

Soft budget spending behaviors: Does political culture matter?  
Evidence from Italian and French regions

*Working paper*

By

Jean-Michel JOSSELIN\*, Fabio PADOVANO\*§ and Yvon ROCABOY\*

**Affiliations:**

\* Université de Rennes I, Centre National de la Recherche Scientifique (CREM UMR 6211), France.

§ DIPES-Università Roma Tre – Roma, Italy

*Correspondent and presenting author: Fabio Padovano [fabio.padovano@univ-rennes1.fr](mailto:fabio.padovano@univ-rennes1.fr)*

*Authors : Jean-Michel Josselin [jean-michel.josselin@univ-rennes1.fr](mailto:jean-michel.josselin@univ-rennes1.fr)*

*Yvon Rocaboy [yvon.rocaboy@univ-rennes1.fr](mailto:yvon.rocaboy@univ-rennes1.fr)*

*Faculté des sciences économiques                      [jean-michel.josselin@univ-rennes1.fr](mailto:jean-michel.josselin@univ-rennes1.fr)  
7, place Hoche CS 86514  
F-35065 Rennes cedex  
France*

Abstract

This paper examines whether different political cultures play a role in the strategic interactions among the central and a subcentral government or whether it is more plausible to conclude that politician are the same all over. In the sample of intergovernmental transfers in Italy and France, two countries characterized by different degrees of rigour in public financial decisions, we find that soft budget constraints and bailing out expectations are a quantitatively important component of local government spending in both countries, regardless the different degrees of stringency of fiscal rules.

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

Key-words: Comparative analysis; institutions; expectations; intergovernmental relations; transfers; local public spending; bailing out.

*This is work in progress.*

# Soft budget spending behaviors: Does political culture matter?

## A case-study of Italian and French regions

### 1. Introduction

Do political habits and environment influence soft budget spending behaviors of lower tiers of government? Does political culture print its mark in such a way that elected local politicians in one country would be more lavish with national taxpayers' money than those of another, supposedly stricter country? What we shall label "soft budget behavior" refers to the possible strategic behavior of regional governments facing a permissive institutional environment. Admittedly, many important aspects of the institutional surroundings of public decisions and their impact on spending have already been investigated. To begin with the most fundamental institutional level, legal systems could indeed be more or less permissive. Laporta et al. (1999) have fueled the debate amongst opponents and proponents of common law as opposed to civil law. Countries ruled by a civil code would be more likely to succumb to corruption, or at least growth and development would relatively suffer from this legal environment (Laporta et al. 1999). Even constitutions are invited to the debate: the respective vices and virtues of centralization and decentralization can lead either to a market-preserving federalism (Qian and Weingast, 1997) or to a soft-budget-enhancing federalism (Prudhomme, 1995). The influence of political culture has to our knowledge and understanding been less under scrutiny, probably because measurement is uneasy and mostly indirect. One notable exception is a special issue of the *European Journal of Political Economy* dedicated to that particular topic (Hillman and Swank, 2000).

One way of conceiving political culture is through civic traditions, following the path-breaking work and method of Putnam et al. (1993). Deep historical and constitutional roots shape the organizations, formal or informal, public or private, which govern and frame civic

life. Putnam evidences in the case of Italy a striking contrast between the vertical-hierarchical conventions of the southern regions and the horizontal-competitive institutions of the northern cities, the former being historically less successful. Political culture expressed for instance through civic traditions would thus significantly matter in terms of growth, development and, for what is our concern here, public finance. Common sense would probably at first glance suggest that in some countries or regions, public decision-makers are more inclined to laxness than in other places. However, there are highly subjective and controversial value judgments creeping behind such statements and as such they should not be taken seriously. Rather, Putnam-like arguments can be put forward, rooting political culture back to historical events and developments explaining the structure of government.

