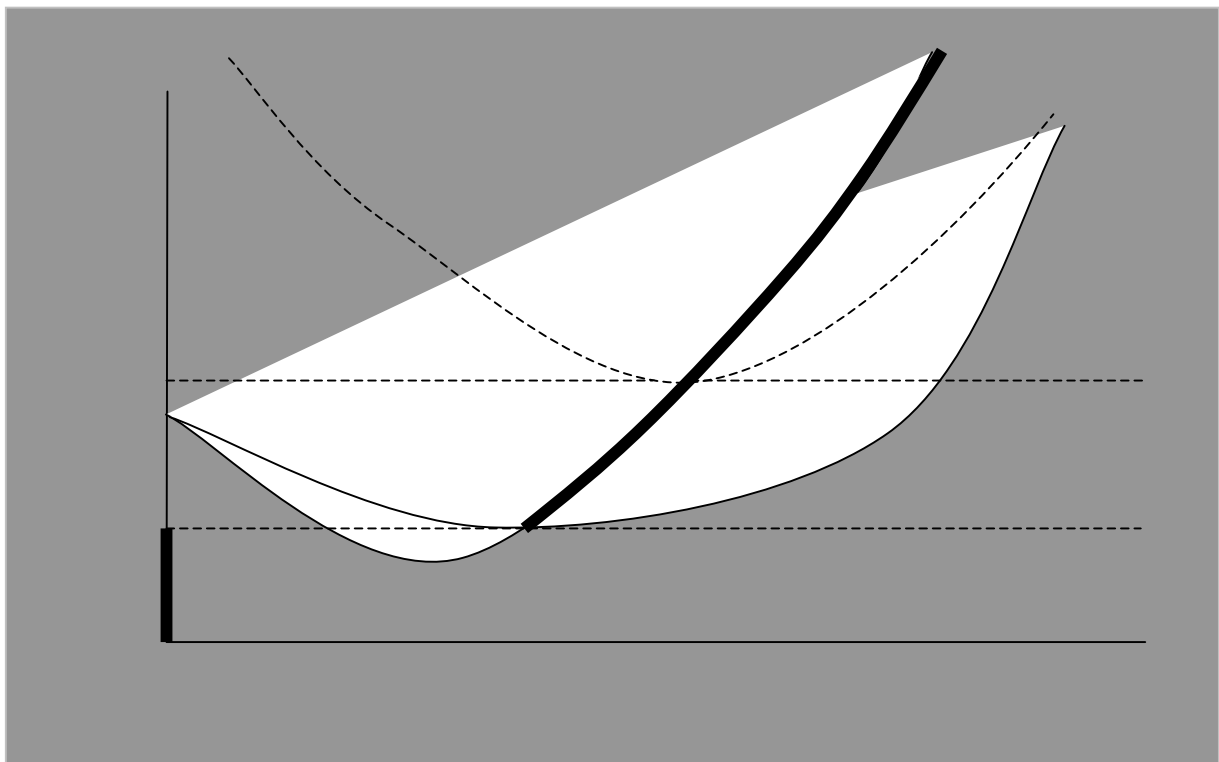
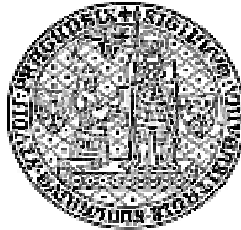


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Martin Gregor: Governing Fiscal Commons in the Enlarged
EU



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This study explores the achievements of the acceding countries in the sphere of procedural fiscal rules (labeled as fiscal governance). The primary goal is to answer two questions: what is the current state of fiscal governance in the “novice” EU comparing to the “old” EU-15? Can we prescribe the acceding states any country-specific fiscal procedures?

Three major sections of the study aim at three different issues. Section 2 reviews the rationale for fiscal governance, and the main focus draws upon the common-pool problem. The next section reviews methods to find the fiscal governance suitable for countries with differing political environments. Next, observed fiscal governance is reported by means of indices from survey data gathered in May-June 2004. Group by group, the author compares the observations with what has been measured for EU-15 countries. The findings reveal the existence of groups of countries with similar characteristics and similar institutional potential.

