FISCAL RULES, FISCAL COUNCILS AND ALL THAT: COMMITMENT DEVICES, SIGNALING TOOLS OR SMOKESCREENS?

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Introduction

Over the past 15 years, an extensive literature has investigated the likely causes of persistent fiscal indiscipline and explored a variety of ways to alleviate it. One key conclusion is that institutional arrangements ranging from legally binding fiscal rules to enhanced transparency and procedural provisions can play a role in helping contain the widely observed penchant of policymakers for excessive deficits. The basis for this conclusion is the idea that well-designed institutions increase the costs faced by policymakers in case of deviations from sound policies. Yet the significance of the role of institutions in improving policy outcomes has been questioned on both theoretical and empirical grounds (see Schick, 2004, for an informal discussion). The main issue revolves around the extent to which institutions per se can truly alter the motivation of policymakers, and hence lead to the desirable outcome, and whether there is any robust evidence supporting this premise.

The paper explores this key issue regarding the role of institutions in determining fiscal policies and outcomes, and comprises two parts. In the first, we briefly discuss potential channels through which fiscal institutions, especially numerical budget rules and non-partisan agencies, can enhance fiscal discipline.[1] The most common view is that institutions can be "commitment devices" in the sense that their influence on fiscal behavior arises from their capacity to "tie the hands" of policymakers tempted by deviations from socially optimal choices. In addition, fiscal institutions can help reduce the asymmetry of information between policymakers and voters. To the extent that such asymmetry is a source of bias – for example because it increases political instability and shortsightedness in decision-making – institutions can be useful signaling tools with positive effect on

fiscal discipline.[2] One concern, however, is that in the absence of social consensus on fiscal discipline, they may lack credibility. Indeed, absent such consensus, institutions perceived as constituting binding constraints are likely to be ignored or circumvented, typically through creative accounting and off-budget operations that harm transparency and democratic accountability. In that sense, fiscal institutions could indeed end up being used as counterproductive smokescreens (Milesi-Ferretti, 2003; and von Hagen and Wolff, 2006).

In the second part of the paper, we exploit new survey data on national fiscal institutions compiled by the European Commission (Ayuso *et al.*, 2007), and explore the implications of these institutions on fiscal behavior in a large sample of EU countries. After a brief description of the data, we estimate a multivariate panel-data model of fiscal policy in these countries. This approach allows quantifying the relationship between fiscal institutions and outcomes. We pay careful attention to the causal nature of that relationship. Causality running from institutions to outcomes would be consistent with the hypothesis that institutions are effective commitment devices. This is indeed the way the link between institutions and performance has been investigated. However, there is a possibility that the reverse causality may hold true: that is intrinsically well-behaved governments may adopt strict rules and institutions to reveal the nature of their (unobservable) preferences, with potentially very significant policy implications. As the paper argues, there are credible theoretical reasons for positing this reverse causality, and a strong *prima facie* case for seeing if there is any empirical evidence supporting this view. The econometric analysis undertaken below is rigorous, but still subject to a number of limitations. In particular, there is a possibility that omitted variables may exert a joint influence on fiscal outcomes and institutions, giving a misleading impression of a strong causal linkage whereas institutions would in fact be a mere proxy of those omitted determinants of fiscal behavior. To refine our analysis and interpretations, descriptive evidence at the country-level is also presented.

We find that budgetary institutions and fiscal performance are strongly correlated. In particular, stricter and more encompassing numerical rules seem to contribute to fiscal discipline. However, it remains difficult to distinguish the signaling from the commitment hypothesis. While estimation with instrumental-variables techniques suggests that reverse causality may be an issue (supporting the signaling hypothesis), the results are sensitive to the choice of instruments. Also, descriptive country-level evidence indicates that panel analysis is likely to mask important cross-country variations in the role and effectiveness of fiscal rules, and that rules may turn out being important commitment vehicles in some countries but not in others.

Finally, we find only sketchy support for the smokescreen hypothesis. The link (correlation) between actual budgetary performance and fiscal indicators is robust and consistent with a discipline-enhancing effect of institutions. However, the data suggest that countries where non-partisan bodies ("fiscal councils") play a

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[2]   Debrun and Kumar (2007) propose a formal illustration of that argument.

greater role in the budget process are also deemed less transparent according to indicators of fiscal transparency. In addition, some countries exhibit a greater tendency to use creative accounting in the aftermath of a tightening of numerical fiscal rules, in line with the econometric work of von Hagen and Wolff (2006).

The rest of the paper is organized as follows. Section 1 provides a brief and selective survey of the key issues pertaining to the role of fiscal institutions. In Section 2, we describe empirical findings for a panel of 14 EU countries, while policy implications and conclusions are presented in Section 3.

1   The elusive link between rules and policy outcomes

While it is straightforward to set up theoretical second-best models with equilibrium deficit bias and to characterize institutions or rules that would alleviate such bias, the actual impact of institutional arrangements on policy decisions and outcomes has been the subject of intense debate. The parallel with the earlier discussions in the 1980s and early 1990s on the merits of central bank independence with regard to the design and implementation of monetary policy is worth noting. That discussion suggests that the current debate on fiscal policy issues should be framed in terms of a choice between "rules and institutions" rather than between "rules and (unchecked) discretion" (Wyplosz, 2005).

1.1   Déjà vu:[3] central bank independence and the rules vs. institutions debate

The adoption of fiscal rules has been considered as the instrument of choice to deal with deficit bias. A large number of studies describe in detail the coverage, nature, degree of state contingency, and the specific targets of desirable fiscal rules (e.g. Calmfors, 2005; Kopits, 2004; and Morris, Ongena and Schuknecht, 2006), and also conclude to the often beneficial role of such rules. However, the literature is far from unanimous in this, with some influential observers arguing that rules-based fiscal frameworks *per se* need not deliver: rather under quite plausible and realistic assumptions, they are likely to end up meeting the same fate as monetary rules because their effectiveness is based on the same faulty premise, namely the assumed capacity of rules to permanently suppress or constrain discretion (Wyplosz, 2005). Indeed, the argument goes, there will always be circumstances in which scrapping or ignoring rules will be preferable for policymakers, suggesting a serious credibility problem. It follows from this argument that a credible solution to biased policies cannot be to suppress discretion but to find mechanisms through which it could be exerted more wisely.

One such mechanism is the delegation of some decision-making power to an independent agency mandated to deliver socially optimal policy. Indeed, the

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[3]   Or as the great American baseball player, Yogi Berra, said, in a somewhat different context, it is "*Déjà vu all over again*".

delegation of certain tasks to a non-partisan agency can help remove politically motivated bias while preserving fully the prerogative of elected policymakers' to define the agency's mandate. The success of independent central banks in dealing with the inflationary bias of monetary policy has led some to argue that nonpartisan agencies could play a similarly useful role in the fiscal realm as well.[4]

Yet, one strand of the monetary policy literature adopted a more skeptical (if not orthogonal) view on the role of central bank independence (and institutional reform in general) in shaping policy outcomes, and the arguments developed there might apply with even greater force to the current fiscal policy debate. A key element in the skeptics' thinking has been that establishing new institutions *per se* does not change the underlying motivations or preferences of the policymakers. Agents know this, and in the absence of significant changes in the environment, such institutions would thus potentially suffer from the same handicap as policies themselves, in particular a lack of credibility (McCallum, 1995).[5]

A related critique of the role of institutions is that in a democracy, institutions can only be sustained if they reflect deeper social preferences or permanent features of the political system (Posen, 1995). That argument again implies that institutions per se do not change underlying incentives. In the context of central bank independence, Posen (1995) concludes that "both central bank independence and a coalition in society committed to protecting that independence are necessary to achieve the low inflation heretofore ascribed to central bank independence; either alone is insufficient" (p. 271).

Two potential counterarguments could be put forward to suggest that institutions may be more than merely decorative, explaining why governments set up these institutions, including formal fiscal frameworks. The first is that under incomplete information (*i.e.* the public does not know the true motivation and competence of the government), institutional reform may play an important signaling role. For instance, Debrun and Kumar (2007) argue that better information on policymakers' true motivations – signalled by institutional reform – reduces the probability that voters will wrongly sanction an incumbent for adverse outcomes that were not related to policies. The result is greater political stability and a correspondingly lower deficit bias.[6] Here institutions do play a role, although a very different one from that assumed in the standard literature.

The second counterargument is less convincing, and hinges on the existence of potentially high costs, attendant on changing institutions. As a result, institutional reforms may be seen to be intrinsically more credible than policy changes. But this immediately raises the issue of the specific nature of these costs: do they result for instance   from   a   loss   of   reputation;   explicit   sanctions,   or   some   other

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[4]   See Debrun, Hauner and Kumar (2007) for a survey of that literature.

[5]   In McCallum's words, institutions *per se* "do not overcome the motivation" for biased policies but "merely relocate it."

[6]   Stéclebout-Orseau and Hallerberg (2007) develop a full-fledged model of the signaling role of independent watchdogs.

political/economic costs? It does not require much to see that this argument may be overdone: after all, even constitutional provisions need not be strictly binding. For example, McCallum (1995) notes that the U.S. Constitution still lacks an amendment taking the dollar out of the metallic standard; in a different area, a superficial reading of Belgium's Constitution would suggest that the King of the Belgians is the most powerful man in the land; and who would have thought, back in 1997, that the Stability and Growth Pact would be substantially amended less than 10 years later?

1.2   *Fiscal institutions in the real world: three hypotheses*

To bridge the gap between theoretical discussions and the need to assess the effectiveness of real-world arrangements, we propose three hypotheses that are important to investigate empirically. These are respectively the "commitment" hypothesis, "signaling" hypothesis, and the "smokescreen" hypothesis. We discuss these in turn.[7]

As noted above, most of the literature on fiscal institutions implicitly accepts the validity of what we term the "commitment" hypothesis: that is the presumption that rules or institutions shape policymakers' incentives in a way that leads them to mimic a socially-optimal "pre-commitment solution". In other words, institutional changes, including the adoption of a rules-based framework, or the setting up of an independent agency is assumed to be followed by an improvement in fiscal performance. In practice, there is a need to nuance the notion that a choice is to be made between fiscal rules – that by themselves may not be enough – and independent agencies – that would be "bound" to be as successful with deficits, as central banks have been with inflation. In the fiscal realm, rules and institutions are more likely than not to interact in many ways, frequently reinforcing each other. The reason is simply that fiscal policy is the translation in financial terms of the democratic mandate received from voters: it involves distributive and efficiency considerations that would be difficult to map into a set of simple and measurable objectives. Fiscal rules can thus define in broad terms the boundaries of acceptable or unacceptable policies that an independent fiscal authority would be in charge of enforcing (Wyplosz, 2005; Debrun, Hauner and Kumar, 2007).

