (IREA) in Barcelona was founded in 2005, as a research institute in applied economics. Three consolidated research groups make up the institute: AQR, RISK and GiM, and a large number of members are involved in the Institute. IREA focuses on four priority lines of investigation: (i) the quantitative study of regional and urban economic activity and analysis of regional and local economic policies, (ii) study of public economic activity in markets, particularly in the fields of empirical evaluation of privatization, the regulation and competition in the markets of public services using state of industrial economy, (iii) risk analysis in finance and insurance, and (iv) the development of micro and macro econometrics applied for the analysis of economic activity, particularly for quantitative evaluation of public policies.

IREA Working Papers often represent preliminary work and are circulated to encourage discussion. Citation of such a paper should account for its provisional character. For that reason, IREA Working Papers may not be reproduced or distributed without the written consent of the author. A revised version may be available directly from the author.

Any opinions expressed here are those of the author(s) and not those of IREA. Research published in this series may include views on policy, but the institute itself takes no institutional policy positions.

Abstract

Devolution of political power is constantly on the political agenda in both Italy and Spain. Fiscal policy in these countries has granted specific privileges to some regions. Valle d'Aosta/Vallée d'Aoste (VdA) and País Vasco/Euskadi (PV) have an extensive say over spending decisions, and receive nearly all regional tax revenues. Although both VdA and PV are among the richest regions in each country, both are net beneficiaries of the fiscal equalisation system. This preferential treatment is the outcome of a fiscal system with limits on taxing power and debt issuance, and is meant as a compensation for the lack of autonomy. It so prevents calls for more fiscal autonomy, or even outright secession. The economic effects of this asymmetric federalism are negative. Although partial equalisation reduces excessive redistribution built in the fiscal equalisation system, more autonomy could pay off with more efficient government. Asymmetric federalism moreover creates a political impasse in the negotiation of a more efficient tax system and financing arrangement.

JEL classification: H70, H73, H77

Keywords: fiscal federalism, equalisation, secession, Valle d'Aosta, País Vasco.

Peter Claeys is a Lecturer professor at Universtat de Barcelona. Department of Econometrics, Statistics and Spanish Economy. E-mail: peter.claeys@ub.edu

Federico Martire is a Teaching-research fellow at Università degli Studi di Torino, Facoltà di Economia, Dipartimento di Diritto dell'Economia. E-mail: federico.martire@gmail.com

1. Introduction

Countries that used to be highly centralised like Italy and Spain have made many steps in the devolution of powers to regional government. Decentralisation is permanently at the centre of the political debate. A peculiar feature of this gradual decentralisation process in both countries is the differentiation of the basic financing system over different regions. Some regions have received specific powers in spending, or in the financing of the regional budget. For some, this differentiation has usually been justified by geographical or economic circumstances. Isolated or poor regions have been attributed more autonomy. For others, a century-long history of fiscal autonomy – based also on linguistic and cultural diversity – has been the reason for granting additional spending and tax powers.

In this paper, we examine the reasons for such a preferential treatment of rich regions, and its economic consequences. We compare the financing system of an Italian region with a special status, Valle d'Aosta/Vallée d'Aoste (hereafter, VdA), and the Spanish region of País Vasco/Euskadi (hereafter, PV). At present, VdA has an almost complete say over its spending. In contrast to the 'ordinary' Italy regions, it also receives nearly all tax revenues collected on its territory.¹ For PV, autonomy is arguably even stronger as it is entirely in command over spending. PV is also the only region to collect all tax revenues. In this 'foral' system – also called the 'Concierto Economico' – PV collects all taxes, and afterwards compensates the central government for services delivered on its territory.² These special arrangements result in net benefits for both regions, with financial resources per inhabitant above those of other regions. Despite being among the richest regions, both get a lot of supplementary financing and are nearly exempt from contributing to solidarity mechanisms with poorer regions in the country.

The origin of this preferential treatment is the difficulty for the central government in Rome and Madrid to develop a fiscal arrangement that fully develops fiscal autonomy over the entire country (Garcia-Milà and McGuire, 2007; Ambrosanio and Bordignon, 2008). Despite the devolution of spending and tax powers, the system is still characterised by tight controls on tax autonomy and the issuance of public debt. This implies that both regions formally receive close to 100 per cent of all tax revenues, but that their autonomy to decide

¹ Similar powers are granted also to the other 'autonomous' regions (Sicily, Sardinia and Friuli-Venezia-Giulia) and provinces (Bolzano/Bozen and Trento) with special statute.

² The only other region with a similar system is Navarra.

on tax revenues – as in other regions – is *de facto* quite limited. In VdA, the main source of revenues is shared taxes, on which the regional government has limited discretion to set exceptions. VdA can only revise its own budget if the central government unilaterally decides to change tax rates or bases. Moreover, the Italian Stability Pact imposes further restrictions on regional debt. In PV, unilateral tax decisions are possible, yet its discretionary power is implicitly curtailed by rules in the Concierto Economico that prohibit tax measures that create competitive distortions in the Spanish internal market. In addition, the Fiscal Policy Council strictly controls the issuance of new debt.

Limits on tax and spending powers, or on public debt, may be necessary to equalize fiscal capacity and control the sustainability of public finances across the country. However, such rules are not adequate for VdA or PV that could afford lower taxes or higher levels of public spending without incurring higher debt. Tax competition would allow both regions to attract firms and citizens with lower taxes or better public services. VdA or PV lose economically under this inflexible fiscal arrangement. The generosity of the fiscal arrangement is a compensation to both regions for the lack of fiscal federalism in the current arrangement, and so prevents calls for more fiscal autonomy, or even outright secession (Le Breton and Weber, 2003). The current situation that treats regions differently is a political equilibrium where on the one hand, the calls of rich regions for more autonomy are limited and do not spark conflict, and on the other hand, poorer regions or the central government do not question the existing privileged financing status of VdA and PV. It is a compromise between the difficulties to implement fiscal federalism in the entire country, due to economic and institutional differences, and the necessity for some regions to develop real tax and spending powers.

The underlying conflict between equity and efficiency is not particular to Spain or Italy. But the asymmetry in financing exacerbates these problems (Keating, 1998, 1999). Differentiating spending and tax powers across regions creates economic inefficiencies. Although the partial equalisation of fiscal capacity under asymmetric federalism might reduce an excessive redistribution built in the fiscal equalisation system (Brennan and Buchanan, 1980), and so provide incentives for regions to improve economic management, full autonomy would allow all regions to reap the (economic) benefits of decentralisation. In VdA or PV, limited autonomy creates economic losses due to the inefficiently high tax and spending levels, and a suboptimally low level of debt. It keeps both regions on a

lifeline of overly generous transfers from the central government and is a barrier for economic growth.³

Federalism *à la carte* not only creates economic losses, but persistent distortions in regional decision making create rent seeking behaviour, and a political deadlock on possible reforms. Modifications of the financing arrangement are determined by the political clout of each region. VdA, with a small population and just one deputy and senator in the Italian parliament cannot put sufficient political power at the central level to contain decisions on taxation. In contrast, political parties of PV are often crucial for majorities of the central government in the Spanish Parliament. This has made a rather small region punch above its political weight, and has resulted in the approval of additional financing for PV. Reform measures in Italy and Spain over the last decade have aimed at matching higher spending autonomy with increased taxing power for the ordinary regions and Comunidades Autonomas (CCAA). But it has not brought substantial changes to the special arrangements of VdA and PV. Asymmetric federalism risks creating a political stalemate that makes it impossible to set further steps in devolution in an economically sensible way.

The paper is structured as follows. In section 2, we compare the development of fiscal arrangements in VdA and PV. We then assess in section 3 the *de facto* degree of autonomy in spending and taxes both regions have. We discuss the financing arrangement, and the reasons for the limited use of tax autonomy in section 4. The final section summarises, and discusses implications for further steps in fiscal federalism.

2. The financing arrangement

2.1. Valle d'Aosta/Vallée d'Aoste (Aosta Valley)

The 1946 Italian Constitution recognizes the existence of five cases of special regional autonomy within the unitary Republic. The reason of this particular attention resides in the historical and cultural differences that characterized these regions and in the will of preserving ethnic-linguistic minorities, as explicitly reported in article 116 of the

³ Empirical evidence on the relationship between decentralization and economic growth is mixed, yet suggests that economic benefits are not a *panacea* but depend on the implementation of devolution (Thornton, 2007).

Constitution.⁴ This distinctive treatment has been maintained – and strengthened, albeit only formally – during the reform of the Constitution in 2001.

The academic literature has not given particular attention to the case of VdA, although it presents some interesting peculiarities, both from legal and economic points of view. The autonomy of the smallest Italian region finds its roots back in the Middle Ages under the Savoy rule, and reflected the linguistic and judicial specificity of the valdôtains⁵. In VdA, in fact, the enforced law derived mainly from habits and customs, although being far from a proper common law system.⁶ The autonomy guaranteed by the Savoy kings assured wide self-government powers also on fiscal and financial issues. This system would survive, with minor changes until the Fascist regime abolished it completely.

In 1946, the Italian Constitution restored with article 116 the autonomy of VdA. The same article also established the conditions of autonomy, in particular on administrative functions. The Constitution did not regulate the necessary financial resources to exercise those functions for any region. Fiscal autonomy is to be found in the Statute of the Region itself, introduced with Constitutional law n. 4 on February 26th 1948.⁷ Two particular articles of this Statute play a fundamental role in regulating the structure of local public finances. First, article 12 introduces bilateral agreements between the central government and the regional administration, with the aim of assigning to VdA a percentage of the fiscal revenues of the central government, although guaranteeing also the possibility of introducing *entrate proprie*, i.e. regional taxes set by the regional government.⁸ VdA's regional government has never used this possibility to levy own taxes. Second, article 13 rules the attribution of fiscal assessment powers to the regional government. These powers, however, merely concern the collaboration with the central administration's tax offices deployed on the territory of the region. Tax collection powers are not even mentioned in the Statute and, therefore, remain entirely under the control of the central administration. The fiscal and financial prerogatives of VdA in the Regional Statute can be defined as a fiscal

⁴ “Il Friuli Venezia Giulia, la Sardegna, la Sicilia, il Trentino-Alto Adige/Südtirol e la Valle d'Aosta/Vallée d'Aoste dispongono di forme e condizioni particolari di autonomia, secondo i rispettivi statuti speciali adottati con legge costituzionale.”