The structure of government is indeed crucial when it comes to understand the soft budget constraint (SBC). Interpreted in a principal-agent framework, SBC is fundamentally a matter of distorted hierarchy whereby the agent tricks the principal into bailing out strategically lavish spending behaviors (Kornai et al., 2003). But does political culture influence behaviors in such a way that it impedes or conversely encourages strategic spending? Can civic traditions make one country the ideal candidate for SBC while another supposedly more stringent would be preserved?

Our case-study considers two democracies of similar cultural and economic development, namely Italy and France. They both are ruled by a civil law legal system largely inherited from Roman law (for the French case, see Josselin and Marciano, 2002). Constitutions do have some differences but bi-cameralism is a common feature, both states are unitary but highly decentralized (Italy more than France). They nevertheless have relatively contrasted civic and political traditions that would influence the making and working of the institutions of decentralization. On the one hand, France has quite elaborated rules of control, following its tradition of strong central power which remains vivid even after

three decades of significant decentralization. With a stable political system, the country is a not a natural candidate to SBC behaviors by lower tiers of government. French politics and public administration are mostly characterized by a culture of explicit rules and of abidance to those rules. Conversely, political determinants in Italy may play a more significant role by enabling strategic behaviors of lower tier governments. In the Italian case, the culture of conventions (in the Humean sense) might induce a sense of “relaxed” behavior with regard to the rules governing public affairs. All in all, common sense would infer that Italy lives with civic traditions that make its regions natural candidates for SBC.

The mechanism of SBC would go through transfers and expectations of transfers from the central government to the regional governments. Can political culture significantly affect or influence this mechanism? Bluntly speaking, is the Italian system more permeate to strategic behaviors than the French system? To try to answer those questions, we apply a similar empirical strategy to both cases. Using the same model of determinants of regional expenditures, we identify the influence of transfers and expectations of transfers on spending behaviors. Two data sets are used for panel data analysis. The one for Italy comprises 21 regions studied between 1996 and 2007. For France, 22 regions are considered over the period 1995-2006.

In both cases, it happens that channels of SBC are indeed present. Transfers are in part related to political motives and they create expectations of future transfers, spending behaviors being thus positively affected. In the case of SBC at least, political culture would not significantly affect the strategic behavior of regional governments. The structure of incentives (which stems from the institutional arrangement of hierarchy organized through principal-agent relations) would seem to be much more pregnant than political customs and conventions.

The article is organized as follows. Section 2 provides a literature review mostly focusing on recent tests of SBC. Section 3 details the institutional setting of the case-studies, providing comparative analysis of the two systems of decentralization of public finance. Section 4 describes the empirical strategy. Section 5 presents the estimations, followed by concluding comments and discussion in Section 6.

## 2. Transfer expectations and spending behavior of lower tiers of government

Quick overview of SBC theory (one paragraph)

SBC and decentralized governments: earlier contributions

SBC and decentralized governments: recent developments in empirical strategies (Rodden, Bordignon-Turati, Padovano). Existing results (France?)

L'idée générale pour ce développement est la suivante:

SBC was put under the sunlights in the context of planned economies (mostly for firms, Kornai, China) then in the context of multi-level governments (Rodden, etc). SBC has thus been identified in a wide variety of situations, although mostly from the viewpoint of the ministry in charge (planned economies) or from the perspective of the central government (federalism). The viewpoint is that of the bailing-out authority (the principal).

Afterwards, there have been more recent attempts at clarifying the intricacies of multilevel (and no longer univocal) financial relations between layers of government (Bordignon-Turati, 2009; Padovano, 2011). Transfers, expectations of transfers and their impact on spending behaviors. Bien détailler le mécanisme théorique sans rentrer pour autant dans les détails formels du jeu.

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

#### 4. Empirical strategy

The empirical strategy consists in two nested batteries of tests. The initial step deals with transfers from CG to RGs (section 4.1). The second step examines the effects of transfer expectations on expenditure behaviors (section 4.2).

