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Grant legislation vs. political factors as determinants of soft budget spending behaviors. Comparison between Italian and French regions

Jean-Michel Josselin[*], Fabio Padovano[**], Yvon Rocaboy[*]

Abstract

This paper analyses intergovernmental transfers in France and Italy to assess to which extent soft budget spending behaviors result from slack in fiscal constraints or from political factors. It innovates on the previous literature, which concentrated on single countries, by adopting a comparative perspective. We estimate two separate but identical autoregressive forecasting models on French and Italian data to evaluate how rules and political factors lead the regional administrators of each country to form their expectations about the amount of transfers they will receive from the central government. This allows to proxy the transfer expectations in both countries and their role in determining soft budget spending behaviors. The estimates indicate that transfer expectations are a quantitatively important component of regional spending in both countries, regardless the different degrees of stringency of grant legislations and the type of grants and expenditures (total, current and capital) examined.

JEL: H71, H73, H77, D78, P43, P48, P52

Keywords: Comparative analysis; Unitary states; Transfer expectations; Soft budget spending behavior; Intergovernmental relations; Local public spending; Bailing out.

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1. Introduction

The aim of this paper is to bring the study of soft budget spending behavior into a comparative framework of analysis. Interpreted in an intergovernmental principal-agent setting, soft budget spending behavior is the result of a dynamic commitment problem, caused by the lack of a "commitment technology" of the central government (the principal) that allows the local governments (the agents) to spend more than their current available resources because they can rationally expect that, in the future, the central government will solve their financial problems by granting them more transfers (Kornai *et al.*, 2003; Qian and Weingast, 1997; Prudhomme, 1995). The empirical literature on the issue has so far tested the implications of the dynamic commitment problem - chiefly the binding force of the rules that discipline the financial relationships between different government tiers and the determinants of these transfer expectations - by means of a variety of empirical strategies and in different samples (Padovano, 2012; Bordignon and Turati,

[*] Université de Rennes I, Centre National de la Recherche Scientifique (CREM UMR 6211), France.
[**] DIPES-Università Roma Tre, Roma, Italy

2009; Pettersson-Lidblom, 2010; Rodden *et al*. 2003). The common feature to all these studies is the focus on a single institutional setting: they all consider samples drawn from a single country. This approach has the obvious advantage of applying a *ceteris paribus* condition to the existing institutions, which allows evaluating the credibility of their commitment potential and, by contrast, transfer expectations originating from factors not directly linked to the legislation on the distribution of transfers. It is precisely these "non-institutional" phenomena that, according to theory (Kornai *et al*., 2003; Rodden *et al.* 2003), drive the "soft" component of spending behaviors.

Yet, focusing on just one country makes it impossible to analyze several issues that have never been examined so far in the literature, such as: a) Comparing the binding force of alternative sets of rules that discipline intergovernmental financial relations, to assess which is better able to solve the dynamic commitment problem; b) Comparing the contribution of transfer expectations to the determination of soft budget spending behavior in alternative institutional frameworks; c) Comparing how relevant are political factors, such as alignment effects, "too big to fail" effects, the need to secure local public capital and, more generally, political exchanges and personal contacts between politicians at various government levels, in determining soft budget spending behaviors in different institutional contexts and countries; d) Checking whether and why these political factors play a complementary, or a substituting, role with respect to the standing legislation in the process of grant distribution. More broadly, the adoption of a comparative analysis to the problem of soft budget spending behavior allows verifying the generality of the conclusions reached so far by models estimated on single country samples.

In this paper, we innovate on the literature by providing the first (to our knowledge) comparative analysis of the role played by alternative financial rules and political factors in solving, or in exacerbating, the dynamic commitment problem that generates soft budget spending behaviors in lower tier governments. To minimize the loss of explanatory advantages due to abandoning the *ceteris paribus* condition inherent in single country studies, we consider two democracies similar for their cultural legal background, the level of economic development and the type of vertical organization of the state: Italy and France. Both are unitary states with a significant level of decentralization (OECD, 2002; Stegarescu, 2005). Within them, we examine the same intergovernmental relation liable to generate soft budget spending behaviors, namely the distribution of transfers from the central government to the regions. In both countries, regions constitute the government level immediately below the central one: this ensures that grant distribution is both direct and does not get dispersed in a myriad of government units, as regions amount to only 20 in Italy and to 22 in France. As we shall see later on, grant distribution in the two countries differs with respect to one main institutional feature: in France, the legislation that disciplines intergovernmental financial relations is designed to ensure that the distribution of grants to regional and local governments be horizontal, i.e., such that variations in the amount of transfers to one region are matched by proportional variations in funds transferred to all other regions. In Italy, on the other hand, grant distribution is much more redistributive, with the possibility of asymmetries in the (per capita) amounts transferred to each region. The distinction between "special" and "ordinary statute" regions and the presence of re-equilibrating funds aimed at

redressing the development gap between the Centre-North regions and those of the *Mezzogiorno* are examples of the asymmetric nature of grant distribution in the Peninsula.

The empirical strategy that we adopt in this paper serves two purposes. The first is to disentangle the role played by the legislation disciplining grant distribution on the one hand, and by political factors on the other in determining soft budget spending behavior. The second is to compare evidence related to each of these two dimensions drawn from each country. To perform the first task, we begin by estimating a funding equation, where the amount of per capita transfers, in each region within a country, is a function only of the variables indicated by the legislation regarding grant distribution. Thus, the first round of estimates captures the role played by grant legislation in the allocation of transfers to regions. We then augment this equation by a series of proxies for transfer expectations, drawn from the political economy and public choice literature on the distribution of transfers (Padovano, 2012; Kornai *et al.*, 2003). The explanatory power of these covariates approximates the role played by "politics" in the distribution of grants. The comparison of the respective significance of grant legislation and political variables assesses the relative role played by these two sets of factors in the distribution of transfers to regions in France and Italy. Then, in order to evaluate the impact of those factors on soft budget spending behavior, we estimate an autoregressive empirical model, which is the standard estimating procedure in the analysis of bailout and transfer expectations (Rodden, 2005; Bordignon and Turati, 2009; Padovano, 2011). Specifically, we interpret the fitted values of the most comprehensive model, i.e., the one that includes the covariates related to both grant legislation and political factors, as the rational expectations at time *t* that regional governments formulate about the transfers they are going to receive at time *t+1*. This interpretation is legitimate insofar as the fitted values include all the relevant information about the process that generates the distribution of grants available at time *t*: to ensure that, special attention will be given to consideration of the widest possible set of explanatory variables on the right-hand side of the funding equation. To assess the role of these transfer expectations on regional spending, i.e., to evaluate and compare the dimension of soft budget spending behaviors, we introduce the fitted values into an equation that estimates regional spending. Insofar as transfer expectations affect spending, we obtain an estimate of the role played by transfer expectations on regional expenditures; in other words, we have an assessment of the extent of soft budget spending behavior, "soft" because it is not tightly constrained by the standing legislation about grant distribution. Naturally, to compare the relevance of these phenomena in Italy and France, we apply a similar empirical strategy to the data from both countries. Specifically, two data sets are used for panel data analysis: the one for Italy comprises 19 regions and 2 autonomous provinces studied between 1996 and 2007; for France, 22 regions are considered over the period 1995-2006. The use of basically the same estimating equation for both countries facilitates a comparative interpretation of the estimated coefficients. The panel structure of the datasets allows controlling also for policy changes occurring within a country through time[1].

1 We could have envisaged estimating a dynamic panel of French and Italian data joint together, thereby possibly identifying some spillovers between the two countries with respect to bailout expectations.

To anticipate the results of the estimates, evidence of soft budget spending behaviors is found in both countries. Transfers are in fact partly related to political determinants; their distribution is not uniquely driven by fiscal rules, grant legislation or by automatic formulas. This generates expectations of more transfers in the future, which in turn fuel spending behaviors. In France, political expediencies do not appear to produce significant differences in transfer decisions across regions, yet soft budget spending behaviors are still detected in all regions taken together. In Italy, institutions and political phenomena concur in determining differential treatments in central government's transfer decisions and in regional government transfer expectations. These results are consistent with the two alternative structures of the transfer legislations of the two countries. As far as the role of political factors is concerned, the estimates show that soft budget spending behavior is not, however, quantitatively more significant in Italy than in France; rather, it shows up in different domains of regional spending, precisely, in both current and capital spending in France, while it is relatively more concentrated in capital spending in Italy. This result is again in line with the greater symmetry in intergovernmental affairs of France compared to Italy.

The rest of the paper is organized as follows. Section 2 provides a literature review, mostly focusing on recent tests of soft budget spending behavior. Section 3 provides justifications for the choice of the two countries as well as a first comparative institutional analysis of the two systems of decentralization of public finance, with special emphasis on the procedures that discipline the distribution of grants to regions in both countries. Section 4 describes the empirical strategy, while section 5 presents the estimates, followed by concluding comments in section 6.

2. Transfer expectations and soft budget spending behavior of lower tiers of government

Soft budget behaviors are likely to arise whenever the structure of the agency relation between a principal and its agent gives the latter some room for profligacy. We first review the soft budget problem, with an emphasis on its relevance in government decentralization processes (section 2.1). Then, we move on, in that context of decentralization, to the political determinants that are likely to trigger such behaviors (section 2.2).

2.1. Bailouts in a multi-level government framework

The theoretical literature on soft budget constraint originates from the analysis of the behavior of state firms in planned economies (Kornai, 1986; Qian and Roland, 1998). When such firms (the agents in charge of production) found themselves in

However, it is difficult empirically to conceive that a rise of grants in a bordering region, like Piedmont in Italy, will raise demand for more grants in Rhône-Alpes, in France. So such spillovers would not be relevant, or at least would not affect our estimates. To investigate that point nevertheless, we have re-estimated the transfer (augmented with bailout expectations) equations without the five bordering regions (Liguria, Piedmont and Vallée d'Aoste in Italy; Provence-Alpes-Côte d'Azur and Rhône-Alpes in France) and the results did not change significantly. As for the dynamic dimension, the short time-series do not allow the estimation of a panel co-integration model. Finally, joining the two samples in a single equation would involve the loss of the country-specific institutional features, which are an important controlling factor of our comparative analysis.

financial difficulties, the planning authorities (the principal, last resort payer, with funding responsibility) tended to rescue them. After playing this game a number of periods, transfer decisions could be anticipated and integrated in the strategic behavior of the firms. The ensuing disincentives brought about technical and allocative inefficiencies most detrimental to the economy as a whole. But also in the so-called market economies similar mechanisms have been evidenced, for instance in the banking industry (Dewatripont and Maskin, 1995) and in other productive sectors (Kornai *et al.*, 2003).