⁵ In VdA, the languages in use are Italian, French and *Arpitan* (a franco-provençal's patois typical of western Alps).

⁶ The codification of local laws took place only in 1588, with the publication of the so-called *Coutumier du Val d'Aoste* (Janin, 1969).

⁷ And in particular, two titles of the Statute: Title III (*Finanze, demanio e patrimonio*)(in articles 5 to 13) and IV (*zona Franca*)(article 14).

⁸ “Oltre al gettito delle entrate proprie della Valle, sarà dallo Stato, sentito il Consiglio della Valle, attribuita alla stessa una quota dei tributi erariali.”

system of derivate finance (*finanza derivata*), in which all resources derive from decisions, sometimes concerted, of the central government, with no real fiscal power for the regional administration.

Several State laws have implemented the content of the Statute. The following are the most relevant:

1. no. 1179, November 29th, 1955;
2. no. 1065, December 6th, 1971 (later modified by Decree no. 638, October 16th, 1972);
3. no. 690, November 26th, 1982, currently in force.

These laws give content to the general stipulations of the Statute. The system adopted by the Italian State and the VdA, under the third Title of the Regional Statute, is based on the *compartecipazione* (share) of fiscal revenues collected on the territory of the region. The method has been modified substantially from the content of the last paragraph of article 12 of the Regional Statute⁹ and it is based on a partition of all fiscal revenues collected on the territory of VdA on the base of a mix of both fixed and variable percentages. Initially (law no. 1179/55), the variable portion was attributed as a percentage of the *imposta di ricchezza mobile*, but created several legal arguments between the State and the Region because of its complexity. Basically, Rome could unilaterally set – within some pre-established limits – the percentage to attribute to VdA. By opening or closing the tap of finance according to the specific needs of the Italian State and depending on its political relations with the regional administration, Rome could use these as a levy in its negotiations. Moreover, these so-called *tap policies*¹⁰ caused great instability in the regional budget. The modification of the law (no. 1065/71) attributed 90 per cent of all taxes and levies. This innovation guaranteed a greater stability of the financial resources, but did not introduce new income for VdA. Although a transitory measure, this solution was extended until the law no. 690/81 entered into force. Since the 1981 law did not introduce any particular fiscal innovation, it still is the current regulating act of the financial system of VdA. The law confirmed the partition of 90 per cent of most taxes and levies in favour of VdA.¹¹ Article 1 of the law details the various groups of sources VdA can obtain its financial resources from.¹² The most significant source remains the share of state taxes and levy collected on the territory of the

⁹ “Lo Stato, inoltre, cede a favore della Valle i nove decimi del canone annuale percepito a norma di legge per le concessioni di derivazioni a scopo idroelettrico.”

¹⁰ Translated: *politiche del rubinetto* (Brosio and Revelli, 2000).

¹¹ Except that for years 1982 and 1983 when, due to harsh political contrasts between the regional and the central administration, the percentage was cut to 70 per cent.

¹² Own taxes, surcharges on state taxes and levies, share of state taxes and levies, administrative financial acts – such as the sell or rent of goods of regional property – and contribution of the state.

Region. The legislator has also listed (articles 2, 3 and 4) the taxes and the levies whose 90 per cent is devolved to the regional administration. Although the law cannot be unilaterally modified by the Italian Parliament nor the Council of Aosta Valley, but only after the approval of a joint committee composed by members appointed by both assemblies, the central government still keeps discretionary power over tax rates and bases. It so controls the main bases for regional taxation, such as taxes on economic activity (IRAP), personal income (IRPEF) and residence (ICI). VdA can only decide marginally on the levied rates and on regional surtaxes, among the limits established by State laws. In November 2010, the Regional administration and the Italian government reached an agreement to revise the sharing agreement in order to compensate VdA for the progressive reduction of VAT on imports.

2.2. El País Vasco/Euskadi¹³

The Spanish Constitution of 1978 has started a process of progressive decentralization in favour of the *Comunidades Autonomas (CCAA)* (Lopez Aguilar, 1999), also in fiscal matters. This decentralisation has created two distinct groups of CCAA:

1. CCAA under the common (or general) regime;
2. CCAA under the foral regime.

All the CCAA but País Vasco/Euskadi and Navarra belong to the former group.¹⁴ PV and Navarra's fiscal and financial relationships with the Spanish government are regulated according to the rules of a traditional system of *Concierto Economico* and *Convenio Economico* respectively.¹⁵ The legal justification for this distinct treatment of both regions lies in the First Additional Disposition of the Constitution which safeguards and respects the historical rights of foral territories.

As in the case of VdA, Basque financial autonomy has its roots in the Middle Ages. During the thirteenth century, the territory of Euskadi got annexed to the Kingdom of Castilla. Nonetheless, the three territories – Alava, Guipuzcoa and Vizcaya – maintained their own legal system, and these foral rights guaranteed administrative, military and fiscal autonomy. This system remained largely unaltered until the end of the nineteenth century. Due to the

¹³ Tax autonomy is actually given to the three provinces (Alava, Guipuzcoa and Vizcaya) that then finance the region. The regional government only coordinates the administrative functions.

¹⁴ Even among the CCAA under the common regime, there are quite some differences in their fiscal treatment, but these are not of first order.

¹⁵ Economic arrangement and agreement respectively.

need of closer economic cooperation between Spain, PV and the Spanish colonies, foral prerogatives became a rather awkward barrier to free trade.¹⁶ With the support of both Spanish and Basque liberals, the 1869 Constitution made some first steps in reducing the foral rights. By 1876, they were definitively abolished and only the specific fiscal regime was kept in place. This was the start of the so-called *sistema de concierto* between PV and the central government (Zubiri, 2000). Under this regime, the provinces of Alava, Vizcaya e Guipuzcoa have the right to collect their own taxes, but need to contribute to the Spanish budget in equal form as other Spanish provinces for the costs the central government has in the PV. This contribution, also called the *cupo* or quota, is basically a payment for the costs the central government has in delivering some common services to the PV (defence, foreign affairs, etc).¹⁷ The idea is that the *cupo* could be revised every five years.

These principles have been guiding all negotiations since, under all political changes the country has known. The first agreement was signed in 1878, and followed by revisions in 1887, 1894, 1906 and 1925. The 1931 Statute of Autonomy of Euskadi should have abolished the system of the *Concierto* in favour of a brand new model guaranteeing total fiscal and financial autonomy to PV. Yet, the Civil War and Franco's dictatorship blocked the 1931 Statute, which recognized the autonomy of provinces and municipalities.¹⁸ The return to democracy, following Franco's death and the period of *Transición*, re-established fiscal and financial autonomy with the 1978 Constitution, along with the Statute of Autonomy for PV, approved in 1979.¹⁹ Articles 40 and 41 of this Statute introduce the legal base for the introduction of the foral system of the *Concierto Económico*.²⁰ The first organic law under this economic agreement between the central government and PV was approved in 1981, and followed in its main principles the agreements set up in 1876 (Lémbarri, 1995). The most relevant difference is that the three territories composing PV were not to be treated separately anymore, but as a unique political and administrative subject, hence reducing the number of agreements from three to one.

¹⁶ PV was *de facto* a free-tax zone with custom rights on the Basque-Spanish border.

¹⁷ The system is a bit more complicated as the *cupo* is a net compensation, after accounting for some tax income the central government has received on the few taxes the region does not collect and some other receipts. For more details, see Zubiri (2000).

¹⁸ Franco abolished the system of *Concierto* for the provinces of Vizcaya and Guipuzcoa, which did not join his coup against the Republic, though maintaining these rights – all along his dictatorship – for Alava.

¹⁹ Also known as Statute of Gernika.

²⁰ “*Para el adecuado ejercicio y financiación de sus competencias, el País Vasco dispondrá de su propia Hacienda Autónoma.*” (article 40)

After a long and complex negotiation process, the Concierto's revision in 2001 addressed some innovations to tackle problems that had arisen since 1981 (Atxabal Rada and Muguruza Arrese, 2006).²¹ First, PV had been accused by other Spanish regions and trade unions of unfair tax competition, especially for attracting firms to locate in the region. Even if the regional government has the power to adjust the corporate tax base and rates, attempts to implement tax reductions have been blocked by legal courtsuits at the Basque Supreme Court, the Spanish Constitutional Court and the European Court of Justice (ECJ). The opponents argue that this creates harmful competition within the common Spanish and European market, and could be considered state aid.²² Second, the financing system of the common regions has been extended substantially, and modified substantially the taxing powers of these regions. Finally, European Monetary Union required some fiscal rule to restrain public debt. Although the Stability and Growth Pact applies at country level, debt control is required also at regional level.

The 2001 law – approved by the Spanish Parliament in 2002 (law no. 12/2002) – details the application of the different taxes, but its main innovation lies in regulating the financial relations between PV and the central government. An important part of the agreement is the respect for solidarity in the terms envisaged in the Constitution and the Autonomy Statute. The agreement also foresees a closer coordination and collaboration with the central government on questions of budget stability. The third chapter of law 12/2002 installs a Commission of the Economic Agreement, with equal representation of PV (one delegate for each of the three foral councils, and three for the regional government) and the central government, which is meant to decide on the modifications to be made to the agreement and the methodology of the quota. This Commission takes taken decisions by unanimity. The Law installs two further institutions. The Coordination and Evaluation Commission is responsible for adjusting the tax regulations prior to their publication. An Arbitration Board – consisting of experts with recognised prestige in tax matters, and appointed for six years by the Spanish Treasury and the Basque Treasury – is responsible for resolving any conflicts between the State and the Basque administration.

²¹ Minor reforms since 1981 are mainly related to changes in the tax system, like the introduction of VAT in 1986.

²² The European Court of Justice in its 2010 sentence ruled (cases C-428/06 through C-434/06) that PV might use its autonomous right to set taxes since its Statute stipulates tax autonomy, at least if this does not involve any compensation from other regions or the central government to offset the loss in tax revenues.