##### 4.1. Transfers and transfer expectations

Explaining transfers per capita  $T_{it}$  from CG to RG  $i$  at times  $t$  over horizon  $T$  can be performed using a standard grant formula (variables can be lagged in the estimations, see section 5):

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

In this equation, the regional unemployment rate is denoted  $U_{i,t}$  while regional population  $POP_{i,t}$  is to account for scale effects. Variable  $\Delta GDP$  expresses the per capita difference between the regional and national GDPs. Finally,  $\varrho_i$  stands for regional fixed effects and  $\tau_t$  represents time (year) fixed effects. The model is tested for total transfers  $TT_{it}$  (equation 1a), current expenditure transfers  $CT_{it}$  (equation 1b) and investment expenditure transfers  $IT_{it}$  (equation 1c). We then introduce further explanatory factors, namely proxies for bailout expectations. Following Bordignon and Turati (2009) and Padovano (2011), two categories of such proxies are considered.

First, we introduce a vector of time-varying proxies which are meant to affect each region without distinction. The previous equation (1) is augmented with the following variables. The ratio between the consolidated national deficit of CG and the average EU15 deficit is denoted  $NDEF_t$ ; it may express the degree of tightness of the national budget. A linear trend ( $TREND_t$ ) is introduced in order to catch the incremental path of transfers. Variable  $NHIND_t$  represents the Herfindahl index of the parliamentary seats of the national government majority. A higher fragmentation of the ruling majority would require more leniency of CG vis-à-vis RGs in order to buy their support. Finally, the national political budget cycle can be captured by the dummy  $NPBC_t$  which takes value 1 in  $t$  when a national election takes place at the second semester of ; value 1 in  $t$  and  $(t - 1)$  when a national election takes place at the first semester of  $t$  ; value 0 otherwise. To summarize, equation (1) augmented with time-varying proxies becomes:

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

Equation (2) is tested for total (equation 2a), current expenditure (equation 2b) and investment expenditure (equation 2c) transfers.

A second vector of proxies is considered in order to capture region-specific characteristics. Dummy variable  $RPBC_{it}$  expresses the regional political budget cycle and it is constructed in the same way as its national counterpart. Another dummy is  $ALIGN_{it}$  expressing the political concurrence of the regional and national majorities. Finally, the vote margin in the regional assembly is defined by  $RMARGE_{it}$ . Equation (3) provides the complete set of determinants of transfers, including proxies for expectations of toughness on the part of CG:

$$(3) \quad T_{it} = \alpha_1 POP_{i,t} + \alpha_2 U_{it} + \alpha_3 \Delta GDP_{i,t}$$

$$\begin{aligned}
& +\alpha_4CGDEF_t + \alpha_5TREND_t + \alpha_6NHIND_t + \alpha_7NPBC_t + \alpha_8RPBC_{it} \\
& + \alpha_9ALIGN_{it} + \alpha_{10}RMARGE_{it} + \sum_{i=1}^I \varrho_i + \sum_{t=1}^T \tau_t + \varepsilon_{1,it}
\end{aligned}$$

Similarly to what has been previously described, equation (3) is tested for total (equation 3a), current expenditure (equation 3b) and investment expenditure (equation 3c) transfers. Furthermore, if it happens that a region previously benefited from a bailout by CG, another dummy variable can be added accordingly.

## 4.2. Effects of transfer expectations on expenditures

Regional expenditures are now considered in a two-stage analysis. They are first scrutinized with respect to standard structural determinants of spending behaviors. The second stage consists in incorporating transfer expectations in the expenditure equations. We intend to check if those expectations have an influence on the spending behavior of regions. Furthermore, since we compare regions in two countries of different political cultures, we would like to infirm or confirm the hypothesis that the strategic behavior of regional governments regarding bailout is context-dependent, namely that political culture does (or does not) affect SBC behavior.