The second step in the development of the soft budget spending theory emerged in the framework of multilevel governments, with the "second generation theories" of fiscal federalism (Oates, 2005). A first class of models analyzes soft budget spending behavior with static games (Wildasin, 1997; Goodspeed, 2002; Petterson-Lidblom, 2010). The intuition is that in an agency setting, the delegation process (here, decentralization) is likely to yield asymmetries of information about the type of central government that the local one is dealing with. In the jargon of these models, the central government can either be a "tough" one, who will not bailout local ones in deficit, or a "weak" one who, instead, will do so by transferring a greater amount of financial resources to them. A set of circumstances, such as ideological similarity of the majorities supporting the two levels of government, the amount of negative externalities engendered by the financial difficulties of the local government, or even plain corruption affect the probability that the local government attaches to the event that the central one is weak; the larger this probability, the higher the expectations that an increase in transfers will occur. Goodspeed (2002), for instance, examines vote maximization as a source of soft budget spending behavior. In his model, a vote maximizing central government may bailout a local one that has over-borrowed when the loss of votes from national taxpayers, who have to bear the fiscal cost of the increased grants, is lower than the gain of votes from the bailed-out local taxpayers. If this is the case, the local government anticipates the rise in transfers and therefore overspends. Wildasin (1997), on the other hand, shows that local governments of a certain population size or economic weight generate positive externalities beyond their administrative boundaries. If they were to become insolvent, those externalities would fade away, endangering regional growth. Bailing out the regions that are "too big to fail" may lead to strategic negligence or even to insolvency, which again shifts the burden of fiscal discipline onto the national taxpayers.

The analysis of the strategic relationships between central and local governments leads to the conclusion that bailouts can take a variety of forms (Rodden, 2005; Bordignon and Turati, 2009, Padovano, 2011). The central government may refuse to bail out, or do so with delay, and/or be selective of which local governments to relieve from trouble and which to abandon to self-financing through a fiscal crunch. Forms of "implicit bailouts" are also possible, when the central government's inability to commit is so severe that it immediately surrenders to the profligacy of the local government and sets a high level of transfers *ex ante*. This kind of situation de-links bailouts and the distribution of transfers from the occurrence of a formal deficit, as a central government can be generous towards a "too big to fail" local authority that has accumulated a small deficit and, at the same time, be tough with a less important one that is in greater financial distress. Similarly,

the central government can pre-empt the financial disequilibria of a politically friendly local authority before the emergence of a formal deficit and, at the same time, delay the stabilization of the finances of local governments that are politically unfriendly, or raise the local political costs of the stabilization by letting the local taxpayer bear a comparatively larger share of the burden (Bordignon and Turati, 2009). Following this evolution of the literature, we concentrate on estimating the expectations of future transfers that regional governments formulate and verify whether these expectations directly affect regional spending levels, bypassing the circumstance of whether the regional government is actually running a deficit.

Another consideration that emerges in the literature is that the mechanisms of cooperation and competition amongst levels of government that lead to soft budget spending behaviors are highly sensitive to the institutional context in place. The latter is indeed crucial in that it enables (or not) agents (here, the lower levels of governments) to develop strategic behaviors at the expense of their principal (the higher level of government). The challenge for empirical analysis is first to determine a relevant set of determinants and proxies for transfer expectations, as exemplified by Bordignon and Turati (2009) in their analysis of health care expenditures of Italian regions; secondly, to evaluate how these expectations impact on local governments' spending behaviors.

This brief review shows that the soft budget mechanism is now well identified in theoretical terms, and also that it is particularly pregnant in the context of multi-level governments. In that case, political determinants seem to be likely to play a significant role in the formation of expectations of transfers, thus influencing the spending behavior of the lower tiers of government. This is what we investigate now.

2.2. Political determinants of soft budget opportunities for regional governments

Soft budget behaviors need a favorable environment if they are to thrive. Such an environment, in the case of regional governments, can take on many forms that we broadly characterize as "political factors". Those determinants can be classified into two categories: variables that broadly relate to the national political and institutional context, and those more specifically in relation to local politics. We investigate them successively.

Expectations of transfers from the central government to regions primarily rely on so-called formulas built on objective criteria, defined ex ante and of common knowledge. For instance, regional population is one such criterion, present in probably most grant formulas in countries where government is organized in multiple tiers. These formulas are supposed to be structural and as such they should be the strategy-proof determinants of transfers. Their set defines what can be labeled the normative criteria for transfers. Beyond those objective factors, one can investigate whether and to what extent the political environment is likely to influence an otherwise quite deterministic grant formula. In this respect, we can distinguish national from regional variables. We consider them successively.

As to the influence of the national context on the determination of grants to regions, the public choice and political economy literature provides a number of suggestions. First, the degree of tightness of the national budget may influence transfers to regions, which constitute an outlay for the central government

(Bordignon and Turati, 2009). In times of expansionary fiscal policy, one can expect that more grants will be distributed. Second, implicit bailouts through incremental rules (Le Maux and Zhang, 2012) could entitle local governments to an ever increasing level of transfers with respect to the previous years' levels of spending (Kornai et al. 2003; Bordignon and Turati, 2009). Third, political fragmentation at the national level may have an impact on the distribution of grants (Padovano, 2012). One can hypothesize that a higher fragmentation of the ruling majority would require more leniencies of the central government *vis-à-vis* regional governments in order to "buy" their support. Fourth, the electoral margin on which the government in place can rest is yet another factor possibly influencing the distribution of grants (Cox and McCubbins, 1986). The argument is that larger majorities make national governments more confident about their political stance and thus less prone to feel the need to enhance local support by means of transfers. Finally, the national political budget cycle is likely to rhythm transfers insofar as they are a means to buy votes. Accordingly, they should be distributed in larger quantities during national electoral campaigns (Alesina et al., 1997). For the regions, those national political determinants of grants will be considered as time-varying proxies in the empirical analysis.

We now move on to the region-specific proxies that could capture transfer expectations. First, the regional political budget cycle, constructed in the same way as its national counterpart, is also likely to have a similar effect, if any. Second, one can hypothesize that regional governments supported by the same political majority as the national one can expect to receive a more "friendly" treatment and thereby to obtain more transfers. Converging political ideologies at the regional and national levels would lead the latter to more leniencies. Moving on to the internal workings of regional politics, the electoral margin in the regional assembly is constructed in the same way as the national counterpart, although the underlying effect or relation with the distribution of grants is likely to be more complex. On the one hand, probabilistic voting models *à la* Dixit and Londregan (1996) predict that the central government directs grants to marginal or "swing" regions, which should result in an inverse U-shaped relationship between regional vote differences and transfers. Alternatively, as Cox and McCubbins (1986) first suggested, risk adverse politicians in the central government might use grants to reward local politicians for electoral success and consolidate their local constituencies. Finally, we consider the lobbying power of a regional government, proxied *à la* Olson (1982), namely, by the number of years in which that government has been in place. The underlying idea is that it takes time to build networks of relations and allegiance within the branches of the central government administration responsible for the distribution of grants; hence regional governments that are in charge since a longer time are likely to be more effective at lobbying and will thus obtain more transfers from the central government.

So far, the literature we have been referring to deals with the determinants of soft budget behaviors in single country settings. We claim that it could also be appropriate and relevant to examine this issue in a comparative framework. In order to do so, we need to describe the institutions that characterize the relationships between the central and the regional governments in the two countries that we have chosen for this comparative analysis: Italy and France.

3. Regional governments in Italy and France: Comparative institutional analysis

This section intends to provide the institutional framework and rationale for the comparative analysis of multi-level governance of two countries that show both similarities and differences in that respect. It begins with an analysis of the two systems of decentralization of public finance, with special emphasis on the procedures that discipline the distribution of grants to regions in both countries (section 3.1). It then turns to a broader analysis of the way in which the decentralization process fits into the general conception of government in the two countries. Admittedly, the latter share similar features in terms of size, culture, institutions, European heritage and current integration, and level of economic development. Nonetheless, the two countries are sufficiently different for a comparative analysis: precisely at the level of intergovernmental vertical relations there remain differences that stem from the constitutional history of the two countries (section 3.2)

3.1. Institutional and financial organization of regions

Both Italy and France feature a four-tiered vertical organization of government (central government included). From the bottom to the top, France[2] has the *Communes* (numbering 36,565), the *Départements* (numbering 100) and 22 *Régions*. Italy features the *Comuni* (currently 8109), the *Province* (currently 109) and 20 *Regioni*. This multilevel government system administers two countries that are similar in terms of population (about 60 million inhabitants in both countries) and less so in terms of size (France has a surface of about 544,000 square kilometers against 301,000 of Italy).

In the two countries, regions constitute the upper tier of sub-central government and the more recently established one. The French regions were created in 1956 after considering that the small size of the *Départements* could become a problem for the modernization of the country[3]. Originally responsible for the planning of the economic development of the regional territory, for a long while their main activity was compiling statistics about the local economy. The regions were administered by prefects under the direct responsibility of the central government. The decentralization laws of 1982 radically changed this situation, by providing the regions with a statute of local authorities similar to that of the *Communes*. The first regional elections were held in 1986. Since then, the regional councils (*Conseils régionaux*) have been elected by direct universal suffrage, with the elections taking place every six years.

In Italy, on the other hand, the regions were foreseen for the first time in the Republican Constitution of 1948, but were actually established in two separate periods of time. First, the time interval between 1948 and 1962 witnessed the creation of the 5 regions with an autonomous statute (*Regioni a Statuto Speciale* or

2 Throughout the paper, we refer to France as continental France, excluding the TOM (Territoires d'Outre-Mer), namely, the territories outside Europe that constitute the remains of the French colonial empire.

3 Established in 1790, the area of each Department was not to exceed the length of a one-day horse ride, both in the North-South and East-West directions.

RSS: Valle d'Aosta, Trentino Alto Adige and Friuli Venezia Giulia in the North; Sicily and Sardinia in the South), motivated by their geographical, cultural, and economic differences with respect to the rest of the country. Then, in 1970, the remaining 15 regions were established with basically identical statutes (*Regioni a Statuto Ordinario*, or RSO). Much in the same way as in France, the *Consiglio Regionale* and the President (commonly called the "Governor") are, since the reforms of 1995, directly elected every 5 years via an institutional mechanism that ensures stable majorities (Padovano and Ricciuti, 2008).