The 2007 revision – formalised on October 25th by law 28/2007 – guarantees PV the full power over personal and corporate taxes, and administrative control over VAT, indirect and excise taxes. In addition, it renewed the five year quota, while introducing some minor revisions due to the need of adaptation to the budget stability rules set by the EU. Also, an agreement was finally reached on the composition of the Arbitration Board.

3. Fiscal federalism

3.1. Autonomous decisions on spending and taxes

Fiscal federalism is concerned with understanding which functions and instruments are best decentralized, and which are best placed at the central level. The traditional theory of fiscal federalism argues that the provision of public goods locally promotes allocative efficiency by tailoring public spending better to local needs (Oates, 1972). Decentralisation introduces competition across jurisdictions such that mobile citizens vote with their feet to get the best public services at the lowest cost (Tiebout, 1956).²³ Hence, even with a uniformly applied decentralisation, different local needs would require different levels of responsibilities.

Regional government spending amounts to 30 per cent of total government spending in Italy and Spain (Table 1).²⁴ But the fiscal system is asymmetric as their special statute gives VdA and PV much more spending power than fellow regions (Garcia-Milà and McGuire, 2007). Ordinary Italian regions on average spend 3900€ per head. In contrast, VdA spends around three times as much (12465€). For PV, nearly all government functions not related to defence or foreign affairs have been transferred. Other CCAA have much less spending responsibilities than PV. Nonetheless, the difference between PV and other regions in terms of spending per capita is much less outspoken than in Italy. While the Basque people receive regional public services for about 5600€, other regions can spend 4446€ per citizen on average. The reason for this small difference is that many of the

²³ More democratic choices on spending contribute to the accountability of government. Local government can experiment with public management, and other governments can learn from this experience (Oates, 1999). As the region is motivated to get its own revenues, tax autonomy moreover reorients government spending towards stimulating economic activity. These effects likely reduce tax pressure, also because budget management improves when citizens become aware of the costs of publicly funded activities (Blöchliger and Petzold, 2009).

²⁴ If we include spending by local government, this number is much higher in Spain.

‘high spender’ regions in Spain, like Andalusia, Cataluña or Galicia, have a similar degree of spending autonomy as PV.²⁵

Table 1. Spending, all functions, average 1995 – 2005.

share of regional spending in general government spending		spending in euros per inhabitant	
Italy	Spain	Italy, ordinary regions	Spain, CCAA
20.0%	32.2%	3900	4446
(29.6%)	(45%)	VdA	PV
		12465	5601

Note: data in brackets include local government; source: OECD National Accounts and Ambrosanio *et al.* (2008).

The differences between VdA and PV, and the other regions is more outspoken on the revenue side. Regional governments rely either on tax revenues or grants to finance their public spending. The mix of subnational financing with taxes and grants is very different across countries (Joumard, 2005). Table 2 compares the financing that an average region in Spain or Italy gets via grants or taxes in percentage of total regional revenues. There is a fifty/fifty split in Italy, whereas there is a slight prevalence of tax financing in Spain. After the 2009 reform of the Common Regime in Spain, tax financing has become even more important.²⁶ We see that both VdA and PV have a very different financing source than other regions. Tax revenues account for not less than 95 per cent of total income, and grants have only a minor role to play. In addition to the nine tenths of tax revenues that VdA obtains,²⁷ there are also some minor tax categories – such as the levies on lotteries, electricity consumption, spirits and fuels, etc. – that the region receives, either for nine tenths or for the total amount. Grants cover a minor part of the costs of functioning of the local government. Given that PV collects all tax revenues and subsequently pays the central government the yearly cupo for delivered services, tax autonomy is nearly complete. The grants cover just some specific minor budget items the central government owes to PV.

Table 2. Revenue structure of regional government, as % of total regional revenue, 2005

	VdA	Italy	PV	Spain
Taxes	95	48	97	59.1
Grants	5	52	3	40.9

Source: OECD Fiscal Relations Network, Valle d'Aosta budget and Informe Integrado de la Hacienda Vasca (2008).

²⁵ Alternative summary measures of regional power are the various indices developed by Hooghe *et al.* (2008). Their index of fiscal autonomy shows that VdA and PV have about as much control over policy matters as other CCAA, but only fiscal autonomy is stronger.

²⁶ Defined by State law 22 of December 18th, 2009

²⁷ This will become 100% once the new regime is formalized.

3.2. Limits to autonomy

The efficiency gains from spending and tax autonomy have to be weighted against its costs. First, there are economies of scale in providing public services at national scale. Second, regional tax or spending decisions can be distorted for several reasons. Granting a few specific taxes may create a distortion if regions overstimulate specific activities. Local tax decisions also create a trade-off with the tax decisions of other regions. If spending or tax changes affect other regions, local governments may not internalise the effect of local decisions on other territories. Hence, local provision of public goods will be sub-optimal. Or taxes may be set lower than in neighbouring regions to attract firms, causing the corporate tax to be suboptimally low. Third, as tax raising capacity is unevenly distributed across jurisdictions, decentralisation raises concerns of equity.²⁸ For these reasons, the constitution usually delimits the spending or tax competences of lower government tiers.

Limits on spending autonomy

Spending autonomy does not imply unlimited freedom to legislate in certain areas. Spending has to correspond to certain criteria that are homogenous on the national territory to avoid large disparities in the quality of public services. The stronger are economic or political linkages across a country's regions, the less flexibility is allowed in differentiating regional budgets.²⁹ Looking at regional spending power based on simple expenditure shares may therefore be misleading. No internationally comparable indicators of the extent of these limitations on regional spending discretion are currently available, as it requires a detailed knowledge of the institutional and regulatory background of each policy area. Recent studies have attempted to make some headway in classifying regional budgeting practices (Bach *et al.*, 2009). This classification does not fully capture the differentiation in spending powers we observe in Spain or Italy. A simple comparison of the tasks attributed to ordinary and special regions undeniably shows that VdA and PV are responsible for many more competences (Brosio and Revelli, 2000; Zubiri, 2000). But legislative control from Rome or Madrid on these decisions is still important. The central government keeps

²⁸ Next to concerns about the volatility of local tax revenues, and the efficiency of tax collection.

²⁹ This overlap of responsibilities reduces accountability of local budgeting. The central government increasingly manages directly the implementation of various policies at local level with earmarked grants. This has resulted in excessive spending or very poorly managed public services (Joumard, 2005).

significant regulation powers governing the basic conditions of provision of services, in Italy through common standards in education or health and social policies (the so called *Livelli Essenziali di Assistenza* and *Livelli Essenziali di Prestazione*). In Spain, similar standards of equality to social and public services are implicitly assumed in the cost calculations prior to the distribution of tax shares.

One numerical indicator of the importance of co-decision by the central government on local policies is the level of earmarked transfers to regions (Bach *et al.*, 2009). Some transfers are granted automatically, and do not require matching funding or are not conditional on some criterion. Earmarked grants are instead attached to a specific task, and aim at securing minimum standards in public services, and avoid a too low spending on public goods with positive spillover effects.³⁰ These earmarked grants may require a matching level of spending by the region. Table 3 shows that in Italy and Spain, most grants are unconditional. These non-earmarked grants are mainly mandatory transfers by the central government. As they are general purpose grants, they provide quite some freedom of use (Blöchliger and King, 2006; Blöchliger and Rabesona, 2009). Block grants or discretionary grants are not used in Italy and Spain. Of the fewer earmarked grants, most are decided at the discretion of the central government, but regions need not provide a matching level of spending.³¹ Fiscal decentralisation seems to have mainly transferred spending power, with little conditions on its use. In contrast, the few grants to VdA are earmarked, and mainly concern investment in infrastructure and the shared participation in some public entities. For PV, grants mostly go towards specific budgets that have been detailed in the *Concierto Economico*.

Table 3. Grant revenue of regional governments, as % of total revenue, 2005

		VdA	Italy	PV	Spain
total grants		5.0	51.7	3.0	44.1
earmarked	total		15.4		7.8
	mandatory, matching	5.0	2.3		0.3
	mandatory, non-matching		2.6	3.0	5.7
	discretionary, matching		-		0.9
	discretionary, non-matching		10.5		0.9
non earmarked	total		36.3		36.3
	mandatory, general purpose		36.3		36.3
	mandatory, block		-		-
	discretionary		-		-

Source: Blöchliger and Rabesona (2009), Valle d'Aosta budget and Informe Integrado De La Hacienda Vasca (2008).

³⁰ Both types of grants can either be mandatory or at the discretion of the central government.

³¹ Some intergovernmental grants look more like a tax share as a result (Blöchliger and Petzold, 2009).

Limits on tax autonomy

Whereas regional spending decisions are hardly subject to central control, there are more limitations in the tax system. Traditional measures like regional taxes as a percentage of total revenues overstate the effective revenue raising powers of regions. The first reason is that regions share a large part of tax revenues with other governments. Total tax income is divided (vertically) between the central and regional governments. This tax sharing limits the discretion of the region in deciding on tax rates and bases. Regions sometimes have a strong say in the set up of these schemes as the distribution scheme is often a constitutional agreement that often requires supermajorities to change. Often, regions may collectively negotiate the sharing formula with the central government. But in a few cases, the central government can decide unilaterally to change tax rates, and even to abolish existing taxes. Moreover, tax sharing arrangements have become popular as a means to redistribute resources (horizontally) across regions. Political bickering on the distribution of these tax revenues have turned tax sharing into complex calculations to determine what a region generates, and what it eventually receives out of the common pool of tax resources. These adaptations often break the direct link between the generated tax revenue and what the region eventually obtains (Blöchliger and Petzold, 2009).³² The final reason is that even the autonomy to decide on regional taxes is often constrained in introducing (or abolishing) taxes, setting tax rates, defining new tax bases, or granting tax credits to individuals or firms (Blöchliger and Rabesona, 2009). The usual reason is restraining tax competition in the country.³³

Few synthetic indicators exist to measure the true competence over taxes. Recent work of the OECD has started to classify these different types of revenues, and distinguishes three main categories (Blöchliger and Rabesona, 2009): grants, shared tax revenues and autonomous taxes. These categories can each be refined by the regional degree of discretion. In case of taxes, this is the authority to change tax rates or to grant tax reliefs. In tax sharing agreements, the split of total revenues between the central government and among regions can be negotiated between regions, require regional approval, or can

³² This has made it quite difficult to draw a clear distinction between grants and shared tax revenues. Tax sharing systems have nonetheless become the most popular means of financing regional government. They provide stable fiscal resources while maintaining central control over fiscal aggregates and contributing to fiscal equalisation. This guarantee on sustainability is strengthened as the taxes usually cover major categories (like income, VAT or corporate taxes) with a high and stable yield.