In a companion paper (Debrun and Kumar, 2007), we build a simple model *à la* Tabellini-Alesina (1991) highlighting the "signaling" hypothesis. Our model places the asymmetry of information between voters and a democratically accountable government at the center of the game. We illustrate that rules can then be employed as a useful signal of competence by a government because they reduce the risk that adverse budgetary outcomes are systematically associated by the voters with incompetence of the government, instead of recognizing for what they are – the results of idiosyncratic shocks. This raises chances of re-election of the incumbent

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[7]   Although these hypotheses are not rigorously derived from a specific theoretical model, they are directly inspired by the earlier discussion.

government, which in turn reduces the incentive to run excessive deficits. We also discuss the necessary conditions for such a mechanism to operate. First, transparency is key, that is budgetary indicators must truthfully reflect actual policies. Second, the main source of deficit bias lies in electoral uncertainty so that the bias originates in the political process itself, and not in some underlying appetite for deficits by the public (also known as "fiscal illusion").

Next consider the "smokescreen" hypothesis: this relates to the relationship between fiscal institutions and transparency of fiscal accounts. It has been argued that when it becomes too costly to stick to fiscal rules, rather than abandon the rules explicitly, given the attendant costs, governments have an incentive to cheat by stealth through creative accounting (see, for instance, Milesi-Ferretti, 2003). This overtime undermines credibility of the public sector, with corrosive effects on trust and accountability in the public domain. Stéclebout-Orseau and Hallerberg (2006) go one step further in the theoretical modeling of this issue. They show, for instance, that the implementation procedure of the SGP's corrective arm (which involves political bargaining in the Council) may make the availability of information on national budgets counterproductive. The reason is that such information could facilitate the formation of blocking minorities in the European Council. Debrun and Kumar (2007) also formalize transparency and show that the lack of it may create an opportunistic deficit bias in addition to the partisan bias present in the basic model. We term the potential relationship between fiscal institutions and transparency the "smokescreen" hypothesis. von Hagen and Wolff (2006) provide econometric evidence that creative accounting has indeed increased in the aftermath of the implementation of the SGP. It could be argued, however, that national rules, because they are essentially self-imposed, may be less likely to lead to creative accounting than international or supranational rules (such as the Stability and Growth Pact).

How do we bring those hypotheses to the data? The commitment hypothesis is consistent with the expectation that institutional changes (including the adoption of a rule or the tightening of an existing rules-based framework) systematically precede improvements in fiscal performance. In a multivariate panel context, it would mean that rules indicators would cause higher primary balances on average. The signaling hypothesis would be associated with reverse causality (commitment or change in preferences comes first), and evidence (in the first stage regression) that the same broader institutional determinants simultaneously enhance rules and improve fiscal performance. Finally, the smokescreen hypothesis would suggest looking for a relationship between indicators of fiscal transparency (including creative accounting) and the fiscal institutions indices. We examine these hypotheses on their own merit, as well as relative to each other – for instance, we explore the extent to which data seem to be more consistent with the signaling relative to the commitment hypothesis.

2   Empirical evidence

This section examines whether the evidence on the impact of fiscal

institutions on fiscal performance (including transparency) allows us to reject one or more of the three hypotheses discussed above. We focus on mature European Union Member States (in fact the EU-15 excluding Luxembourg) over the period 1990-2004, relying on the fiscal institutions database described in Ayuso *et al.* (2007). The latter, based on a recent survey among member states of numerical fiscal rules at the national level, comprises quantitative, time-varying indices of fiscal rule restrictiveness and coverage. The survey also collected qualitative data on nonpartisan fiscal agencies that we summarize in quantitative indices capturing their importance in the budget process.

2.1 Fiscal rules and non-partisan agencies: the data

2.1.1 Numerical fiscal rules at the national level

As discussed in detail by Ayuso *et al.* (2007), there has been a tendency during the 1990s in the European Union to adopt more restrictive and more encompassing fiscal rules (Figure 1). The trend, notable for all groupings of countries – the largest European countries, EU 15, the new member states – was particularly pronounced after the adoption of the blueprint for the economic and monetary union, the Maastricht Treaty, in 1992.

Even though it is difficult to assess precisely what a change in the index means, the time variation is significant and suggests exploration of some "visual correlations" between fiscal performance (as measured by the cyclically-adjusted primary balance of the general government) and changes in national rules over time. The results are reported in Figure 2: these indicate clearly that the relationship between budgetary performance and fiscal rules varies considerably across countries. While trend budgetary performance in Belgium appears driven by variations in the rules index (in line with our commitment hypothesis), improvements in the budgetary situation of Spain, Sweden and the Netherlands clearly precede major tightening in the national fiscal rules (in line with our *signaling* hypothesis). By contrast, fiscal outcomes in Italy and the United Kingdom do not appear linked to changes in fiscal rules.

2.1.2 Fiscal councils: main features and interaction with rules

In addition to rules, many countries have established nonpartisan agencies – "fiscal councils" in the terminology of Debrun, Hauner and Kumar (2007) – that provide independent input into the budgetary processes. In general, their purpose is to limit the scope for politicization of fiscal decisions although no explicit delegation of policymaking power is involved. The European Commission's survey covers many relevant dimensions of these institutions, including the content and legal status of their mandate, the guarantees of their independence, their potential impact on the policymaking process (including through the provision of independent forecasts), and their perceived influence on the public debate. For our analysis, we constructed a number of indices to characterize the set-up, independence, and the potential

Figure 1

Numerical Fiscal Rules at the National Level (EU Countries, 1990-2005)
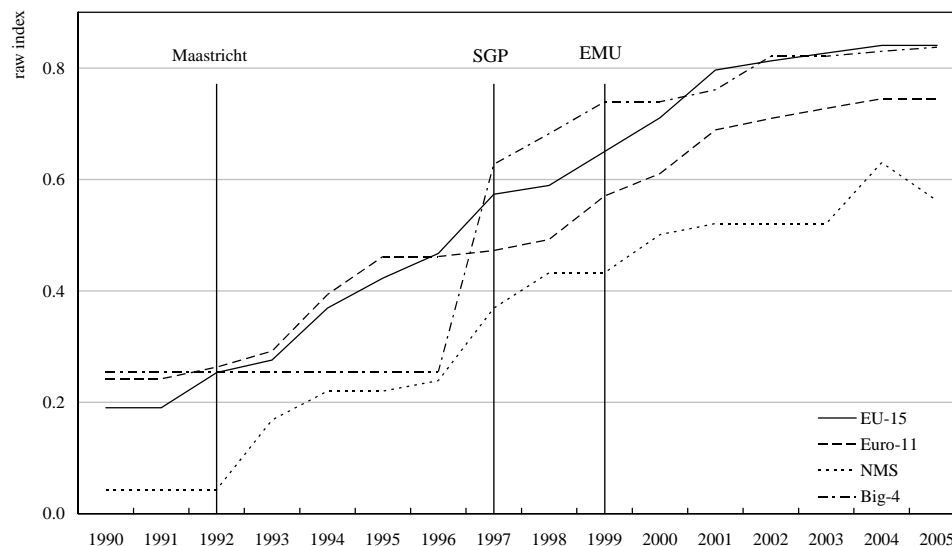
Source: Ayuso *et al.* (2006).

influence of these agencies on the budgetary process including via the public debate. We used a weighting scheme that explicitly emphasizes their role in preserving fiscal discipline and in facilitating the implementation of rules (see Table 1 and Appendix 1). As Table 1 indicates, there is a significant variation across countries in the de jure influence and independence of the fiscal councils in overall terms as well as specifically on the budgetary process, in the formal guarantees of political independence, and in the perceived impact on fiscal discipline.

Unlike the evidence presented in Figure 2 that focused on the relationship between rules and performance, we examine more closely the channels through which the fiscal councils potentially might have an impact, and also the relationship between the fiscal council and fiscal rules. One premise is that the greater the degree of restraint exercised by the fiscal council or the greater the guarantee of independence from political interference, the greater the likelihood of perceived or actual impact. There may also be a presumption of some complementarity between fiscal rules and fiscal councils, with the latter contributing to a more effective enforcement of the former.

The results, shown in Figure 3, are clearly quite suggestive. We see a strong positive relationship between the *de jure* influence exerted by a fiscal council and its perceived impact on fiscal performance. This is complemented by a positive relationship between formal guarantees of political independence and the perceived

Figure 2

Fiscal Performance and Numerical Fiscal Rules in Selected EU Countries

Belgium

Sweden
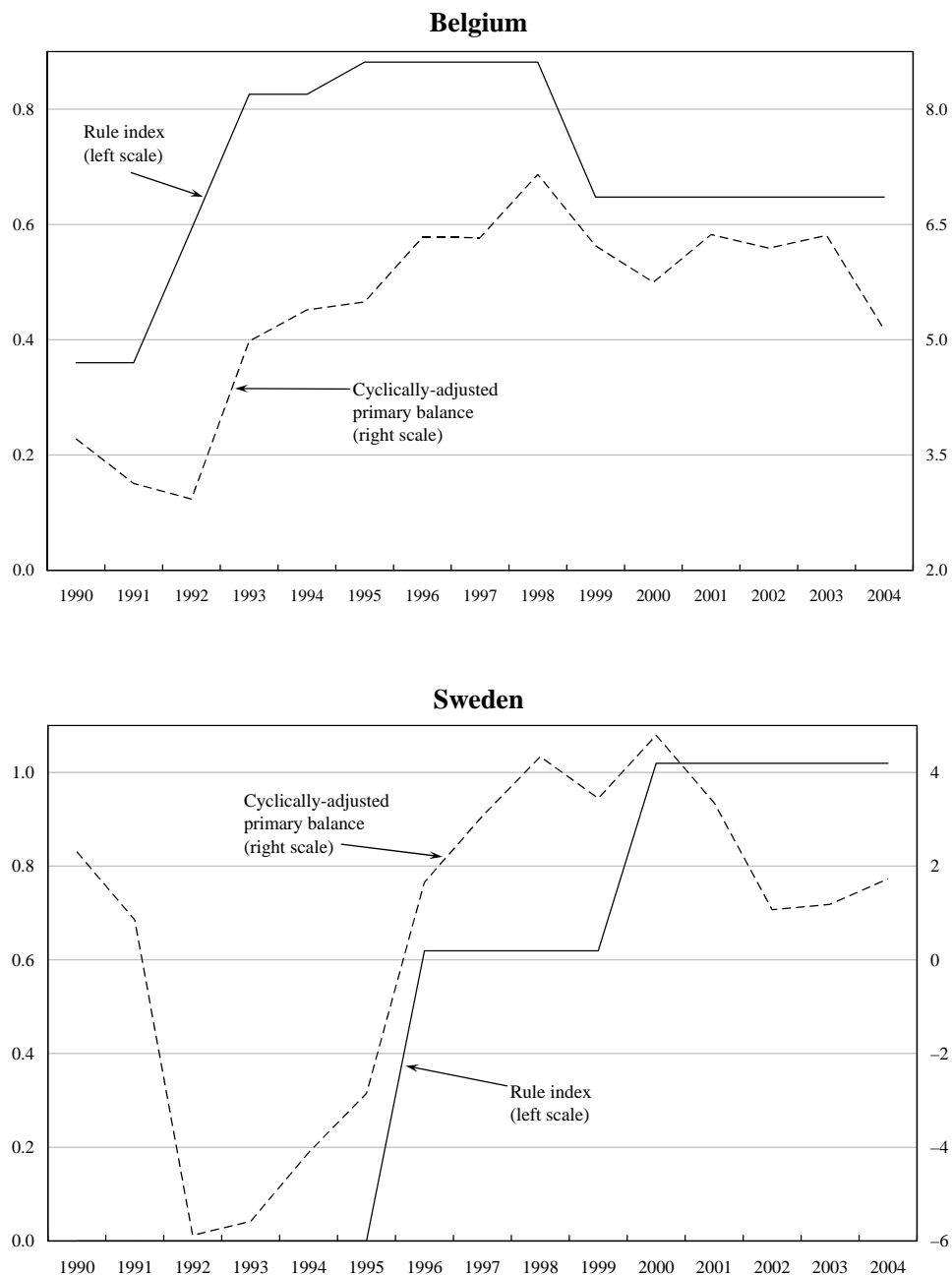
Source: OECD, Ayuso *et al.* (2006).