Over the years, the French decentralization process has been transferring new responsibilities to the regions (Guengant and Rocaboy, 2008; Garello, 2003). Today, vocational training, high school buildings and facilities as well as railway infrastructures are the main responsibilities assigned to the French regions. The financing principle is that any additional expenditure induced by a prerogative transferred to the regions is to be exactly compensated by the central government. Compensation takes two forms. First, there can be a transfer of taxes – bases and rates. Second, all sub-central jurisdictions (regions included) receive a lump-sum grant, the DGD (*Dotation Globale de Décentralisation*), which is equal to the difference between the expenditure attributable to the new prerogative and the value of the taxes conceded. In 2004, the DGD amounted to more than 20% of the total revenues of the regions. The DGD was first adjusted annually at the rate of the VAT and now at a rate equal to the sum of the inflation rate and a fraction of the rate of growth of total GDP in the previous year (Gilbert and Rocaboy, 1996, Guengant and Josselin, 2005). Setting this fraction is the responsibility of the national assembly, and constitutes the lever with which the central government varies the yearly amount of transfers to the regions. The procedures that govern the assignment of the DGD show that changes in the growth rate of the fraction are "horizontal", i.e., they apply to all regions more or less in the same way. In broad terms and at least on paper, the French government does not follow the practice of systematic differential treatment of local governments (or "variable geometry federalism") that is instead followed in neighboring Spain, Belgium and, indeed, Italy.

The main difference between the Italian and the French systems of decentralization is thus found at the institutional level, since Italy adopts a "variable geometry" model quite different from the "horizontal symmetry" typical of France. In Italy, a most important asymmetry is between the RSO and the RSS. The RSSs have broader competencies and spending powers than the RSOs and enjoy correspondingly larger tax autonomy, especially in the form of greater revenue sharing of central government taxes. To (partly) compensate that, the RSSs receive less funds from the central government in the form of explicit transfers (Brosio and Piperno, 2007; Bordignon, 2000). Both the RSOs and RSSs have health care as their main competence. The remaining outlays are composed of miscellanea of administrative expenses, local transportation, social assistance, education and culture programs. On the financial side, the funding of the Italian National Health Service (SSN, *Servizio Sanitario Nazionale*) follows a two stage process. First, with the approval of the budget law for the following year, the central government sets the overall size of the National Health Fund (FSN, *Fondo Sanitario Nazionale*) that the regional governments have then to distribute to the various Local Health Units (ASL, *Aziende Sanitarie Locali*) in their territory. As the SSN is also partly financed by the

IRAP (*Imposta Regionale sulle Attività Produttive*, a regional value added tax computed at the firm level), by approving the budget the central government effectively sets the amount of "topping up" to be given to the regions via conditional grants for the following year's health care expenditures. Later in the year, however, additional transfers can be (and usually are) distributed to the regions, according to a predetermined formula, that basically equalizes per capita health financing (regional taxes plus central government transfers) across regions, with some adjustments being made for the age structure of the population and the interregional mobility of patients (Turati, 2003). In principle, given that both the formula and the overall amount of central government funding are predetermined, the allocation of the national funds to each region should follow automatically. In practice, however, there is often considerable bargaining between the regions and the central government about the amounts of funds to be distributed to each region, partly because some room in "interpreting" the formula is allowed (and the formula itself, parameters included, has often been changed); partly because the regions perform a substantial amount of "budget dressing"; and partly because of the difficulty in computing from the centre a precise estimate of "standardized" or "efficient" health cost for the amount of services provided by each region[4] (Bordignon and Turati, 2009). The remaining regional expenditure programs follow a process similar to health care, especially for the combination of regional self-financing via taxes and central government grants provided via the budget law: the greater differences lay in the equalization procedures that leave even more room for discretionary choices. Moreover, as already said, the RSSs can retain more funds in the form of participation into central government taxes, and receive less in the form of explicit grants-in-aid. This strong resilience of discretionary power *vis à vis* rule-based decisions confirms the different importance of political determinants in France and Italy, as well as the need to examine the issue of the distribution of transfers from a positive outlook. But before we proceed to the empirical analysis, it is worth emphasizing how the differences in the decentralization patterns that we have just described fit into the broader frame of the constitutional history and organization of the two countries under scrutiny.

3.2. Conceiving decentralization from different constitutional standpoints

We have already pointed at the several common features of the two countries. It is all the more so now that they are both deeply engaged in the ongoing process of European integration. It nevertheless remains that there are some fundamental differences that stem from their constitutional political economy and history. Admittedly, both are unitary states, with a strong and engrained tradition of civil law. In Italy, Roman law has been paving the way to the current juridical organization; in France, even though the Code Napoleon borrows from Germanic customs for property law, it heavily rests on Roman law for the other domains. That joint heritage should not conceal significant differences in the organization and workings of governments, especially with respect to its multi-level nature.

4 Most of these negotiations are carried out in an informal institution that has gained considerable importance with the progressive decentralization of the Italian government, the Conferenza Stato-Regioni (Committee State-Regions), where undersecretaries of Ministries meet delegates of the Regions, if not the Governors themselves, to solve the most technical issues. Most of the solutions found then find their way into national legislation.

First of all, Italy is a parliamentary republic whereas since the 5th Constitution of 1958, France is definitely a semi-presidential regime in which the central power is extremely present. Secondly, Italy features a perfect bi-cameralist system of representatives, such that legislations must be voted in exactly the same terms by Parliament and Senate. The latter does represent to a certain extent a lobbying arena for regions especially through the State-Regions Committee, but if regions ever use their weight in Senate, it is mostly on an individual basis: strategic behaviors are individualized. In the French case, through the tradition of concurrent political mandates at the local and national levels ("*cumul des mandats*") remains vivid in spite of various attempts to refrain it. Senators very often have regional responsibilities and as such, they have a considerable leverage on the amendment and passage of bills. The lobbying power of regions is reinforced by the role of the Committee for Local Public Finance (*Comité des Finances Locales*). The Committee is composed of representatives of the mayors and members of departmental or regional councils. Among other missions, it is closely involved in the conception and presentation by the central government of the initial national budget (*Loi de finances initiale*). Traditionally, the Committee ensures a *de facto* coordination of the various interests that cross the local public sector. In the game involving on one hand, the central government and the Ministry of Finance, and on the other hand the Senate and the Committee, regions systematically evidence a common standpoint, using their strategic capacity as a single player representing the interests of all regions indiscriminately.

In the previous section 2.1, we had hinted at the main difference between the Italian and the French systems of decentralization, namely the Italian "variable geometry" model of decentralization as opposed to the French "horizontal symmetry". It is now apparent that such a difference stems from constitutional systems which, if they have strong common features, nevertheless exhibit dissimilarities that the empirical investigation intends to illuminate and explain. We thus move on now to the presentation of the empirical strategy that will provide the setting for the ensuing econometric tests.

4. Empirical strategy

The empirical strategy that we adopt in the comparison of transfer expectations and spending behaviors in Italy and France consists in two batteries of sequential tests, as described in section 4.1. The initial step deals with transfers from central government to regional governments, in order to have an estimate as precise as possible of the structural process that determines their distribution. According to the rational expectations theory, the fitted values of these funding equations constitute a *proxy* for the expectations that regional governments form about the transfers they can receive from the central government (section 4.2). The second step estimates an expenditure equation for regional governments, to verify whether these expectations have behavioral consequences, i.e., if they have a distinct impact on the level of regional spending (section 4.3). Tests for transfers and expenditures are sequential in the sense that they consist in the estimation first of a benchmark, then of an augmented equation.

4.1. Description of the strategy

The benchmark funding equation includes only the variables foreseen by the legislations that regulate the distribution of equalization transfers in Italy and France (Brosio and Piperno, 2007; Bordignon, 2000, for Italy; Guengant and Rocaboy, 2008, for France). Essentially, these variables are indicators of the state of the regional economy and of the size of the population; they capture the role played by grant legislation in the allocation of transfers to regions[5]. The benchmark specifications are then augmented for time specific and region specific proxies of transfer expectations, as suggested by the literature (Padovano, 2012). As we shall see in greater detail in the next section, these proxies are related to political factors; as such they can capture the role of politics in the distribution of transfers to regions.

A similar sequential process is adopted for the spending equations. We begin by estimating a structural model of regional expenditures, and then augment it with the fitted values of the funding equations, i.e., the estimate of transfer expectations. A positive and statistically significant coefficient on this term is evidence of a positive impact of transfer expectations on the regions' spending behaviors.

This empirical strategy is based on an autoregressive forecasting procedure, commonly used in this literature, as in the case of Holtz-Eakin and Rosen (1993), Rattsø (1999) and Rodden (2005). With respect to this literature, however, and particularly Rodden (2005) and Bordignon and Turati (2009), we mark an improvement in that we consider a much larger set of proxies for transfer expectations.

4.2. Specification of transfer expectations

The benchmark equation explaining transfers per capita $T_{i,t}$ from central government to regional governments i at times t over horizon T is specified using variables included in the legislation disciplining the distribution of grants in the two countries, chiefly the regional level of unemployment $U_{i,t}$ and the per capita difference between the regional and national GDPs, $\Delta GDP_{i,t}$ (variables can be lagged in the estimations, see section 5):

$$T_{i,t} = \alpha_1 POP_{i,t} + \alpha_2 U_{i,t} + \alpha_3 \Delta GDP_{i,t} + \sum_{i=1}^{I} \varrho_i + \varepsilon_{1,it} \quad (1)$$

In this equation, the regional population $POP_{i,t}$ is included to capture scale effects[6], also considered in the formulas for the distribution of grants. Finally, ϱ_i stands for regional fixed effects. Their consideration is especially important in the

5 While it is obviously impossible to translate all provisions foreseen by the French and Italian laws for grant distribution to regional governments into a regression model, still the benchmark funding equation does include the most important factors to which those laws make reference to. This interpretation is reinforced by the inclusion of the regional fixed effects in the specification of the estimating model, which account for the other conditioning phenomena.

6 The variables that meter the state of the regional economy, such as the unemployment rate U and the regional growth differential ΔGDP, are bound to capturing correlated phenomena that go beyond the provisions of the legislation for the distribution of transfers to regions. Hence, U and ΔGDP are likely to overestimate the role of legislation and, consequently, the model is liable to under estimate the role played by political factors and by transfer expectations on such distribution.

Italian case, to account for the institutional differences between the RSSs and the RSOs. We do not include year or time dummies because many of the proxies for expectations are qualitative variables centered on a particular year. The model is tested for total transfers $TT_{i,t}$, current expenditure transfers $CT_{i,t}$ and investment expenditure transfers $IT_{i,t}$.

In a second step we introduce the proxies for expectations. Following Bordignon and Turati (2009) and Padovano (2011), two categories of such proxies are considered. First, a vector of time-varying proxies that are meant to affect each region without distinction is introduced; it represents the possible influence of national political factors. Second, we introduce a vector of region-specific political determinants. The previous equation (1) is therefore successively augmented with the corresponding variables, which synthesize the discussion earlier provided in section 2.2.

