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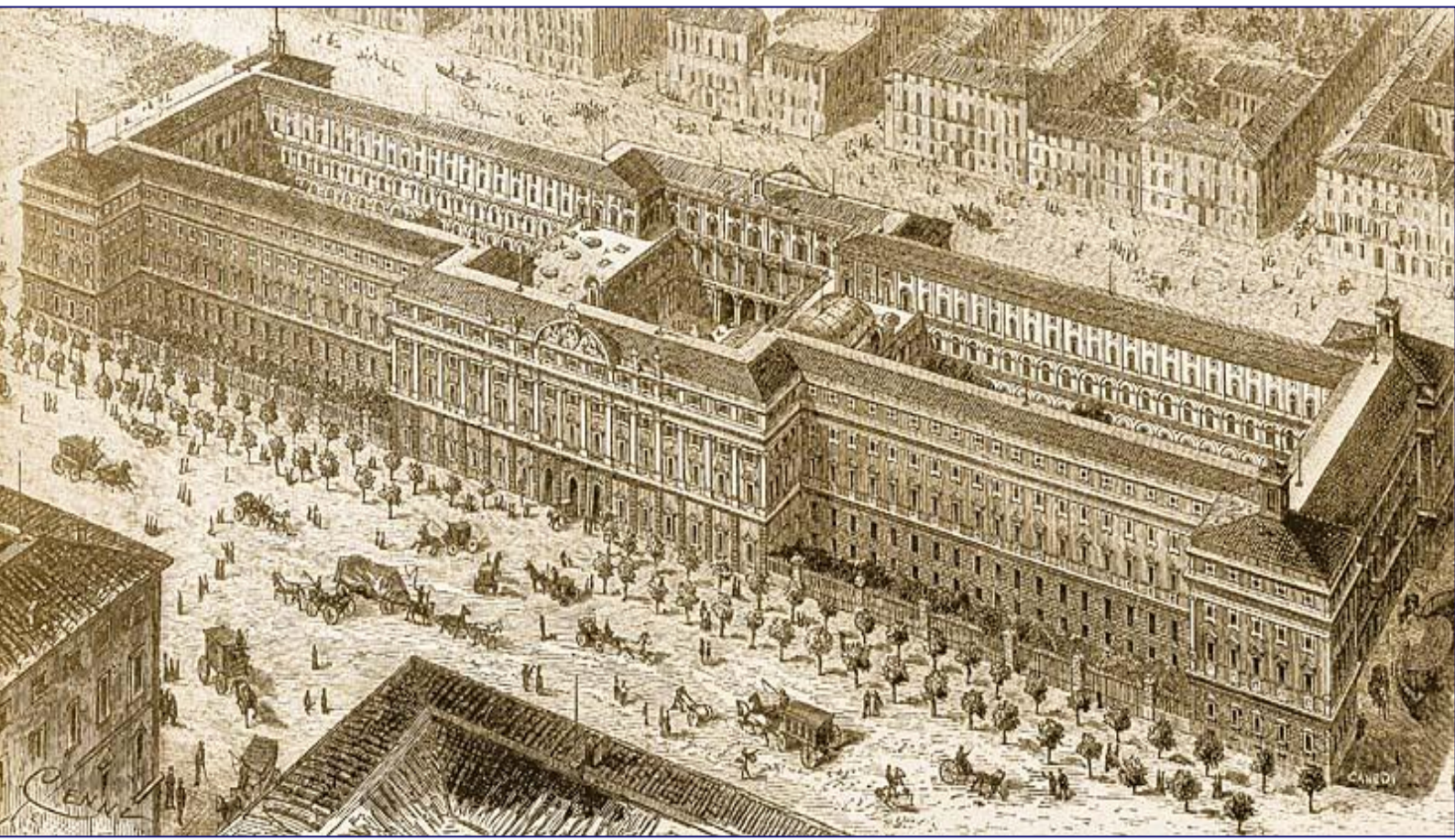
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# Do fiscal councils impact fiscal performance?

Giovanni Coletta, Carmen Graziano, Giancarlo Infantino



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# Do fiscal councils impact fiscal performance?

Giovanni Coletta\*, Carmen Graziano\*\*, Giancarlo Infantino\*\*\*

## Abstract

The lack of budget transparency and projections accuracy have been among the determinants of the last four decades high deficit and debt, as the recent 2008-2009 economic crisis has highlighted. In order to improve fiscal policy process and budget transparency, the European Union (EU) stated more stringent fiscal rules monitored by Independent Fiscal Bodies, that have the capacity to “tie the hands” of policymakers tempted by deviations from socially optimal choices according to the academic circles.

The present paper aims at empirically verifying if Fiscal Councils (FCs) in Europe (as a complement or substitute for the Fiscal Rules - FRs) have an impact on Governments’ fiscal decisions and if this impact exists and is positive which feature of their functioning is relevant for their effectiveness.

The data elaborated with a panel regression model are the actual and foreseen (one year ahead) public finance and economic data of eleven European Countries<sup>1</sup>. The yearly planned change of the Cyclically Adjusted Budget Balance (CAB)<sup>2</sup> is interpreted as the discretionary fiscal policy and data about FCs and FRs are those of the European Commission (EC) Database on Fiscal Governance (data on fiscal institutions of the European database were opportunely adjusted, controlled and rebuilt for the missing years to construct the Fiscal Council Index - FCI).

This work (with the caveats related to the used data) provides empirical support for the hypothesis of a positive impact of FCs on fiscal performance; leading to the conclusion that if there are clear and strong FRs, the presence of fiscal institutions with solid basis in national institutional framework (strong legal basis) could positively affect political decisions.

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<sup>1</sup> Till 2011 only a few European Union (EU) Member States(MSs) have in their institutional framework the *strictu-sensu* called “Fiscal Council” (FC, according to the OECD and EU definition), whereas the most have institutions that perform some of the functions of an independent Fiscal Council (see EC, 2006a; Hagemann, 2010).

<sup>2</sup> Since 2005, with the reform of the Stability and Growth Pact (SGP), the CAB has become the key indicator for both the assessment of country-specific medium-term fiscal objectives (MTO) and of the fiscal adjustment imposed to MSs in excessive deficit position and furthermore its use it’s quite common in literature to look at change in fiscal policy stance (Fatas e Mitov 2009).

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## 1 INTRODUCTION

Since 1970 the attitude of governments in projecting growth with systematic optimism in the planning phase of the budget, together with inertia in the budget execution, determined significant excessive deficits. This phenomenon is known as deficit bias.

In particular in the EU, over the last 14 years, the MSs have recorded a divergence between budgetary commitments taken in their Stability and Convergence Programmes (SP-CPs)<sup>3</sup> and their implementation, turning the medium-term budgetary position (MTO) of “close-to-balance” or “in surplus” in a moving target.

Since the mid-1990s a small but growing literature has argued that non-partisan agencies could shape policymakers’ incentives in a more credible and effective way than numerical limits on budgetary aggregates (see Debrun et al 2012), in order to break bad government habits above mentioned.

These bodies with the role of watch dogs of public accounts would reduce the information asymmetry between policymakers and voters to the extent that such asymmetry is the primary source of the deficit bias<sup>4</sup>

In March 2005, following this view, the EU’s Finance Ministers agreed on a number of changes to the SGP, with the stated aim of strengthening FRs and improving their implementation under the control of an independent fiscal body (such as FCs).

In 2011 the EU Directive on “requirements for budgetary frameworks” (the so called “Six Pack”) stated that “*biased and unrealistic macroeconomic and budgetary forecasts can considerably hamper the effectiveness of budgetary planning and impair commitment to budgetary discipline*”.

In 2012 the European Treaty on Stability, Coordination and Governance (in force since January, 1 2014) recognized to an “independent body” at the national level the mandate to monitor compliance with national fiscal policy rules and produce (or at least “*assess or validate*”) macroeconomic and budgetary forecasts used for the budget preparation in each EA-MS.

Institutions having the characteristics of an independent “Fiscal Councils” (FCs) already exist in many EU countries (they include the Economic Council in Denmark<sup>5</sup>, the Government Debt Committee<sup>6</sup> in Austria, and the Working Party on Tax Revenue forecasting<sup>7</sup> in Germany). Some institutions are in charge for providing forecasts or/and conducting positive analyses on

<sup>3</sup> These reports called “stability programmes” for Euro Area Member State (EA-MS) and “convergence programmes” for non-EA-MS are identical in regards to the content. After the reform of the SGP in 2005, these programmes include the MTO’s, calculated for each MS as the medium-term sustainable average-limit for the country’s structural deficit. The MS is also obliged to outline the measures to be implemented in order to attain its MTO.

<sup>4</sup> A FC can raise the public awareness about the consequences of certain policy paths through independent analysis, assessments, and forecasts, by contributing to a stability culture directly addressing fiscal illusion (see Debrun and Kumar 2007).

<sup>5</sup> It is an advisory body providing macroeconomic forecasts and analyses on fiscal policy issues (such as the functioning of the public sector, the tax system, fiscal sustainability, fiscal stance, issuing policy recommendations). It also monitors compliance with current FRs, so assessing recommendations as needed to ensure compliance.

<sup>6</sup> It has a mandate to assess on regular basis the sustainability of fiscal policy, taking into account the economic cycle, with a focus on debt sustainability and the quality of public finance. Its members are nominated by the federal Government, social organisations and representative bodies. It receives funding from Austrian National Bank and realises an annual Report containing recommendations to the Government.

<sup>7</sup> It prepares revenues projections on which the budget is based; anyway these ones are preliminary affected by Governments’ macroeconomic forecasts on economic growth.

fiscal policy issues; others for issuing normative statements and recommendations on the conduct of fiscal policy. Information about them has been collected through the European Commission (EC) survey on Fiscal Governance in the EU-MSs. We will use these data to explore, if the establishment of a FC also as a complement of FRs affects the fiscal behaviour of governments.

The paper is structured as follows: after reviewing the existent economic literature on FCs in Section I, we explain the main problems related to EU MSs fiscal performance in Section II. Data description and analysis are reported in Section III; the last section contains concluding remarks.

## 2 DEFINITIONS AND LITERATURE

### 2.1 Definitions

Before proceeding it's worth spending some words on definitions of fiscal performance, FRs and FCs.

#### *Fiscal performance*

About fiscal performance, according to the IMF and OECD definition, we refer to the budgetary discipline requiring that governments maintain fiscal positions that foster macroeconomic stability and sustainable growth<sup>8</sup> (minimizing the distortion in the economy as well).

Some economic analyses underline that Governments can't create new economic activity, but only redistribute the income and wealth created by private sector (see Kirchner 2009). This redistribution can be realised either among several sectors of the economy or across time (see Taylor et al 2009). The activism of the fiscal policy to stimulate aggregate demand lies on the concept that governments extra spending influence the economy. The change in budget balance measures the fiscal impulse that government spending and tax changes are supposed to impart to economy (see Taylor et al 2009).

There have been theoretical and empirical attempts to link fiscal policy to growth as well, through the new endogenous model to growth (see Easterly and Rebelo 1993). The result of these studies demonstrates that a prudent fiscal policy is necessary but not sufficient for rapid economic growth; but an imprudent fiscal policy hampers growth, threatens macro stability and carries high costs to economy.

Cross-country analyses of fiscal performance are difficult to carry out for several reasons. First of all there is a lack of a common definition to consider, second the different time and country specific coverage of data and politics, third the linkage with other politics making difficult the examination of fiscal policy separately from them.