<div align="right">**Figure 2 (continued)**</div>

Fiscal Performance and Numerical Fiscal Rules in Selected EU Countries

<div align="center">**Spain**</div>

<div align="center">**Italy**</div>

Source: OECD, Ayuso *et al.* (2006).

Fiscal Performance and Numerical Fiscal Rules in Selected EU Countries

Netherlands

Cyclically-adjusted primary balance (right scale)

Rule index (left scale)

United Kingdom

Cyclically-adjusted primary balance (right scale)

Rule index (left scale)
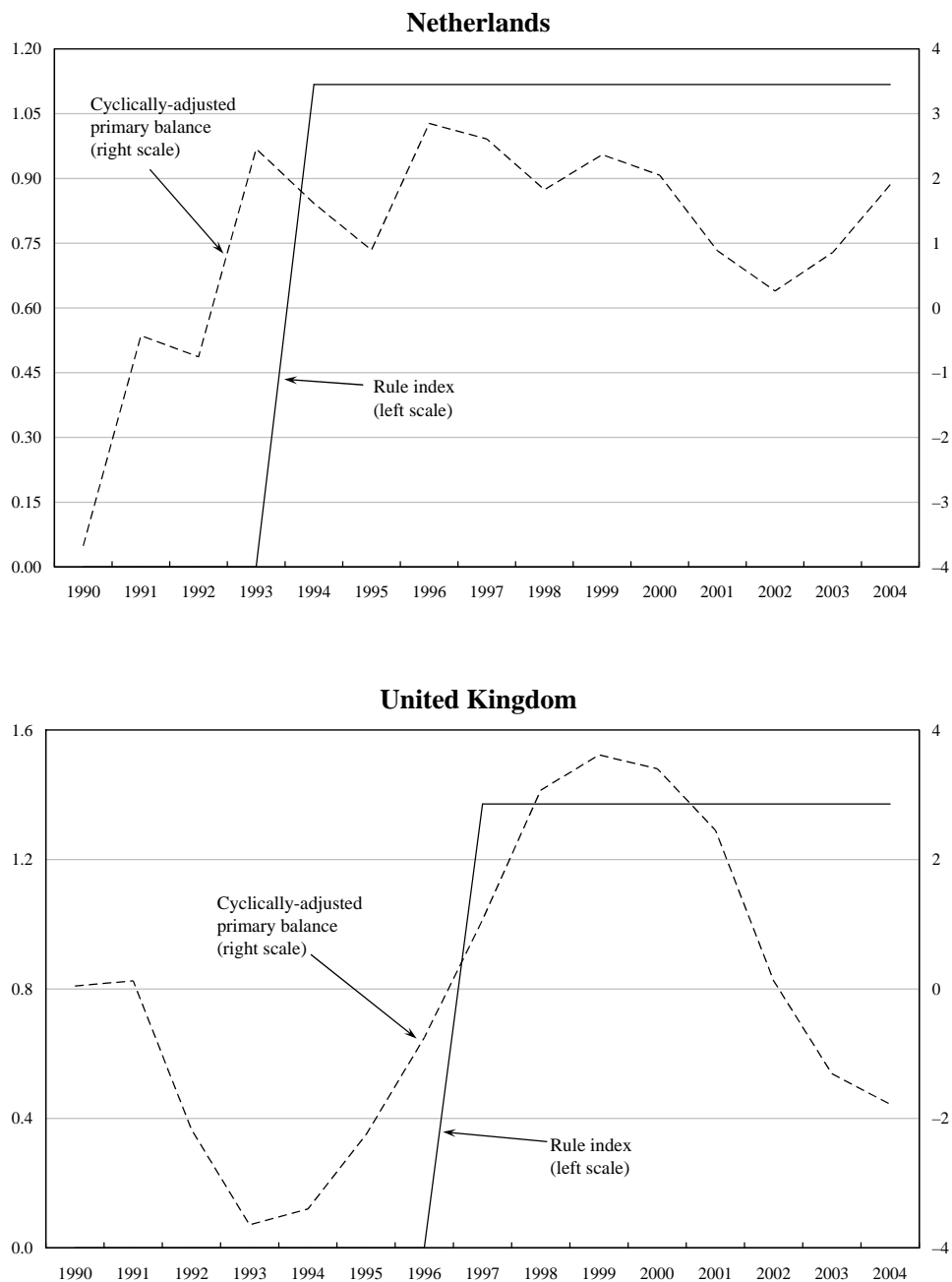
Source: OECD, Ayuso *et al.* (2006).

impact of the fiscal council. It is also interesting to note that there appears to have been some positive relationship between the index of de jure influence and the guarantees of independence, suggesting that countries instituting such agencies seemed serious in their willingness to strengthen the council's effectiveness.

By contrast, there does not appear to be any meaningful relationship between the formal influence of fiscal councils and the restrictiveness of fiscal rules. This is regardless of the nature of fiscal governance (in terms of standard classification of "commitment" versus the "delegation" form.[8] This indicates that countries with nominally more restrictive fiscal rules are not inclined to set up institutions that may potentially contribute to their enforcement.

We complement the unconditional correlations above with a careful and systematic assessment of fiscal rules and institutions in the context of a more comprehensive, multivariate model of fiscal behavior. In line with the hypotheses we want to test, we pay particular attention to the issue of reverse causality along the lines noted earlier.

2.2   Commitment vs. signaling? Modeling fiscal behavior

Fiscal behavior can be assessed by estimating "reaction functions", positing a link between fiscal outcomes and a range of policy, institutional and economic variables, similar to Bohn (1998). Because of the relatively short time series available for most fiscal variables, panel data techniques have increasingly been used despite the likely heterogeneity among individual countries' behavior. In line with the literature, the general specification is given by:

$$p_{i,t} = \alpha_0 + \rho d_{i,t-1} + \gamma \ Institutions_{i,t} + x'_{i,t}\beta + \eta_i + \varepsilon_{i,t} \qquad (1)$$

$$t = 1,...,T \qquad\qquad i = 1,...,N,$$

where $p_{i,t}$ is the ratio of the primary balance to GDP in country i and time t, $d_{i,t-1}$ is the public debt to GDP ratio at the end of period $t-1$, $Institutions_{i,t}$ is a time- and country-specific measure of fiscal institutions, $x_{i,t}$ is a vector of control variables, η_i are unobserved country effects, and $\varepsilon_{i,t}$ is a time- and country-specific disturbance. To better capture fiscal behavior, it is common to filter out the impact of automatic stabilizers on the primary balance, using the cyclically-adjusted primary balance (CAPB) as the dependent variable.

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[8]   The bottom-right panel of Figure 3 identifies with a thick dot countries having adopted the commitment form of fiscal governance and with a thick square, the delegation form.

Table 1

**Variation in the *De Jure* Influence and Independence of the Fiscal Councils,
in the Formal Guarantees of Political Independence and in the Perceived Impact on Fiscal Discipline**

	Number of councils [1]	Overall (*de jure* influence and independence)	*De jure* influence on the budget process (legal)	Impact of independent forecast	Formal guarantees on political independence	Perceived impact on fiscal discipline	Fiscal rule index (raw, 2005)
Austria	1	1.3	0.8	0.2	1.7	1.5	0.5
Belgium	2	5.7	6.5	2.3	4.9	6.3	0.6
Denmark	1	3.5	2.4	0.0	4.6	0.8	1.2
Estonia	1	4.0	2.9	0.0	5.2	7.1	1.1
France	2	1.7	1.5	0.0	1.9	1.3	0.5
Germany	4	3.7	1.4	0.2	6.1	2.5	0.9
Greece	1	1.5	0.2	0.0	2.7	0.2	
Hungary	1	4.2	4.6	0.0	3.8	3.3	0.2
Italy	1	1.9	1.1	0.0	2.7	2.5	0.6
Luxembourg	1	4.8	3.6	0.0	6.0	2.7	1.1
Netherlands	1	3.5	2.6	1.1	4.4	6.3	1.1
Portugal	1	4.1	2.5	0.0	5.6	1.5	0.1
Spain	2	5.5	5.0	0.0	6.1	7.1	1.1
UK	1	1.9	2.0	0.0	1.9	1.5	1.4
Average		3.4	2.7	0.3	4.1	3.2	0.8
Average euro		3.4	2.5	0.4	4.2	3.2	0.7
Standard deviation		1.5	1.8	0.7	1.6	2.4	0.4

Sources: European Commission and author's calculations.
Note: Maximum score is 10.
[1] Excludes entities operating primarily as research institutes. In case of mutiple councils, we took the highest score.