With respect to national political determinants, we introduce five covariates. The degree of tightness of the national budget is expressed by the ratio between the consolidated national deficit of central government and the average one of the remaining 15 countries that belong to the Euro zone; it is denoted $NDEF_t$. The expected sign is positive: as a higher deficit denotes a more expansionary fiscal policy and greater spending, more grants are likely to be distributed to regions, since grants constitute an outlay for the central government budget. Then, a linear trend ($TREND_t$) is introduced to capture incremental processes in the allocation of transfers. Again, the expected sign is positive. As regards political fragmentation, variable $NHIND_t$ represents the Herfindahl index of the parliamentary seats of the national government majority; it ranges from one (maximal cohesion) to zero (maximal fragmentation when the number of parties is infinite). Because of the construction of the index, we expect a negative sign on this variable, as a less fragmented parliament is more prone at resisting lobbying from regional governments. Governmental room for maneuver is captured by variable $NMARGIN_t$, viz., the difference in the number of seats between the first and second largest party in the national parliament. National governments with larger majorities feel more secure about their political stance, and need less to distribute grants in order to secure local votes. The effect of the national political budget cycle is captured by the dummy $NPBC_t$ which takes a value of 1 in t when a national election is held during the second semester of year t; value 1 in t and $(t-1)$ when a national election takes place at the first semester of year t; and a value 0 otherwise. The expected sign is obviously positive, as the usual greater spending typical of electoral years will involve the distribution of more grants.

To summarize, equation (1) is first augmented with time-varying proxies of the possible national political determinants of grants:

$$T_{i,t} = \alpha_1 POP_{i,t} + \alpha_2 U_{i,t} + \alpha_3 \Delta GDP_{i,t} + \alpha_4 NDEF_t + \alpha_5 TREND_t + \alpha_6 NHIND_t + \alpha_7 NPBC_t + \alpha_8 NMARGIN_t + \sum_{i=1}^{I} \varrho_i + \varepsilon_{2,it} \qquad (2)$$

Equation (2) is tested for total, current expenditure and investment expenditure transfers, to verify whether the same process similarly affects all types of transfers.

A second vector of covariates is then considered to capture transfer expectations that are region-specific. The dummy variable $RPBC_{i,t}$ identifies the regional political budget cycle, again with the expected positive sign. Another dummy is $ALIGN_{i,t}$, which expresses the political concurrence of the regional and of the national majorities. It equals 1 when the majorities of the regional and national legislative branches express the same political ideology, 0 otherwise. The sign on the coefficient should be positive, because more grants should be allotted to politically friendly regions. The vote margin in the regional assembly is defined by $RMARGE_{i,t}$. The expected sign depends on whether the central government concentrates its efforts on swing regions or on rewarding successful local politicians. In the former case, the squared value of $RMARGE_{i,t}$ should be positive, as fewer grants should be directed to regions at the tail of the distribution of the vote margin, and more at the centre where the zero value lies. In the latter case, the expected sign of the coefficient for $RMARGE_{i,t}$ would be positive. Finally, $GOVYEARS_{i,t}$ represents the number of years in power for a regional government. Government in charge since longer times are likely to be more effective at lobbying the central government and to carry higher political weight, that should result in more grants received (Padovano, 2012). The corresponding coefficient is likely to be positive.

Equation (2) had added time-varying proxies to the normative criteria of grant formulas (equation 1), such proxies intending to capture the effects of national politics on transfer expectations. It is now augmented with region-varying proxies expressing the likely effects of regional politics on transfer expectations. Equation (3) thus provides the complete set of determinants of transfers:

$$\begin{aligned} T_{i,t} = {} & \alpha_1 POP_{i,t} + \alpha_2 U_{i,t} + \alpha_3 \Delta GDP_{i,t} + \alpha_4 NDEF_t + \alpha_5 TREND_t \\ & + \alpha_6 NHIND_t + \alpha_7 NPBC_t + \alpha_8 NMARGIN_t + \alpha_9 RPBC_{i,t} + \alpha_{10} ALIGN_{i,t} \\ & + \alpha_{11} RMARGE_{i,t} + \alpha_{12} GOVYEARS_{i,t} + \sum_{i=1}^{I} \varrho_i + \varepsilon_{3,it} \end{aligned} \quad (3)$$

Similarly to what has been previously described, equation (3) is tested for total, current expenditure and investment expenditure transfers.

4.3. Specification of expenditure equations

Regional expenditures are first examined with respect to standard structural determinants of regional spending programs and then with the inclusion of transfer expectations. This specification allows checking whether those expectations affect the spending behavior of regions. Furthermore, since we compare regions from two different countries, we would like to infirm or confirm the hypothesis that the strategic behavior of regional governments regarding expected transfers is context-dependent, and highlight where it plays a more important role and why.

The first stage thus explains per capita expenditures $E_{i,t}$ of regional governments i at times t over horizon T using structural variables and country specific variables. The latter control for the different tasks assigned to regional governments in Italy and in France. For instance, since health care is the most important competence of Italian regions, but is hardly present in the French ones, specific variables are introduced to capture this country-specific characteristic, such

as the number of physicians and of hospital beds in the Italian spending equation. Conversely, as education is a relatively more important responsibility for the French regions, we introduce variables such as the pupil per teacher ratio among the covariates for the French spending equation. Finally, since the high demanders of health care and education are likely to belong to different age cohorts, we insert the percentage of elderly and of youngster in the regional population as a check for the overall plausibility of the specification of the empirical model. The following spending equation only details structural variables common to both countries, while context-dependent variables will be described in greater detail in the next section.

$$E_{i,t} = \alpha_1 RGDP_{i,t} + \alpha_2 YPOP_{i,t} + \alpha_3 EPOP_{i,t} + \alpha_4 RIGHT_{i,t} + \alpha_5 SPEC_{i,t} + \sum_{i=1}^{I} \varrho_i + \varepsilon_{4,it} \quad (4)$$

In this equation, the regional GDP per capita $RGDP_{i,t}$ conveys the income effect of Wagner's law, which predicts a positive correlation between public expenditures and per capita income. A demand effect can be expressed through the proportion of young $YPOP_{i,t}$ and elderly $EPOP_{i,t}$ people in the population of the region. A partisan effect is captured with the dummy $RIGHT_{i,t}$, which should capture the conjecture that rightwing regional governments would be less inclined to spending than their leftwing counterparts. Hence a negative sign is expected on this variable. Vector $SPEC_{i,t}$ includes country specific supply or demand-inducing effects, to be detailed in the estimation section. Fixed effects are denoted as previously. Equation (4) is tested for total, current and investment expenditures.

We now move on to the second and final stage of estimations. The fitted values $T_{i,t-1}$ from equation (3) are introduced in the expenditure equation (4), according to the autoregressive forecasting procedure. The explained components of transfers represent the expected financing of regions by the central government, as it is expressed through the transfer proxies, conditional on the existing grant legislation. As the budget appropriation process inserts a one year delay between the moment when funds get assigned (and expectations are formed) and the time when these funds can be spent by the regional government, only the lagged fitted values of the estimates of equation (3) should prove significant. To the extent that transfer expectations play a role in determining soft budget spending behavior, a positive sign is expected on the covariate T_{t-1}. Expenditures with expectations about transfers can thus be described as:

$$E_{i,t} = \alpha_1 RGDP_{i,t} + \alpha_2 YPOP_{i,t} + \alpha_3 EPOP_{i,t} + \alpha_4 RIGHT_{i,t} + \alpha_5 SPEC_{i,t} + \alpha_6 T_{i,t-1} + \sum_{i=1}^{I} \varrho_i + \varepsilon_{5,it} \quad (5)$$

Again and finally, equation (5) is tested for total, current and investment expenditures.

Tables 1 and 2 provide the descriptive statistics of the data, respectively for the French and the Italian samples.

Table 1 Descriptive statistics: France

	mean	**median**	**max**	**min**	**st. dev**	**N.**
TT (10^3 €)	165408.9	107107	1978208	13371.91	78219.83	308
CT (10^3 €)	121144.8	69056.43	1270591	-26812.1	58581.28	308
IT (10^3 €)	48109.2	32973.96	786087.1	18088.23	3903639	308
TE (10^3 €)	454354.4	354902	3099739	47690.17	124672.9	308
CE (10^3 €)	201294.7	157288.8	1403636	20340.81	74611.48	308
IE (10^3 €)	249482	197365	1696100	0	76973.67	308
align	0.43	0	1	0	0.009	308
ΔGDP	0.029779	0.029267	0.086654	-0.01513	0.003872	308
epop	13.7851	14.0167	17.73	11.13586	0.140107	308
govyears	5.204545	4.25	10	0	1.508642	308
Ndif	0.74	0.6	1	-0.3	1.14^{-16}	308
nhind	0.70	0.724	1	0.46	2.84^{-17}	308
nmargin	161	66	415	39	144	308
Pop	10867992	10836317	11447402	10357291	1794047	308
right	0.40	0.41	1	0	0.017	308
rmargin	14.204	9	36	0	2.43	308
U	9.98	10.15	17.2	5.2	3.43	308
Ypop	26.8	26.26	38.93	19.52	22.41	308

Table 2 Descriptive statistics: Italy

	mean	**median**	**max**	**min**	**st. dev**	**N**
TT (10^3 €)	185864.5	1430.405	8222.887	25.315	1567.191	210
CT (10^3 €)	153762.6	1078.757	7914.283	9.486	1446.212	210
IT (10^3 €)	375023	261.242	2272.578	5.616	333.060	210
TE (10^3 €)	476759.9	4140.603	21074.827	430.574	3862.850	210
CE (10^3 €)	427265.2	3687.925	19669.577	312.091	3583.585	210
IE (10^3 €)	59114.6	463.351	2441.737	62.168	445.368	210
align	0.536	1	1	0	0.499	210
ΔGDP	-1.41^{-06}	0.02	0.127	0.068	0.018	210
epop	1.218	1.202	1.667	1.003	1.028	210
govyears	0.190	0.188	0.265	0.128	0.029	210
ndif	2.04	2	4	0.00	1.424	210
nhind	5.791	5.751	8.961	4.143	7.252	210
nmargin	0.031	0.038	0.038	0.023	0.007	210
pop	2825121	1649546	9393092	117065	2246760	210
right	0.431	0	1	0	0.496	210
rmargin	0.132	0.096	0.408	0.001	0.107	210
U	0.107	0.079	0.280	0.024	0.069	210
Ypop	0.140	0.135	0.196814	0.101	0.022	210

We now propose to apply the successive steps of this empirical strategy to the two samples of Italian and French regions.