Among the measures the actual overall balance - as a share of GDP - could highlight the impact effect of fiscal policy. Since the absolute magnitude of the fiscal deficit depends directly

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<sup>8</sup> With the words of Musgrave (1964): "(regarding to fiscal performance) what matters are changes in budgetary positions relative to changes in GNP [...] the only satisfactory way to measure the effects of budget policy on GNP is through an econometric model which isolate the fiscal factors".

on the size of the state and the nature of the economy, Blanchard (1990) makes the point that any improvement on the overall balance<sup>9</sup> - as an indicator of the impact effect of fiscal policy - would involve estimating marginal propensity to consume, and future paths of fiscal and macroeconomic variable. Another measure commonly used is the cyclically-adjusted budget balance (CAB) obtained by removing the cyclical component of the budget balance (that is the product of the output gap by the output semi-elasticity of the balance) from the overall balance. The basic reason related to the use of this indicator is related to the fact that removing temporary or cyclical elements from the balance, one would get a clear view of the actual fiscal situation of a country. In fact nominal budget balance figures are too volatile to be used as a reference point for policy making (a country that seemed to be close or moving towards a balanced budget, suddenly find it off when the cyclically condition changed , see Larch, Turrini 2009).

The CAB, especially the CAPB(Cyclically-Adjusted Primary Budget Balance), is commonly employed to measure the discretionary<sup>10</sup> fiscal policy, as it excludes the cyclical component related to government's expenditures (e.g. unemployment insurance benefits and social policy expenditures, that are higher during economic recessions than during booms) and revenues (e.g. tax revenues are higher during booms than during economic crises). In the case of CAPB the component of interests on public debt from the public deficit are excluded as well. In this way, the remaining component indicates the effort of the government to contain/increase changes in expenditures/revenues, also in the perspective of long-term sustainability. Therefore, the CAB (and the CAPB with greater reasons) was chosen by the EU to measure the dynamics of public finances in terms of country-specific MTO<sup>11</sup>, as well as of the fiscal adjustment imposed to MSs in excessive deficit position, as stated in the Stability and Growth Pact (SGP). Just as an example of its informative capability, the CAPB on average improved the years following the introduction of FRs as the government expenditures adjusted for the cycle grew more slowly remaining broadly stable over the period 1990-2005. The main caveat of this measure is that there are no clear and incontestable methodologies for estimating the cyclical components of Government's expenditures and revenues.

Following these premises budgetary forecasts (tax , expenditure, public debt and National Gross Product) are the necessary starting point to asses the direction and the objectives of fiscal policy. Mismatching between actual and forecasted data (especially in terms of economic growth) significantly affect ex post assessment of fiscal policy and the evaluation of right countercyclical fiscal policy (see IMF 2013)<sup>12</sup>.

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<sup>9</sup> Inflation adjusted.

<sup>10</sup> The discretionary fiscal policy is usually well interpreted as **the change** in the budget balance and in its components under the control of government. It is usually measured as the residual of the change in the balance after the exclusion of the budgetary impact of automatic stabilisers (EC definition ).

<sup>11</sup> The Italian SGP - called Economic and Financial Document (EDF) - describes the main consolidation targets for Italy in terms of the MTO related to the CAB. It mentions also the main FRs in force such as the Domestic Stability Pact, to define the contribution of local authorities to consolidation targets, and the Healthcare and Pharmaceutical Expenditure ceiling, to control the growth of health expenditure. Finally, the mentioned document for the 2014 describes guidelines for the establishment of the new Parliamentary Budget Office (PBO) with responsibilities for the assessment of macroeconomic and public-finance forecasts contained in the planning documents; this body will also report the discrepancy between the actual budget and its forecasts, envisaging the possible action to be taken.

<sup>12</sup> Optimistic growth projections, reflected in budget aggregates, could have the same impact of an active expansionary fiscal policy.

## ***Fiscal Rules***

FRs have attracted significant attention over the time in literature as the secure remedy to eliminate large deficits. They are defined as quantitative (numerical) targets, or statutory or constitutional restriction, on fiscal policy setting a specific limit on a fiscal aggregate such as the budgetary balance, debt, spending, or taxation. In other words, these rules are a specific, binding constraint on the government's range of policy options. Neither legislated policy rules nor guidelines are not considered to be FRs, because they do not impose binding constraints on present or future governments (see Kennedy et al 2001). In the 1992, the Maastricht Treaty set out convergence criteria that countries must satisfy to participate in the European Economic and Monetary Union (EMU)<sup>13</sup>. In 1997 the Maastricht Treaty's provisions were strengthened by the Stability and Growth Pact (SGP). In addition to the Treaty's debt and deficit rules, the SGP requires that MSs set MTOs of budgetary positions close to balance or in surplus, in order to provide sufficient flexibility to allow the operation of automatic fiscal stabilizers remaining within the 3 per cent deficit limit. The application of these objectives at national level (FRs and multi-annual targets) depends on Government's policy decisions. Therefore every EU-MS defines its fiscal rules as numerical targets for budgetary aggregates such as government budget balance, expenditure, or revenue developments, but also debt at national and subnational level. The effectiveness of national/subnational rules depends on: 1) the coverage of the government sector (in particular the policy coordination in federal and highly decentralized systems); 2) their legal foundation (effectively constraining parliamentary discretion requires Constitutional amendments or qualified majority acts); 3) the effective impact of the rule on the quality of national public finances. Numerical FRs suffer from several weaknesses. First, unless carefully constructed, rules can in some circumstances (e.g. simple deficit and debt ceilings) result in pro-cyclicality (see IMF, 2004). Second, rules can be harmful to the quality of public finances through inadvisable compositional effects when, for instance, pro-growth public investment is cut to respect an expenditure cap (see Blanchard and Giavazzi, 2004). Third, where political will is lacking, rules can motivate creative accounting and off-budget operations, undermining transparency and, ultimately, democratic control over the budget (see von Hagen and Wolff, 2006).

## ***Fiscal Council***

According to the EC definition FC is a permanent agency with a statutory or executive mandate to assess publicly and independently from partisan influence government's fiscal policies, plans and performance against macroeconomic objectives related to the long-term sustainability of public finances, short-medium-term macroeconomic stability, and other official objectives.

Academic circles recognise to these bodies the role to address excessive deficits (see Table1).

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<sup>13</sup> Under the Treaty, two main numerical criteria determine the fiscal discipline: the government deficit as a percentage of GDP can't exceed the reference value of 3 per cent of GDP; and the ratio of gross government debt to GDP can't exceed the reference value of 60 per cent.



Tab. 1 Mapping the tasks of FCs

Mapping the Sources of Excessive Deficits into Tasks of a Fiscal Council		
	Causes and manifestations of the deficit bias	Tasks of the fiscal council
Policymakers	Myopia, re-election concerns, partisanship; overoptimistic revenue forecast, unrealistic spending estimates, efforts to circumvent fiscal rules (creative accounting).	Produce unbiased macro-fiscal forecasts or at least assess official forecasts; analysis of short and long-term implications of current policies, costing fiscal measures; monitoring of compliance with fiscal rules, report on government statistics integrity.
	Time inconsistency (policies that were agreed to ex ante are not adhered to ex post)	Examine fiscal outcomes in light of government commitments; monitor compliance with fiscal rules.
	Common pool problem between line ministries (at the central government level) and/or between different government levels	Analysis covers the general government. Issue public recommendations (strengthening centralization of the budget; coordinating fiscal policy among government entities to avoid soft budget constraints).
	Imperfect information: underestimation of risks and costs, overoptimistic views on growth, misperception of the government's budget constraint (notably in cases of abundant commodity revenues), lack of timely data.	Analysis of complex issues such as fiscal sustainability, intergenerational equity and fiscal risk analysis; assessments of long term trends, and possibly recommendations on appropriate of fiscal policy.
	Asymmetric information (lack of transparency); insufficient background analysis and information received by the legislative power (weakened accountability)	Report on a regular basis to Parliament and provide responses to questions; contribute to legislative debate on fiscal matters
Voters	Imperfect information: misperception of the government's budget constraint.	Provide unbiased assessment of medium and long-term sustainability; raise public awareness on fiscal issues.
	Neglect for future generations and impatience	Impact: analysis of unsustainable policy paths and costs of adjusting to the intertemporal budget constraint.

Source: IMF 2013.

Anyway the actual influence of FCs could depend only on several factors related to their establishment and functioning: media support and visible impact on the debate over policy matters, as well as sustained, high quality and visibly independent analyses over long periods of time.

Debrun and Kinda (2014) help to clarify the role and functions of FCs through a specifically built dataset<sup>14</sup>.

IMF dataset shows that 22 countries belonging to OECD have so far established a FC and 10 out of them have done it after 2010. New FCs include the Parliamentary Budget Office in Canada and South Africa, the Office for Budget Responsibility in the United Kingdom, and the High Council of Public Finance in France. In October 2013, the Spanish Parliament approved a law establishing a FC. Each body is classified on the basis of these criteria: legal independence, safeguard on budget and the composition/appointment/size of the staff.

Among the FC surveyed by FMI, 90 percent are attached to the legislature (parliamentary budget office), while the remaining are stand-alone bodies<sup>15</sup>.

With respect to their remits, there are three main categories of FCs. A first group includes bodies that provide independent forecasts used in the formulation of the budget, or against which the official projections are, or can be, assessed. A second group comprises entities with a

<sup>14</sup> Including Fiscal Councils envisaged by legislative texts adopted in the end of January 2013.

<sup>15</sup> Parliamentary budget offices have historically emerged in presidential political systems (United States and Korea), but have more recently spread to a great variety of advanced and developing countries (such as Italy). Stand-alone FCs are the closest to the model suggested in the academic literature and are also present in a wide variety of countries (only two countries - France and Finland - have their fiscal councils attached to the supreme audit).

mandate to provide normative views on the appropriateness of the overall stance of fiscal policy from a cyclical perspective, or the desirable timeline to restore fiscal sustainability. A third group includes councils that are tasked with providing independent forecasts of macroeconomic and budgetary variables necessary for the elaboration of the annual budget (see Hagemann 2010).

The monitoring of the compliance with fiscal policy rules and the costing of policy measures are generally not included in the FCs' responsibilities with the exception of the recently new established FCs (the Italian one among them). Around the world the majority of FCs benefits from legal protections against partisanship when fulfilling their mandate, even though only less than half of them (more commonly older councils, such as in Germany and in Denmark) has their budget protected from arbitrary cuts undermining their ability to fulfil their mandates. FCs influence the conduct of fiscal policy indirectly through the public debate, and only rarely through direct action in the budget process. Anyway, all FCs prepare public reports with a significant media impact.

Providing forecasts that are either binding or linked to a "comply or explain" clause is rare; however, a sizeable number of new FCs holds formal consultations with the Government or hearings in Parliament on a regular basis. The FC's size can vary greatly according to their remits, the complexity of the government system, and the availability of human and financial resources. The dataset suggests that small councils tend to have narrower remits than larger ones: small fiscal councils (with less than 10 full-time professionals) are often tasked with the assessment of fiscal policy (e.g. Finland, Ireland, and Slovenia), while much larger councils usually combine different functions including forecasts preparation, long-term sustainability analyses, and the costing of policy measures (e.g. Netherlands, South Korea, and the United States). Most of councils' staffs are academics, policy experts, and civil servants, but a growing share of councils have in their senior management foreign experts (increasing the perception of independence from local politics and allowing access a greater pool of talents).