Figure 3

Potential Channels of Impact of Fiscal Councils and Relationship between Fiscal Councils and Fiscal Rules
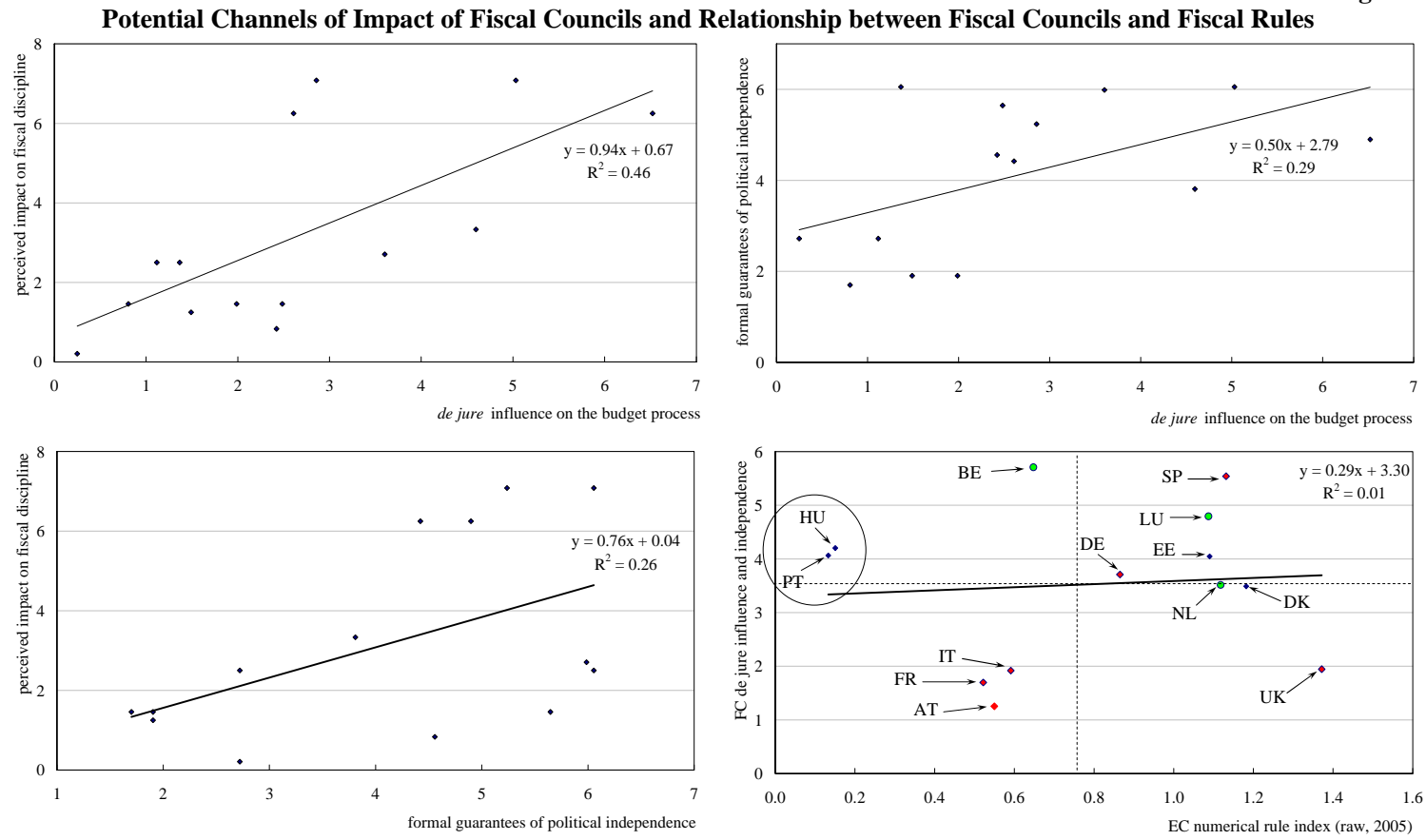
Source: European Commission and authors' calculations.

We proceed in two steps. First, we estimate standard reaction functions for a broader panel of 18 industrial countries, initially leaving aside the role of fiscal institutions, using a range of estimation techniques. The idea is to identify features of the political system that may cause a deficit bias in industrial countries.[9] In a second step, we build on Ayuso *et al.* (2006) to evaluate the potential for reverse causality, and the possible role of non-partisan fiscal agencies.

2.2.1 Fiscal behavior omitting fiscal institutions

The results reported in Table 2 confirm earlier findings in similar studies. First, fiscal behavior tends to exhibit a fairly high persistence, with an AR(1) term estimated to be around 0.7, and which is quite consistent across the different estimation techniques. Second, the negative sign on the output gap variable suggests that on average, over the past two decades the countries in the panel had a tendency to react in a destabilizing fashion to output fluctuations (procyclicality). Thirdly, the response of the CAPB to the level of public debt is significant, robust, and positive, which is consistent with long-term solvency (Bohn, 1998). These results are generally robust to the use of alternative estimators, including pooled OLS, LSDV (country fixed effects), IV (instrumenting the output gap only), and GMM (Arelano and Bond's dynamic panel estimator, which accounts for the possible small sample bias associated with fixed-effects estimation of an AR(1) panel data model).

One noteable finding is that the introduction of political variables – a measure of government fragmentation, an ideology variable that increases with the degree of conservatism, and an index of government stability – eliminates most of the unexplained cross-sectional heterogeneity captured by country fixed effects (see the F-test of the null hypothesis that country effects are jointly redundant, and that fixed-effect and GMM estimators are correspondingly suffering from a specification bias). In particular, the significant and positive impact of government stability on fiscal outcomes is striking.[10] To the extent that government stability is likely to be inversely correlated with electoral uncertainty (*i.e.*, the government stability variable is a plausible proxy of the risk faced by an incumbent to be voted out – higher the stability, the greater the likelihood of reelection), the result is consistent with the idea of a partisan deficit bias. The estimates suggest that a reduction in government stability by one standard-deviation reduces the CAPB by about 0.25 per cent of GDP on average. Similarly, the sample range of the index (between 3 and 11) corresponds to a difference of about 1 per cent of GDP between the CAPB of a country with a very unstable government, and that of a very stable one.

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[9] The EU-15 minus Luxembourg, plus Australia, Canada, Switzerland, and the U.S.

[10] The government stability variable is an index ranging from 0 to 12, with the highest figure indicating perfect stability. The index is taken from the International Country Risk Guide (ICRG), compiled by the PRS Group, a consultancy. Other political variables have been constructed using the World Bank's Database on Political Institutions.

Table 2

Fiscal Behavior in a Panel of Industrial Countries

(dependent variable: cyclically-adjusted primary balance)

Estimator:	OLS	IV-DV	GMM	IV-DV	IV	GMM	IV-DV	IV	GMM
	(Robust *t*- or *z*-statistics in parentheses)								
Lagged dependent variable	0.73 ***	0.73 ***	0.72 ***	0.68 ***	0.76 ***	0.68 ***	0.67 ***	0.72 ***	0.63 ***
	(28.79)	(28.53)	(47.65)	(16.14)	(20.57)	(25.30)	(13.12)	(15.86)	(14.83)
Output gap	–0.02	–0.01	–0.02	–0.05	–0.1 ***	–0.04	–0.06	–0.10 **	–0.07 **
	(–0.99)	(–0.45)	(–0.54)	(–1.04)	(–2.64)	(–0.70)	(–1.14)	(–2.25)	(–1.72)
Lagged public debt	0.03 ***	0.03 ***	0.03 ***	0.03 ***	0.02 ***	0.03 ***	0.03 ***	0.02 ***	0.04 ***
	(8.21)	(8.19)	(5.93)	(4.35)	(4.70)	(4.09)	(3.64)	(4.28)	(5.44)
Government fragmentation	…	…	…	–0.1	0.34	–0.1	–0.63	–0.19	–0.83
	...	...	...	(–0.17)	(1.22)	(–0.09)	(0.93)	(–0.47)	(–1.44)
Ideology (conservative)	…	…	…	–0.03	–0.03	–0.03	0.03	0.02	0.00
	...	...	...	(–1.10)	(–1.15)	(0.75)	(0.78)	(0.62)	(–0.11)
Government stability	…	…	…	0.12 ***	0.10 **	0.11 *	0.14 **	0.11 **	0.14 ***
	...	...	...	(2.31)	(2.18)	(1.61)	(2.22)	(2.06)	(2.31)
Delegation (dummy)	…	…	…	…	…	…	–0.37	–0.01	–0.15 ***
	...	...	...	...	...	...	(–0.79)	(–0.03)	(–2.51)
Commitment (dummy)	…	…	…	…	…	…	0.50	0.51	0.06
	...	...	...	...	...	...	(1.35)	(1.44)	(1.13)
Constant	–1.60 ***	–1.61 ***	…	–2.49 ***	–1.51 ***	0.01	–2.56 ***	–1.99 ***	0.02
	(–7.52)	(–7.54)	...	(–3.87)	(–3.21)	(0.46)	(–3.41)	(–3.33)	(0.46)
R-squared (overall)	0.75	0.75	…	0.73	0.76	…	0.75	0.77	…
F-test (country effects)	2.75 ***	2.77 ***	…	1.10	…	…	0.71	…	…
Sargan test (*p*-value)	…	…	0.98	…	…	0.98	…	…	1.00
Arellano-Bond test (*p*-value)	…	…	0.11		…	0.66	…	…	0.70
Fixed effects (country)	Yes	Yes	…	Yes	No	…	Yes	No	…
Number of observations	490	490	490	279	279	261	234	234	234
Number of cross-sections	18	18	18	18	18	18	15	15	15

The *, **, and *** superscripts indicate that the corresponding estimate is statistically significant at the 10, 5, and 1 percent level, respectively.

With regard to the other explanatory variables, we see that government fragmentation and ideology do not appear to have any *direct* effect on the fiscal balance. Finally, it is worth noting that country specific dummies characterizing the type of fiscal governance in place to alleviate common pool problems (the delegation and commitment models) have no robust impact on the average balance, which is in line with the findings of Annett (2006) for the post-1992 period, but also indicative of a potential collinearity problem between the two.

2.2.2 The role of fiscal institutions

The availability of time-varying indices of restrictiveness and coverage of fiscal rules allows for a direct statistical test of their impact on fiscal behavior. In that regard, the Commission's indices of fiscal rules are particularly useful. In addition to focusing on political control variables, one novel aspect of our analysis is to examine the role of fiscal councils. As noted earlier, there is little to guide the construction of meaningful quantitative indices summarizing features of nonpartisan agencies likely to affect fiscal policy choices. Nonetheless, using the analytical framework proposed in Debrun, Hauner and Kumar (2005), we compiled indices of different features of fiscal councils (FCs) that might be regarded as likely to be related to fiscal performance. One important observation is that, in comparison to our previous results, the new fiscal council indices yield more intuitive results.