The first stage thus explains per capita expenditures  $E_{it}$  of RG  $i$  at times  $t$  over horizon  $T$  using structural variables and context-dependent variables. The latter originate in the different tasks assigned to regional governments from one country to another. For instance, since health expenditures are a dominant feature of the Italian system but are hardly present in the French one, specific variables are introduced to capture this institutional characteristic. The following spending equation only details structural variables common to both countries while context-dependent variables will be separately described afterwards.

$$(4) \quad E_{it} = \alpha_1RGDP_{i,t} + \alpha_2YPOP_{it} + \alpha_3EPOP_{i,t} + \alpha_4RIGHT_{i,t} + \alpha_5SUPP_{i,t}$$

$$+ \sum_{i=1}^I \varrho_i + \sum_{t=1}^T \tau_t + \varepsilon_{1,it}$$

In this equation, the regional GDP per capita  $RGDP_{i,t}$  conveys the income effect of Wagner's law. 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 depicted with the dummy  $RIGHT_{i,t}$  which should catch the conjecture that rightwing regional governments would be less inclined to spending than their leftwing counterparts. Supply or demand-inducing effects are context-specific and as such they will be detailed in the estimation section. Until then, they are synthesized by variable  $SUPP_{i,t}$ . Fixed effects are denoted as previously. Equation (4) is tested for total (equation 4a), current (equation 4b) and investment (equation 4c) expenditures.

We now move on to the second and final stage of estimations. The fitted values  $\hat{T}_{it}$  from equation (3) are introduced in the expenditure equation (4). The explained components of transfers are meant to represent the expected financing of regions by the central government, depending on the degree of toughness of the latter (as is it expressed through the bailout proxies). Expenditures with expectations about transfers can thus be described as:

$$(5) \quad E_{it} = \alpha_1 RGDP_{i,t} + \alpha_2 YPOP_{it} + \alpha_3 EPOP_{i,t} + \alpha_4 RIGHT_{i,t} + \alpha_5 SUPP_{i,t} + \alpha_6 \hat{T}_{it} \\ + \sum_{i=1}^I \varrho_i + \sum_{t=1}^T \tau_t + \varepsilon_{1,it}$$

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

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

## 5. Estimations

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 grants formulas while the latter involves proxies for bailout expectations. Section 5.2 then investigates how expected transfers can affect spending behaviors. The objective is to confirm or infirm the existence of different attitudes from one country to the other. Since the Italian and French regional governments make their decisions within contrasted frameworks of political culture, one may wonder whether that affects their patterns of expenditure, in particular with respect to soft budget behaviors.

## 5.1. Bailout expectations

Regional

## 5.2. Bailout expectations and spending behavior

xxxxxxxxx

Proportion of young  $YPOP_{i,t}$  and elderly  $EPOP_{i,t}$  people in the population of the region: 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.

“Supply or demand-inducing effects are context-specific and as such they will be detailed in the estimation section. Until then, they are synthesized by variable  $SUPP_{i,t}$ .”

## 6. Discussion and conclusion

Putnam, Aghion-Tirole, Olson

## References

- Aghion, P. and Tirole, J. (1997), "Formal and real Authority in Organizations" *Journal of Political Economy* 105: 1-29.
- Bordignon, M. and Turati, G. (2009), "Bailing Out Expectations and Health Expenditure" *Journal of Health Economics* 28: 305-321.
- Goodspeed, T. (2002), "Bailouts in a Federation" *International Tax and Public Finance* 9: 409-421.
- Guengant, A. and Josselin, JM. (2005), "Grants to Local Governments under National Fiscal Discipline: The Case of France" *Urban Public Economics Review* 2: 69-88.
- Guengant, A. and Josselin, JM. (2009), "Is there a Soft Budget Constraint for the French Local Governments?" (In French) *Revue d'économie Régionale et Urbaine* 31: 739-758.
- Hillman, A. and Swank, O. (2000), "Why Political Culture should be in the Lexicon of Economics" *European Journal of Political Economy* 16: 1-4.
- Inman, R. (2003), "Transfers and Bailouts: Enforcing Local Fiscal Discipline with Lessons from U.S. Federalism", in Rodden J., Eskeland G. and Litvack J., *Fiscal Decentralization and the Challenge of Hard Budget Constraint*, MIT Press, pp. 35-83.
- Josselin, JM. and Marciano, A. (2002), "The making of the French civil code: an economic interpretation" *European Journal of Law and Economics* 14: 193-203.
- Kornai, J. (1986), "The Soft Budget Constraint" *Kyklos* 39: 3-30.
- Kornai, J., Maskin, E., and Roland, G. (2003), "Understanding the Soft Budget Constraint" *Journal of Economic Literature* 151: 1095–1136.
- La Porta, R., Lopez-de-Silanes, F., Shleifer, A. and Vishny, R., (1999). The Quality of Government," *Journal of Law, Economics and Organization* 15: 222-279.