Tab. 2 Cross Country Overview

Country	Fiscal council	Positive analysis	Long term sustainability	Forecast preparation	Normative analysis	Monitoring of fiscal rules	Legal independence	High media impact	Formal consultation or hearings	Members of the staff (other than politicians)
Australia	Parliamentary Budget Office	x	x	x			x			x
Austria	Government Debt Committee	x	x		x	x	x	x		x
Belgium	High Council of Finance	x	x		x	x				x
Belgium	Federal Planning Bureau	x	x	x			x	x		x
Canada	Parliamentary Budget Office	x	x	x	x		x	x		x
Denmark	Danish Economic Council	x	x	x	x	x	x	x		x
Finland	National Audit Office of Finland	x	x	x	x	x	x		x	x
France	High Council of Public Finance	x		x	x	x	x		x	x
Germany	German Council of Economic	x	x	x	x		x	x		x
Ireland	Irish Fiscal Advisory Council	x	x	x	x	x	x	x		x
Italy	Parliamentary Budget Office	x	x	x	x	x	x		x	x
Japan	Fiscal System Council	x			x					x
Mexico	Center for Public Finance Studies	x		x		x		x	x	x
Netherlands	Netherlands Bureau for Economic Policy Analysis	x	x	x		x		x		x
Portugal	Portuguese Public Finance Council	x	x	x	x	x	x	x	x	x
Romania	Fiscal Council	x	x	x	x	x	x	x	x	x
Serbia	Fiscal Council	x	x	x	x	x	x	x	x	x
Slovak Republic	Council for Budget Responsibility	x	x			x	x	x		x
Slovenia	Institute of Macroeconomic Analysis and Development	x	x				x	x		x
Slovenia	Fiscal Council	x	x	x		x	x			x
Sweden	Swedish Fiscal Policy Council	x	x		x	x	x	x		x
United Kingdom	Office for Budget Responsibility	x	x	x		x	x	x	x	x
United States	Congressional Budget Office	x	x	x			x	x		x

Source our elaboration on IMF 2013.

## 2.2 Economic literature

The economic literature on the role of fiscal councils in the budgetary process and on fiscal outcomes is relatively abundant.

The number is reduced when we consider only the economic authors that use econometric model in the explanations of the impact of FC on fiscal outcomes (the aim of our research).

In terms of budgetary process the main existent literature demonstrates that countries with

FCs would tend to have lower bias in their official budgetary forecasts; in particular, according to the EC(2006) delegation of the forecasting seems to be an efficient way to address optimistic biases in macroeconomic projections; furthermore the role of the institutions in place in public debate seems to be relevant considering the large media coverage. Furthermore IMF (2010) elaborates the budgetary Institutions Index, comprising several components: i) planning and negotiation; ii) approval and implementation; iii) allocation of funds between the different programs, concluding, that high quality budgetary institutions seem to be associated with less pro-cyclical fiscal policies in the context of multi-annual macroeconomic and budgetary frameworks. A more transparent budgetary process (with fiscal pro-cyclical coefficients lower than in those with less transparent budgets) seems to play a more important role in shaping fiscal cycles than other characteristics.

On this question Debrun (2011) highlights that an independent FC could recover the informative asymmetries of voters, who cannot observe the competence of policy-makers<sup>16</sup>. Fiscal institutions are assumed to be generally preferred by voters requiring the strictest guarantees of independence from politics; as IMF (2012) using the impact on CAPB of fiscal decentralisation programs- consisting of reassigning spending and revenue collection responsibilities from the centre to sub-national government- demonstrates that spending decentralisation is associated with stronger fiscal performance, especially when transfer dependency of subnational governments is low; nevertheless subnational FRs do not seem to play a relevant role in ensuring a better fiscal performance.

The literature following reported (with a particular focus on the econometric model and fiscal and economic variables employed) is on tracks of the direct relation between FCs' presence and fiscal outcomes.

EC (2006) confirms, through empirical analyses, the influence of the design of FRs and fiscal institutions (FIs) in determining sound fiscal policies. In particular the study highlights that the primary CAB on average improved the years following the introduction of FRs (primary government expenditure adjusted for the cycle tends to grow more slowly in the years following the introduction of numerical expenditure rules and the relative reduction as GDP ratio seems to depend on an increase in the share of government finances covered by numerical rules)and remained broadly stable over the period 1990-2005<sup>17</sup>.

Fabrizio and Mody (2006), focus on the need to guarantee the representativeness of several, also ethnic and religious, components through consistent electoral rules, using a panel data of new and potential EU-MSs over the period 1997-2003. They conclude that more inclusiveness hurts budgetary outcomes; but the establishment of checks, exercised by FCs, in the competition for fiscal resources can provide a significant help in containing deficit. Among others the research of Debrun Xavier et al (2012) is interesting. The authors, testing the FCs' influence on fiscal performance, demonstrate that stronger media presence of the FC in any given year is correlated with greater planned fiscal activism for the following year, regardless of whether the fiscal plans envisage a more ambitious fiscal consolidation or a greater stimulus. Their interest is focused on the media impact of fiscal councils at times when we would expect them to speak out, that is in the aftermath of budgetary slippages or policy shifts. The results

<sup>16</sup> Opaque public accounts prevent voters from distinguishing the effect of pure luck from the impact of a competent policy-making, and so the notional budget deficit resulting, efficiently combines shocks and noise.

<sup>17</sup> Strong rules, enshrined in law or Constitution, and automatic enforcement mechanisms, seem to have a larger influence on budgetary outcomes.

are fairly consistent across alternative regressions (Fixed-effects or Pooled Ols). The control variables, output gap and public debt, display negative signs. This means that a reduction in the output gap (less positive or more negative) encourages fiscal activism, whereas high public debts are less conducive to activism.

On the same question IMF (2013) presents an econometric exercise on 26 countries over the period 1998-2010 where the FR index, the FC legal independence, FC staff number (high level), FC high-media impact, FC forecasts provision assessing, and FRs monitoring appear to be very significant. On the contrary, the mere existence of a FC does not seem to play a determinant role. The features of functioning of these institutions are relevant for their impact on fiscal performance.

However IMF(2013) considers that a reverse causation between the fiscal performance and FCs is possible, as intrinsically disciplined countries could reveal their deep preferences by adopting certain institutions. A complementarity's relation between FRs and FCs is demonstrated.

On the question of the reverse causality of FC on fiscal performance it's worth mentioning Alesina and al (1999). The authors show that the primary deficit average of some Latin-American countries over the period 1980-92 is determined significantly by indicators of both budgetary institutions (FRs and FCs). Restricting the sample to include only years of democratic government, the coefficient for the index is slightly smaller, although still significant. Causality running from institutions to outcomes would prove the existence of the commitment hypothesis. Anyway a reversal causality could run from fiscal performance to FRs and FCs, as countries strongly committed to fiscal balance could show this preference by establishing independent institutions (so called "signalling hypothesis").

Debrun and Kumar (2007) study has a relevant role in terms of complementarity of FCs and FIs. The authors estimate a multivariate panel model for EU-MSs (excluding Luxembourg) over the period 1990-2004, to test if countries that cannot explicitly abolish FRs could have an incentive to cheat by stealth through creative accounting (so called "*smokescreen hypothesis*"). The SGP and run-up to EMU seem to have had a negative impact on the FR index and the FC index seems to be complementary to the FR index.

In summary, the recent econometric literature, highlighted that FCs helped countries to contain forecast bias on projected cyclically-adjusted public expenditures and revenues (degree of pro-cyclicality of fiscal policy depends negatively on the quality of budgetary institutions). In terms of their effects on budgetary process, the related influence depends on the degree of governments' commitments to fiscal austerity (FRs in force), on the public acknowledgment of their role and on socio-political variables (as the fragmentation of government, the degree of leftism; decentralisation; and voters' participation). The FC structure and, in particular, the features of its functioning are relevant for both the budgetary process and (especially) fiscal outcome (see Debrun Xavier et al 2012, IMF 2013).

A particular aspect analysed is the complementarity of FRs and FCs (not their mere existence, but their specific characteristics: legal independence, independent budget, high-media impact, forecasts provision assessment) considering that FRs can fail and the existence of FCs can deter violations of them and have positive influence on the accuracy of budgetary forecasts measured by discrepancies between actual and forecasted real GDP growth. Our literature overview doesn't rest about this issue, because the legislative acts in Europe consider

existent the synergy between FC and FRs, stating that the FC in charge has to check the compliance with rules.

Finally, as emerged from reverse causality relations a “signalling hypothesis” should exist: strongly committed governments would adopt FRs and FCs, in order to ‘certify’ their commitment to austerity. Following a summary table showing the main empirical results obtained employing in econometric panel regression the FR index and FC index to demonstrate the direct influence of FC on fiscal outcomes.

Tab. 3 Main studies about the FC impact on fiscal outcome

Authors	Model	Dependent variable	Regressors	Results
Fabrizio et al (2006)	Panel regression	Primary balance to GDP ratio	Debt-to-GDP ratio, the fiscal institution index, the inflation rate, the FR index and the openness of the economy	The primary-balance-to-GDP ratio seems to be positive correlated with the debt-to-GDP ratio, the fiscal institution index, the inflation rate, the FR index and the openness of the economy; more inclusiveness hurts budgetary outcomes.
Debrun et al (2007)	Multivariate panel model	CAPB	CAPB of the previous year, the lagged debt ratio, the government stability, the output-gap and the delegation rules.	CAPB seems to positively depend on its previous year level, the lagged debt ratio, the government stability and the overall fiscal rules index; a negative correlation has found for the output-gap.
Debrun et al (2012)-	Panel regression	DCAB	Lagged output gap, lagged public debt level, FCs media presence in year T-1,time dummies	The coefficients are positive for FC media presence and negative for output gap and debt level: The results are fairly consistent across alternative regressions (fixed-effects or pooled).The control variables display the expected signs: a reduction in the output gap encourages fiscal activism, whereas high public debts are less conducive to activism.
IMF (2013)	Pooled regressions	The primary balance in percentage of GDP	One year ahead output-gap, FCs, fiscal rules monitoring, previous-year debt, the FRs index, FC legal independence, FC staff number,FC high-media impact,FCforecasts provision assessing.	Previous-year debt, the FRs index, FC legal independence, FC staff number (high level), FC high-media impact, FC forecasts provision assessing, and fiscal rules monitoring appear to be very significant. On the contrary, the mere existence of a FC does not seem to play a determinant role.

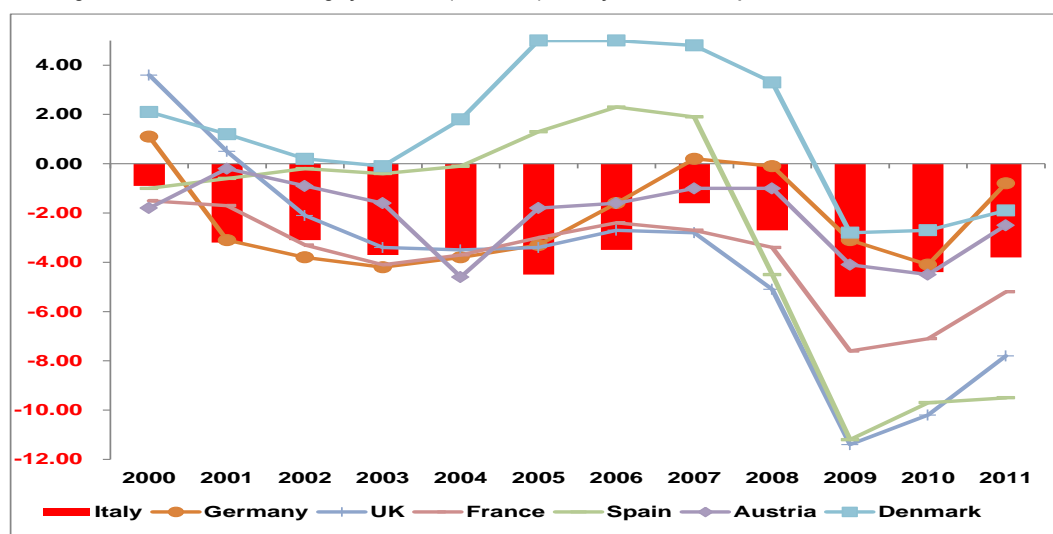
### 3 MAIN PROBLEMS IN EU MS’ FISCAL PERFORMANCE

The gaps between actual and forecasted fiscal and economic data of the studied countries highlight that the problem is not only of providing unbiased forecasts, but to enhance transparency and hamper information asymmetry of citizen who should also have access of all inside information of governments.