Keywords

fiscal governance, fiscal rules, political fragmentation

Introduction

The recent EU enlargement has stimulated special concern about fiscal policy among EU novice countries, for they are now expected to comply with the Maastricht criteria and ultimately qualify for the EMU. So as to assess the readiness to join the monetary union, the vast majority of scholars working in this field analyse fiscal sustainability of acceding countries’ finances. This essentially macroeconomic approach is useful in providing more-or-less sophisticated policy advice, but often lacks any idea of how to materialize the advice. A complementary approach may be to explore political and institutional determinants of fiscal performance, rather than focus on macroeconomic figures and trends; the determinants might be more available instruments of policy reform.

This study follows this institutional agenda by focusing on the achievements of the acceding countries in the sphere of *procedural fiscal rules* (labeled as fiscal governance), such as who creates and amends the budget proposal, what type of expenditure ceilings can be used, or whether veto over budget can be applied etc.

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Three major sections of the study aim at three different issues. Section 2 reviews the rationale for fiscal governance, and the main focus draws upon the common-pool problem. A classic model by Hallerberg (2004) is modified. The next section is closely related; it reviews methods to find the fiscal governance suitable for countries with differing political environments. Not all governance instruments suit to all types of government, because governments differ in constraints imposed by the Parliament and the coalitional agreements. Based on theory and observations of Hallerberg and von Hagen (1999), and Alesina and Perotti (1999), the section identifies political determinants of potential fiscal governance.

Section 4 comprises the empirical part of the study. On the basis of alternative measures of political fragmentation, new EU member states are classified into groups with different potential fiscal governance, called Delegation, Commitment, and Mixed.

Next, observed fiscal governance is reported by means of indices from survey data gathered in May-June 2004. Group by group, the author compares the observations with what has been measured for EU-15 countries. The findings reveal the existence of groups of countries with similar characteristics and similar institutional potential.

Why care for fiscal governance?

Why do political economists argue for constraints or pressure to be exerted on modus operandi of fiscal decision-makers? The argument may start with the broad topic of efficiency

of political markets (Wittman 1995, Olson 2001). Up to 1960ies, the social choice assumed the only relevant problem for the political market is to pick up an outcome from the set of Pareto-efficient outcomes, thus only cycling threatens in collective decision-making (Arrow's impossibility theorem).¹

In reality, the government does not inevitably select from a set of efficient outcomes. An extensive empirical research (Niskanen 1975) confirmed the intuition; mainstream economics discovered rent-seeking as well as "churned transfers" (Palda 1997). In the realm of fiscal policy, it was Buchanan and Wagner (1977) who observed the tendency for fiscal imprudence and strongly argued for imposing restraints on fiscal discretion.

Survey

The topic of politically induced fiscal behavior constitutes a flagship of contemporary political economics (Persson and Tabellini 2000), or the new political economy (Drazen 2000). Three fiscal variables are prone to be affected: composition of spending, size of spending, budget deficit and public debt. At the outset, different effects on all three variables can be neglected, but after completing the survey, I will be more careful in making differences (see review by Alesina 1999).

The seeds of the respective research have been planted by tax-smoothing models by Barro (1979) and Lucas and Stokey (1983). The former author found that deficit is an instrument of tax-smoothing, while the latter found possible time-inconsistency of debt-creation because bonds of various maturities yield different interests. Since then, a great amount of competing hypotheses about inefficiency of fiscal policy have been developed. They fall into two (often complementing) groups of hypotheses – inefficient political supply side and/or inefficient political demand side.

Political supply side

Strategic manipulation with deficits is an activity of an incumbent reducing the opposition's chance of being elected (Alesina and Tabellini 1990, Persson and Svensson 1989, Lambertini 1999). This provoking hypothesis predicts that even fiscal conservatives accumulate debt, and the voters – who minimize risk of debt-default – less favor a default-prone leftist party (Aghion and Bolton 1990, Milesi-Ferreti and Spolaore 1995).