- Oates, W. (2005), "Toward a Second Generation of Fiscal Federalism" *International tax and Public Finance* 12: 349-37.
- Padovano, F. (2011), "Causes and consequences of bailing out expectations of local governments: evidence from Italian regions" *CREM-DIPES Working Paper*.
- Prud'homme, R. (1995), "The Dangers of Decentralization" *World Bank Research Observer* 10: 201-220.
- Putnam, R., Leonardi, R. and Nanetti, R. (1993), *Making democracy work: Civic traditions in modern Italy*, Princeton University Press.
- Qian, Y. and Weingast, B. (1997), "Federalism as a commitment to preserving market incentives" *Journal of Economic Perspectives* 11: 83-92.
- Qian, Y. and Roland, G. (1998), "Federalism and the Soft Budget Constraint" *American Economic Review* 8: 1141–1162.
- Rodden, J., Eskeland, G. and Litvack, J. (2003), *Fiscal Decentralization and the Challenge of Hard Budget Constraint*, MIT Press.
- Wildasin, D. (2004), "The Institutions of Federalism: Toward an Analytical Framework" *National Tax Journal* 57: 247-272.

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

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

<i>Italy</i>	<i>Model 1a</i>	<i>Model 1b</i>	<i>Model 1c</i>
<i>Dependent variable</i>	<i>Total transfers TT<sub>it</sub></i>	<i>Current expenditure transfers CT<sub>it</sub></i>	<i>Investment expenditure transfers IT<sub>it</sub></i>
<i>C</i>	0.002*** (5.54)	0.002*** (4.31)	0.0004*** (4.45)
<i>POP<sub>t</sub></i>	-5.69 <sup>-10</sup> *** (-4.49)	-4.97 <sup>-10</sup> *** (-3.88)	-4.02 <sup>-11</sup> (-1.39)
<i>U<sub>t-1</sub></i>	0.002*** (2.79)	0.003*** (3.25)	-0.0008*** (-3.67)
<i>Regional and time fixed effects</i>	Yes	Yes	Yes
<i>Estimator</i>	EGLS	EGLS	EGLS
<i>Adj. R<sup>2</sup></i>	0.53	0.38	0.54
<i>S.E.R.</i>	0.000242	0.000239	7.6-05
<i>F statistics</i>	11.19***	6.66***	11.87***
<i>D.W.</i>	1.9	1.86	2.19
<i>Sample period / number of observations</i>	1998-2007 / 210	1998-2007 / 210	1998-2007 / 210

Note: *t*-statistics in parentheses. Statistical significance at the 1%, 5% and 10% level are depicted by \*\*\*, \*\* and \* respectively.