The analysis of the actual net borrowing<sup>18</sup> referred to the considered countries (Figure 1-a) shows that - excluding Denmark, Spain, and partly the UK -all of them (Austria and Germany are included in this latter group) have a negative or slightly negative net borrowing before 2007.

<sup>18</sup> The actual and forecasted net borrowing values are built as the growth rate of the difference between the actual and forecasted revenues and expenditures values reported in EC assessments of SP-CPs.

Fig. 1-a Actual net borrowing by countries (2000-2011) for Italy and main European countries

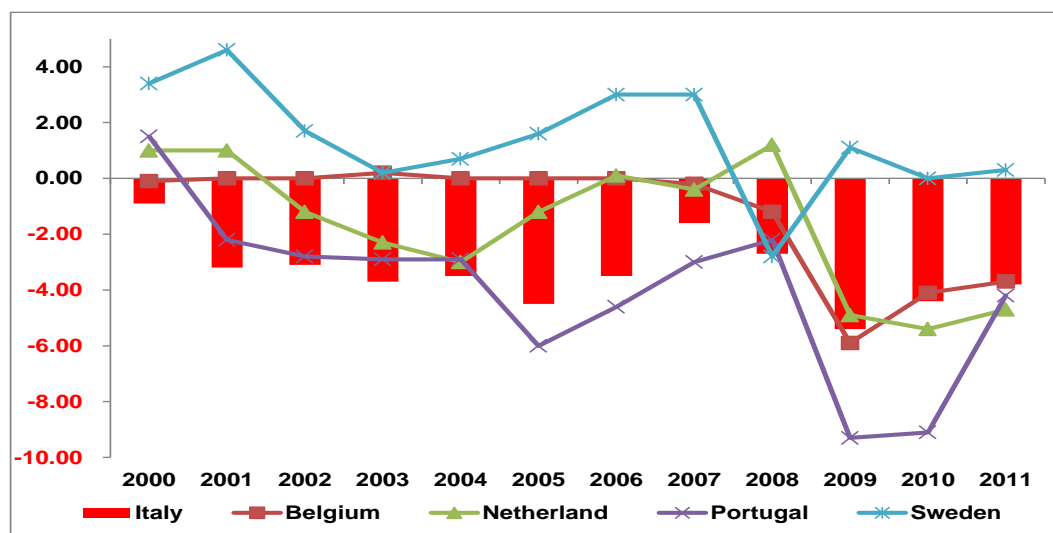


Source: Our elaboration on Eurostat data.

In Italy the actual net borrowing is always negative, slightly lower than -4.0 per cent. Italy performed better than France, especially over the period 2008-2011. The United Kingdom and Spain are characterised by the worse performance after 2007.

Moreover, the Italian dynamics is generally worse than that of Netherlands, Belgium and Sweden (see Figure 1-b); only Portugal shows among the other European countries a worse performance than Italy. During the economic crisis Italy has followed the trend of all these countries, excepting Portugal, whose deficit has reached in 2009 the level of about -10 per cent.

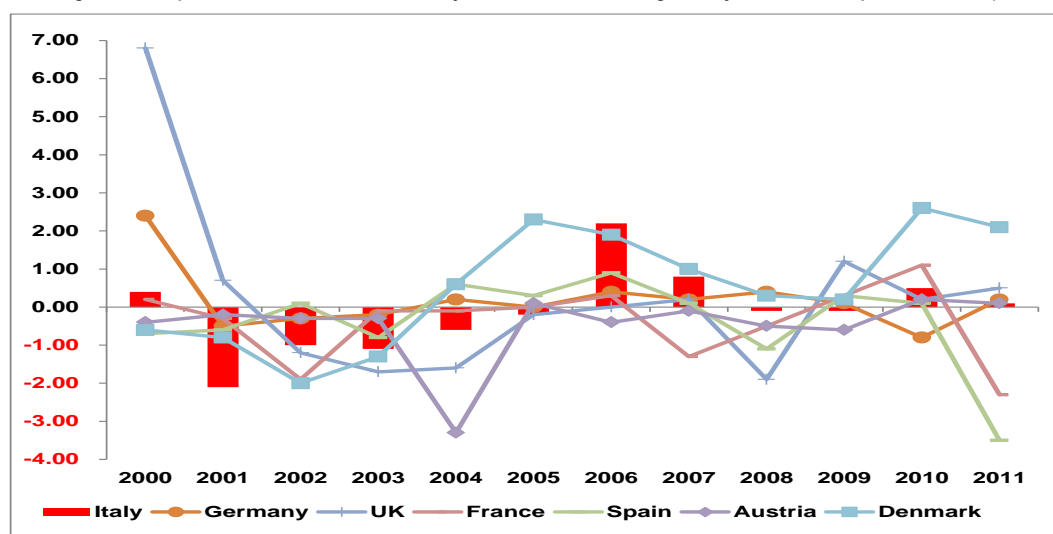
Fig. 1-b Actual net borrowing by countries (2000-2011) for Italy and other European countries



Source: Our elaboration on Eurostat data.

If we consider the gap between actual and foreseen net borrowing (see Figure 2-a), the United Kingdom confirms its unsatisfactory performance, especially over the period 2004-2008;

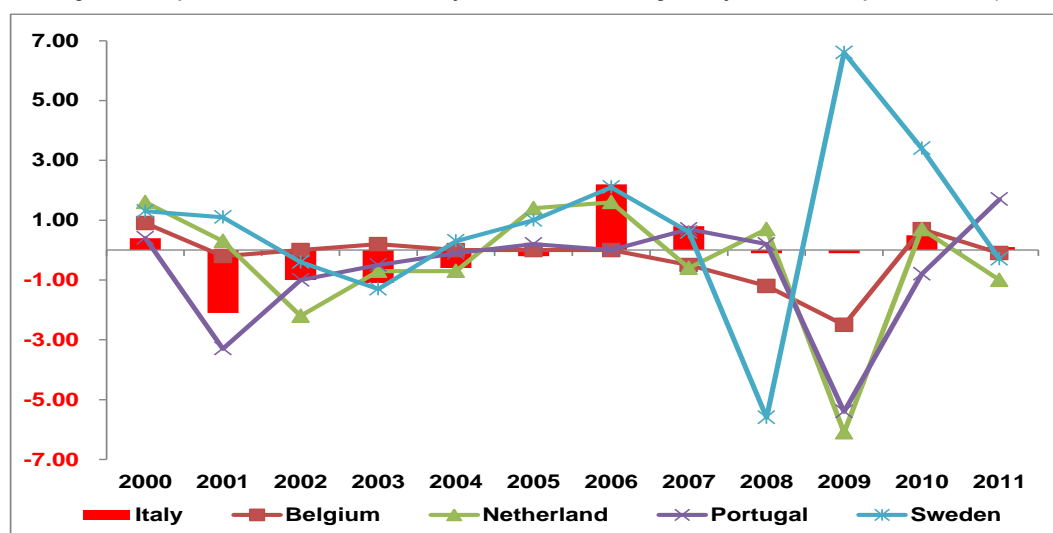
Fig. 2-a Gap between actual and foreseen 1-year ahead net borrowing for Italy and main European countries (2000-2011)



Source: Our elaboration on Eurostat data and SGP data.

the situation seems slightly to improve after 2008. Denmark seems to perform very well with a 3.0 p.ps positive difference between actual and foreseen deficit in 2010. Italy has not a negative performance after 2006, but there is a negative difference amounting to -2.0 p.ps in 2001 in regard to the previous period. Austria (after 2004) and Germany show a gap around zero. As regard with the comparison with the other EU countries, generally only Portugal seems to have a worse performance before 2007. After 2007 all European forecasters have been outperformed by Italy. Sweden shows a better forecasting capacity especially after 2009.

Fig. 2-b Gap between actual and foreseen 1-year ahead net borrowing for Italy and other European countries (2000-2011)

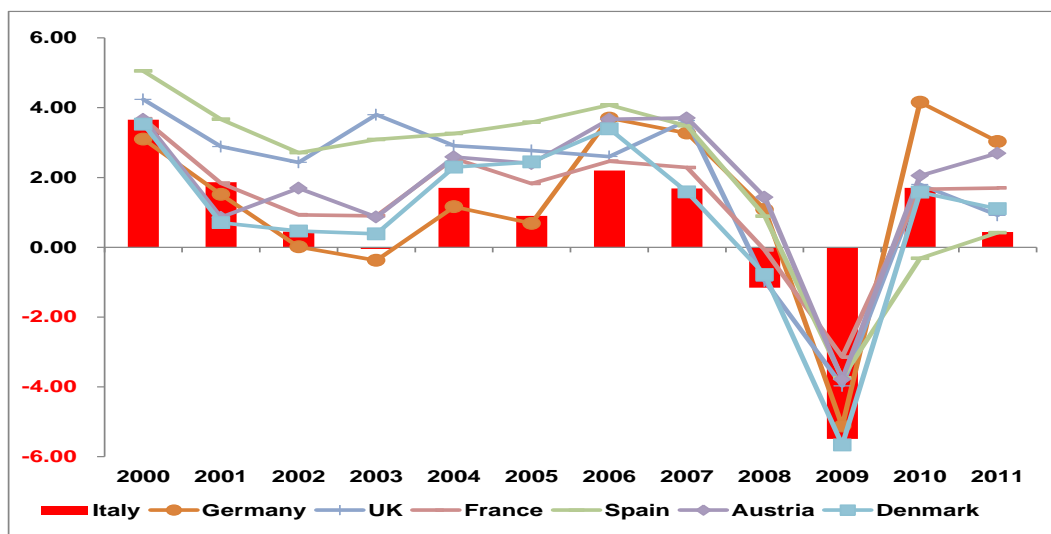


Source: Our elaboration on Eurostat data and SGP data.