As noted earlier, there are good theoretical reasons and some *prima facie* evidence that in some countries at least, the relationship between budgetary balances and fiscal rules may not be causal. First, it can be argued – as under our signaling hypothesis – that governments adopt rules and institutions that merely reflect their underlying preferences. Second, omitted determinants of fiscal behavior could be correlated with institutions, also causing a bias in the OLS estimates. Instrumenting the fiscal rule indices would be a natural technical response to this issue: however, there is a scarcity of good quality instruments (which have to be orthogonal to the error term but highly correlated with the endogenous explanatory variable) for institutional variables. One way to alleviate this problem is to rely on standard specification tests to exclude exogenous political variables that appear to play no direct role in fiscal behavior, and use them as instruments. In the present model, good candidates are government fragmentation and ideology. To these, we also add our country-specific fiscal council indices while taking care to systematically test for the exogeneity of this instrument.

We also introduce other excluded instruments to capture exogenous factors that may have affected the decision to introduce national fiscal rules. Ayuso *et al.* (2006) point to the role played by the run-up to EMU, which may have encouraged countries to adopt stricter national rules to accompany the fiscal adjustment process, and by the introduction of the Stability and Growth Pact. Dummy variables capturing these events are therefore used as excluded instruments as well.[11] Finally,

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[11] These dummies proved highly insignificant when included in the model.

as Figure 1 illustrated, the fiscal rule indices are not stationary so that we also use a linear time trend as an excluded instrument.

A related aspect is that other explanatory variables may be endogenous and could also be candidates for instrumentation. In particular, the output gap, the lagged primary balance, and the lagged public debt may all be correlated with the error term of the primary surplus equation, making them debatable instruments.[12] However, instrumenting more than one variable raises a number of econometric difficulties, including potential problems in the overall quality of the set of instruments. (For instance, a good instrument for the output gap may prove to be very weak for fiscal institutions). In order to address this issue, we instrumented only one variable at a time, focusing on the output gap and the fiscal rule indices. In the absence of obvious instruments for the lagged public debt and the lagged CAPB, we rely on standard specification tests to check whether they are orthogonal to the error term. (The same tests are used to check for the exogeneity of the fiscal council index.) Of course, the power of these tests is still a matter of debate, and therefore the results of this exercise, provided in Table 3, should be regarded as suggestive rather than fully conclusive.

Table 3 confirms the broad patterns observed earlier (in Table 2). The first 3 columns only instrument the output gap, assuming that fiscal institutions (both rules and the fiscal council index) are exogenous. The estimates indicate that while stricter and broader fiscal rules are associated with higher CAPBs (supporting the European Commission's findings), elections also seem to play a role, with lower CAPBs being observed in election years. In contrast, the impact of government stability is less precisely estimated than earlier, and its coefficient is lower, reflecting possible collinearity with rules and elections. As expected from Figure 2, the fiscal council index has no meaningful impact on fiscal performance, suggesting that if such institutions play a role, this must be indirectly, likely through fiscal rules.

It is also worth noting that the Durbin-Hu-Hausman test does not reject the null hypothesis that the output gap is exogenous, despite the usual assumption to the contrary in most related empirical studies (e.g. Galí and Perotti, 2003). However, that result may also reflect a relatively low power of the test in the context of this panel. Finally, the introduction of fixed effects is consistently rejected by standard specification tests, and the results in column 3 indicate that country effects strongly interfere with our country-specific fiscal council index. The fit of the fixed-effects model is worse than the model without the fixed effects, and fiscal councils appear to have an implausible, adverse impact on performance.

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[12]   One reason for such correlation is the possibility of time-invariant factors affecting the capacity or willingness to generate high primary surpluses in each country. Another reason is the possible persistence in the idiosyncratic shocks to primary surplus behavior. See Celasun, Debrun, and Ostry (2006) for a detailed discussion of the potential statistical biases related to the estimation of fiscal reaction functions, and Celasun and Kang (2006) for an assessment of alternative estimators.

Table 3

Impact of Fiscal Rules and Institutions on Fiscal Behavior
(dependent variable: cyclically-adjusted primary balance)

	Instrumenting the output gap only			Instrumenting fiscal rules only			
	No FC	With FC index		With time trend as omitted instrument			Without time trend
	(Robust t- or z-statistics in parentheses)						
Lagged CAPB	0.65 *** (13.16)	0.65 *** (13.18)	0.55 *** (8.85)	0.58 ** (8.21)	0.66 *** (12.47)	0.68 ** (12.59)	0.67 *** (11.81)
Output gap	−0.07 (−1.58)	−0.06 (−1.37)	0.00 (0.04)	−0.04 (−0.89)	−0.08 * (−1.77)	−0.08 * (−1.78)	−0.07 * (−1.77)
Lagged public debt	0.02 *** (5.48)	0.02 *** (5.67)	0.03 *** (3.40)	0.03 *** (3.09)	0.02 *** (5.67)	0.02 *** (5.67)	0.02 *** (5.25)
Government stability	0.08 (1.59)	0.07 (1.51)	0.07 (1.28)	0.07 (1.22)	0.09 * (1.88)	0.10 ** (1.99)	0.11 ** (2.04)
Fiscal governance ("Commitment" dummy)	0.64 *** (2.67)	0.65 *** (2.69)	0.82 ** (2.09)	0.68 * (1.65)	0.56 *** (2.91)	0.56 *** (2.89)	0.56 *** (2.90)
Government fragmentation	−0.29 (−0.60)	−0.31 (−0.64)	−0.85 (−0.99)	… ...	… ...	… ...	… ...
Ideology	0.01 (0.31)	0.01 (0.43)	0.05 (1.43)	… ...	… ...	… ...	… ...
Election year (dummy)	−0.33 ** (−1.98)	−0.33 ** (−1.97)	−0.32 * (−1.92)	−0.32 * (−1.92)	−0.34 ** (−2.07)	−0.34 ** (−2.05)	−0.34 ** (−2.04)
Fiscal council index	… ...	−0.04 (−0.82)	−1 *** (−3.75)	… ...	… ...	… ...	… ...
Fiscal rule overall index	0.55 ** (2.48)	0.62 *** (2.70)	1.07 *** (2.99)	0.84 * (1.65)	0.39 (1.27)	… ...	0.19 (0.45)
Fiscal rule coverage index	… ...	… ...	… ...	… ...	… ...	0.27 (1.16)	… ...
Constant	−2.05 *** (−3.99)	−1.99 *** (−3.89)	… ...	… ...	−2.08 *** (−4.02)	−2.01 *** (−4.00)	−2.05 *** (3.89)
R-squared (overall)	0.78	0.78	0.64	0.62	0.78	0.78	0.78
Country fixed effects	No	No	Yes	Yes	No	No	No
F-test (country effects)	1.05	1.79 *	…	…	0.81	1.25	0.61
Hansen J statistic (p-value)	0.93	0.96	0.93	0.10 *	0.93	0.90	0.98
Durbin-Wu-Hausman Chi-squared (p-value) [1]	0.52	0.47	0.15	0.77	0.52	0.47	0.28
Cragg-Donald statistic (weak instrument)	…	…	…	23.2	32.38	34.9	14.10
Exogeneity of suspect instrument (C statistic, p-value)							
- fiscal council index	…	…	…	0.00 ***	0.50	0.51	0.95
- lagged debt	…	…	…	…	0.67	0.59	0.67
- lagged CAPB	…	…	…	…	0.95	0.85	0.93
- all of the above (joint test)	…	…	…	…	0.90	0.89	0.96

All estimates are obtained by two-stage least squares. Excluded instruments for the output gap are the lagged output gap and the average output gap in the US, France and Germany, except for France (Germany, US and UK), and Germany (US, UK and France). Instruments for the fiscal rule indices include government fragmentation, ideology, and dummies for SGP, the run-up to EMU, the delegation form of fiscal governance, and a linear time trend. In the last two columns, the fiscal council index was also used as an excluded instrument.

[1] For the fixed effect regression (3rd and 4th columns), the *p*-value refers to the Davidson-McKinnon F-statistic.

The *, **, and *** superscripts indicate that the corresponding estimate is statistically significant at the 10, 5, and 1 percent level, respectively.

The second panel of Table 3 shows results based on instrumenting the rules: this crucially affects estimates of their impact on fiscal behavior. As the last four columns of Table 3 indicate, now both the restrictiveness of the rules and their coverage have no statistically meaningful impact on the CAPB. More strikingly, the Durbin-Hu-Hausman tests indicate that the potential endogeneity problem with regard to the fiscal rules is as large as for the output gap. Clearly, extensive robustness checks remain needed to understand more fully the apparently strong conditional correlation between rules and fiscal councils; but if anything, these results indicate that one cannot dismiss the possibility of a causal relationship running from fiscal performance to rules. Indeed based on these results it is not implausible to suggest that on average, the signaling hypothesis may well dominate the commitment hypothesis.

Beyond the exogeneity tests, an informed discussion of a potential simultaneity bias and its consequences would not be complete without looking carefully at the overall quality (and underlying message) of the first stage regression. This is done in Table 4: it confirms the impression conveyed by specification tests that first-stage regressions for rules are of good quality. The significant role of excluded exogenous variables is particularly noteworthy. These regressions unambiguously, and strongly, support the view that more disciplined governments (*i.e.* with low public debt and high CAPB) tend to have more restrictive (or a broader coverage of) fiscal rules. Government stability – which is associated with better fiscal performance – is significantly positively correlated with the restrictiveness of the rules, but only when the time trend is removed. Rather strikingly, when controlling for all other determinants of the rules, delegation countries tend to have tightened fiscal rules by more than commitment countries over the sample period, perhaps reflecting a "catching up" effect as the former were generally less prone than the latter to have rules-based fiscal frameworks.

Government fragmentation and ideology also appear to have a significant effect on the preference for tighter and more encompassing fiscal rules. Specifically, more fragmented governments seem to find it more convenient to enact binding rules committing all parties to the same aggregate objective than to rely on presumably endless and paralyzing negotiations among coalition partners, an interpretation which may also explain why the commitment dummy has a quantitatively smaller impact on the rules indices.[13] Also, right-leaning governments seem to have an intrinsic appetite for less constraining arrangements than left-leaning governments. Importantly, the fiscal council index enters with a positive and statistically significant coefficient. Once one appropriately controls for other determinants of rules, the presence of fiscal councils would thus appear to contribute positively to either the emergence of fiscal rules or their more effective enforcement. Finally, the time trend is, of course, positive and significant but, with the exceptions of government stability, the SGP dummy and the run-up dummy, it does not change the above results.

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[13]   Coalition governments typically prefer the commitment approach (Hallerberg, von Hagen and Strauch, 2004).