5. Empirical analysis

Estimations follow the track of the testing strategy described above. Section 5.1 explores the structural and conjectural determinants of transfers. The former rests on the standard components of legislation about transfers for France and Italy, while the latter involves proxies for transfer expectations. In particular, the most important indicators in the French transfer legislation for assigning grants are population size and regional growth differentials; in addition to those two, in Italy also the unemployment level plays a significant role, mainly because of legislation in favor of hiring unemployed workers in the Southern regions (like law 407/90 and similar ones). Section 5.2 then investigates how expected transfers affect spending behaviors. As to the estimation technique, for all models we use a pooled EGLS with

cross section weights and standard errors clustered at the region level[7]. The short time dimension of the panel (generally 12 years) does not allow estimating a panel co-integration model to fully capture the dynamics of the relationships[8].

5.1. Estimating transfer expectations

Table 3 reports the estimates of equation (1), which explains transfers per capita $T_{i,t}$ as a function of the variables foreseen in the standard legislation about grant distribution for the Italian and French cases successively.

The fundamental evidence that emerges from comparing the estimates of equation (1) for Italy and France is that the institutional variables, i.e., those included in the legislation disciplining transfers to regions, condition the central governments' decisions to allocate transfers across regions only to a point. Their relevance appears greater in the case of France than in Italy, as the values of the adjusted R^2 and the size of the coefficients suggest. As a further reinforcement of the plausibility of the estimates, the cross-country variations in the estimated coefficients are consistent with the different economic state variables that the Italian and the French legislations for grant distribution emphasize. In the Italian case lagged unemployment plays a more relevant role than relative growth of GDP, while the latter variable carries a greater explanatory power in the French sample. Again in line with the broad characteristics of the legislations of the two countries, both in the French and in the Italian case unemployment correlates significantly only with current transfers and not with those earmarked for capital projects, which actually follow different criteria of distribution (Arachi and Zanardi, 2004; Guengant and Rocaboy, 2008). In France, regional growth differentials are negatively correlated with current transfers, but positively with those earmarked to investments in public capital.

7 There is some concern that clustering the standard errors at the regional level might insert some bias in the estimates, given the small number of clusters; Following Angrist and Pitschke (2010) this should not be the case for our estimates, because the number of years is not much smaller than that of the cross sections (13 years for up 21 regions for Italy, 22 for France). When the clustering is removed, the standard errors do not suffer qualitatively relevant changes.

8 The presence of many time related dummies, such as electoral years or innovations in the legislation, does not allow using time dummies in the estimates. This in principle raises concerns, as the absence of time dummies implies the assumption that the processes estimated for the two countries are characterized by the same time shocks. While legitimate, this concern does not quite apply to our analysis, as the two countries are indeed highly integrated economically, and can be safely assumed to be characterized by the same business cycle. Equations (4) and (5) control for per capita incomes; equations (2) and (3) control for changes in the financial position (effectively, the fiscal policy) of each country relative to the EU15 group. Other financial and legislative shocks are mostly accounted for by means of the various dummies that capture legislative innovations and changes in the political factors that affect transfer expectations. Finally, the rather short time interval of our sample (13 years maximum) provides another guarantee that asymmetric shocks should be not be relevant.

Table 3 Estimates of equation 1 for Italy. Transfers as a function of structural determinants

Italy	**Model 1**	**Model 2**	**Model 3**
Dependent variable	Total transfers $TT_{i,t}$	Current expenditure transfers $CT_{i,t}$	Investment expenditure transfers $IT_{i,t}$
C	0.0003*** (7.97)	0.0001*** (4.31)	0.0001*** (9.6)
$POP_{i,t}$	-1.88-11*** (-2.43)	7.54-13*** (0.1)	-1.31-11 (-4.23)
$U_{i,t}$	0.001 (1.52)	0.0005 (0.6)	0.0002 (1.05)
$U_{i,t-1}$	0.002*** (2.76)	0.002*** (2.53)	0.0002 (-1.1)
$\Delta GDP_{i,t}$	-0.001 (-1.22)	0.0005 (0.77)	-0.0004** (-2.02)
$\Delta GDP_{i,t-1}$	-0.001** (-2.21)	-0.001* (-1.61)	-0.0004** (-1.37)
$\Delta GDP_{i,t-2}$	-0.0004 (-0.51)	-0.0004 (-0.62)	-0.0003** (-1.46)
Regional fixed effects	Yes	Yes	Yes
Estimator	EGLS	EGLS	EGLS
Adj. R^2	0.54	0.45	0.49
S.E.R.	0.0002	0.0002	8.68-05
F statistics	32.42***	22.82***	26.53***
D.W.	1.97	1.99	2.16
Sample period / number of observations	1998-2007 / 210	1998-2007 / 210	1998-2007 / 210

*Note: t-statistics in parentheses. Statistical significance at the 1%, 5% and 10% level are indexed by ***, ** and * respectively. Robust standard errors clustered by regions.*

Table 3 (continued) Estimates of equation 1 for France. Transfers as a function of structural determinants

France	**Model 4**	**Model 5**	**Model 6**
Dependent variable	Total transfers $TT_{i,t}$	Current expenditure transfers $CT_{i,t}$	Investment expenditure transfers $IT_{i,t}$
C	-2.194*** (-5.20)	-1.953*** (-3.55)	-0.008 (-0.73)
$POP_{i,t}$	7.70^{-7}*** (-5.20)	5.66^{-7}*** (2.83)	9.20^{-9}*** (2.57)
$U_{i,t}$	0.006*** (10.99)	0.006*** (9.92)	3.36^{-5} (0.17)
$U_{i,t-1}$	0.005*** (6.91)	0.005*** (6.81)	0.00035* (1.69)
$\Delta GDP_{i,t}$	-0.000915*** (-4.05)	-0.0014*** (-18.86)	0.000517** (2.07)
$\Delta GDP_{i,t-1}$	0.000452*** (3.53)	-8.07^{-5}*** (-2.39)	0.000251** (1.83)
$\Delta GDP_{i,t-2}$	-0.000874*** (-7.82)	-8.11^{-5} (-0.27)	0.00028 (0.013)
Regional fixed effects	Yes	Yes	Yes
Estimator	EGLS	EGLS	EGLS
Adj. R^2	0.96	0.99	0.74
S.E.R.	0.01881	0.01616	0.00638
F statistics	235.15***	1139.92***	26.62***
D.W.	2.85	2.99	2.02
Sample period / number of observations	1995-2005 / 242	1995-2005 / 242	1995-2005 / 242

*Note: t-statistics in parentheses. Statistical significance at the 1%, 5% and 10% level are indexed by ***, ** and * respectively. Robust standard errors clustered by regions.*

We then augment equation (1) with time-varying proxies that feature the likely national political determinants of transfers. Results of equation (2) for France and Italy are presented in table 4. For both countries, they indicate that time-related proxies do carry a significant explanatory power and are generally in line with theory. Furthermore, the overall explanatory power of the models increases, especially in the Italian sample, as indicated by the R^2. Economic state variables related to transfer legislation maintain the expected signs, but, predictably, in many cases loose explanatory power, once these new variables are added[9]. This result

9 In general the unemployment rate still positively correlates with current grants in Italy and the relative regional growth rate of output is positively correlated in the case of France. The loss of statistical significance is concentrated in the case of capital transfers, which, as already mentioned, follow a

further confirms the importance of transfer expectations and of political factors in the actual distribution of grants. There remains to check the relevance of each time proxy. First, the linear trend $TREND_t$ is significant in both countries except for investment transfers (with just 10% significance in France). This result reflects the incremental path for current transfers that is explicitly stated in the Italian legislation[10] and is also implicit in the mechanism of the DGD in France; it also reveals a greater variability of investment support, depending on the dynamism, the duration and the time partitioning of regional investment projects. In this respect, the 10% statistical significance of the coefficient on the $TREND_t$ variable with respect to French capital transfers points out their less erratic behavior than the Italian ones. On the national side of public budgets, the ratio $NDEF_t$ between the consolidated national deficit of central governments and the average EU15 deficit – effectively, a measure of how expansionary the fiscal policy is - is introduced with current and lagged dates. In Italy, the results are in line with theory, as a greater deficit-to-GDP ratio with respect to the European average results in larger transfers to the regions, which constitute a central government outlay. In France, the instantaneous impact of an expansion of the national budget is significantly negative, but then becomes positive as expected for the lagged value, which includes the one year lag in appropriations in the central government budget. The net effect, measured by the sum of the two coefficients, is positive, as theory predicts. As for $NHIND_t$, the Herfindahl index of the parliamentary seats of the national government majority, the results for both countries confirm the strongly positive influence of majority fragmentation, i.e., of weaker national governments needful to acquire local political support at the national level by means of transfers. This effect is quite evident where it is expected to emerge, namely in the case of current transfers that have an immediate return in terms of votes; the correlation with capital transfers is much less evident, being positive in Italy and weakly negative in France. As to the national political budget cycle $NPBC_t$, it does prove to be significant and to be indeed a cycle; an expansionary effect in the year of the electoral campaign is followed by a contraction in the post electoral year. Finally, for Italy, the variable $NMARGIN_t$, an alternative measure of central government strength related to the difference in the number of seats between the first and second largest parties in the national parliament, appears to be a quite significant driver for all categories of transfers. The same variable, instead, never turned out significant in the French sample, probably reflecting the semi-presidential nature of the French government and the greater stability it lends to the executive branch.

different distribution pattern also at the level of legislation. The loss of statistical significance in the regression explaining total transfers in Italy most likely derives from the capital transfers component.

10 The "spesa storica" – effectively an incremental rule à la Wildavski - was abolished in 2009 (law 42/2009) and replaced by the principle of the standard costs. This reform, however, falls outside the sample period of our analysis.