In terms of real GDP growth (see Figure 3-a) all countries have generally a similar trend, with a positive growth over the period 2000-2007, a deep recession in 2008-2009 and a limited recover after 2010. Generally, Italy shows the worst performance among the reviewed



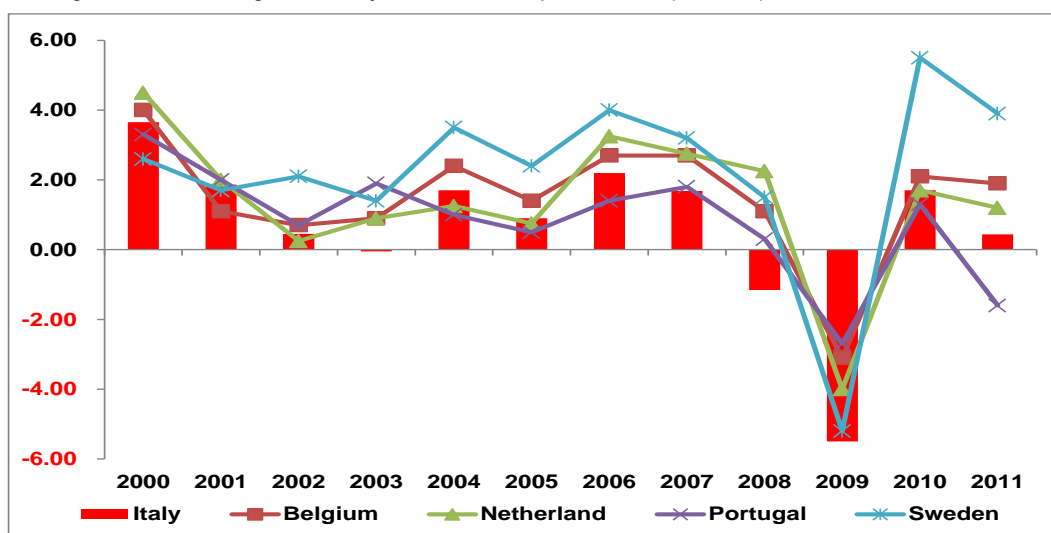
Fig. 3-a Actual GDP growth for Italy and the main European countries (2000-2011)



Source: Our elaboration on Eurostat data.

countries. In the period before the economic crisis, the United Kingdom and Spain have the higher GDP increase; the economic crisis hit greatly these countries, while Germany and Austria demonstrated to be more resilient. By taking into account the other European countries (see Figure 3-b), all countries have shown a similar pattern. Anyway, Sweden, and partly Belgium and Netherlands, have behaved in 2010-2011 better than Italy.

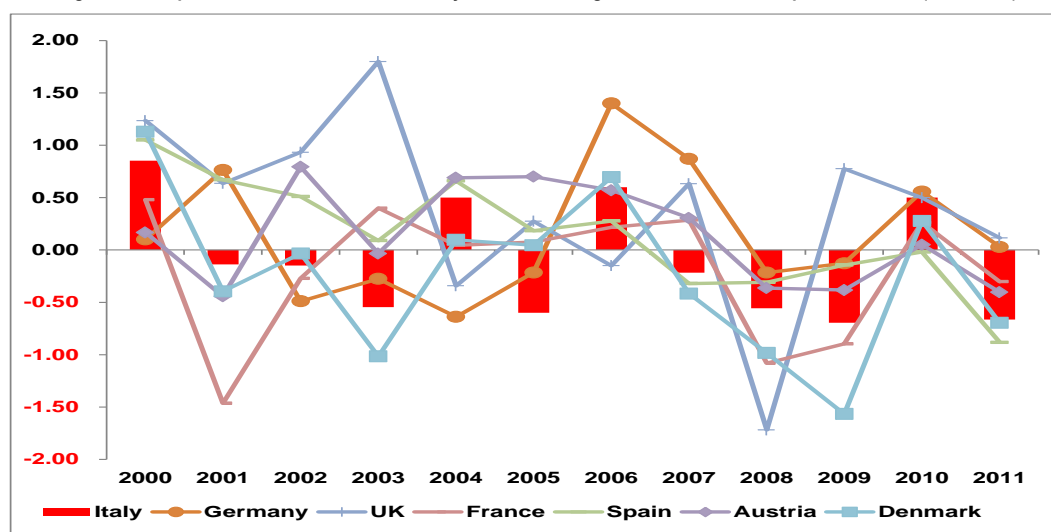
Fig. 3-b Actual GDP growth for Italy and the other European countries (2000-2011)



Source: Our elaboration on Eurostat data.

In terms of differences between the actual and 1-year ahead forecasts of real GDP growth (see Figure 4-a), we can distinguish two groups. The United Kingdom and Denmark have 'pro-cyclical' errors: positive before 2007 (actual>forecasts) and negative after (actual<forecasts).

Fig. 4-a Gap between actual and foreseen 1-year ahead GDP growth in the main European countries (2000-2011)

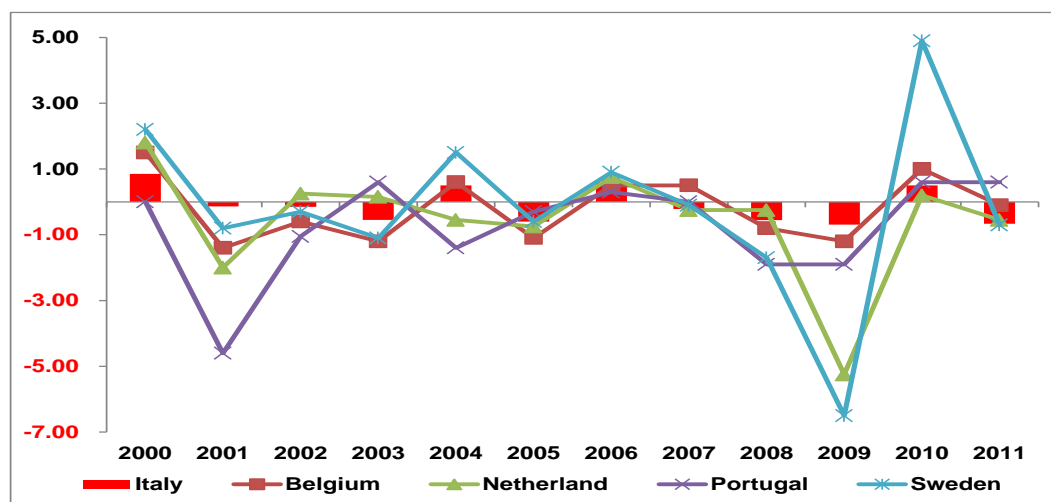


Source: Our elaboration on Eurostat data and SGP data.

Also Spain shows a similar trend, though in lesser extent. In Italy, instead, there is no specific pattern, with a fluctuation around zero in the range -0.5/+1.0 per cent. Finally, France and Germany show a wider fluctuation range, with a greater frequency, respectively, of negative and positive errors.

In comparison with the other European countries (see Figure 4-b), Italian forecast errors seem to be more limited. In particular, Sweden and Netherlands seem to be unable to correctly forecast the economic crisis over the period 2009-2010.

Fig. 4-b Gap between actual and foreseen 1-year ahead GDP growth in the other European countries (2000-2011)

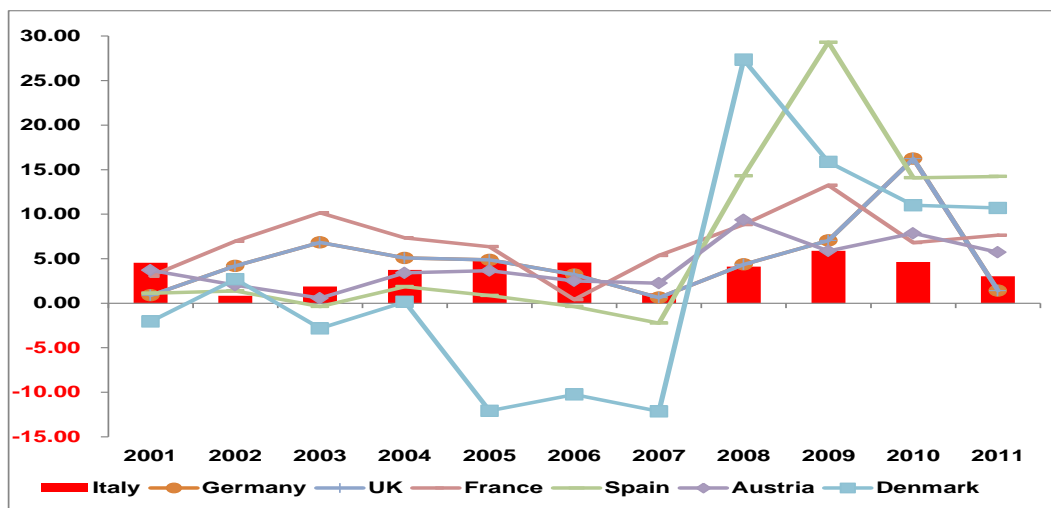


Source: Our elaboration on Eurostat data and SGP data.

In terms of debt's growth rate (see Figure 5-a) we make our analysis by building clusters by countries showing a similar trend. In the first group we can observe an unusually high debt's growth rate in Spain, in Denmark and, in a lower extent, in the United Kingdom. In the second

group France and Germany, and, in a lower extent, Austria have a peak, respectively, in 2009 and 2010, returning quickly to the usual pattern soon afterwards.

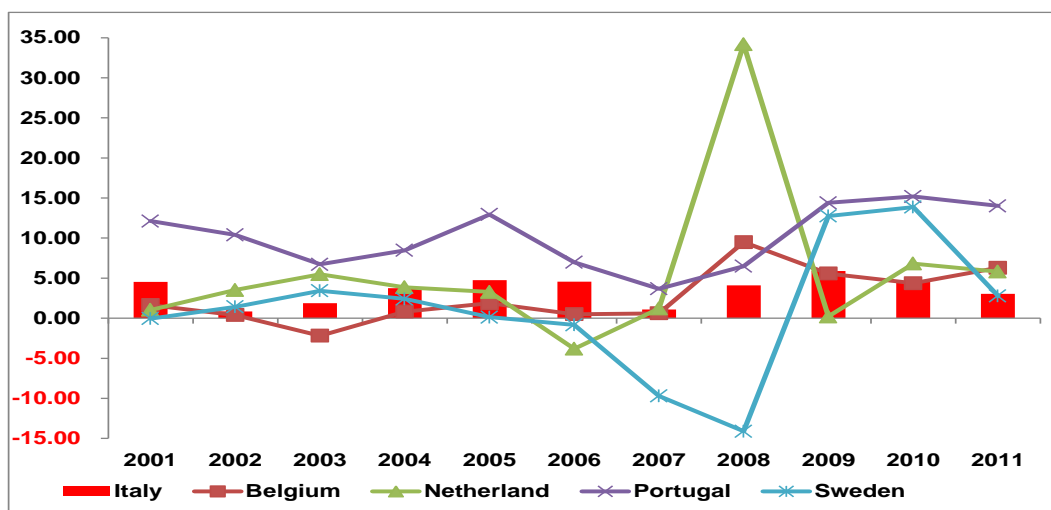
Fig. 5-a Percent increase in public debt for the main European countries (2001-2011)



Source: Our elaboration on Eurostat data.

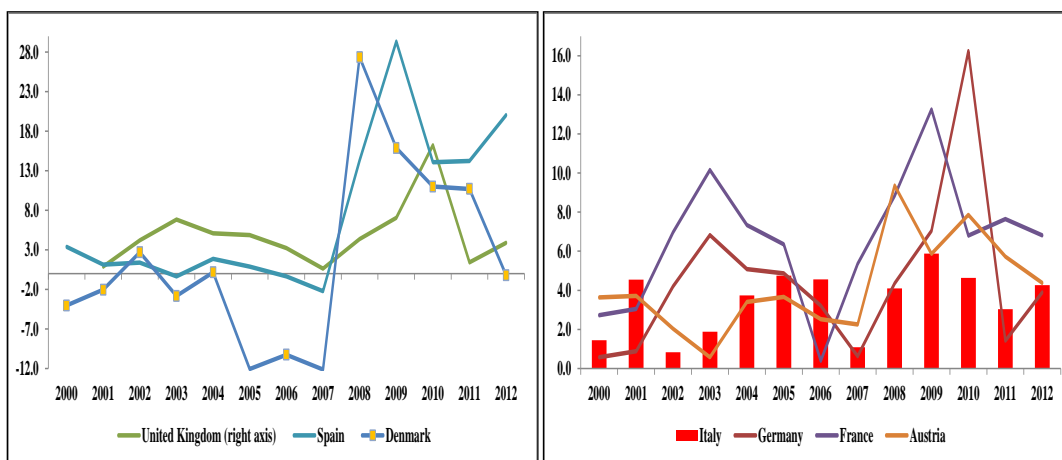
Among reviewed countries Italy keeps substantially constant its rate, which has fluctuated in the last 3 years in the range +2.0/+5.0 per cent; only in 2009 the debt grew at a maximum rate of nearly +6.0%.