Table 4

First-stage Regressions for the Fiscal Rules Indices
(dependent variable: fiscal rule index)

	Fifth column in Table 3	**Sixth column in Table 3**	**Seventh column in Table 3**
Lagged public debt	-0.00 ***	-0.00 ***	-0.00 ***
	(−3.46)	*(−3.95)*	*(−2.77)*
Lagged CAPB	0.03 ***	0.04 ***	0.05 ***
	(3.25)	*(3.15)*	*(3.95)*
Government stability	0.00	-0.01	0.05 **
	(0.21)	*(−0.53)*	*(2.50)*
Delegation (dummy)	0.34 ***	0.48 ***	0.46 ***
	(6.24)	*(6.89)*	*(7.06)*
Commitment (dummy)	0.13 **	0.19 ***	0.22 ***
	(2.45)	*(2.74)*	*(3.40)*
Government fragmentation	0.50 ***	0.75 ***	0.36 ***
	(6.37)	*(7.26)*	*(3.94)*
Ideology (conservative)	-0.02 ***	-0.03 ***	-0.03 ***
	(−3.10)	*(−3.58)*	*(−3.45)*
Output gap	0.02 **	0.02 **	-0.01
	(2.03)	*(2.19)*	*(−0.96)*
SGP (dummy)	-0.44 ***	-0.47 ***	-0.09
	(−7.26)	*(−6.77)*	*(−1.24)*
Runup to EMU (dummy)	-0.09	-0.06	-0.12 **
	(−1.56)	*(0.85)*	*(−2.07)*
Elections	0.03	0.03	0.03
	(0.69)	*(0.51)*	*(0.60)*
Fiscal council index	0.07 ***	0.10 ***	0.08 ***
	(7.55)	*(7.82)*	*(7.00)*
Linear time trend	0.07 ***	0.09 ***	…
	(12.37)	*(11.97)*	*...*
Constant	-1.67 ***	-1.99	-0.19
	(−8.71)	*(−8.13)*	*(−1.05)*
R-squared (overall)	0.65	0.66	0.47
Partial *R*-squared of excluded instruments	0.56	0.57	0.32
F-test of excluded instruments	50.30 ***	56.17 ***	16.90 ***

The *, **, and *** superscripts indicate that the corresponding estimate is statistically significant at the 10, 5, and 1 percent level, respectively.

Overall, the results in Table 4 point to two important messages as regards the determinants of fiscal rules:

First, it is highly unlikely that fiscal rules are everywhere primarily conceived as commitment devices of naturally profligate governments. On the contrary, it appears quite plausible that in a fair number of countries, rules are simply the manifestation of an implicit contract with the electorate, a public signal of the commitment to maintain mutually agreed standards of fiscal discipline. Second, fiscal rules have a procedural dimension that reflects the preference for certain forms of fiscal governance (see Hallerberg, Strauch and von Hagen, 2004). In both cases, the adoption of rules seems to embody a conscious commitment to fiscal discipline rather than an attempt to suppress discretion and escape its potentially injudicious use.

2.3 Smokescreens?

Here, we limit ourselves to some descriptive evidence about the potential link between fiscal transparency and fiscal institutions. To do full justice to the issue, a comprehensive econometric analysis similar to that by von Hagen and Wolff (2006) – who systematically investigate the link between creative accounting and the implementation of the SGP – would be needed. However, it is beyond the scope of this paper.

We undertake three exercises: first, we look for evidence of a relationship between existing indices of fiscal transparency (specifically the one proposed by Alt and Lassen, 2006) and the range of our indices of fiscal rules and fiscal councils (see Appendix 2). Because transparency indices are only available for a small number of countries, we also investigate the possibility of a link between the creative use of stock-flow adjustments and fiscal institutions.

The results, summarized in Figure 4, do not point to any difference in terms of fiscal rules between countries with above-average transparency and those with below-average transparency. There is, however, some difference as regards fiscal councils. Less transparent countries seem to favor more active non-partisan bodies in their budgetary process. Could this mean that these institutions, far from being discipline-enhancing tools, are primarily envisaged as smokescreens? Or is it that these institutions proved too intrusive *ex post*, triggering an adverse response in terms of transparency? This obviously deserves further investigation.

A second exercise is to look for a relationship between our time-varying rules indices and changes in the correlation between key fiscal indicators (fiscal balance and public debt) and stock-flow adjustments (SFA). As noted by von Hagen and Wolff (2006), a positive correlation between the fiscal balance and SFAs would suggest that countries deliberately use accounting tricks to improve the budget balance, whereas a negative correlation would signal similar efforts to improve public debt numbers. Overall, a departure from zero-correlation feeds the suspicion of creative accounting.

In Figure 5 Spain, Denmark and the United Kingdom appear to show marked deviations from zero correlation in the aftermath of a tightening of the fiscal rules. Sweden also exhibits a high a positive correlation between SFAs and the overall fiscal balance since the implementation of the rules-based fiscal framework. Finally, Belgium appears to be operating a rapid shift from public debt embellishment operations to surplus boosting efforts.

Again, these stylized facts offer no definite proof that the revealed preference for rules-based fiscal frameworks has encouraged creative accounting. Yet, if there is no smoke without fire, these results should at least encourage us not to discard the smokescreen hypothesis and undertake more systematic research on that issue.

3   Conclusions

There is a significant debate raging, both in academia and in policy circles, regarding the premise that institutional arrangements can contain the widely observed tendency towards excessive government deficits. There may appear to be some valid theoretical support for this premise, and also some empirical evidence. Nonetheless, the significance of the role of institutions in improving policy outcomes has been increasingly questioned on both theoretical and empirical grounds. This is so given the uncertainty as to whether institutions per se can truly alter the motivation of policymakers, and hence lead to the desirable outcome, and whether there is any robust evidence supporting this premise. In view of its crucial importance, the main objective of this paper has been to explore how valid are its underpinnings of the premise, contribute a number of additional insights to the debate, and provide some systematic new evidence.

The paper first discussed potential channels through which fiscal institutions, such as numerical budget rules and non-partisan agencies, may affect fiscal discipline. It argued that their role as "commitment" devices, in "tying the hands" of policymakers may be overstated – they may do little to alter the underlying motivation of the policymakers. And that their role as "signaling" tools – that can help reduce the asymmetry of information between the electorate and policymakers – is likely to be at least as important. Given that they may not affect the motivation, there is also a concern that institutions perceived as constituting binding constraints may be circumvented, typically through creative accounting and off-budget operations, and are essentially used as counterproductive smokescreens.

The paper then formulated a series of hypotheses related to each of these three aspects – commitment, signaling and smokescreen hypotheses, and tested them using data for the industrial countries, particularly for the EU members, over the last two decades. A wide range of indices of numerical fiscal rules, and of fiscal agencies, obtained from a comprehensive survey data by the European Commission, were utilized in the analysis. A multivariate panel-data model of fiscal policy in these countries was estimated, with particular attention paid to the causal nature of the relationship between fiscal institutions and budgetary outcomes. While the

Fiscal Transparency and Institutions
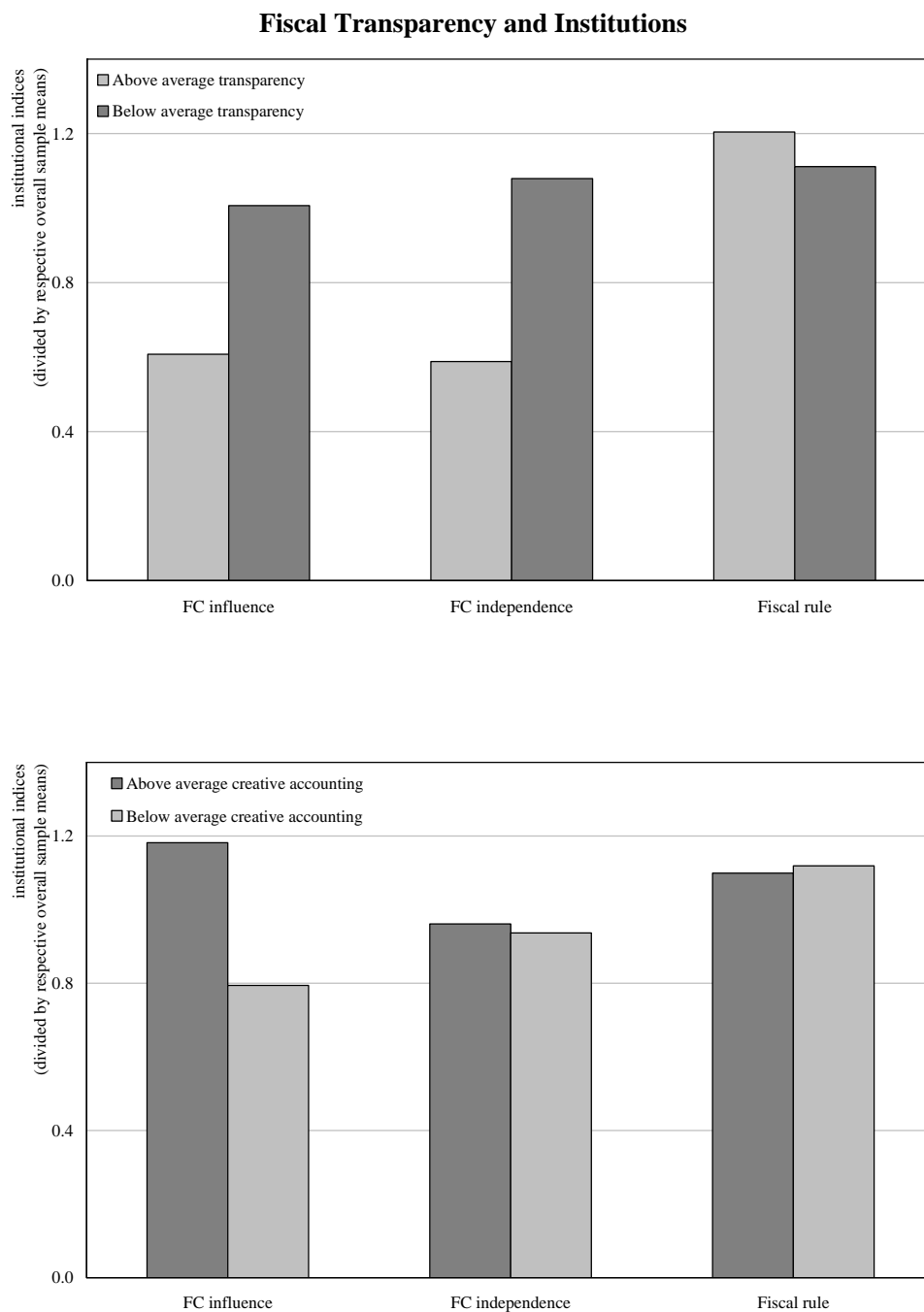
Sources: European Commission, Alt and Lassen (2006) and authors' calculations.
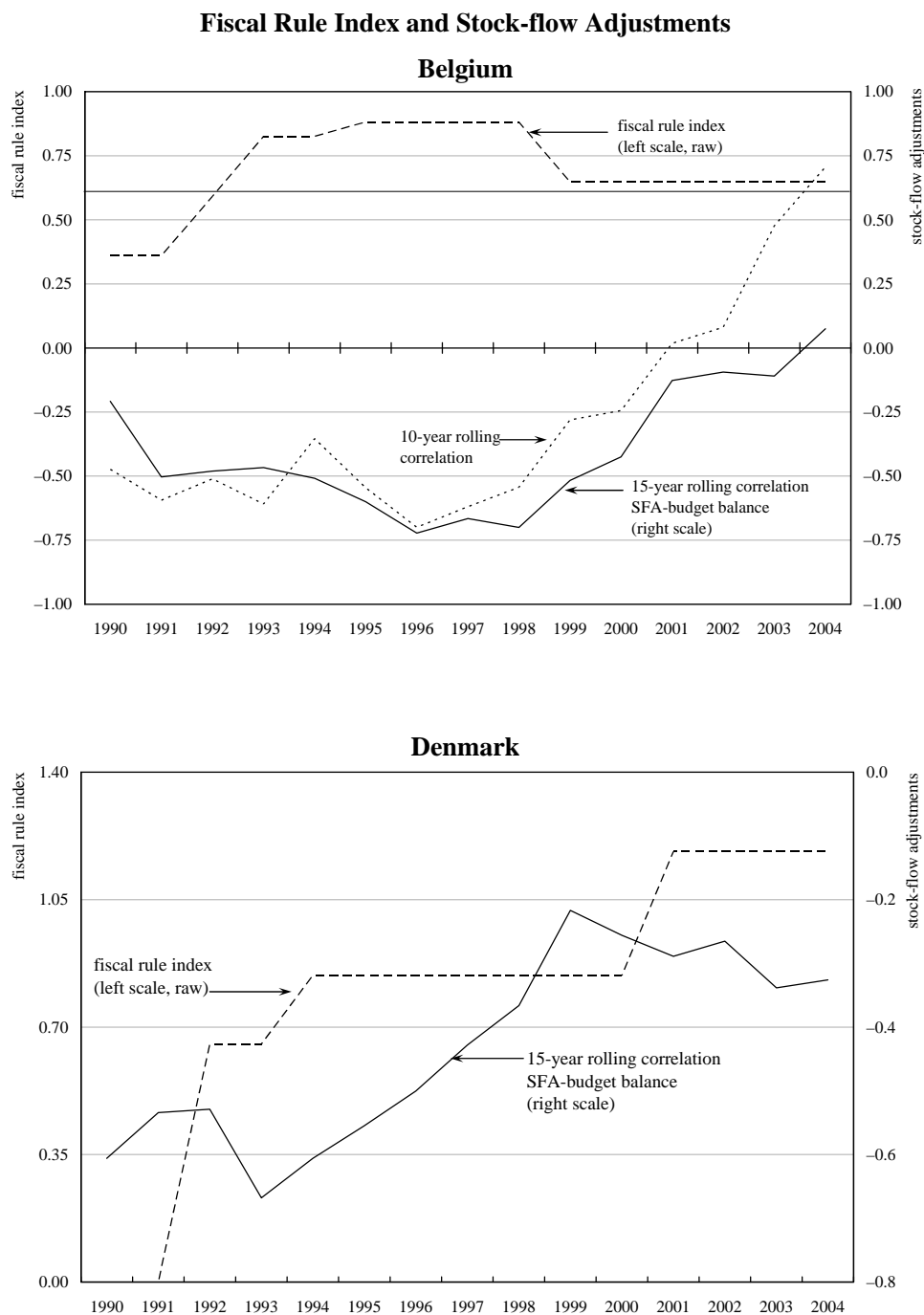
Figure 5