³³ Lower taxes on households are less common, probably because they are less mobile (Joumard, 2005).

otherwise be decided by the central government on the basis of some fixed formula that can be negotiated (for a period of years). Table 4 reports the proportion of these three main types of revenues for an average region in Italy and Spain. We follow the method of Blöchliger and Rabesona (2009) and compute similar indices for VdA and PV.

Table 4. Revenue structure of regional government, as % of total revenue, 2005

		VdA	Italy	PV	Spain
	total	-	28.4	88.0	32.7
autonomous taxes	discretion on rates and reliefs		-		32.6
	discretion on rates		28.4		0.1
	discretion on reliefs		-		-
	total	88.0	19.9	4.0	23.3
	revenue split set by region		-		-
tax sharing	revenue split set with region consent	88.0	11.4		23.3
	revenue split set by central government plurianual		8.5	94.0	-
	revenue split set by central government annual		-		-
other taxes	total	7.0	-	5.0	0.0
	total	5.0	51.7	3.0	44.1
grants	earmarked	5.0	14.8		7.0
	non earmarked		36.9	3.0	37.1

Source: OECD Fiscal Relations Network, Valle d'Aosta budget and Informe Integrado De La Hacienda Vasca (2008).

Table 4 shows that the structure of tax financing is quite similar in Italy and Spain: about half of regional financing comes from grants, and own taxes account for about 30 per cent of regional income. Shared taxes finance the remaining 20 per cent of regional budgets.³⁴ Table 2 may have given the impression that VdA and PV can freely use tax resources to finance public spending. Table 4 shows that in practice, both regions may find it actually quite difficult to adjust their revenues.

³⁴ With the latest reform of the common regime in Spain, this share has risen to about 50 per cent of total revenue.

The financing arrangement for VdA deviates substantially from the general system in Italy. VdA does not have own taxes, as nearly all taxes are shared between VdA and the central government. Ordinary regions seem to have more autonomy. However, this difference should not be overrated since the Constitutional Court has ruled that the own taxes in ordinary regions can only be levied on tax bases the central government is not taxing already. Given the extent of the Italian tax system, this makes it practically impossible to introduce regional taxes. Ordinary regions are somewhat better positioned in their negotiations on the tax sharing agreement. Although the national government can decide to suppress some taxes, co-decision is foreseen for only half of all shared tax revenues, so ordinary regions have some negotiation power with the treasury by pooling their requests. In contrast, given its particular statute, VdA stands alone in defending its arrangement, and has hardly any political power to modify the agreement.

Tax autonomy is certainly stronger for PV. Autonomous taxes are the major source of income, and shared taxes represent only a minor part of revenues.³⁵ Although for historical reasons, PV negotiates its particular system separately with the central government, this puts it actually in a very strong position. The first reason is that its political representation at national level is very strong, as Basque parties are crucial for government majorities in the Cortes. Second, separate negotiations do not dilute the claims of PV by similar calls from other regions. Nonetheless, these numbers do not take into account additional legislative limits. In fact, there is a clause in the Law on Autonomous Financing that stipulates a limit on the overall tax pressure: a region's tax level shall not deviate from the average pressure in Spain. This rule is not clearly specified as it refers to the average tax pressure, and not to any specific tax, and it does not specify what a deviation is. This clause has been invoked by the central government and CCAA governments to dispute the tax cuts the PV planned on businesses. Hence, even if there is quite a lot of potential freedom in deciding on tax rates and tax bases, this clause potentially restricts changes in taxation.

Limited borrowing autonomy

When regions lack the responsibility for using their own tax revenues, but keep substantial spending autonomy, they are prone to fiscal profligacy. Taxpayers' money from other regions comes in more cheaply than taxing the own citizens to finance a given level of

³⁵ In Spain, autonomous taxes are more important in total revenues of the CCAA than shared taxes. And the financing system grants quite some freedom as on nearly all own taxes, regions can decide on changes in the tax rates, or may grant reliefs. Even changes to shared tax revenues require prior approval from the regions.

spending. So regional governments with little tax responsibility will tend to overspend or undertax if they realise the differences will be made up for with grants (Inman, 2003). This can put in danger fiscal sustainability, and in extreme cases, may even entail explicit bail out.³⁶ This problem of soft budget constraints is exacerbated if the central government is weak in its commitment not to intervene, for example, if the central government is hostage of regional interests, or if the political and economic spillover of debt default is so large as to have consequences on a national scale (Rodden *et al.*, 2003).³⁷

A good summary indicator of a potential debt problem is given by the vertical fiscal imbalance, which is the gap between regional spending and own tax revenues (usually expressed as a ratio of transfers to total subnational government revenue). We have computed similar indices of vertical imbalance for VdA and PV from the tax and spending shares in Table 4. Given the predominance of grants and shared tax arrangements in both Italy and Spain, it is no surprise that the imbalance measure indicates limited autonomy *de facto*.³⁸

Table 5. Vertical fiscal imbalance.

VdA	Italy	PV	Spain
0.86	0.72	0.11	0.68

Note: average period 1995-2005, own calculations.

The dependence on tax sharing gives VdA much less autonomy, even in comparison to other Italian regions, and seems to justify a tight control on public finances in VdA. But in contrast, PV certainly has an acceptable degree of tax autonomy in order not to run up debt in the absence of such controls. Rating agencies, like Standard and Poor's or Fitch, which assess the fiscal capacity of sovereigns, qualify both VdA and PV at a similarly high level. The ratings attributed to both regions follow closely those at country level (Table 6). The first reason is that debt is actually quite low in both regions (Figure 1). Despite a jump in 2001, the debt to GDP ratio does not raise above 20 per cent of regional GDP in VdA.³⁹ For PV, debt has been declining over time and is the lowest of all Spanish regions. The second reason is that, despite the reduced flexibility in the budget of VdA, and in the

³⁶ There is also empirical evidence that deficits are much larger when regions are free to borrow, and are dependent on grants for financing (Singh and Plekhanov, 2005).

³⁷ Moreover, if regions have precisely stipulated tasks on which it is difficult to renege, then spending cannot easily be cut either. It is even more difficult for the central government to deny a bailout in this case (Rodden *et al.*, 2003).

³⁸ Large increases in tax autonomy have alleviated this problem in Spain since the 2009 reform. Reform of the fiscal system in Italy has met with much political resistance, and little has changed in recent years.

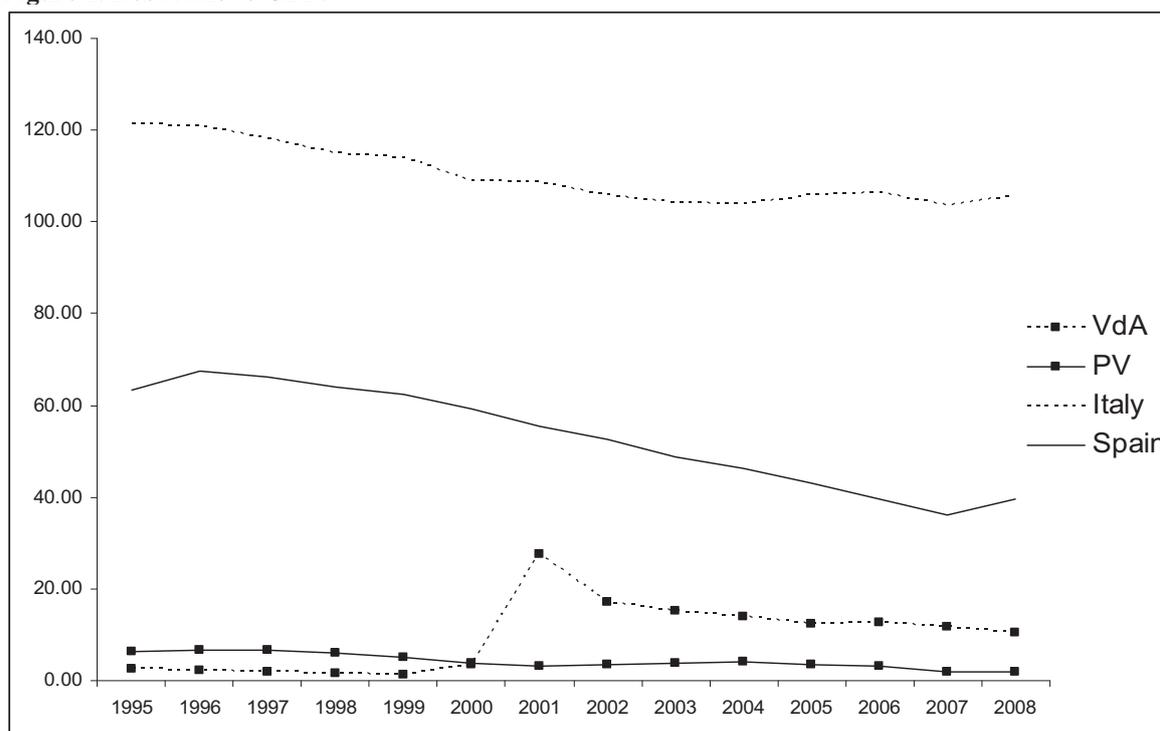
³⁹ Due to the acquisition of the local hydroelectric power plants.

unlikely case of problems with debt payments, rating agencies expect that the central government would intervene in case of financial trouble, and would not leave VdA or PV to resolve these problems on its own. Subnational credit ratings reflect the expectation that the central government backs the debt of the subnational governments as credit risk is transferred to the central government. Regions do not get superior ratings on their debt for this reason.

Table 6. Ratings Standard and Poor's.

	VdA	Italy	PV	Spain
1998	A+	AA	A+	AA
2000	AA	AA	AA	AA+
2007	A+	AA-	AAA	AAA
2009	A+	A+	AAA	AA+

Figure 1. Debt ratio to GDP.