Fig. 5-b Percent increase in public debt for the other European countries (2001-2011)



Source: Our elaboration on Eurostat data.

**Fig. 6 Percent increase in public debt (2000-2012)**

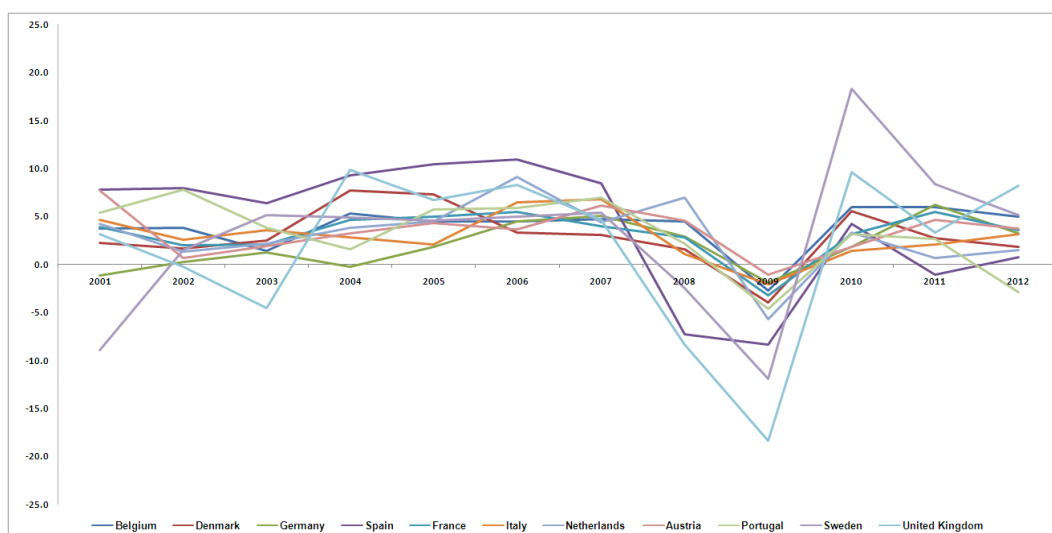


Source: Our elaboration on Eurostat data

In comparison with the other European countries, Italy shows a more limited cyclical component in the debt growth rate. Netherlands (with a peak in 2008), Belgium and Portugal (with relatively higher growth rates) show a similar trend. Sweden is the only country which has reduced its debt by 15.0 per cent in 2008, followed by the increase by the same magnitude over the following two years.

The y-o-y percent increase of revenues (see Figure 7) records on the whole a common procyclical trend: it shows a common growth over the 2004- 2007 period with a range of 5- 10 per cent (the highest values recorded by the Spain) a fall in 2009 and a recovery in 2010.

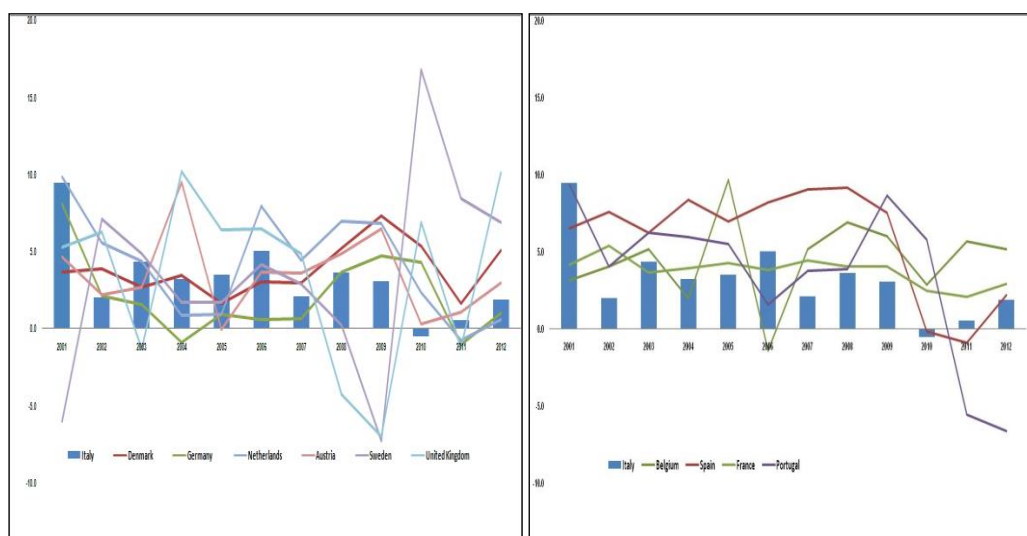
**Fig. 7 Y-O-Y percent increase of Public Revenue**



Source: Our elaboration on Eurostat data.

The y-o-y percent increase of public expenditure highlights a pattern with high variability: the most of the lines shows up and down oscillations, among them Spain shows the highest increase in 2008 and a fall in 2009 and Netherlands and Sweden showing an increase in 2008 and 2010 respectively.

Fig. 8 Y-o-Y Percent increase of Public Expenditure



Source: Our elaboration on Eurostat data.

## 4 EMPIRICAL EVIDENCE

### 4.1 The basic model

According to the empirical works above mentioned we constructed an econometric model to simulate how the presence of a FC could affect fiscal performance of the EU-MSs considered and which feature of its functioning is determinant for its effectiveness.

The traditional fiscal equation (1) presents as depended variable a measure, at time  $t$ , of fiscal policy and as control variables the state of economy, the gross government debt and the lagged dependent variable.

In symbols:

$$Bal_t = \beta Cycle_t + \lambda Debt_{t-1} + \rho Balt_{t-1} + \varepsilon \quad (1)$$

The fiscal policy could be expressed either in terms of actual budget balance (in this case  $\beta$  captures both the automatic stabilizers and the endogenous change in discretionary fiscal policy), or in terms of a cyclically adjusted measures (in this case the parameter  $\beta$  is capturing the endogenous response of fiscal policy to the business cycle) (see Fatas e Mihov 2009).

In our exercise the model presented is a panel regression (see Debrun et al 2012, IMF 2013) that has an intercept varying by country but constant during the time period considered (distinguishing each country analysed from the others)<sup>19</sup>.

$$y_{it} = x'_{it} \beta + \alpha_i + \varepsilon_{it} \quad (2)$$

$$t=1,2,3,4,5,\dots,T \text{ and } i=1,2,3,4,\dots,N$$

<sup>19</sup> The advantages of panel regression lay on controlling the individual heterogeneity through modelling the dynamic behaviour of individuals. The result is a major estimates' efficiency.

Where  $y_{it}$  is a scalar,  $x'_{it}$  is a  $(K \times 1)$  vector of regressors,  $\beta$  is a  $(K \times 1)$  coefficients' vector,  $a_i$  is the so called unobserved heterogeneity and  $\varepsilon_{it}$  is the errors vector behaving as random noise. We take aim to make inference on  $\beta$ , the indices  $i$  and  $t$  denote years and countries respectively.

The dependent variable chosen as indicator of fiscal performance is the absolute value of the planned variation of the CAB ( $\Delta CAB$ )<sup>20</sup>(difference between its yearly value)- see Debrun et al 2012-, while the proxy of the behavior of the economic cycle is the output-gap. Other regressors are the public debt log, and two indices that summarise the relevant features of the national FRs in charge and FCs. Fiscal and Economic data come from the SP-CPs of the 11 European countries considered (Austria, Belgium, Denmark, France, Germany, Italy, Netherlands, Portugal Spain, Sweden and United Kingdom); as data regarding to FRs and fiscal institutions<sup>21</sup> are those of the EC Database on Fiscal Governance. In the case of FCs the EC data have been completed for the missing years (from 2000 to 2009) controlled and transformed to get indices (see Annex).

## 4.2 Data description

The European countries included in the present econometric analysis are chosen among those listed in EC database on fiscal institutions and FRs. Furthermore the choice responded to the consideration that only the former EU founders present in their SP-CPs a complete time series on the projections of their budgetary position and the underlying economic assumptions since 2000. They are Austria, Belgium, Denmark, France, Germany, Italy, Netherlands, Portugal Spain, Sweden and the United Kingdom.

Although the caveat to use public projections present in the SP-CPs lays on the fact that the EU-MSs governments don't make forecasts on the same scenario: some follow the unchanged legislation (Italy among them), others the unchanged policies: the choice of the governments reduces the amount of expenditure forecasted and consequently the deficit results. The EC services collect a broad set of information on national independent fiscal institutions of EU countries through an annual survey, launched in 2006. The questionnaire concerns to the existing national institutions, others than the government, the Central Banks and the Parliament, which may have a direct or indirect influence on the conduct of fiscal policy. Only institutions primarily financed by public funds are considered; private think tanks and private research bodies are therefore excluded. The survey is focused on information related to the main characteristics of these domestic public bodies covering their mandates and functions, the composition of their governing boards, formal status, presence near the Government or Parliament, media visibility and influence on public debates on fiscal policy. The first questionnaire was sent to all EU MSs in the context of the Working Group on the Quality of

<sup>20</sup> The changes in CAB is commonly used to describe the effects of the discretionary policy (see Larch and Turrini, 2009). In fact the CAB is a good indicator indeed to: 1) separate the contribution of discretionary fiscal policy to a given change in the headline deficit from the effect of the economic environment; 2) assess fiscal impulse; 3) examine whether a given fiscal policy is sustainable. Furthermore the fundamental issue that justifies the employment of DCAB is related to the fact that this variable allows recording only the endogenous response of the fiscal policy to the business cycle (see Fatas and Mitov 2009).

<sup>21</sup> Considered as a good proxy of the FCs properly said on the basis of the EC definition.

Public Finances (WGQPF) attached to the Economic Policy Committee (EPC). The current questionnaire is divided into six sections following explained.

**I) General description** (divided into two other parts) requiring: a) a description of the institution, the main motivations for its introduction and the relevant data related to their creation and any major changes and b) the relation of the institutions with Government and/or parliament over the period considered; **II) Activities** containing questions about the mandate of the institution and relative specific tasks; **III) Independent analysis on fiscal policy developments** requiring information on: a) the economic aggregates and sectors covered by the forecasts (if the fiscal institution provides forecasts and/or long-term projections of macroeconomic and/or budgetary variables), b) the use of budget forecasts produced (SCP and MTBF are also reported), c) the sectors covered by the normative statements and recommendations issued by the institution and the way the government reacts to it; **IV) Governing/high-level board** containing questions related to the composition of the board of the institution (background of the members, appointment procedures, compatibility of members' responsibilities with other political posts, size of the board, voting procedures); **V) Status** concerns the institution's placement (whether it is formally attached to the Parliament or the Government, the sources of financing the institution and its access to inside information ; **VI) output and visibility of the fiscal institution**. This section of the questionnaire deals with reports, publications, communication issued by the institution to the general public. It also allows evaluation of the fiscal institution's influence on public debate.