Table 4 Estimates of equation 2 for Italy. Transfers as a function of structural determinants and of time proxies for bailout expectations

Italy	**Model 7**	**Model 8**	**Model 9**
Dependent variable	Total transfers $TT_{i,t}$	Current expenditure transfers $CT_{i,t}$	Investment expenditure transfers $IT_{i,t}$
C	0.003*** (4.36)	0.002*** (3.94)	-0.0004*** (-5.28)
$POP_{i,t}$	-6.68-10*** (-2.68)	-5.53-10*** (-2.42)	-1.27-10*** (-4.46)
$U_{i,t-1}$	0.001 (1.01)	0.002* (1.66)	-2.39-05 (-0.13)
$TREND_t$	7.72-05*** (2.99)	5.8-05*** (2.26)	7.24-07 (0.14)
$NDEF_t$	-4.9-05 (-0.75)	-5.6-06 (-0.09)	-6.53-05*** (-6.86)
$NDEF_{t-1}$	7.3* (1.73)	5.71-05 (-1.29)	6.25-06 (-0.65)
$NHIND_t$	-0.0004*** (-2.65)	-0.0005*** (3.43)	0.0001*** (5.47)
$NPBC_t$	0.000246*** (3.39)	0.00014*** (2.19)	7.64-05*** (5.77)
$NPBC_{t+1}$	-5.68-05 (-0.63)	-9.88-05 (-1.13)	7.88-05*** (5.7)
$NMARGIN_t$	-0.027*** (-3.31)	-0.024*** (-2.8)	0.0038*** (2.61)
Regional fixed effects	Yes	Yes	Yes
Estimator	EGLS	EGLS	EGLS
Adj. R^2	0.63	0.58	0.78
S.E.R.	0.0002	0.00023	6.83-05
F statistics	11.86***	9.8***	23.23***
D.W.	1.98	1.98	2.04
Sample period / number of observations	1998-2006 / 189	1998-2006 / 189	1998-2006 / 189

*Note: t-statistics in parentheses. Statistical significance at the 1%, 5% and 10% level are indexed by ***, ** and * respectively. Robust standard errors clustered by regions.*

Table 4 (continued) Estimates of equation 2 for France. Transfers as a function of structural determinants and of time proxies for bailout expectations

France	**Model 10**	**Model 11**	**Model 12**
Dependent variable	Total transfers $TT_{i,t}$	Current expenditure transfers $CT_{i,t}$	Investment expenditure transfers $IT_{i,t}$
C	-0.385*** (-10.5)	-0.337*** (-10.29)	-0.016 (-0.66)
$POP_{i,t}$	-1,02-09 (-0.07)	-2.47-08** (-1.95)	1.41-08 (1.50)
$U_{i,t-1}$	0.006*** (4.81)	0.004*** (4.33)	0.0003 (0.86)
$\Delta GDP_{i,t}$	0.009*** (5.41)	0.008 (6.85)	0.001* (1.61)
$TREND_t$	0.023*** (35.78)	0.023*** (28.9)	0.0004* (1.73)
$NDEF_t$	-0.005*** (-27.41)	-0.005 (-25.73)	-0.0001* (-1.75)
$NDEF_{t-1}$	0.219*** (33.23)	0.226*** (28.96)	-0.0009 (-0.66)
$NHIND_t$	-0.228*** (-8.73)	-0.216*** (-8.56)	-0.014* (-1.86)
$NPBC_t$	0.097*** (34.56)	0.099*** (30.87)	0.0009** (1.95)
$NPBC_{t+1}$	-3.067*** (-33.04)	-3.171*** (-28.85)	0.01 (0.054)
$NMARGIN_t$	0.00007 (0.11)	0.00002 (0.058)	-0.00009 (-0.06)
Regional fixed effects	Yes	Yes	Yes
Estimator	EGLS	EGLS	EGLS
Adj. R^2	0.99	0.99	0.78
S.E.R.	0.011	0.0078	0.006
F statistics	597.56***	1338.78***	23.47***
D.W.	1.64	1.44	2.09
Sample period / number of observations	1998-2006 / 220	1998-2006 / 220	1998-2006 / 220

*Note: t-statistics in parentheses. Statistical significance at the 1%, 5% and 10% level are indexed by ***, ** and * respectively. Robust standard errors clustered by regions.*

Finally, in equation 3 we introduce region-specific proxies in the grant equation (which is already augmented with national time-varying proxies). This is an important test for the soundness of our empirical analysis, because, as already mentioned in section 3, we expect that the distribution of grants to regions follows a fundamentally symmetric pattern in France, while it should be more consistent with a "variable-geometry" model in the Italian case. Such differences should emerge precisely when region-specific proxies are considered in the explanatory model. This is exactly what we found, as in our estimates France and Italy differ in that region-

specific proxies of expectations play a more important role in the Italian than in the French case.

Table 5 Estimates of equation 3 for Italy. Transfers as a function of structural determinants and of time and region specific proxies for bailout expectations

Italy	**Model 13**	**Model 14**	**Model 15**
Dependent variable	Total transfers $TT_{i,t}$	Current expenditure transfers $CT_{i,t}$	Investment expenditure transfers $IT_{i,t}$
C	0.002*** (2.82)	0.0017*** (2.36)	0.0004*** (4.76)
$POP_{i,t}$	-5.56-10* (-1.86)	-4.05-10 (-1.49)	-1.41-10*** (-4.77)
$U_{i,t-1}$	0.001 (1.16)	0.002* (1.66)	-6.47-05 (-0.36)
$NDEF_t$	4.16-05 (-0.6)	6.49-06 (0.1)	-7.11-05*** (-6.39)
$NDEF_{t-1}$	7.76-05** (1.89)	6.49-05 (1.52)	-5.32-06 (-0.58)
$TREND_t$	4.73-05 (1.57)	3.5-05 (1.24)	2.2-07 (0.03)
$NHIND_t$	-0.0003** (-1.77)	-0.0004*** (-2.67)	0.0002*** (4.35)
$NPBC_t$	0.0003*** (3.35)	0.00015*** (2.15)	8.77-05*** (5.58)
$NPBC_{t+1}$	3.7-05 (0.63)	-1.98-05 (-0.18)	7.74-05*** (2.83)
$NMARGIN_t$	-0.02** (-2.3)	-0.019*** (-2.27)	0.004** (1.94)
$RPBC_{i,t}$	7.4-05 (1.11)	6.56-05 (1.09)	2.06-05 (0.9)
$ALIGN_{i,t}$	5.18-07 (0.02)	1.86-05 (0.76)	-2.11-06 (-0.44)
$RMARGIN_{i,t}$	0.0003** (1.83)	0.0003** (1.77)	-4.08-05 (-1.57)
$GOVYEARS_{i,t}$	4.54-05** (2.3)	4.53-05*** (2.67)	3.61-05 (0.53)
Regional fixed effects	Yes	Yes	Yes
Estimator	EGLS	EGLS	EGLS
Adj. R^2	0.63	0.57	0.78
S.E.R.	0.0002	0.0002	6.78-05
F statistics	10.39***	8.35***	20.05***
D.W.	2.03	2.03	2.03
Sample period / number of observations	1998-2006 / 189	1998-2006 / 189	1998-2006 / 189

*Note: t-statistics in parentheses. Statistical significance at the 1%, 5% and 10% level are indexed by ***, ** and * respectively. Robust standard errors clustered by regions.*

Table 5 (continued) Estimates of equation 3 for France. Transfers as a function of structural determinants and of time and region specific proxies for bailout expectations

France	**Model 16**	**Model 17**	**Model 18**	**Model 19**
Dependent variable	Total transfers TT_{it}	Current expenditure transfers CT_{it}	Investment expenditure transfers IT_{it}	Total transfers TT_{it}
C	-0.134*** (-3.14)	-0.108 (-3.55)	0.001 (0.155)	-0.46*** (-8.76)
$POP_{i,t}$	-3.54^{-09} (-0.27)	-2.02^{-08**} (-2.07)	4.82^{-09*} (1.61)	-5.61^{-08***} (-3.43)
$U_{i,t-1}$	0.004*** (3.51)	0.003*** (5.56)	0.0004*** 2.59	0.007*** (3.96)
$\Delta GDP_{i,t}$	0.01*** (6.35)	0.01*** (7.17)	0.0007*** (2.67)	0.111 (3.03)
$NDEF_t$	-0.002*** (-13.12)	-0.002*** (-15.19)	-0.0002*** (-4.5)	-0.006*** (14.76)
$NDEF_{t-1}$	0.009 (1.21)	0.012** (2.03)	-0.0001*** (-2.5)	0.372*** (18.97)
$TREND_t$	0.028*** (21.91)	0.026*** (25.06)	0.001*** (2.55)	
$NHIND_t$	-0.32*** (-11.44)	-0.27*** (-10.8)	-0.022*** (-2.55)	-0.308*** (-10.31)
$NPBC_t$	0.027*** (9.53)	0.027*** (12.63)	0.0016*** (2.36)	0.093*** (14.58)
$NPBC_{t+1}$	-0.176* (1.69)	-0.21*** (-2.54)	-0.0008 (-1.16)	-5.14*** (-18.72)
$RPBC_{i,t}$	0.018*** (12.81)	0.018*** (16.29)	0.0004 (0.86)	-0.034*** (-23.39)
$ALIGN_{i,t}$	-0.001 (-1.26)	-0.002* (-1.6)	-0.0001 (-0.3)	-0.0003 (-1.31)
$RMARGIN_{i,t}$	0.017** (1.98)	-0.025 (4.91)	-0.004** (-1.77)	1.95^{-05} (0.163)
$RAIL_{i,t}$				0.017** (5.26)
Regional fixed effects	Yes	Yes	Yes	Yes
Estimator	EGLS	EGLS	EGLS	EGLS
Adj. R^2	0.99	0.99	0.75	0.98
S.E.R.	0.01	0.007	0.007	0.013
F statistics	611.07***	1622.7***	21.23***	272.57***
D.W.	1.74	1.47	1.67	1.32
Sample period / number of observations	1998-2006 / 220	1998-2006 / 220	1998-2006 / 220	1998-2006 / 220

*Note: t-statistics in parentheses. Statistical significance at the 1%, 5% and 10% level are indexed by ***, ** and * respectively. Robust standard errors clustered by regions.*

Table 5 provides the estimations of equation (3). The presence of a regional electoral year $RPBC_{i,t}$ is never significant in the Italian case. There is no evidence of

a regional political budget cycle, possibly because regional and national elections are often held in the same year (Padovano, 2012). In France, on the contrary, where regional and national elections are held at different time intervals, and regional ones are often interpreted as "midterm elections", there is indeed evidence of such a cycle for current transfers (model 17). The negative sign on the $RPBC_{i,t}$ variable in model 19 (total transfers as in model 15, augmented for railway devolution) further suggests that resources for current transfers are drawn from funds normally devoted to capital transfers. The combination of these two signs is perfectly consistent with the theory of the composition cycles *à la* Rogoff (1990). The dummy variable $ALIGN_{i,t}$ indicates that national and regional governments are supported by the same majority. The alignment effect, though popular in the theoretical literature (Arulampalam *et al*., 2009, is a recent example), is not confirmed in either sample. In the case of France, this result well reflects the abidance to the horizontal symmetry principle, whereby all regions should receive a proportional amount of transfers, regardless of their political orientation. In the Italian case, on the other hand, this result appears more surprising, but can be explained by the presence of both RSOs and RSSs in the cross section. RSSs are often governed by local political parties, quite disconnected from the national ones. This deprives the alignment effect of its fundamental premise[11]. Another proxy is the vote margin in the regional assembly $RMARGIN_{i,t}$. Significantly positive for total transfers in both cases, it is also more relevant for current transfers in both countries, and less so for investment transfers. Furthermore, this covariate appears linearly correlated with the dependent variables in both countries, thus supporting Cox and McCubbins' (1986) view that risk-averse national politicians distribute grants to consolidate local strongholds, rather than to try to win "swing" regions *à la* Dixit and Londregan (1996).[12] Finally, $GOVYEARS_{i,t}$, representing the lobbying ability of the President of the regional government, is a variable that was meant to be tested as context-specific in the case of Italy; it does carry the expected positive sign. On the contrary, it never reaches a near-borderline level of significance in France, showing either that lobbying for more transfers by regional politicians in France is not effective, or that it produces an across-the board impact in the form of more transfers to *all* regions, replicating the horizontal structure of French grant distribution. Finally, the variable $RAIL_{i,t}$ is included in the augmented model 19 for France only, as it intends to capture the railway investments that were implemented by regional governments with the support of the central government. It is a dummy that discriminates the time interval around the year when each region received this competence from the central government, beginning in 1996. The strongly significant coefficient for this variable confirms that our estimates indeed capture policy changes in the distribution of grants, which occur in different years for different regions.