Source: regional government of Aosta, Statistical Bulletin Bank of Italy (Supplement), OECD

Out of fear of unsustainable regional debt, federal fiscal systems are usually complemented with control systems on the sustainability of public finances at lower tiers. There are implicit constraints placed on regional budget autonomy by reducing the recourse to debt finance. These rules are either numerical or procedural. The former set targets for budget balance, debt, and sometimes limit the increases in spending or the tax burden. The latter

rather set the rules of the budgeting process and create a framework for budget monitoring, sanctioning, and possible escape clauses (Sutherland *et al.*, 2005). Control systems between the first tier and lower levels of government have been set up in a variety of ways. In federal countries, it is more common that the central and regional governments cooperate in fiscal councils, and this is also the case in Spain. Other countries explicitly limit the regional borrowing capacity (Joumard, 2005). In Italy, a Domestic Stability Pact was introduced in 1999, following the start of the European Stability and Growth Pact. The Domestic Pact imposes annual constraints on the deficit of every single region, and these limits are negotiated directly with the treasury. While initially the aim was to reduce deficits, it has now become a tool to correct deviations from budget balance, and to contain increases in spending. Debt service cannot exceed 25 per cent of current revenues, and is only allowed for capital investments. An escape clause allows more borrowing in the event of special conditions. It is not clearly stipulated how deficits have to be corrected over time. Only a cooperative solution is mentioned, and in case of EU sanctions against Italy, non-complying regions contribute by the size of their deficit. Rules of this kind are somewhat looser for VdA, as it may issue bonds up to the total amount of current tax revenues on the budget. This corresponds to about 30 per cent of regional GDP. This debt can only be used to finance investment, or to buy participation in public-private enterprises that exert functions related to local autonomy. Under the recent revision of the Pact, each year VdA must agree with the Ministry a three-year spending plan, covering both current as capital outlays, that curtails annual spending growth to a maximum of 2 per cent, as in other regions.⁴⁰ This negotiation is one-sided as in case of disagreement, the stricter rules for ordinary regions apply.

In Spain, the Budgetary Stability Law obliges each government to maintain a balanced budget. The Law was amended in 2006 to allow deficits in an economic crisis or to finance capital expenses (Joumard and Giorno, 2005). This borrowing requires authorisation from the Ministry of Finance if annual debt service and repayments exceed 25 per cent of current revenues. The same authorisation is required for bond issues or loans in foreign currency. Regions that incur a deficit need to present a plan to the Fiscal and Financial Policy Council that sets out a return to budget balance. This Council consists of the central government Finance and Administration ministries and representatives of all regions. The central government can decide on additional limits on borrowing for reasons of

⁴⁰ Furthermore, the regions' accounts are monitored by the Ministry.

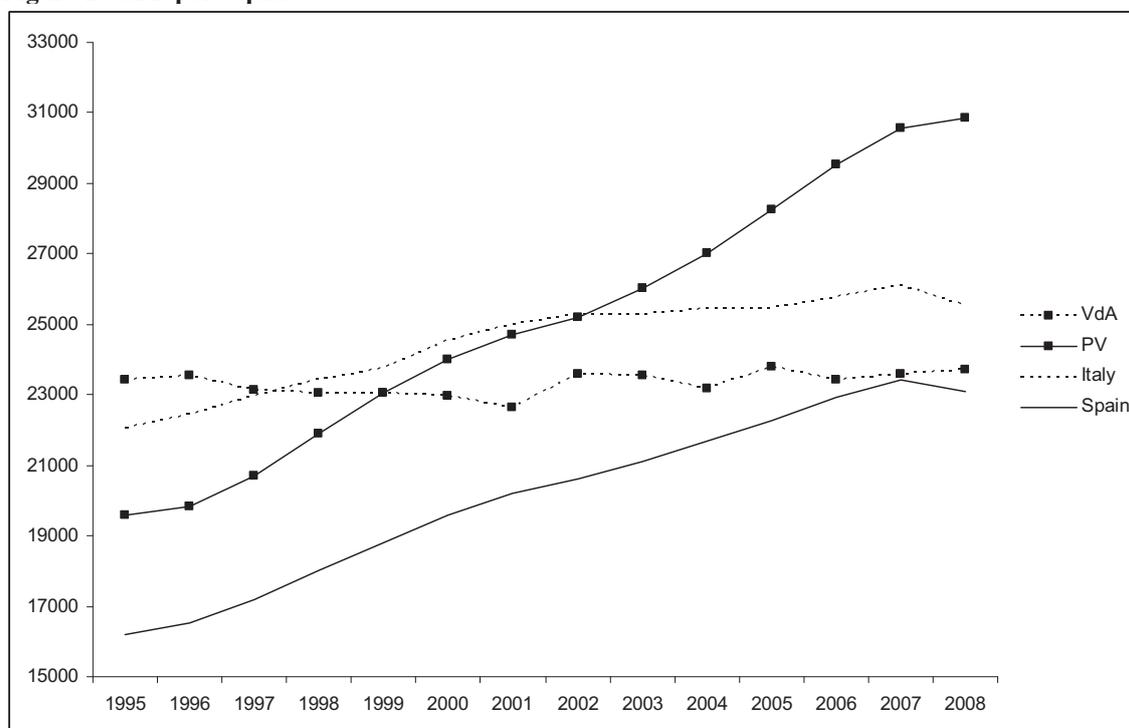
macroeconomic policy.⁴¹ PV has to obey to these limits, and as such, has no stronger autonomy to plan budget decisions over time.⁴²

4. Asymmetric federalism: causes and effects

4.1. Net beneficiaries of fiscal federalism

Both VdA and PV are the richest regions in their country as measured by GDP per capita (Figure 2). We would therefore expect both regions to be net contributors to the financing system, as fiscal arrangements typically redistribute in favour of poorer regions.

Figure 2. GDP per capita.



Source: Istat, Eustat.

Table 7 compares the financial flows to regions and ranks the regions by the net flows received.⁴³ We compare the situation before and after including social security transfers. In absolute numbers, poorer regions typically receive less money than rich regions. But once

⁴¹ In case the region's deficit causes Spain to breach the Stability and Growth Pact, it only will bear the sanction.

⁴² Many regions have sought ways around these borrowing constraints with capital transfers to public companies (Amor and Pou, 2004). Although formally prohibited, there has been a proliferation in the debt of public companies controlled by the regions in recent years.

⁴³ The figures presented in Ambrosanio *et al.* (2008) and Barberan and Uriel (2006) are representative of those in other studies. Arachi *et al.* (2006) or Brosio and Revelli (2003) arrive at even high net benefits for VdA. For PV and Navarra, Castells (2000) estimates the net benefits to be of a similar order.

social security transfers are included, rich regions become net payers into the system while poorer regions are net receivers. According to calculations by Barberan and Uriel (2006) for Spain, and Ambrosanio *et al.* (2008) for Italy, the top and bottom part of the ranking correspond to the poorest and richest regions. The correlation between the net flows and GDP per capita is negative. But surprisingly, VdA still receives net around 890 euros per inhabitant once we take into account social security flows. Likewise, PV receives net 792 euros. Hence, both receive relatively more than their GDP would suggest.⁴⁴ They show some solidarity with other regions, but mainly through social security transfers. The outcome of the fiscal arrangement still results in a net benefit for both regions. Financial resources per inhabitant are actually above those of similar regions.

Table 7. Net benefits of financing system, net fiscal flows per capita, in euro

	net flows	flows without social security		net flows	flows without social security
Calabria	2817	2059	Melilla	3394	3711
Sicilia	2661	2277	Ceuta	2970	3240
Molise	2510	2682	Extremadura	2375	2013
Sardegna	2361	3076	Asturias	2148	1268
Basilicata	2313	2370	Canarias	1544	2056
Campania	2311	2223	Castilla La Mancha	1528	1500
Puglia	2056	2431	Galicia	1422	1080
Umbria	1785	4088	Andalucia	1421	1237
Abruzzo	1394	3425	Castilla y Leon	1420	1160
Liguria	1386	5180	Murcia	860	959
Valle d'Aosta	890	6120	País Vasco	792	1050
Marche	146	4299	Cantabria	674	427
<i>Italy</i>	<i>0</i>	<i>4666</i>	Navarra	584	1207
Toscana	-160	5061	Aragon	346	485
Friuli-Venezia Giulia	-212	5394	<i>Spain</i>	<i>297</i>	<i>482</i>
Trentino Alto Adige	-388	5746	La Rioja	232	425
Piemonte	-469	5225	Com. Valenciana	-37	195
Lazio	-737	5693	Baleares	-915	-368
Emilia-Romagna	-1751	6068	Cataluña	-1094	-643
Veneto	-1836	5128	Madrid	-2302	-1256
Lombardia	-3653	6696			

Source: Ambrosanio *et al.* (2008), Barberan and Uriel (2006).

⁴⁴ The correlation between GDP per capita and net flows is -0.86 in Italy, and -0.77 in Spain. Other Spanish regions with a special statute (Navarra) also deviate from this norm. If all regions had a foral regime with a similar degree of autonomy as PV, all Spanish regions – except Extremadura and Andalucia – would gain (Zubiri and Vallejo, 1995).

4.2. A preferential treatment to prevent secession

It is often argued that an asymmetry in federal systems just reflects a different culture, history and language (Keating, 1998; Garcia-Milà and McGuire, 2007). Recent theories of fiscal federalism instead see current outcomes as the consequence of political bickering and economic forces (Besley and Coate, 2003; Lockwood, 2006).⁴⁵ Following this line of research, we argue that the preferential system is the result of political negotiation between a central government and some rich regions that may want to break away from the country.

The key to understand this preferential treatment is the difficulty for the central government in Rome and Madrid to develop a fiscal arrangement that fully develops fiscal autonomy for the entire country (Garcia-Milà and McGuire, 2007; Ambrosanio and Bordignon, 2008). Despite the partial devolution of spending and tax powers, the system is overall characterised by tight controls on tax autonomy and the issuance of public debt. Although both VdA and PV receive close to 100 per cent of all tax revenues, the *de facto* autonomy to decide on tax revenues and the budget – as in other regions – is quite limited in practice.