We have built a set of FC indices on data of EC Governance dataset (see Annex) checked on the basis of the country fiches about fiscal framework across MSs prepared by EC Directorates for EPC peer review (see EC 2012). All of them tested in our simulation model to find which among them realized the best fiscal equation specification.

After ten tests the No. 6 version of the index (see Table 5, row 6 - obtained giving a weight of 50 per cent to the Section V of EC questionnaire) and the No10 version (see Table 5, row10 obtained giving the whole weight to the Section V) have given the best model specification.

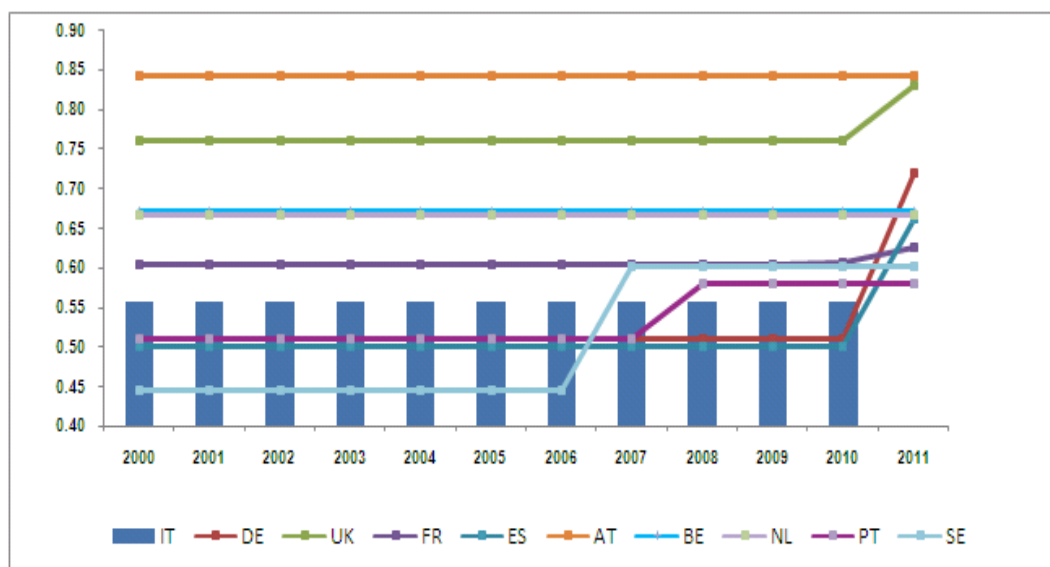
The indices built are a weighted composition of features of functioning of FC (having as starting point the real situation of the fiscal institutions surveyed).It's worth highlighting that the weight expresses the **relative** importance of each component: the whole weight given to the legal status augmented the relevance of this section (in correspondence to the others) without leaving out of consideration the score obtained in the other sections.

The representation of the number 10 indices (see Figure 9) shows the best position of Austria and United Kingdom followed by Netherlands Belgium and Denmark.

Our exercise stressed that the first two countries achieve the highest results thank to the weight given to the legal status component but the scores of others sections are relevant too In fact, the normative analysis and the media visibility matter in Austria (Debt Government Committee (Austrian FC)) too ; as the independent public finance analysis is relevant in Northern European countries<sup>22</sup>.

<sup>22</sup> The Danish Economic Council established in 1963 and the Netherlands Bureau of Public Administration in 1945 have sound positions in national framework and high reputation.

Fig. 9 Fiscal Council Index n10 (2000-2011)



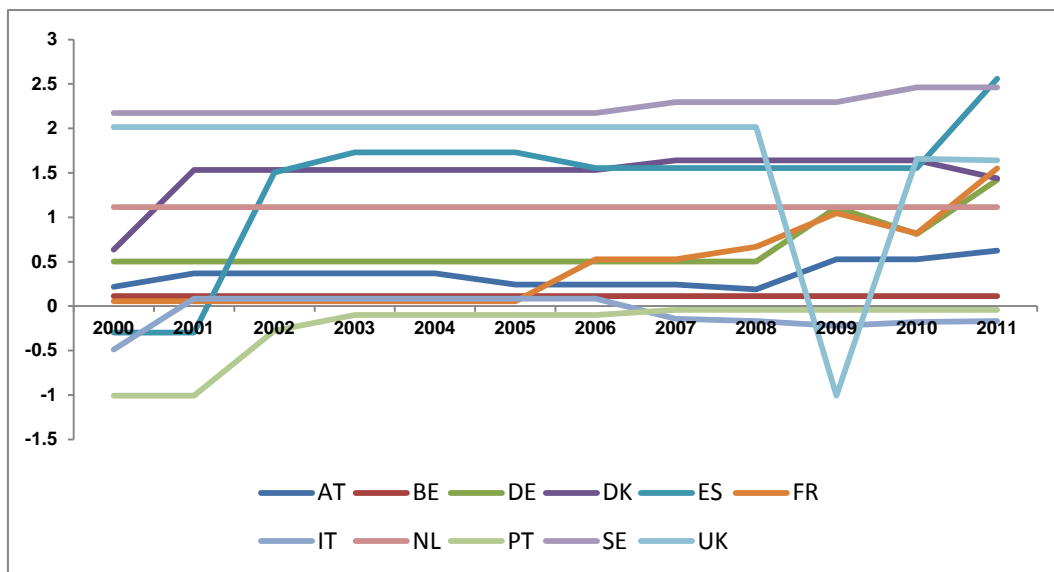
Source: our elaboration on EC Data

The FRs indices is built (by EC Services) taking into account 5 criteria: 1) the statutory base of the rule; 2) the room for revising objectives; 3) the mechanism of monitoring compliance and enforcement of the rule; 4) the existence of pre-defined enforce mechanism; and 5) media visibility of the rule. Score for each criteria are predefined and weighted on several defined dimensions such as the sector of Public administration covered, the number of rules present and so on (see EC fiscal governance dataset explanations of the construction of FR index). According to this index Denmark, Spain and Sweden (till 2010) demonstrate binding fiscal rules (see Figure 10): expenditure rules represent the cornerstone of fiscal framework<sup>23</sup> in Denmark and Sweden, while the balance budget rule and coordination among different government layers is relevant in Spain. The Spanish existing law, in fact, establishes that in case the 3 per cent deficit threshold is breached all governments layers have to contribute to the payment of a possible fine in proportion to their share over the overall deficit (EC 2010).

<sup>23</sup> The experience of such rules in these countries demonstrate that follows: 1) the adoption of these rules guarantee more centralized budgeting process such as top-down budgeting procedures; 2) it appears decisive to ensure the effectiveness of budget balance rules; 3) it should cover the whole general government sector with proper coordination (see EC 2010).



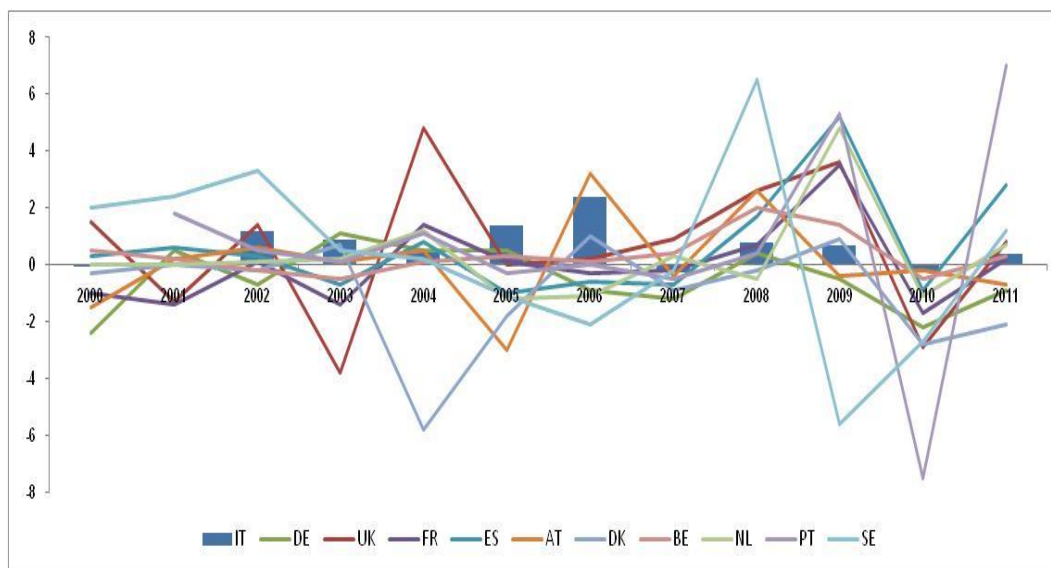
Fig. 10 FRs index in some European countries (2000-2011)



Source: Our elaboration of European Commission data.

The planned variation of the CAB (see Figure 11), on the whole shows a restrained variability up to 2008 (but Austria in 2005 and UK in 2003 and in 2004). Among the determinants of its contained variation may be highlighted the fact that the provisions about the debt and deficit contained in SGP becoming more binding with the introduction of a common currency (1999).

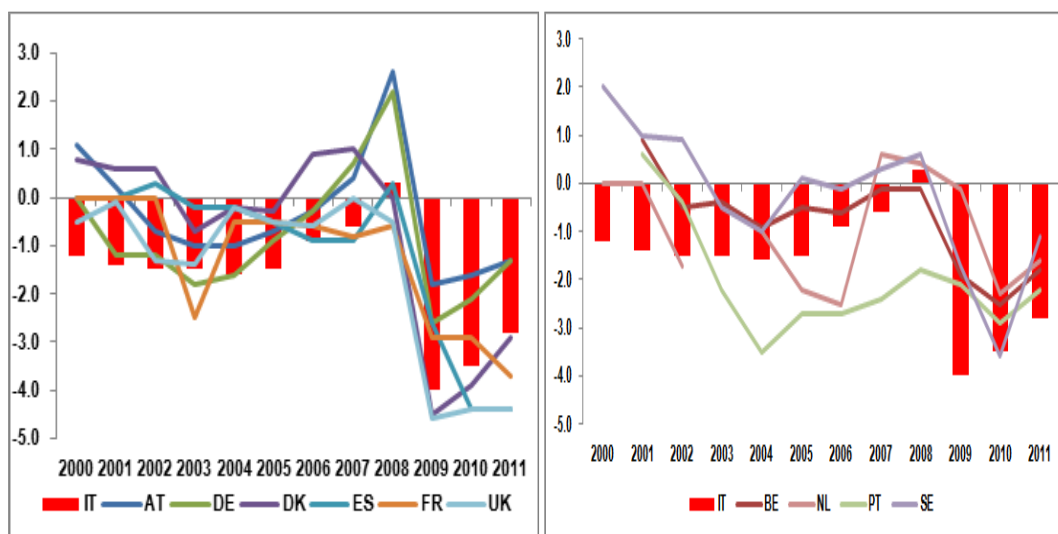
Fig. 11 Planned yearly change in the CAB (2001-2011)



Source: Our elaboration on SCGP data and European Commission data (Ameco database).

For the foreseen output-gap (see Figure 12), all the countries (but Portugal) follow a similar pattern.

Fig. 12 Foreseen output-gap in some European countries (2001-2011)



Source: Our elaboration on Eurostat data.