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

<i>France</i>	<i>Model 1a</i>	<i>Model 1b</i>	<i>Model 1c</i>
<i>Dependent variable</i>	<i>Total transfers <math>TT_{it}</math></i>	<i>Current expenditure transfers <math>CT_{it}</math></i>	<i>Investment expenditure transfers <math>IT_{it}</math></i>
<i>C</i>	-2.194 (-5.20)	-1.953 (-3.55)	-0.008 (-0.73)
<i>POP<sub>t</sub></i>	7.70 <sup>-7</sup> (-5.20)	5.66 <sup>-7</sup> (2.83)	9.20 <sup>-9</sup> (2.57)
<i>U<sub>t</sub></i>	0.006 (10.99)	0.006 (9.92)	3.36 <sup>-5</sup> (0.17)
<i>U<sub>t-1</sub></i>	0.005 (6.91)	0.005 (6.81)	0.00035 (1.69)
$\Delta GDP_i$	-0.000915 (-4.05)	-0.0014 (-18.86)	0.000517 (2.07)
$\Delta GDP_{i,t-1}$	0.000452 (3.53)	-8.07 <sup>-5</sup> (-2.39)	0.000251 (1.83)
$\Delta GDP_{i,t-2}$	-0.000874 (-7.82)	/	/
<i>Regional and time fixed effects</i>	Yes	Yes	Yes
<i>Estimator</i>	EGLS	EGLS	EGLS
<i>Adj. R<sup>2</sup></i>	0.96	0.99	0.74
<i>S.E.R.</i>	0.01881	0.01616	0.00638
<i>F statistics</i>	235.1575	1139.928	26.6221
<i>D.W.</i>	2.85	2.99	2.02
<i>Sample period / number of observations</i>	1995-2005 / 242	1995-2005 / 242	1995-2005 / 242

Note: *t*-statistics in parentheses. Statistical significance at the 1%, 5% and 10% level are depicted by \*\*\*, \*\* and \* respectively.

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

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

<i>Italy</i>	<i>Model 1a</i>	<i>Model 1b</i>	<i>Model 1c</i>
<i>Dependent variable</i>	<i>Total transfers TT<sub>it</sub></i>	<i>Current expenditure transfers CT<sub>it</sub></i>	<i>Investment expenditure transfers IT<sub>it</sub></i>
<i>C</i>	0.003*** (4.36)	0.002*** (3.94)	-0.0004*** (-5.28)
<i>POP<sub>t</sub></i>	-6.68-10*** (-2.68)	-5.53-10*** (-2.42)	-1.27-10*** (-4.46)
<i>U<sub>t-1</sub></i>	0.001 (1.01)	0.002* (1.66)	-2.39-05 (-0.13)
<i>TREND<sub>t</sub></i>	7.72-05*** (2.99)	5.8-05*** (2.26)	7.24-07 (0.14)
<i>DDEF<sub>t</sub></i>	-4.9-05 (-0.75)	-5.6-06 (-0.09)	-6.53-05*** (-6.86)
<i>DDEF t-1</i>	7.3* (1.73)	5.71-05 (-1.29)	6.25-06 (-0.65)
<i>NDIF<sub>t</sub></i>	-0.027*** (-3.31)	-0.024*** (-2.8)	0.0038*** (2.61)
<i>HM<sub>t</sub></i>	-0.0004*** (-2.65)	-0.0005*** (3.43)	0.0001*** (5.47)
<i>ELN<sub>t</sub></i>	0.000246*** (3.39)	0.00014*** (2.19)	7.64-05*** (5.77)
<i>ELN<sub>t+1</sub></i>	-5.68-05 (-0.63)	-9.88-05 (-1.13)	7.88-05*** (5.7)
<i>Regional and time fixed effects</i>	Yes	Yes	Yes
<i>Estimator</i>	EGLS	EGLS	EGLS
<i>Adj. R<sup>2</sup></i>	0.63	0.58	0.78
<i>S.E.R.</i>	0.0002	0.00023	6.83 <sup>-05</sup>
<i>F statistics</i>	11.86***	9.8***	23.23***
<i>D.W.</i>	1.98	1.98	2.04
<i>Sample period / number of observations</i>	1998-2006 / 189	1998-2006 / 189	1998-2006 / 189

Note: *t*-statistics in parentheses. Statistical significance at the 1%, 5% and 10% level are depicted by \*\*\*, \*\* and \* respectively.