To obtain a further check of the plausibility of our estimates, we have calculated the mean values and variances of the fixed effects ϱ_i of the estimates of equations (1) and (3), that is, the one including only the effects of the transfer legislation and the one which considers all the proxies for transfer expectations as

11 When the alignment effect is tested on RSSs and RSOs separately, it emerges where it is expected to, namely in the subsample of the RSOs (Padovano, 2012).

12 The estimates with RMARGINit in linear and squared specification, to search for nonlinear relationships, are available from the authors upon request.

well. The hypothesis is that if the distribution of transfers is relatively more driven by political factors than by the standing legislation, we should observe a reduction of the mean values of the fixed effects, once expectations have been accounted for. Moreover, such reduction should be larger in the Italian sample than in the French one, where transfer legislation should bind more the discretionary power of politicians. Indeed, this is what we find, for all types of government transfers – total, current and capital. Furthermore, the fact that France adopts a principle of horizontal symmetry in the distribution of grants, while Italy follows a "variable geometry" model, implies that the reduction of the variances of the fixed effects should be higher in the Italian sample, because political factors there play a more important role in Italy and should therefore carry a greater explanatory power in the model for grant distribution. Once more the data confirm this hypothesis, as the ratio of the variances (after the consideration of political factors over the examination of transfer legislation only) is larger in the Italian sample for all types of transfers. Table 6 reports these results.

Table 6 Comparison of fixed effects (equations (1) and (3)) for Italy

	Italy					
	Equation 1 (a)			**Equation 3 (b)**		
	TT	**CT**	**IT**	**TT**	**CT**	**IT**
Mean	0.05	0.08	0.01	0.00	0.00	0.00
Variance	0.05	0.11	0.00	0.00	0.00	0.00
Obs.	21	21	21	21	21	21
Ratio of the means b/a	2.62^{-03}	3.53^{-06}	2.63^{-02}			
Ratio of the variances b/a	55688.46	214691.34	43036.95			

Table 6 (continued) Comparison of fixed effects (equations (1) and (3)) for France

	France					
	Equation 1 (a)			**Equation 3 (b)**		
	TT	**CT**	**IT**	**TT**	**CT**	**IT**
Mean	9.68	2.28	0.14	0.01	0.01	0.00
Variance	1885.20	108.17	0.37	0.01	0.01	0.00
Obs.	22	22	22	22	22	22
Ratio of the means b/a	-0.1^{+06}	4.55^{+01}	-4.58^{+10}			
Ratio of the variances b/a	265796.35	12350.13	3208.98			

All in all, a comparative pattern seems to emerge from the estimates that in both countries the standing legislations only partly condition the central government's decisions to allocate transfers across regions. Political determinants, on the other hand, carry a quite important explanatory power in both countries. France and Italy, however, differ in that region-specific proxies of expectations play a more important role in the Italian than in the French case where national proxies carry

more weight. This result reflects the different setups of intergovernmental financial institutions of the two countries, more informed to principles of horizontal symmetry in France than in Italy.

5.2. Transfers expectations and spending behavior

Moving to the analysis of spending decisions, namely equation (4), we first test regional spending behavior without any reference to transfers expectations. The results are presented in table 7.

Table 7 Estimates of equation 4 for Italy. Expenditures as a function of structural determinants

Italy	**Model 20**	**Model 21**	**Model 22**
Dependent variable	Total expenditures $E_{i,t}$	Total current expenditures $CE_{i,t}$	Total investment expenditures $IE_{i,t}$
C	-0.008*** (-4.9)	-0.005*** (-3.41)	-0.0001*** (-3.1)
$RGDP_{i,t}$	0.045** (1.95)	0.074*** (3.55)	0.001 (0.17)
$EPOP_{i,t}$	0.037*** (3.94)	0.0218*** (2.85)	0.007*** (3.02)
$RIGHT_{i,t}$	-2.99^{-05} (-0.52)	-8.16^{-05} (-1.49)	-2.17^{-05} (-1.47)
$SPEC_{i,t} = BUR_{i,t}$	13.76* (1.64)	10.811 (1.33)	1.804 (0.87)
$SPEC_{i,t} = PHYS_{i,t}$	1.05*** (3.64)	0.683*** (2.46)	0.1588** (1.84)
$SPEC_{i,t} = BED_{i,t-1}$	3.7^{-08}* (1.87)	2.43^{-08} (1.37)	9.95^{-09}** (2.17)
Regional fixed effects	Yes	Yes	Yes
Estimator	EGLS	EGLS	EGLS
Adj. R^2	0.94	0.93	0.83
S.E.R.	0.0007	0.0006	0.0002
F statistics	136.15***	122.5***	43.01***
D.W.	1.76	1.72	1.87
Sample period / number of observations	1997-2007 / 231	1997-2007 / 231	1997-2007 / 231

*Note: t-statistics in parentheses. Statistical significance at the 1%, 5% and 10% level are indexed by ***, ** and * respectively. Robust standard errors clustered by regions.*

Table 7 (continued) Estimates of equation 4 for France. Expenditures as a function of structural determinants

France	**Model 23**	**Model 24**	**Model 25**
Dependent variable	Total expenditures $E_{i,t}$	Total current expenditures $CE_{i,t}$	Total investment expenditures $IE_{i,t}$
C	-0.165 (-0.79)	-0.277*** (-2.39)	0.066 (0.51)
$RGDP_{i,t}$	14.21*** (5.54)	11.41*** (5.64)	0.32 (0.11)
$YPOPi_{,t}$	0.008*** (6.61)	0.006*** (6.19)	0.002*** (2.76)
$EPOP_{i,t}$	0.002 (0.19)	0.008 (1.12)	-0.0007 (-0.1)
$RIGHT_{i,t}$	0.016 (0.47)	-0.025* (-1.6)	0.032 (1.19)
$SPEC_{i,t} = SCHOOL_{i,t}$	9.01-05* (1.1)	8.74-05*** (2.75)	6.25-06 (0.2)
Regional fixed effects	Yes	Yes	Yes
Estimator	EGLS	EGLS	EGLS
Adj. R^2	0.94	0.96	0.62
S.E.R.	0.029	0.021	0.032
F statistics	124.74***	183.30***	14.78***
D.W.	2.09	2.08	2.15
Sample period / number of observations	1997-2007 / 200	1997-2007 / 220	1997-2007 / 220

*Note: t-statistics in parentheses. Statistical significance at the 1%, 5% and 10% level are indexed by ***, ** and * respectively. Robust standard errors clustered by regions.*

As it was earlier mentioned, regional per capita expenditures $E_{i,t}$ depend on structural factors that can be "universal" or context-dependent. In the first category, regional GDP per capita $RGDP_{i,t}$ appears to be significant in both countries, with the same exception for capital expenditures (probably because the estimating model relies on yearly data, while the relationship between this type of expenditures and income per capita may follow a different dynamic pattern). Overall, this result is consistent with Wagner's law of government growth. When we try to assess expenditures relating to age-specific needs with the proportion of the age cohort of the youngsters ($YPOP_{i,t}$) and of the elderly ($EPOP_{i,t}$)[13], we find opposite results from

13 Although these two variables are common to the two samples, available data impose that $YPOP_{i,t}$ is the population below 16 in Italy and below 20 in France. Similarly, $EPOP_{i,t}$ describes the population above 65 in Italy while it is above 60 in France. The differences do not infringe the validity of our test.

one country to the other. This result is consistent with our *a priori*, as it reflects the quite different prerogatives of regions in Italy and France; French regions have education as one of their main concerns, while Italian regions have health in charge, and elderly people significantly weigh on the corresponding budgets. It is therefore no chance that the share of the youngsters in the regional population is positive and significant in the French sample, while the share of the elderly is not; and that the opposite pattern emerges in the Italian sample. Moving to the conjecture of a partisan effect $RIGHT_{i,t}$, we find that neither country seems to be affected by a more lavish spending behavior from leftwing governments, except for current expenditures in France. We finally consider country-specific variables, beginning with Italy and the number of top bureaucrats in regional public administration (a data that is not available for France). Although it is significant only at the 10% level, because the data change in jumps of roughly 10 years, the variable shows the expected positive sign consistent with Niskanen's theory of bureaucracy. Probably more relevant is the data concerning the core prerogatives of regions, namely health for Italy and education for France. In the former case, specific variables are $PHYS_{i,t}$, the number of private physicians per 1,000 inhabitants, capturing demand-induced effects; and $BED_{i,t}$, the number of beds in public hospitals per 1,000 inhabitants, capturing supply-induced effects. The first variable is undoubtedly relevant while the second one mostly and logically matters for investment expenditures. As to France, the variable $SCHOOL_{i,t}$ describing the number of pupils in public secondary schools is significant with the expected positive sign.

The final and crucial step of the analysis consists in introducing the fitted values $T_{i,t}$ and $T_{i,t-1}$ from equation (3) in the expenditure equation (4). Results are presented in table 8.