Tab. 4 Standard deviation for the all variables and Fiscal Council index number 10

	Overall	Between	Within
DCAB	1.5282	0.6101	1.4140
FR index	0.9321	0.9165	0.3152
FC index	0.1231	0.1135	0.0578
Output-gap	1.4762	0.5151	1.3913
Debt	0.4791	0.4953	0.0830

The statistical description of the variables considered in the model (see Table 4) shows more within variability for variables like  $\Delta Cab$  and the output-gap, the contrary for variables like FRs and FCs. and Debt.

### 4.3 Results

Here following we described the results of the model based on the fiscal index number 10. The shape of our model is the following:

$$|\Delta CAB_t| = \beta_1 Debt_{t-1} + \beta_2 OG_{t-1} + \beta_3 iFR_{t-1} + \beta_4 iFI(10)_{t-1} + \alpha_7 + \epsilon_{7t}$$

Our panel data is balanced (all countries have data for all years).

Applying the panel estimators beginning from Pooled OLS and ending with Random Effects, we find that the coefficients of Pooled OLS and Random Effects are more significant. The assumptions of the last estimator are: linearity, strict exogeneity of  $x'_{it}$  with  $\epsilon_{it}$  and  $\alpha_i$ . Analysing the residuals, we can affirm that individual effects exist. Moreover with the OLS estimator we use the cluster option, used when the individual effects are present in the model. The results of the model are illustrated in the following tables: the Table 5 summarises all the results of the regressions, while the Table 6 focuses on FR and FC indices.

Tab. 5 Outcome of estimators

Variable		Pooled OLS	Random Effects	Fixed Effects
FR Index	b	0.259	0.259	0.336
	se	0.17	0.16	0.41
FC Index	b	1.392	1.392	2.627
	se	1.20	1.20	1.86
Output-gap	b	-0.232	-0.232	0.029
	se	0.09	0.09	0.11
Public Debt	b	-0.195	-0.195	5.50
	se	0.29	0.29	2.13
N		117	117	117

Tab. 6 Outcome of estimators

	Pooled OLS(cluster)	Random Effects (robust)
FR Index	0.259	0.279
	(0.1894)	(0.139)
FC Index	1.392***	1.197***
	(0.60)	(0.54)

Note: Robust t-statistics are in parentheses, with (\*\*\*), (\*\*), and (\*) denoting statistical significance at the 1 percent, 5 percent and 10 percent threshold respectively.

The Random Effects and Pooled OLS (that exploits both the within and between variability) estimates of FC index are significant and have a positive sign; this demonstrates that this regressor have a positive influence on fiscal policy activism differently from the others (coefficients of output gap and debt that have a negative sign).

The Hausman test rejected the null hypothesis of extra orthogonality conditions imposed by the Random Effects estimator. This demonstrates the violation of the second moment assumption required by random effects:

$$E(\epsilon_i \epsilon_i' | X_i, \alpha_i) = \sigma_\epsilon^2 I_T$$

$$E(\alpha_i^2 | X_i) = \sigma_\alpha^2$$

Then the Pooled Ols estimator is advisable.

The Pooled OLS estimates for the coefficient of FC with the stress given to the legal status component ,are significant and positive. These results highlight the relevance of the legal basis of the FC (independence and wide access of inside information) on the fiscal outcomes: an external body could have a role on fiscal output only if its position is properly defined into the national institutional framework and it's role is widely and socially recognized as highly institutional one .

Table 5 shows in details that the presence of stronger FC in any given year is correlated with greater fiscal activism in the following year. The debt's coefficient with negative sign is not expected. The contained percent increase of public debt showed above (see Figures 5) could help to answer: debt growth has to respect a cap according to the SGP statements and this provision reduces *per se* the margins of the politicians' fiscal **activism**. The output gap is expected negative because the aim of the active politics is to reduce it.

The results are fairly consistent also with the inclusion of two statistically significant time dummies (2008 and 2009) to consider the breakdown related to the economic crisis.

In order to demonstrate if FRs and FCs are complementary or substitutes, we employ a linear Wald restriction test for the sum of coefficients of both variables FRI and FCI (integer values from -3 to +3, including 0). In the case of N6 FC Index the sum of the coefficients in random regression seems to be significant only for negative values; whereas no conclusive evidences emerge from robust regression. However, both variables seem to be fungible by choosing N10 FC index (all the weight to Section V and weights of the other Sections are zero) both parameters seem to be complementary.

## 5 CONCLUSIONS AND FUTURE RESEARCH

This paper analyses the impact of a FCs on fiscal performance of 11 European Countries using a regression panel. The presented literature highlights the positive impact of FC on fiscal process and consequently on fiscal outcome with small evidence of the direct positive influence of a FCs' presence on fiscal outcomes (the fiscal performance quantitative representation is among the problems).

We contribute to fill this gap in two main ways:

- 1) demonstrating that the FC have an impact on fiscal outcomes;
- 2) this influence is strictly related to the combination of its functioning features.

Our fiscal equation comprises - as proxy of the Fiscal Performance - the yearly variation of CAB (commonly used by EC and the recent economic literature) and - as fiscal institutions ten weighted combinations of the features of their functioning - the FC indices.

The simulation demonstrates that the indices that gave relevance to the "legal status" features of FCs functioning provide the best model specification. In other terms that legal status (i.e. whether it is formally attached to the Parliament or the Government, how it is financed and the access to inside information) of a FC establishment has relevance for the national fiscal outcomes. The results were fairly consistent also with the inclusion of two statistically significant time dummies (2008 and 2009) to consider the breakdown of the economic crisis.

Explaining the results in fiscal terms in any given year the presence of fiscal institutions, that have a strong legal basis, together with the FRs in place is correlated with greater fiscal activism for the following year. Our conclusions are in line with Hangeman(2010): *"In smaller countries with a relatively less developed infrastructure of unofficial bodies, the creation of a fiscal council enables the pooling of local expertise (creating analytical synergies) and access to financial and informational resources not otherwise available to unofficial bodies. In larger countries, however, where unofficial bodies are prevalent and potentially influential through the media and by active participation in public policy debates, a principal advantage gained from the creation of a fiscal council is the latter's access to the more detailed confidential data normally restricted to legislative and executive agencies. In all countries, however, a desired benefit to the government of creating an official fiscal council is to signal the government's commitment to good behavior"*.

But some cautions are necessary to better read the research results:

- governments don't make forecasts on the same scenario (some follow the unchanged legislation others the unchanged policies) the choice reduces or augments the expenditure

and consequently the deficit without any endogenous intervention;

- there are many aspects of fiscal process that are not considered (i.e. the way in which new expenditures are financed).

Focusing on the variables used in the model we highlight the following caveats:

- i)* the indicator of fiscal performance, the absolute value of the yearly planned change of the CAB, has the advantage to isolate the discretionary policy component of the government balance from the component affected by the economic cycle. Anyway, CAB estimation can't rely on a correct and agreed methodology of calculation and this could determine problems of social and political acceptance.
- ii)* the data used for FC indices have been rebuilt for the year 2000-2009 and the set of fiscal council indices built are only ten. The combinations created are only a part of all the possible existent cases.

Under this light we may conclude that, for the 11 European countries studied, if there are clear and solid fiscal rules the presence of fiscal institutions could affect political decision with the relative prevalence of the strong legal basis but caveats in data and other considerations (there are other ingredients of their success and the right combination it's a matter of other conditions<sup>24</sup> we haven't examined) call for caution.

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<sup>24</sup> E.g. the permanence of such institutions in institutional framework that affects their credibility and folk 's culture.

## ANNEX FISCAL COUNCIL INDEX'S CONSTRUCTION

The FC index has the aim to summarize the relevant features of FCs in each country (see Debrun Xavier and Manmohan S. Kumar, 2007) explicitly referring to their role in preserving fiscal discipline and in facilitating the implementation of the rules. It is built on the basis of the 2010-2011 answers of the EC questionnaire on Fiscal Governance checked on the basis of the 2011 country fiches prepared by EC Directorates for EPC peer review about fiscal framework across Members States (EC 2012).

The surveys available on EC web-site refer to 2010 and 2011, data from 2000 to 2009 have been reconstructed removing the institutions born in the following years and assuming invariance of the answers of institutions that do not change over time.

The index construction consisted of:

- the calculation of a numerical score for each answer given;
- the introduction of a weighting scheme applying at this score to consider the relative importance of every section of the questionnaire to which the answer belongs to.

### Calculation of the score

The score within each Section is obtained according to these instructions, the same for each fiscal institution:

- to dichotomous answers (yes-not) has been given a score of 1 if yes, 0 if not;
- to the numerical answers that reflect qualitative response, considering that higher score reflects better performance, the relative importance is expressed proportionally in percentage;
- to numerical answers, such as the number of employees, where the maximum value is not defined in advance a dichotomous score (0-1) has been assigned if that number is respectively below or above the average of the correspondent values for all the institutions of all the countries involved;
- the answers "n / a" (question not applicable), "." (missing event though the question applies to the institution) or "\*" (additional information) are not considered for the calculation of the indicator;
- the answers "\*\*1" or "0\*" (the asterisk indicating additional information), are considered equivalent to those without an asterisk.

It is interesting to note that institutions in 2011 reported a higher average score on the media visibility, while is fairly low the level of interaction with government and parliament (see Section I), as well as the level of independence in terms of macro and/or budgetary forecasts.

The scores for each institution, however, don't help us to differentiate the relevance of each aspects/features of Fiscal Council functioning expressed by the sections of the questionnaire.

One way to explore this aspect may pass through a weighting scheme related to each section.

## The weighting scheme

Table 7 shows 10 different fundamental weights<sup>25</sup> (expressed as percentage) related to importance given for every single year and country to each section of the questionnaire. Their combination determines 10 different sets of indices according to the following criteria:

1. prevalent weight to the section VI;
2. equal weight to all sections and considering the three subsections of the III (Section) as independent ones;
3. half weight to the Section II and the remainder equally distributed between the remaining sections;
4. half weight to the Section I and the remainder equally distributed between the remaining sections;
5. half weight to the Section IV and the remainder equally distributed between the remaining sections;
6. half weight to the Section V and the remainder equally distributed between the remaining sections;
7. half weight to the section III (considered as a single section), and the remainder equally distributed;
8. all weight to the Section II;
9. equal weight to all sections considering the part III as a single section;
10. the whole weight to the Section V.

The 10 cases represented the circumstance that one or another of these sections (indicating particular aspects of fiscal councils) has an influence in monitoring fiscal process.

Tab. 7 Weights distribution as percentage

N. progressive weighting	I	II	III.a	III.b	III.c	IV	V	VI	Tot
1	2.5%	2.5%	10.0%	10.0%	10.0%	10.0%	15.0%	40.0%	100.0%
2	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	100.0%
3	10.0%	50.0%	3.3%	3.3%	3.3%	10.0%	10.0%	10.0%	100.0%
4	50.0%	10.0%	3.3%	3.3%	3.3%	10.0%	10.0%	10.0%	100.0%
5	10.0%	10.0%	3.3%	3.3%	3.3%	50.0%	10.0%	10.0%	100.0%
6	10.0%	10.0%	3.3%	3.3%	3.3%	10.0%	50.0%	10.0%	100.0%
7	10.0%	10.0%	16.7%	16.7%	16.7%	10.0%	10.0%	10.0%	100.0%
8	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
9	16.7%	16.7%	5.6%	5.6%	5.6%	16.7%	16.7%	16.7%	100.0%
10	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%

<sup>25</sup> Other combinations exist but these 10 are the basic one to quantify in a simply way the (relative/absolute) relevance of the basic aspects of a fiscal council functioning expressed by the sections of the questionnaire.

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