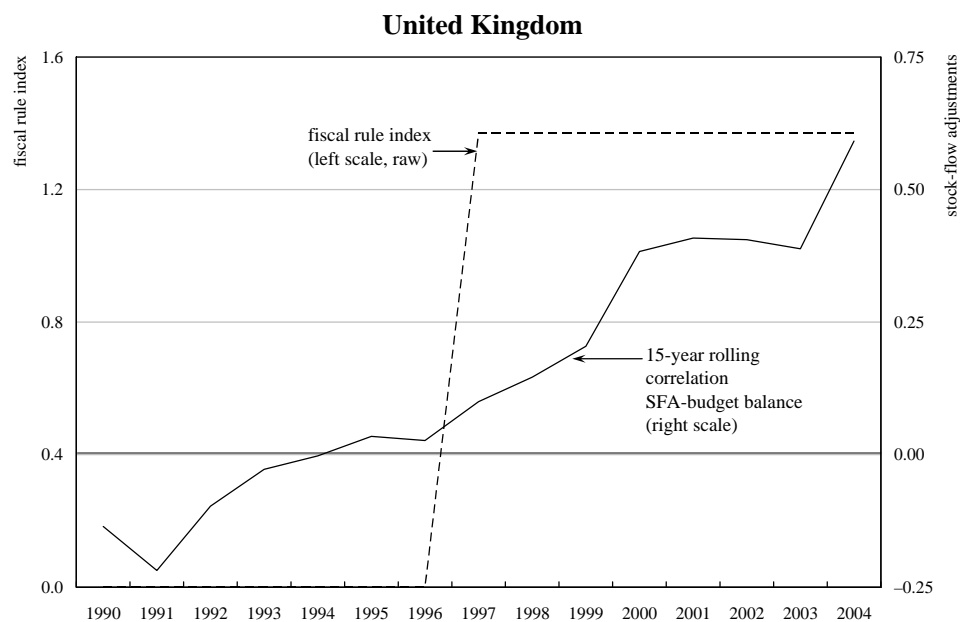**Fiscal Rule Index and Stock-flow Adjustments**

Belgium

Denmark

Source: Authors' calculations.

Figure 5 (continued)

Fiscal Rule Index and Stock-flow Adjustments

Spain

United Kingdom

Source: Authors' calculations.

Figure 5 (continued)

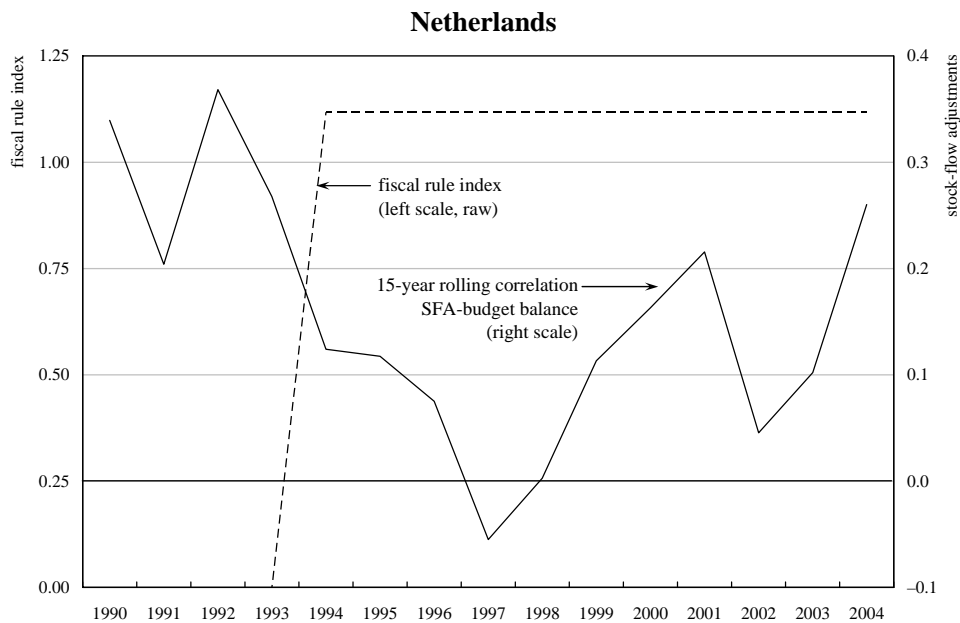**Fiscal Rule Index and Stock-flow Adjustments**

Netherlands

Sweden
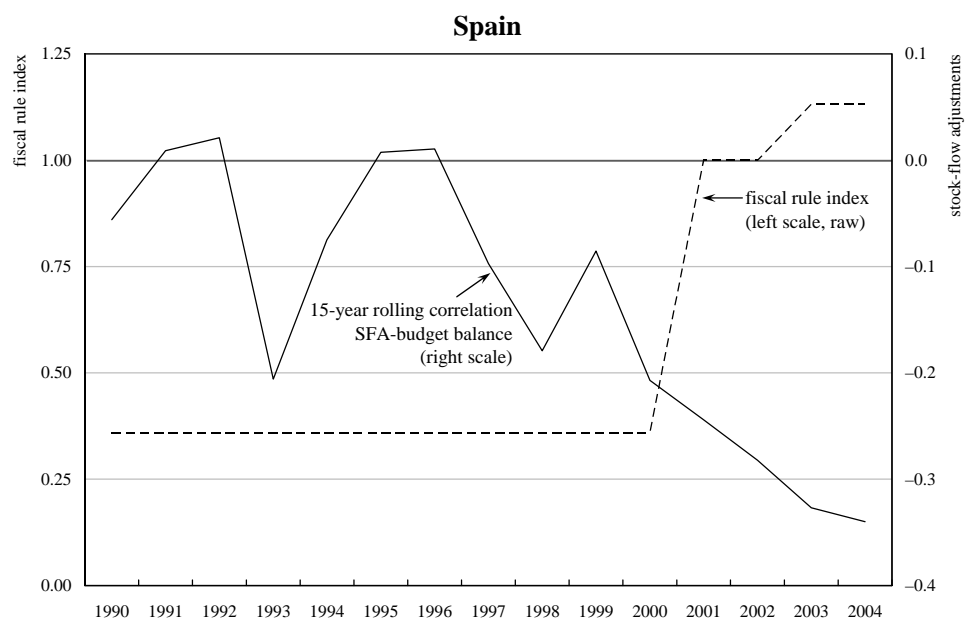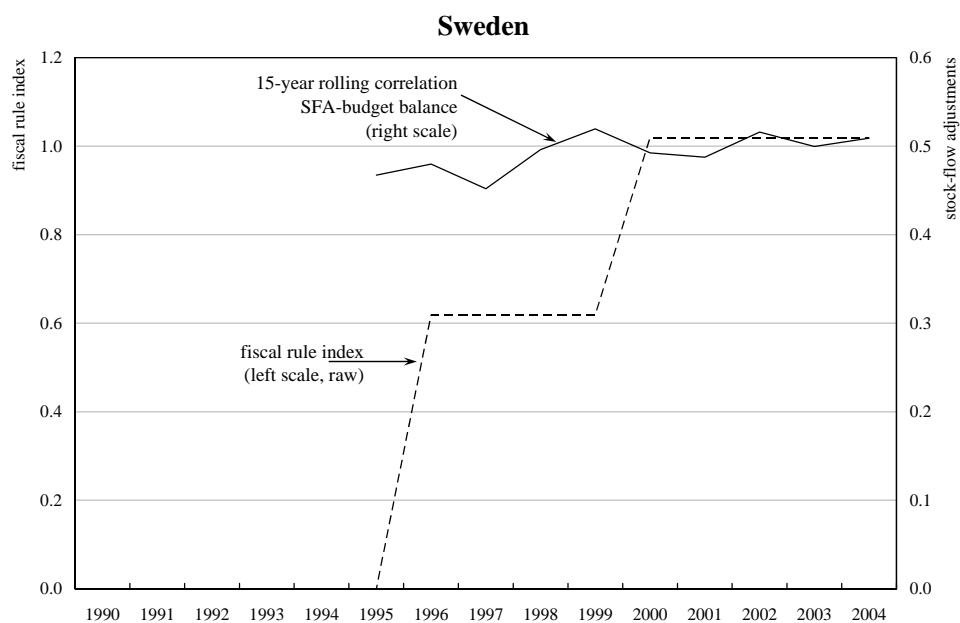
Source: Authors' calculations.