Table 8 Estimates of equation 5 for Italy. Expenditures as a function of structural determinants and bailing out expectations

Italy	**Model 26**	**Model 27**	**Model 28**
Dependent variable	Total expenditures $E_{i,t}$	Total current expenditures $CE_{i,t}$	Total investment expenditures $IE_{i,t}$
C	-0.006*** (-3.14)	-0.004*** (-2.38)	-0.0005 (-0.87)
$RGDP_{i,t}$	-0.013 (-0.34)	0.071*** (2.22)	-0.031*** (-2.49)
$YPOP_{i,t}$	-0.013 (-0.34)	0.071*** (2.22)	-0.031*** (-2.49)
$EPOP_{i,t}$	0.041*** (3.35)	0.019** (2.05)	0.01*** (3.01)
$RIGHT_{i,t}$	3.31^{-05} (0.56)	-4.20^{-05} (-0.8)	-7.85^{-06} (-0.32)
$SPEC_{i,t} = BUR_{i,t}$	-0.465 (-0.06)	3.333 (0.5)	-3.378 (-0.83)
$SPEC_{i,t} = PHYS_{i,t}$	0.884*** (2.4)	0.411 (1.4)	0.165 (0.87)
$SPEC_{i,t} = BED_{i,t-1}$	4.14^{-08}** (1.84)	3.38^{-08}* (1.62)	-9.89^{-09} (-1.2)
T_{it}	0.052 (0.73)	-0.036 (-0.65)	0.033 (1.09)
T_{it-1}	0.125** (1.87)	0.064 (1.07)	0.044** (1.72)
Regional fixed effects	Yes	Yes	Yes
Estimator	EGLS	EGLS	EGLS
Adj. R^2	0.97	0.98	0.96
S.E.R.	0.0006	0.0003	0.0002
F statistics	218.06***	238.67***	112.38***
D.W.	2.17	2.16	2.02
Sample period / number of observations	2000-2007 / 181	2000-2007 / 181	2000-2007 / 181

*Note: t-statistics in parentheses. Statistical significance at the 1%, 5% and 10% level are indexed by ***, ** and * respectively. Robust standard errors clustered by regions.*

Table 8 (continued) Estimates of equation 5 for France. Expenditures as a function of structural determinants and bailing out expectations

France	**Model 29**	**Model 30**	**Model 31**
Dependent variable	Total expenditures $E_{i,t}$	Total current expenditures $CE_{i,t}$	Total investment expenditures $IE_{i,t}$
C	-0.477** (-2.05)	-0.41*** (-3.66)	0.006 (0.033)
$RGDP_{i,t}$	15.99*** (3.46)	14.33*** (7.33)	2.297 (0.48)
$YPOPi_{,t}$	0.009*** (7.47)	0.006** (7.15)	0.002** (1.99)
$EPOP_{i,t}$	0.021** (1.74)	0.015*** (2.45)	0.002 (0.21)
$RIGHT_{i,t}$	-0.0266 (-0.74)	-0.029* (-1.69)	2.44^{-13}*** (5.23)
T_{it}	7.2^{-13} (0.12)	1.71^{-13} (0.34)	1.56^{-13} (1.01)
T_{it-1}	-1.62^{-13} (-0.72)	2.31^{-13}*** (2.22)	2.44^{-13}*** (5.23)
Regional fixed effects	Yes	Yes	Yes
Estimator	EGLS	EGLS	EGLS
Adj. R^2	0.92	0.95	0.6
S.E.R.	0.032	0.024	0.035
F statistics	72.46***	110.46***	10.69***
D.W.	2.03	1.95	2.13
Sample period / Number of observations	1997-2007 / 220	1997-2007 / 220	1997-2007 / 220

*Note: t-statistics in parentheses. Statistical significance at the 1%, 5% and 10% level are indexed by ***, ** and * respectively. Robust standard errors clustered by regions.*

As already explained, the one-year lag between the funding and the spending of these funds requires, as a conditioning test, that only the lagged fitted values be statistically significant. In both countries, this requirement is satisfied. For Italy, there is evidence of soft budget spending behavior mostly in total and in investment spending, while for current spending the variable $T_{i,t-1}$ has the correct positive sign but it is borderline significant. In the French case, evidence of soft budget spending behavior is found both in current and in capital spending. Even in France central governments do apply a significant dose of discretionary power in the distribution of grants that results in soft budget spending behaviors. The augmenting process of the DGD may result in a form of *ex ante*, implicit bailout where central politicians react to the excessive spending of some regions by increasing the amount of next years'

transfers to *all* regions, in a sort of "domino effect". The latter corresponds to the positive externalities generated when a (group of) region negotiates an advantageous turn in the making of grants. If the central government agrees to its implementation, it will mechanically benefit the other regions thanks to the homogenous treatment they receive. Let one regional domino fall and the others will too. The image is coherent with our empirical results. If soft budget spending behaviors do exist in both countries, political determinants of transfer expectations are relatively more national than regional in France. On the contrary, regional variables matter relatively more in the Italian case, illuminating the bilateral nature of the bargaining between the central government and the regions. All in all, the decentralization pattern seems to significantly vary from one country to the other, affecting transfer expectations accordingly.

6. Conclusion

We have investigated soft budget spending behaviors of regional governments in a comparative framework involving the neighboring Italy and France. The two countries have similar structures, in terms of size, culture, institutions, European heritage and current integration, level of economic development. Those similarities ensure that one compares what is indeed comparable. Nonetheless, and fortunately for our standpoint, the two countries are sufficiently dissimilar for a comparative analysis. There remain differences that stem from their respective constitutional history. This is particularly the case in the relationships between levels of government. From their inception, decentralization processes have been conceived differently: in particular, and this was the underlying motivation of our analysis and choice of countries, France has a history of horizontal equality in intergovernmental relations, whereas in Italy, especially at the regional level, a structure of variable geometry prevails, with five special statute and fifteen ordinary statute regions. We found it appealing to test whether such differences would matter for soft budget behaviors, in a comparative environment that would not evidence too large discrepancies from one country to the other.

The estimation of the same model of financing and spending decisions, augmented for an autoregressive spending procedure to estimate bailout expectations, has allowed detecting the presence of soft budget spending behaviors both in the French and Italian cases. The transfer legislation or institutions that regulate intergovernmental financial relations do never entirely determine the allocation of transfers from the central to the regional governments. Admittedly, an important difference between the two countries is that in France, the estimates confirm that the distribution of grants is much more "horizontal" than in the Italian case, as region specific proxies of transfer expectations show a much lower explanatory power for French data than for Italian ones. In both countries, however, transfer expectations do have an impact on regional spending decisions, which suggests that also political factors, in the form of administrative mores and practices (Hillman and Swank, 2000), play a role in explaining soft budget spending behaviors by regional governments. This role is not the same in both countries, as in Italy it appears stronger in the case of investment expenditures, while in France it holds for both capital and current spending. Furthermore, the principle of horizontal symmetry in France may trigger a sort of "domino effect", whereby national politicians may

react to excessive spending by some regions by increasing grants to all regions. The "variable geometry" model adopted in the Italian decentralization process seems to accommodate more local profligacy, but it also confines possible forms of contagion.

This essay intended to provide a first (to our knowledge) comparative analysis of soft budget behaviors for the regions of Italy and France. Although the latter are both unitary states and share many common features, they nevertheless have conceived significantly different frames for the relations between the central government and regions. We have shown that these differences translate into transfer expectations and in turn in spending behaviors. Obviously, this research should be considered as a tentative and preliminary investigation. Our results call for more fine-grained research in the politics of the distribution of funds to regions and of the way these are spent.

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Appendix A. List of variables and sources (alphabetical order)

Variable code	Explanation	Source France	Source Italy
ALIGN	Dummy: national and regional governments are supported by the same majority	Ministry of the Interior	Ministry of the Interior
BED	Number of beds in public hospitals per 1,000 inhabitants	N/A	ISSIRFA
CE	Current real per capita expenditures	Ministry of the Interior	ISTAT
CT	Real per capita transfers for current expenditures	Ministry of the Interior	ISTAT
∆GDP	Difference between the GDP growth rate of region i and the national average	INSEE	ISTAT
EPOP	Percentage of elderly population	INSEE	ISTAT
GOVYEARS	Number of years in office at time t of the President of the regional government	Ministry of the Interior	Ministry of the Interior
IE	Investment per capita real expenditures	INSEE	ISTAT
IT	Real per capita transfers for capital expenditures	Ministry of the Interior	ISTAT
BUR	Number of top bureaucrats in regional public administration	N/A	Ministry of the Interior
NDEF	Ratio between the country's deficit to GDP ratio over the EU15 average deficit to GDP ratio	INSEE	ISTAT
NHIND	Herfindahl index of fragmentation of the national government parliamentary majority	Ministry of the Interior	Ministry of the Interior
NMARGIN	Difference in the number of seats between the first and second largest party in the national parliament	Ministry of the Interior	Ministry of the Interior
NPBC	National electoral year	Ministry of the Interior	Ministry of the Interior
POP	Total regional population	INSEE	ISTAT
PHYS	Private physicians per 1,000 inhabitants	N/A	ISSIRFA
RAIL	Multilevel dummy for central government transfers to regions for railway expenditures	Ministry of the Interior	N/A
RGDP	Regional real per capita income	INSEE	ISTAT
RIGHT	Dummy for right wing regional government	Ministry of the Interior	Ministry of the Interior
RMARGIN	Difference in the number of seats between the first and second largest party in the regional parliament	Ministry of the Interior	Ministry of the Interior
RPBC	Regional electoral year	Ministry of the Interior	Ministry of the Interior
SPEC	Country-specific determinants of expenditures (*BED, BUR, PHYS, SCHOOL*)	Ministry of the Interior	
SCHOOL	Number of students in public high school	INSEE	N/A
TE	Total real per capita expenditures	Ministry of the Interior	ISTAT
$\hat{T}_t$	Expected transfers		
TT	Total real per capita transfers	INSEE	ISTAT
TREND	Annual linear trend		
U	Regional unemployment rate	INSEE	ISTAT
YPOP	Percentage of young population	INSEE	ISTAT

Appendix B. Regional Codes

France			Italy		
N.	**Code**	**Name**	**N.**	**Code**	**Name**
1	Al	Alsace	1	ABR	Abruzzo
2	Aq	Aquitaine	2	BAS	Basilicata
3	Au	Auvergne	3	CAL	Calabria
4	Bn	Basse-Normandie	4	CAM	Campania
5	bo	Bourgogne	5	ERO	Emilia-Romagna
6	br	Bretagne	6	FVG	Friuli-Venezia Giulia
7	ce	Centre	7	LAZ	Lazio
8	ca	Champagne-Ardenne	8	LIG	Liguria
9	co	Corse	9	LOM	Lombardia
10	fc	Franche-Comté	10	MAR	Marche
11	hn	Haute-Normandie	11	MOL	Molise
12	if	Ile de France	12	PIE	Piemonte
13	lr	Languedoc-Roussillon	13	PUG	Puglia
14	li	Limousin	14	SAR	Sardegna
15	lo	Lorraine	15	SIC	Sicilia
16	mp	Midi-Pyrénées	16	TAA	Trentino-Alto Adige
17	pc	Poitou-Charentes	17	BO	Autonomous Province of Bolzano
18	pl	Pays de la Loire	18	TN	Autonomous Province of Trento
19	pi	Picardie	19	TOS	Toscana
20	np	Nord-Pas-de-Calais	20	UMB	Umbria
21	pa	Provence-Alpes-Côte d'Azur	21	VDA	Valle d'Aosta
22	ra	Rhône-Alpes	22	VEN	Veneto