Limits on fiscal power may be necessary to equalize fiscal capacity and control the sustainability of public finances across the country. However, such rules are not adequate for VdA or PV that could afford lower taxes or higher levels of public spending without incurring higher debt. Tax competition would allow both regions to attract firms and citizens with lower taxes or better public services. More spending autonomy would allow tailoring the provision of public goods to local needs. Full autonomy would allow realising the benefits of fiscal federalism. VdA and PV would stand to gain economically from more autonomy. As the fiscal system does not allow for this flexibility, the net transfers to VdA or PV partially correct the built-in equalisation of the system. The preferential treatment compensates both regions for the lack of fiscal federalism in the current arrangement, and so prevents calls for more fiscal autonomy, or even outright secession (Bolton and Roland, 1997; Le Breton and Weber, 2003).

⁴⁵ Panizza (1999) shows empirical evidence that decentralisation can be explained by socio-economic forces only.

4.3. Tiny, happy and affluent regions: a political equilibrium

Asymmetric federalism is a compromise between the difficulties to implement fiscal federalism in the entire country, due to economic and institutional differences, and the necessity for some regions to develop real tax and spending powers. The preferential treatment reflects a mutual understanding between the regional and central government. Aggressive tax competition by VdA or PV could be considered as compromising co-operation in a number of other policy areas. More intense tax competition would certainly create a debate on the negative consequences of horizontal tax competition between regions. It would exacerbate demands by other rich regions to be treated in a similarly favourable way. In contrast, poorer regions could start to demand more fiscal equalisation. Competition would also spark fear in these regions of not being able to provide a sufficient level of public services, despite the existence of common standards. As long as tax competition is limited, other regions and the central government will not start questioning the especially generous sharing agreement for VdA and PV. The threat to break away from the country is strong enough to counterbalance the claims of the central government and the other regions. The political negotiation power of these regions is therefore shaping the current situation and is crucial to understand steps to obtain more autonomy.

This threat does not seem too relevant for VdA. However, historically, VdA has shown strong tendencies to separate from Italy. The independentist movement has been particularly relevant in local politics at the end of the Second World War. In 1946, the newly installed regional Council was strongly divided between a pro-Italian group (favouring autonomy within Italy) and a separatist group in favour of annexation to France or of an independent state. This even resulted in a call to the United Nations for an '*international guarantee towards the realization of a referendum*' by which the local population could choose between the '*existing status quo or the creation of an independent State*'. Violent clashes between the two factions continued until the Italian institutional referendum and elections for the Constitutional Assembly in 1946 (Zanotto, 1986). The pro-Italian factions that subsequently won the elections then started negotiating the creation of the Autonomous region (Riccarrand, 2004), yet the confrontation with the separatists continued until the approval of a Special Statute in 1948. The separatist movement has lost political power over time, and nowadays has nearly disappeared. The

generous financial regime has progressively reduced the anti-Italian sentiment within the local population, and has been considered a lever for reaching economic prosperity.

At present, and because of its small economic size, and its diminished political power, the VdA government may be reluctant to enter in disputes with the central government, which can simply undo any gain in autonomy with a marginal adjustment in tax bases or rates. The losses in tax revenues of this vertical tax competition probably outweigh the gains in the short term of more tax autonomy (Joumard, 2005). Moreover, local politicians are probably not unhappy with the generous revenues from the sharing of national taxes collected on their territory. As VdA does not need to contribute to equalisation transfers destined to poorer regions, it eventually obtains a much higher income from these tax shares, and any additional transfers (Bibbee, 2007). The local government probably considers this more than sufficient to continue with a high level of public spending, rather than cutting taxes. Regional politicians may have been happy to spend generous tax resources to buy political consensus at home. Voters may be happy too with a high level of public services. This positive attitude towards the current fiscal arrangement is shown also by the continuous requests raised by the regional government itself to continue the current system even in the case of the application of the foreseen federal reform. VdA is happy with maintaining the status quo.

The political situation in PV is very different from VdA. The region has been striving for independence for a long time, and has been governed till at least 2009 by nationalist parties. Terrorist groups claim to fight for independence, and the actions of ETA continue to dominate Spanish politics. Since the Gernika Statute of 1979, calls for independence have been frequent, not just in PV. The use of its fiscal power has been a constant point of conflict in the negotiations of the Concierto Economico. Given the fast developments after the democratic transition, PV initially adopted a 'wait and see' attitude to improve its negotiating position with other regions and the central government (Garcia-Mila *et al.*, 2000; Zubiri, 2000). Unilateral changes may have risked putting off other regions at granting additional competences. So reform may not have been on the cards directly. However, the Basque government has persistently tried to extend its fiscal power since. In contrast to VdA, the control system on fiscal policy is considered by PV as a straightjacket on its fiscal choices. The repeated attempts of the Basque government to attract businesses to PV have been disputed in several legal court suits at the Basque Supreme Court, the

Spanish Constitutional Court and the European Court of Justice (ECJ). This has resulted in a reform of the *Concierto Economico* that has created specific arbitrage boards to settle conflicts, and set out the future revisions of the *Concierto*. More intense tax competition has started to exacerbate demands by other rich regions, especially Catalonia, to be treated in a similarly favourable way. This has culminated in the 2009 reform of autonomous financing that has substantially increased tax autonomy and reduced the solidarity between regions. Unlike Italy, poorer regions in Spain do not have the political clout to contrast the pivotal position of Basque parties in the Cortes.

PV can and does use its political weight at national level to push through changes. The political representation at the national level gives rise to bargaining and log-rolling that affects the set up of central financial arrangements. In recent years, political parties of PV have not hesitated to use their negotiating power to get additional financing. They have often become determining for the survival of the central government in the Cortes. This has made Basque politicians' negotiating power punch above their minor representation in the national parliament (the PV population is about 6 per cent of the total for Spain, which results in 22 out of 350 seats in Parliament). This has allowed Basque political parties at the time of the 2010 Budget to make the central government pay for additional spending in PV, and additionally accept a suspension of current procedures against PV budget at lower courts.

4.3. Economic effects of asymmetric federalism

A financing system that devolves spending and tax autonomy might reduce the economic distortions of a centralized system. More autonomy would pay off economically with better managed public services, improved budget management, a more adequate composition of spending, and a reduced tax pressure. Financing of the budget with taxation or debt would become more transparent, also easing pressure for the central government to control regional debt. These 'classical' benefits of fiscal federalism have to be weighed against the costs of distorted provision of public goods, a lack of coordination, the effects of economic inequality and a whole set of governance problems (Prud'homme, 1995). A complete cost-benefit analysis of all aspects of a fiscal arrangement would be required to evaluate the effects of the current financing arrangement, but is a too ambitious exercise given the various trade-offs. For the same reason, the empirical literature on the economic

growth effects of introducing fiscal federalism has probably not come up yet with a definite answer (Martinez-Vazquez and McNab, 2003; Thiessen, 2003; Rodriguez-Pose and Gill, 2005).⁴⁶

One reason for the lack of support for positive economic effects is the set up of the fiscal system (Rodden *et al.*, 2003). Although devolution implies heterogeneity in the budget and economic outcomes in each region; it does not mean asymmetry in decentralisation itself (Garcia-Mila and McGuire, 2007). An asymmetric financing arrangement creates economic inefficiencies in spending and tax choices. The lack of uniformity does create some economic tradeoffs that stretch beyond the question of unfair tax competition by the privileged regions (Keating, 1998). On the one hand, the economic redistribution, which is implicit in the Spanish and Italian fiscal system, is often argued to drain resources from rich regions, and put poorer parts of the country on a lifeline that prevents structural reform (Obstfeld and Peri, 1998). The reduction in economic inequality between regions is excessive as it prevents rich regions from advancing economically, and poor regions to catch up with the rich regions. The preferential treatment then makes economic sense if it reduces the excess degree of redistribution in Italy and Spain. This is similar to the argument of Brennan and Buchanan (1980) that decentralisation curbs the Leviathan state. However, the privileges granted to VdA and PV are excessive in compensating their loss of autonomy. In both regions, tax and spending levels are inefficiently high, and the level of debt is suboptimally low. VdA and PV live from economic rents, just like poorer regions often live on the lifeline of transfers. More autonomy would make VdA or PV really responsible for their own budget. Asymmetric decentralisation might be difficult to sustain for the country as a whole (Blöchliger *et al.*, 2009). Sidepayments to regions in an increasingly complex web of overlapping responsibilities and exceptions to tax schemes complicates control on fiscal imbalances, and attempts to maintain the homogeneity of economic conditions over the country.

Federalism *à la carte* not only creates economic losses in the short term, but also persistent distortions in political decision making. As VdA and PV live from economic rents, this creates a political deadlock on possible reforms of the financing system. Reform measures in Italy and Spain over the last decade have aimed at matching higher spending autonomy with increased taxing power for the ordinary regions and CCAA. It has not brought

⁴⁶ The only comprehensive empirical study for Spain is Rodriguez-Pose (1996).

substantial changes to the special arrangements of VdA and PV. Asymmetric federalism risks creating a political stalemate that makes it impossible to set further steps in devolution in an economically sensible way (Tanzi, 1995).

5. Conclusions and policy implications

Italy and Spain are making gradual steps towards a federal structure. A peculiar feature is the asymmetric way in which regional spending competences and tax revenues are defined. VdA and PV retain a lot of additional competences, and substantial spending power although autonomy is implicitly curtailed via the tax sharing system or debt control. The preferential treatment, which makes both VdA and PV net beneficiaries of the fiscal system is a compensation for the lack of autonomy and so prevents secession (Le Breton and Weber, 2003).

This asymmetric federalism creates quite some economic inefficiencies. Although partial equalisation may reduce the negative effects of redistribution, the current situation makes a rich region live from economic rents. The differences in political representation at the national level give rise to regional bargaining and log-rolling that affects the set up of central financial arrangements. Federalism *à la carte* complicates further steps in negotiations as it petrifies positions of net winners and losers of a reform. The tendency to avoid net losers in negotiations on reforms of fiscal arrangements exacerbates the problems of stability and equity of fiscal federalism.

The key to restoring an efficient federalism in Italy and Spain is an overhaul reform of fiscal relations that relies less on hierarchical control but more on granting true spending and tax autonomy. A truly federal system would realise the benefits of fiscal federalism in all regions (Garcia-Mila and McGuire, 2007; Bibbee, 2007). Such a reform might also relax the pressure to grant privileges to some regions, which may then really compete for resources. This might be politically acceptable only if both regions increase solidarity with poorer regions.