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

$$T_{it} = \alpha_1 POP_{i,t} + \alpha_2 U_{it} + \alpha_3 \Delta GDP_{i,t} + \alpha_4 CGDEF_t + \alpha_5 TREND_t + \alpha_6 NHIND_t + \alpha_7 NPBC_t + \alpha_8 RPBC_{it} \\ + \alpha_9 ALIGN_{it} + \alpha_{10} RMARGE_{it} + \sum_{i=1}^I \varrho_i + \sum_{t=1}^T \tau_t + \varepsilon_{1,it}$$

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

	Model 7	Model 8	Model 9
<i>Dependent variable</i>	<i>TR/POP</i>	<i>TCC/POP</i>	<i>TCK/POP</i>
$U_{t-1}$	0.001 (1.16)	0.002* (1.66)	-6.47 <sup>-05</sup> (-0.36)
$POP_t$	-5.56 <sup>-10*</sup> (-1.86)	-4.05 <sup>-10</sup> (-1.49)	-1.41 <sup>-10</sup> *** (-4.77)
$DDEF_t$	4.16 <sup>-05</sup> (-0.6)	6.49 <sup>-06</sup> (0.1)	-7.11 <sup>-05</sup> *** (-6.39)
$DDEF_{t-1}$	7.76 <sup>-05**</sup> (1.89)	6.49 <sup>-05</sup> (1.52)	-5.32 <sup>-06</sup> (-0.58)
$TREND_t$	4.73 <sup>-05</sup> (1.57)	3.5 <sup>-05</sup> (1.24)	2.2 <sup>-07</sup> (0.03)
$NDIF_t$	-0.02** (-2.3)	-0.019*** (-2.27)	0.004** (1.94)
$HM_t$	-0.0003** (-1.77)	-0.0004*** (-2.67)	0.0002*** (4.35)
$ELN_t$	0.0003*** (3.35)	0.00015*** (2.15)	8.77 <sup>-05</sup> *** (5.58)
$ELN_{t+1}$	3.7 <sup>-05</sup> (0.63)	-1.98 <sup>-05</sup> (-0.18)	7.74 <sup>-05</sup> *** (2.83)
$GOVYEARS_t$	4.54 <sup>-05**</sup> (2.3)	4.53 <sup>-05</sup> *** (2.67)	3.61 <sup>-05</sup> (0.53)
$ELR_t$	7.4 <sup>-05</sup> (1.11)	6.56 <sup>-05</sup> (1.09)	2.06 <sup>-05</sup> (0.9)
$RDIF_t$	0.0003** (1.83)	0.0003** (1.77)	-4.08 <sup>-05</sup> (-1.57)
$SAME_t$	5.18 <sup>-07</sup> (0.02)	1.86 <sup>-05</sup> (0.76)	-2.11 <sup>-06</sup> (-0.44)
$C$	0.002*** (2.82)	0.0017*** (2.36)	0.0004*** (4.76)
<i>Fixed effects</i>	Yes	Yes	Yes
<i>Estimator</i>	EGLS	EGLS	EGLS
<i>Adj. R<sup>2</sup></i>	0.63	0.57	0.78
<i>S.E.R.</i>	0.0002	0.0002	6.78 <sup>-05</sup>
<i>F statistics</i>	10.39***	8.35***	20.05***
<i>D.W.</i>	2.03	2.03	2.03
<i>Sample period</i>	1998-2006	1998-2006	1998-2006
<i>N.</i>	189	189	189

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

$$E_{it} = \alpha_1 RGDP_{i,t} + \alpha_2 YPOP_{i,t} + \alpha_3 EPOP_{i,t} + \alpha_4 RIGHT_{i,t} + \alpha_5 SUPP_{i,t} + \sum_{i=1}^I \varrho_i + \sum_{t=1}^T \tau_t + \varepsilon_{1,it}$$