Common pool problem emerges whenever competing constituencies, or interest groups, attempt to shift costs of redistribution to other groups. The idea of "tragedy of budgetary commons" surfaced with the geographical concentration of interests in a model by Weingast, Shepsle and Johnsen (1981), and changed into "war of attritions" formulated by Alesina and Drazen (1991).

Intergenerational redistribution is nothing else but a common-pool problem across generations. When Barro-Ricardo equivalence is violated because of finite temporal horizon, and the state is able to commit unborn generations, the possibility of imposing external effect on the future tax base leads to excessive expenditures and excessive debt – see Browning (1975), Tabellini (1991), and Azariadis and Galasso (1998).

Intergenerational redistribution may appear via *heritage effect* as well. While high-income voters bestow some wealth, low-income groups may prefer a moderate deficit. However, no income group is allowed to create large private liabilities, so the low-income voters resort to the public debt which relaxes their intergenerational liquidity constraint (Cukierman and Meltzer 1989).

Fiscal externality in a monetary union is another version of common-pool problem (or collective action problem) which motivated the fiscal coordination in EMU.

¹ The research accordingly went just in the direction of abandoning selected axioms (Sen 1999).

Procedural lock-in effect of adjusting expenditures is present whenever an increase in expenditures is procedurally easier than consolidation (Niskanen 1992). Tsebelis (1999) finds the lock-in effect also due to multiple partisan veto players.

Political demand side

Fiscal illusion, i.e. the inability to calculate and assess tax cost, is more acute with complicated taxation and debt instruments. The impact of fiscal institutions on public good demand has been investigated by Buchanan (1960) as early as in 1960s and the fiscal illusion research was significantly promoted in works by Buchanan (1967), Goetz (1977), Buchanan, Rowley and Tollison (1986), Oates (1988), and Tyran and Sausgruber (2000).

Voters are myopic, both forward and backward, and the opportunistic politicians may engage in effective pre-electoral fiscal manipulation – imperfect consolidation inevitably follows. See Blais and Nadeau (1992), Alesina, Roubini and Cohen (1997), Franzese (2000), and Schuknecht (2000).

On the other hand, *voters learn and change their attitudes* to fiscal policy: the asymmetric information has been leveled over time (Peltzman 1992), public perception of public debt is no more in accordance with the institutionally blind Keynesian orthodoxy (Buchanan and Wagner 1977), and voter's myopia has been improving (Suzuki 1994). For a comprehensive overview of the ways to measure the structure of public preferences over public finance, look into Hansen (1998).

Common-pool concern

In the ensuing part, I narrow the focus to the supply side of the political market, specifically to the *collective-action problem* within the government. In the next section, I argue that procedural criteria (fiscal governance in a narrow sense as defined by von Hagen 1992) address precisely this type of problem.

The common-pool problem was first formulated by David Hume in the 17th century and his famous example of the “tragedy of commons” lent itself to name the phenomenon. An incentive to “overfish the stock” is however an example of any situation with mutual negative externalities.

Definition. *A situation of n individuals ($n > 1$) is to be called a common pool problem if the following two conditions, regarding commodity x , hold:*

- a) negative external effects (externalities) of production/consumption of x are imposed by all engaged parties on each other, and*
- b) bargaining implies prohibitive transaction costs, or contracts are unenforceable.*

Intuitively, anytime a part of costs of an activity can be shifted to other actors, we can see a negative externality. For enforceable contracts and negligible transaction costs, both bilateral and multilateral externalities can be bargained out (by the exchange of property rights), and the new outcome is Pareto efficient. Otherwise, when transaction costs are high and information missing, so bargaining is rather complex, a Pareto sub-efficient allocation remains in place.

Proposition 1. *A common pool situation results in an equilibrium which is Pareto-inferior to the case when only 1 individual exploits the commodity x .*

The Proposition 1 shall be proved in Section 2.3.