References

- Ambrosanio M., Bordignon M., Cerniglia F. (2008). Constitutional reforms, fiscal decentralisation and regional fiscal flows in Italy, DISCE working paper 84.
- Ambrosanio M., Bordignon M., (2008). Il federalismo fiscale in Italia, Il Mulino: Bologna.
- Amor J. and Pou V. (2004). Comunidades autónomas ante la estabilidad presupuestaria, Cuadernos de Información Económica 179.
- Arachi G., Ferrario C., Zanardi A. (2006). Redistribuzione e ripartizione del rischio fra territori regionali in Italia, in: Barca F., Cappelletto F., Ravoni L., Volpe M. (eds.). Federalismo, equità, sviluppo, Il Mulino: Bologna.
- Atxabal Rada A., Muguruza Arrese J. (2006). Recopilación del Concierto Económico vasco. Legislación, jurisprudencia y bibliografía. 1981-2004, Ad Concordiam: Bilbao.
- Bach S., Blöchliger H., Wallau D. (2009). The spending power of sub-central governments: a pilot study, OECD working paper 705.
- Barberan R., Uriel E. (2006). Las balanzas fiscales regionales en España en el periodo 1991-2005, Investigaciones Regionales, 13, 115-154.
- Besley T., Coate S. (2003). Centralized versus decentralized provision of local public goods. *Journal of Public Economics*, 87, 2611-37.
- Bibbee A. (2007). Making federalism work in Italy, OECD Economics Department working paper 590.
- Blöchliger H., King D. (2006). Less than you thought: the fiscal autonomy of sub-central governments, *OECD Economic Studies*, 43(2).
- Blöchliger H., Petzold O. (2009). Taxes and grants: on the revenue mix of sub-central governments, OECD working paper 706.
- Blöchliger H., Rabesona J. (2009). The fiscal autonomy of sub-central governments: an update, OECD Network on Fiscal Relations, working paper 9.
- Blöchliger H., Merk O., Charbit C., Mizell L. (2009). Fiscal equalization in OECD countries, OECD Network on Fiscal Relations, working paper 4.
- Bolton, P., Roland G., (1997). The break-up of nations: a political economy analysis, *Quarterly Journal of Economics*, 113, 1057-90.
- Brosio, G., Revelli, F., (2000). I costi e il benefici economico-finanziari dell'autonomia e dell'integrazione: i rapporti fra Italia e Valle d'Aosta, Le Château: Aosta.
- Castells A. (2000). Autonomía y solidaridad en el sistema de financiación autonómica, *Papeles de Economía*, 83, 37-59.

- VV.AA. (2008). Eusko Jaurlaritza, Ekonomia ituna, Euskadiko Zerga Koordinaziorako Organoa, Vitoria-Gasteiz.
- Garcia-Mila T., McGuire T. (2007). Fiscal decentralization in Spain: an asymmetric transition to democracy, in: Bird R., Ebel R. (eds.), *Fiscal Fragmentation in Decentralized Countries*, Cheltenham: U.K., 208-23.
- Garcia-Milá T., Goodspeed T., McGuire T., (2002). Fiscal decentralization policies and sub-national government debt in evolving federations, mimeo, UPF.
- Brennan G., Buchanan J., (1980). *The power to tax: analytical foundations of a fiscal constitution*, Cambridge, New York.
- Hooghe l., Marks G., Schakel A. (2008). Operationalizing regional authority: a coding scheme for 42 countries, 1950-2006, *Regional and Federal Studies*, 18(2-3), 123-42.
- Inman R., (2003). Transfers and bailouts: enforcing local fiscal discipline with lessons from US federalism, in Rodden J., Eskeland G., Litvack K. (eds.). *Fiscal Decentralization and the Challenge of Hard Budget Constraints*, Cambridge: MIT Press, Boston.
- Joumard I., Giorno C., (2005). Getting the most out of public sector decentralization in Spain, OECD Economics Department working paper 436.
- Joumard I., (2005). Fiscal relations across governmental levels experience in OECD countries, OECD Report.
- Keating M., (1998). What's wrong with asymmetrical government?, *Regional and Federal Studies*, 8(1), 195-218.
- Keating M., (1999). Asymmetrical government: multinational states in an integrating Europe, *Publius*, 29(1), 71-86.
- Le Breton M. and Weber S., (2003). The art of making everybody happy: how to prevent a secession, *IMF Staff Papers*, 50, 403-435.
- Léibarri C., (1995). Fiscal policy in Europe: the case of the Basque Country, *European Business Review*, 95(4), 10-18.
- Lengereau M., (1968). *La Vallée d'Aoste : minorité linguistique et région autonome de la république italienne*, La Tronche-Montfleury: Cahiers de l'Alpe, Lyon.
- Lockwood B. (2006). The political economy of decentralization, in: Ahmad E., Brosio G. (eds.). *Handbook of Fiscal Federalism*, Edward Elgar: Cheltenham, 33-60.
- Martinez-Vazquez J, Mc Nab R., (2003). Fiscal decentralization and economic growth, *World Development*, 31, 1597-616.
- Muguruza Arrese J., (2005). *Recopilación del Concierto Económico Vasco. Legislación, jurisprudencia y bibliografía*, Ad Concordiam: Bilbao.

- Oates W., (1972). *Fiscal federalism*, Harcourt Brace Jovanovich: New York.
- Oates W., (1999). An essay on fiscal federalism, *Journal of Economic Literature*, 37(3). 1120-49.
- Obstfeld M., Peri G., (1998). Regional non-adjustment and fiscal policy, *Economic Policy*, 13(26). 205-59.
- Panizza U. (1999). On the determinants of fiscal centralization: theory and evidence, *Journal of Public Economics*, 74(1), 97-139.
- Prud'homme R., (1995). The dangers of decentralisation, *World Bank Research Observer*, 10, 201-220.
- Riccarand E., (2004). *Storia della Valle d'Aosta (1945-1981)*. Stylos: Aosta.
- Rodden J., Eskeland G. Litwack J., (2003). *Fiscal decentralization and the challenge of hard budget constraints*, Cambridge, MIT Press: Boston.
- Rodriguez-Pose A., (1996). Growth and institutional change: the influence of the Spanish regionalisation process on economic performance, *Environment and Planning C: Government and Policy*, 14, 71-87.
- Rodriguez-Pose A., Gill N., (2005). On the 'economic dividend' of devolution, *Regional Studies*, 39, 405-420.
- Sutherland D., Price D., Joumard I., (2005). Fiscal rules for sub-central governments: design and impact, *OECD working paper* 465.
- Tanzi V., (1995). Fiscal federalism and decentralization: a review of some efficiency and macroeconomic aspects, in Bruno M., Pleskovic B. (eds.). *Annual World Bank Conference on Development Economics*, World Bank, 295-330.
- Thiessen U., (2003). Fiscal decentralization and economic growth in high income OECD countries, *Fiscal Studies*, 24, 273-4.
- Thornton J., (2007). Fiscal decentralization and economic growth reconsidered, *Journal of Urban Economics*, 61, 64-70.
- Tiebout C., (1956). A pure theory of local expenditure, *Journal of Political Economy*, 64 (5): 416-424.
- Zanotto A., (1986). *Le particularisme valdôtain: aperçu historique*, Musumeci: Aosta.
- Zubiri I., Vallejo M., (1995). *Un análisis metodológico y empírico del sistema de cupo*, Fundación BBVA, Bilbao.
- Zubiri I., (2000). *El Sistema de Concierto Económico en el contexto de la Unión Europea*, Círculo de Empresarios Vascos, Bilbao.

Llista Document de Treball

List Working Paper

- WP 2011/01 "I If you want me to stay, pay" . Claeys, P and Martire, F
- WP 2010/16 "Infrastructure and nation building: The regulation and financing of network transportation infrastructures in Spain (1720-2010)"Bel,G
- WP 2010/15 "Fiscal policy and economic stability: does PIGS stand for Procyclicality In Government Spending?" Maravalle, A ; Claeys, P.
- WP 2010/14 "Economic and social convergence in Colombia" Royuela, V; Adolfo García, G.
- WP 2010/13 "Symmetric or asymmetric gasoline prices? A meta-analysis approach" Perdiguero, J.
- WP 2010/12 "Ownership, Incentives and Hospitals" Fageda,X and Fiz, E.
- WP 2010/11 "Prediction of the economic cost of individual long-term care in the Spanish population" Bolancé, C ; Alemany, R ; and Guillén M
- WP 2010/10 "On the Dynamics of Exports and FDI: The Spanish Internationalization Process" Martínez-Martín J.
- WP 2010/09 "Urban transport governance reform in Barcelona" Albalate, D ; Bel, G and Calzada, J.
- WP 2010/08 "Cómo (no) adaptar una asignatura al EEES: Lecciones desde la experiencia comparada en España" Florido C. ; Jiménez JL. and Perdiguero J.
- WP 2010/07 "Price rivalry in airline markets: A study of a successful strategy of a network carrier against a low-cost carrier" Fageda, X ; Jiménez J.L. ; Perdiguero , J.
- WP 2010/06 "La reforma de la contratación en el mercado de trabajo: entre la flexibilidad y la seguridad" Royuela V. and Manuel Sanchis M.
- WP 2010/05 "Discrete distributions when modeling the disability severity score of motor victims" Boucher, J and Santolino, M
- WP 2010/04 "Does privatization spur regulation? Evidence from the regulatory reform of European airports . Bel, G. and Fageda, X."
- WP 2010/03 "High-Speed Rail: Lessons for Policy Makers from Experiences Abroad". Albalate, D ; and Bel, G."
- WP 2010/02 "Speed limit laws in America: Economics, politics and geography". Albalate, D ; and Bel, G."
- WP 2010/01 "Research Networks and Inventors' Mobility as Drivers of Innovation: Evidence from Europe" Miguélez, E. ; Moreno, R. "
- WP 2009/26 "Social Preferences and Transport Policy: The case of US speed limits" Albalate, D.
- WP 2009/25 "Human Capital Spillovers Productivity and Regional Convergence in Spain" , Ramos, R ; Artis, M. ; Suriñach, J.
- WP 2009/24 "Human Capital and Regional Wage Gaps" ,López-Bazo,E. Motellón E.
- WP 2009/23 "Is Private Production of Public Services Cheaper than Public Production? A meta-regression analysis of solid waste and water services" Bel, G.; Fageda, X.; Warner. M.E.
- WP 2009/22 "Institutional Determinants of Military Spending" Bel, G., Elias-Moreno, F.
- WP 2009/21 "Fiscal Regime Shifts in Portugal" Afonso, A., Claeys, P., Sousa, R.M.
- WP 2009/20 "Health care utilization among immigrants and native-born populations in 11 European countries. Results from the Survey of Health, Ageing and Retirement in Europe" Solé-Auró, A., Guillén, M., Crimmins, E.M.
- WP 2009/19 "La efectividad de las políticas activas de mercado de trabajo para luchar contra el paro. La experiencia de Cataluña" Ramos, R., Suriñach, J., Artis, M.
- WP 2009/18 "Is the Wage Curve Formal or Informal? Evidence for Colombia" Ramos, R., Duque, J.C., Suriñach, J.
- WP 2009/17 "General Equilibrium Long-Run Determinants for Spanish FDI: A Spatial Panel Data Approach" Martínez-Martín, J.