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

	Model 13	Model 14	Model 15
<i>Dependent variable</i>	<i>EXP/POP</i>	<i>EXPC/POP</i>	<i>EXPK/POP</i>
<i>POP65<sub>t</sub></i>	0.037*** (3.94)	0.0218*** (2.85)	0.007*** (3.02)
<i>PHYS<sub>t</sub></i>	1.05*** (3.64)	0.683*** (2.46)	0.1588** (1.84)
<i>NBUR<sub>t</sub></i>	13.76* (1.64)	10.811 (1.33)	1.804 (0.87)
<i>BED<sub>t-1</sub></i>	3.7 <sup>-08*</sup> (1.87)	2.43 <sup>-08</sup> (1.37)	9.95 <sup>-09**</sup> (2.17)
<i>GDP/POP<sub>t</sub></i>	0.045** (1.95)	0.074*** (3.55)	0.001 (0.17)
<i>RIGHT<sub>t</sub></i>	-2.99 <sup>-05</sup> (-0.52)	-8.16 <sup>-05</sup> (-1.49)	-2.17 <sup>-05</sup> (-1.47)
<i>C</i>	-0.008*** (-4.9)	-0.005*** (-3.41)	-0.0001*** (-3.1)
<i>Fixed effects</i>	Yes	Yes	Yes
<i>Estimator</i>	EGLS	EGLS	EGLS
<i>Adj. R<sup>2</sup></i>	0.94	0.93	0.83
<i>S.E.R.</i>	0.0007	0.0006	0.0002
<i>F statistics</i>	136.15***	122.5***	43.01***
<i>D.W.</i>	1.76	1.72	1.87
<i>Sample period</i>	1997-2007	1997-2007	1997-2007
<i>N.</i>	231	231	231

*Table 4. Estimates of Equation 4 for France. Expenditures as a function structural determinants*

$$E_{it} = \alpha_1 RGDP_{i,t} + \alpha_2 YPOP_{i,t} + \alpha_3 EPOP_{i,t} + \alpha_4 RIGHT_{i,t} + \alpha_5 SUPP_{i,t} + \alpha_6 \hat{F}_{it} + \sum_{i=1}^I q_i + \sum_{t=1}^T \tau_t + \varepsilon_{1,it}$$

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

	Model 16	Model 17	Model 18
<i>Dependent variable</i>	<i>EXP/POP</i>	<i>EXPC/POP</i>	<i>EXPK/POP</i>
<i>POP</i> <sub>65,t</sub>	0.041 <sup>***</sup> (3.35)	0.019 <sup>**</sup> (2.05)	0.01 <sup>***</sup> (3.01)
<i>PRPHY</i> <sub>t</sub>	0.884 <sup>***</sup> (2.4)	0.411 (1.4)	0.165 (0.87)
<i>NBUR</i> <sub>t</sub>	-0.465 (-0.06)	3.333 (0.5)	-3.378 (-0.83)
<i>BED</i> <sub>t-1</sub>	4.14 <sup>-08**</sup> (1.84)	3.38 <sup>-08*</sup> (1.62)	-9.89 <sup>-09</sup> (-1.2)
<i>GDP/POP</i> <sub>t</sub>	-0.013 (-0.34)	0.071 <sup>***</sup> (2.22)	-0.031 <sup>***</sup> (-2.49)
<i>RIGHT</i> <sub>t</sub>	3.31 <sup>-05</sup> (0.56)	-4.20 <sup>-05</sup> (-0.8)	-7.85 <sup>-06</sup> (-0.32)
$\hat{F}_t$	0.052 (0.73)	-0.036 (-0.65)	0.033 (1.09)
$\hat{F}_{t-1}$	0.125 <sup>**</sup> (1.87)	0.064 (1.07)	0.044 <sup>**</sup> (1.72)
<i>C</i>	-0.006 <sup>***</sup> (-3.14)	-0.004 <sup>***</sup> (-2.38)	-0.0005 (-0.87)
<i>Fixed effects</i>	Yes	Yes	Yes
<i>Estimator</i>	EGLS	EGLS	EGLS
<i>Adj. R</i> <sup>2</sup>	0.97	0.98	0.96
<i>S.E.R.</i>	0.0006	0.0003	0.0002
<i>F statistics</i>	218.06 <sup>***</sup>	238.67 <sup>***</sup>	112.38 <sup>***</sup>
<i>D.W.</i>	2.17	2.16	2.02
<i>Sample period</i>	2000-2007	2000-2007	2000-2007
<i>N.</i>	147	147	147

*Table 5. Estimates of Equation 5 for France. Expenditures as a function structural determinants and bailing out expectations*