results do indicate causality running from institutions to outcomes – underlining their role as commitment devices, we found highly suggestive evidence that the reverse causality may also hold true (supporting the signaling hypothesis): that is responsible governments may adopt strict rules and institutions to reveal the nature of their (unobservable) preferences. It was argued that this result is fully consistent with a rigorous theoretical framework, and with evidence from other areas relating to the role of institutions and economic policy (in particular the links between central bank independence and monetary policy). The premise of reverse causality was buttressed by the use of instrumental-variable techniques, although the results are sensitive to the choice of instruments.

We find only limited support for the smokescreen hypothesis. The correlation between budgetary performance and fiscal indicators is robust and consistent with a discipline-enhancing effect of institutions. However, the data suggest that countries where fiscal councils play a greater role in the budget process are also deemed less transparent according to indicators of fiscal transparency. In addition, some countries exhibit a greater tendency to use creative accounting in the aftermath of a tightening of numerical fiscal rules.

With regard to the role of fiscal councils, we found a strong relationship between the de jure influence exerted by them and their perceived impact on fiscal performance – evidence that was complemented by a positive relationship between formal guarantees of independence and their perceived impact. Although no strong unconditional relationship between the influence of fiscal councils and the restrictiveness of rules appears to exist, the econometric analysis suggests that the presence of fiscal councils is associated with tighter rules.

In sum, there is evidence to suggest that rules are primarily the manifestation of an implicit contract with the electorate, a public signal of the commitment to maintain mutually agreed standards of fiscal discipline. The adoption of rules reflects a conscious commitment to fiscal discipline rather than an attempt to suppress discretion and reduce its potentially injudicious use. Overall, both the theoretical discussion and the empirical evidence suggests at a minimum some caution in the role ascribed to fiscal rules: they are not a universal panacea – their impact is likely to vary significantly across countries, and they may well turn out to be useful commitment devices in some countries but not in others. In this context, fiscal councils – that analyze and asses budgetary developments and policies, offer advice and stimulate public debate and scrutiny while leaving the policy mandate with the elected representatives – can play a helpful role.

APPENDIX 1

Table 5

Construction of Fiscal Council Indices

Criteria	Item weights	score	Maximum score	Implied weights
A. Formal influence on the budget process				
Mandate	*10*		*90*	*0.11*
Provide analyses of the budget		1		0.01
Monitor implementation of budget plans		2		0.02
Quantify impact of measures and reforms		2		0.02
Check consistency with fiscal rules		4		0.05
Policy objectives	*10*		*90*	*0.11*
Assess sustainability of current plans		2		0.02
Assess compliance with fiscal rules		4		0.05
Assess compliance with SGP		3		0.04
Contribute to greater transparency		0		0.00
Main activities	*0*		*0*	*0.00*
Provide independent analyses of policies		0		0.00
Provide independent macro forecasts/budget projections		0		0.00
Make normative statements on fiscal policy		0		0.00
Make recommendations on fiscal policy		0		0.00
Normative functions (if any)	*15*		*165*	*0.20*
Make judgments on budget plans and consistency with fiscal rules		4		0.07
Provide alternative costing of budget plans		0		0.00
Recommend changes to budget plans		1		0.02
Make judgment on implementation and consistency with fiscal rules		4		0.07
Issue early warnings in case of deviations from budget plans		1		0.02
Recommend corrective measures in case of slippages		1		0.02
Agency of restraint	*40*		*160*	*0.20*
Governements (central, state, local) have to follow recommendations		4		0.20
Governments usually follow recommendations		2		0.10
Governments can ignore recommendations but must publicly justify deviations		1		0.05
Formal role in the budget process	*20*		*220*	*0.27*
FC has to approve the final budget		4		0.10
FC has to approve the draft budget		3		0.07
FC must be consulted during the budget process		2		0.05
FC is usually consulted (no legal obligation)		1		0.02
FC must be auditionned by Parliament during budget process		2		0.05
FC is usually auditionned by Parliament during budget process		1		0.02
Other role		0		0.00
Government response to FC's analyses	*0*		*0*	*0.00*
Government must take into account the analyses prepared by FC		0		0.00
Government has to publicly respond to such analyses		0		0.00
Access to information	*5*		*20*	*0.02*
FC has full access to inside information		4		0.02
FC has a priviledged access to information		2		0.01
Regular publication of reports on budget execution and plans	*0*	*0*	*0*	*0.00*
Legal status	*10*		*60*	*0.07*
Mandate of FC in Constitution or a Statute		2		0.02
Existence and role of FC in the Constitution		4		0.05
Existence and role of FC in a Statute		2		0.02
Maximum score of index A			805	

Table 5 (continued)

Construction of Fiscal Council Indices

Criteria	Item weights	score	Maximum score	Implied weights
B. Autonomy from Politics				
Nature of appointees	*20*		*80*	
Academics		4		*0.38*
Policy experts		4		*0.38*
Civil servants		2		*0.19*
Politicians		0		*0.00*
Central banker		3		*0.29*
Trade unionist		0		*0.00*
Others		0		*0.00*
Appointment is made by	*0*		*0*	*0.00*
Government		0		0.00
Parliament		0		0.00
Others		0		0.00
Autonomy of appointees from politics	*10*		*130*	*0.62*
FC member (top management) cannot hold political office		4		0.19
FC members serve longer terms than a typical legislature		4		0.19
Simultaneous (vs. staggered) appointments of FC members		0		0.00
Other guarantee on autonomy		1		0.05
FC is not formally attached to either government or parliament		2		0.10
FC has access to other resources than government budget allocations		2		0.10
Maximum score of index B			210	
C. Impact of independent forecasts				
Macroeconomic forecasts	1		11	0.25
FC's forecasts must be used for budget preparation		10		0.23
FC's forecasts are usually used for budget preparation		1		0.02
Deviations of budget assumptions from FC's forecasts must be justified		1		0.02
Expenditure projections	1	0	11	0.25
FC's projections must be used for budget preparation		10		0.23
FC's projections are usually used for budget preparation		1		0.02
Deviations of budget assumptions from FC's projections must be justified		1		0.02
Tax revenue projections	1	0	11	0.25
FC's projections must be used for budget preparation		10		0.23
FC's projections are usually used for budget preparation		1		0.02
Deviations of budget assumptions from FC's projections must be justified		1		0.02
Government balance projection	1	0	11	0.25
FC's projections must be used for budget preparation		10		0.23
FC's projections are usually used for budget preparation		1		0.02
Deviations of budget assumptions from FC's projections must be justified		1		0.02
Maximum score of index C			44	0
D. Perceived impact of FC				
Impact on government policies	30		120	0.25
Advice always followed by government		4		0.25
Advice generally followed by government		2		0.13
Advice generally not followed by government		0		0.00
Advice generally ignored by government		0		0.00
Impact on fiscal discipline	60		240	0.00
FC definitely had an impact		4		0.50
FC is perceived as having had a positive impact		1		0.13
Impact on public debate through media coverage	20		80	0.00
High media coverage encouraging public debate		4		0.17
Good media coverage but weak impact on the public debate		1		0.04
Reputation of FC's analytical output	10		40	0.00
Well above standard		4		0.08
Above standard		2		0.04
Standard		1		0.02
Below Standard		0		0.00
Well below standard		0		0.00
Maximum score of index D			480	

APPENDIX 2

Table 6

Alternative Measures of Fiscal Transparency

	Transparency Indices			Fiscal Institutions Indices		
	Alt-Lassen	**Hameed (ROSC-based)**	**Absence of creative accounting** [1]	**FC *de jure* influence index**	**FC political indepen-dence**	**Numerical rule index (raw, 2005)**
Belgium	3.00	-	0.52	6.52	4.90	0.65
Denmark	3.00	-	0.57	2.42	4.56	1.18
Germany	2.00	7.32	0.86	1.37	6.05	0.87
Spain	-	5.99	0.86	5.03	6.05	1.13
France	4.00	6.66	0.84	1.49	1.90	0.52
Ireland	3.00	-	0.66	-	-	0.62
Italy	3.00	5.65	0.77	1.12	2.72	0.59
Luxembourg	-	-	-	3.60	5.99	1.09
Netherlands	5.00	-	0.88	2.61	4.42	1.12
Austria	4.00	-	0.94	0.81	1.70	0.55
Portugal	-	5.65	0.85	2.48	5.65	0.13
Finland	4.00	-	0.84	-	-	0.93
Sweden	4.00	5.99	0.51	-	-	1.02
United Kingdom	7.00	3.00	0.85	1.99	1.90	1.37
Czech rep.	-	5.64	-	-	-	0.87
Estonia	-	-	-	2.86	5.24	1.09
Hungary	-	5.31	-	4.60	3.81	0.15
Latvia	-	-	-	-	-	0.41
Lithuania	-	-	-	-	-	0.52
Poland	-	4.99	-	-	-	0.95
Slovakia	-	-	-	-	-	0.43
Slovenia	-	-	-	-	-	0.06
Average	3.82	5.62	0.77	2.84	4.22	0.74
Median	4.00	5.65	0.84	2.48	4.56	0.76

[1] Defined as 1 minus the median coefficient of correlation (in absolute value, 15-year rolling correlation) between stock-flow adjustments and the overall budget balance in percentage of GDP over 2004-1990.

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