- WP 2009/16 “Scientists on the move: tracing scientists’ mobility and its spatial distribution” Miguélez, E.; Moreno, R.; Suriñach, J.
- WP 2009/15 “The First Privatization Policy in a Democracy: Selling State-Owned Enterprises in 1948-1950 Puerto Rico” Bel, G.
- WP 2009/14 “Appropriate IPRs, Human Capital Composition and Economic Growth” Manca, F.
- WP 2009/13 “Human Capital Composition and Economic Growth at a Regional Level” Manca, F.
- WP 2009/12 “Technology Catching-up and the Role of Institutions” Manca, F.
- WP 2009/11 “A missing spatial link in institutional quality” Claeys, P.; Manca, F.
- WP 2009/10 “Tourism and Exports as a means of Growth” Cortés-Jiménez, I.; Pulina, M.; Riera i Prunera, C.; Artís, M.
- WP 2009/09 “Evidence on the role of ownership structure on firms’ innovative performance” Ortega-Argilés, R.; Moreno, R.
- WP 2009/08 “¿Por qué se privatizan servicios en los municipios (pequeños)? Evidencia empírica sobre residuos sólidos y agua” Bel, G.; Fageda, X.; Mur, M.
- WP 2009/07 “Empirical analysis of solid management waste costs: Some evidence from Galicia, Spain” Bel, G.; Fageda, X.
- WP 2009/06 “Intercontinental flights from European Airports: Towards hub concentration or not?” Bel, G.; Fageda, X.
- WP 2009/05 “Factors explaining urban transport systems in large European cities: A cross-sectional approach” Albalade, D.; Bel, G.
- WP 2009/04 “Regional economic growth and human capital: the role of overeducation” Ramos, R.; Suriñach, J.; Artís, M.
- WP 2009/03 “Regional heterogeneity in wage distributions. Evidence from Spain” Motellón, E.; López-Bazo, E.; El-Attar, M.
- WP 2009/02 “Modelling the disability severity score in motor insurance claims: an application to the Spanish case” Santolino, M.; Boucher, J.P.
- WP 2009/01 “Quality in work and aggregate productivity” Royuela, V.; Suriñach, J.
- WP 2008/16 “Intermunicipal cooperation and privatization of solid waste services among small municipalities in Spain” Bel, G.; Mur, M.
- WP 2008/15 “Similar problems, different solutions: Comparing refuse collection in the Netherlands and Spain” Bel, G.; Dijkgraaf, E.; Fageda, X.; Gradus, R.
- WP 2008/14 “Determinants of the decision to appeal against motor bodily injury settlements awarded by Spanish trial courts” Santolino, M.
- WP 2008/13 “Does social capital reinforce technological inputs in the creation of knowledge? Evidence from the Spanish regions” Miguélez, E.; Moreno, R.; Artís, M.
- WP 2008/12 “Testing the FTPL across government tiers” Claeys, P.; Ramos, R.; Suriñach, J.
- WP 2008/11 “Internet Banking in Europe: a comparative analysis” Arnaboldi, F.; Claeys, P.
- WP 2008/10 “Fiscal policy and interest rates: the role of financial and economic integration” Claeys, P.; Moreno, R.; Suriñach, J.
- WP 2008/09 “Health of Immigrants in European countries” Solé-Auró, A.; M.Crimmins, E.
- WP 2008/08 “The Role of Firm Size in Training Provision Decisions: evidence from Spain” Castany, L.

- WP 2008/07 “Forecasting the maximum compensation offer in the automobile BI claims negotiation process” Ayuso, M.; Santolino, M.
- WP 2008/06 “Prediction of individual automobile RBNS claim reserves in the context of Solvency II” Ayuso, M.; Santolino, M.
- WP 2008/05 “Panel Data Stochastic Convergence Analysis of the Mexican Regions” Carrion-i-Silvestre, J.L.; German-Soto, V.
- WP 2008/04 “Local privatization, intermunicipal cooperation, transaction costs and political interests: Evidence from Spain” Bel, G.; Fageda, X.
- WP 2008/03 “Choosing hybrid organizations for local services delivery: An empirical analysis of partial privatization” Bel, G.; Fageda, X.
- WP 2008/02 “Motorways, tolls and road safety. Evidence from European Panel Data” Albalate, D.; Bel, G.
- WP 2008/01 “Shaping urban traffic patterns through congestion charging: What factors drive success or failure?” Albalate, D.; Bel, G.
- WP 2007/19 “La distribución regional de la temporalidad en España. Análisis de sus determinantes” Motellón, E.
- WP 2007/18 “Regional returns to physical capital: are they conditioned by educational attainment?” López-Bazo, E.; Moreno, R.
- WP 2007/17 “Does human capital stimulate investment in physical capital? evidence from a cost system framework” López-Bazo, E.; Moreno, R.
- WP 2007/16 “Do innovation and human capital explain the productivity gap between small and large firms?” Castany, L.; López-Bazo, E.; Moreno, R.
- WP 2007/15 “Estimating the effects of fiscal policy under the budget constraint” Claeys, P.
- WP 2007/14 “Fiscal sustainability across government tiers: an assessment of soft budget constraints” Claeys, P.; Ramos, R.; Suriñach, J.
- WP 2007/13 “The institutional vs. the academic definition of the quality of work life. What is the focus of the European Commission?” Royuela, V.; López-Tamayo, J.; Suriñach, J.
- WP 2007/12 “Cambios en la distribución salarial en España, 1995-2002. Efectos a través del tipo de contrato” Motellón, E.; López-Bazo, E.; El-Attar, M.
- WP 2007/11 “EU-15 sovereign governments’ cost of borrowing after seven years of monetary union” Gómez-Puig, M.
- WP 2007/10 “Another Look at the Null of Stationary Real Exchange Rates: Panel Data with Structural Breaks and Cross-section Dependence” Syed A. Basher; Carrion-i-Silvestre, J.L.
- WP 2007/09 “Multicointegration, polynomial cointegration and I(2) cointegration with structural breaks. An application to the sustainability of the US external deficit” Berenguer-Rico, V.; Carrion-i-Silvestre, J.L.
- WP 2007/08 “Has concentration evolved similarly in manufacturing and services? A sensitivity analysis” Ruiz-Valenzuela, J.; Moreno-Serrano, R.; Vaya-Valcarce, E.
- WP 2007/07 “Defining housing market areas using commuting and migration algorithms. Catalonia (Spain) as an applied case study” Royuela, C.; Vargas, M.
- WP 2007/06 “Regulating Concessions of Toll Motorways, An Empirical Study on Fixed vs. Variable Term Contracts” Albalate, D.; Bel, G.
- WP 2007/05 “Decomposing differences in total factor productivity across firm size” Castany, L.; Lopez-Bazo, E.; Moreno, R.
- WP 2007/04 “Privatization and Regulation of Toll Motorways in Europe” Albalate, D.; Bel, G.; Fageda, X.

- WP 2007/03 “Is the influence of quality of life on urban growth non-stationary in space? A case study of Barcelona” Royuela, V.; Moreno, R.; Vayá, E.
- WP 2007/02 “Sustainability of EU fiscal policies. A panel test” Claeys, P.
- WP 2007/01 “Research networks and scientific production in Economics: The recent spanish experience” Duque, J.C.; Ramos, R.; Royuela, V.
- WP 2006/10 “Term structure of interest rate. European financial integration” Fontanals-Albiol, H.; Ruiz-Dotras, E.; Bolancé-Losilla, C.
- WP 2006/09 “Patrones de publicación internacional (ssci) de los autores afiliados a universidades españolas, en el ámbito económico-empresarial (1994-2004)” Suriñach, J.; Duque, J.C.; Royuela, V.
- WP 2006/08 “Supervised regionalization methods: A survey” Duque, J.C.; Ramos, R.; Suriñach, J.
- WP 2006/07 “Against the mainstream: nazi privatization in 1930s germany” Bel, G.
- WP 2006/06 “Economía Urbana y Calidad de Vida. Una revisión del estado del conocimiento en España” Royuela, V.; Lambiri, D.; Biagi, B.
- WP 2006/05 “Calculation of the variance in surveys of the economic climate” Alcañiz, M.; Costa, A.; Guillén, M.; Luna, C.; Rovira, C.
- WP 2006/04 “Time-varying effects when analysing customer lifetime duration: application to the insurance market” Guillen, M.; Nielsen, J.P.; Scheike, T.; Perez-Marin, A.M.
- WP 2006/03 “Lowering blood alcohol content levels to save lives the european experience” Albalate, D.
- WP 2006/02 “An analysis of the determinants in economics and business publications by spanish universities between 1994 and 2004” Ramos, R.; Royuela, V.; Suriñach, J.
- WP 2006/01 “Job losses, outsourcing and relocation: empirical evidence using microdata” Artís, M.; Ramos, R.; Suriñach, J.



Institut de Recerca en Economia Aplicada Regional i Pública
Research Institute of Applied Economics

Universitat de Barcelona

Av. Diagonal, 690 • 08034 Barcelona

WEBSITE: www.ub.edu/irea/ • **CONTACT:** irea@ub.edu