In our case, the common pool problem leads to two consequences – excessive expenditures (fiscal externality in a given period) and excessive debt (fiscal externality postponed to the future periods). In addition to these *domestic fiscal externalities*, we can also define *international fiscal externalities* in monetary unions.

Proposition 2. *The higher n , the higher efficiency loss in a common pool situation.*

The implication of the above-mentioned proposition has been illustrated as early as in the very beginning model of fiscal “commons” by Weingast, Shepsle and Johnsen (1981). In a logrolling game, N constituencies of equal size are supposed to create coalitions promoting packages of redistributive policies, and the policies are covered by a uniform-rate tax. The game between leads to an interesting “Law of $1/N$ ”, i.e. the higher number of constituencies, the proportionally more relaxed is the hard-budget constraint; total expenditures and also tax rate grow up, because the constituency bears precisely $1/N$ tax cost. The assumptions for Law of $1/N$ to hold are nevertheless very restrictive: representatives of all constituencies in the legislature have the equal probability of being assembled in a coalition.

An intuition behind a logrolling game can be transmitted into the situation within a coalitional cabinet, which is our primary interest. As a result, in a cabinet we expect to see *fiscal externalities* (in the model above indicated by a tax) *abound with an increase in number of coalitional partners* (to be called as *cabinet fragmentation*).

Roubini and Sachs (1989: 924-5) offer additional explanations of why the tax rate (or, fiscal inefficiency) increases with cabinet fragmentation:

1. *Adverse self-selection*. In the status quo, parties control departments most important for their particular constituency. Moreover, a parliamentary committee created to correct the respective ministry is occupied with representatives of constituencies who are interested in excessive spending in the field of committee’s interest.

2. *Weak enforcement mechanisms*. The more parties, the lower level of interdependency, which limits the set of threatening strategies bargaining.

3. *Costly monitoring of coalitional contracts*. Deals are hard to monitor and enforce because of asymmetric information, and often involve non-contemporaneous benefits (distributed over time); an incentive to renege on the contract increases.

4. *Rapid turnover*. Multi-party coalition governments are associated with a smaller “cabinet survival rate”, which reduces the expected continuation value of the game and makes cooperation less attractive.

5. *High average negative voting power*. If the minimum winning coalition faces a opposition, each member can pose a strong exit threat. When any member leaves, the coalition has to reshuffle dramatically to be able to get support from the united opposition. In other words, the consequences of exit give each member significant blocking power, which hinders coordination changing the possibly undesirable status quo.

In general, it is a complex task to demonstrate how institutional details of elections, executive decision-making, and legislation creating affect the level of fiscal externalities. The most pending problem is perhaps the trade-off between modeling dynamic effects (future electoral consequences of fiscal irresponsibility) and richness of institutional details.² A possible way out has been a complex model by Persson and Tabellini (2003), who ran simulations with the model, by changing electoral formula and the distribution of preferences. Their outcome has been that government spending depends only on the type of government, *coalitions spending more than single-party governments* (Persson 2003:11).

There is anyway a need to be careful when specifying any model of fiscal commons. In the following section, I will demonstrate how a slight relaxation of assumptions modifies model predictions.

Clarifying the tragedy of budgetary commons

² A nice example of complex behavior is given in Chari, Jones and Marimon (1997) who argue that American voters often prefer to elect a “big spender” (Democrat) in their legislative district, but a “fiscal conservative” (Republican) as a president. By doing so, they maximize their chances of bringing spending to their districts while keeping the overall size of the budget low (Alesina and Perotti 1999).

First and foremost, I shall discuss the influential specification of a fiscal common pool as proposed by Hallerberg and von Hagen (1999). The model allows the cabinet to direct transfers d_i to n groups ($i = 1, \dots, n$); the objective function of all spending players (i.e. ministers) is the same. In a two-period model, it is shown that decentralized decision-making of government ministers leads to a higher budget deficit in the first period than a centralized decision-making. The reason is not that decentralized decisions would reflect different spending preferences (note all ministers have the same objective function), but that the *excess burden of taxation* of each transfer d_i is born not only by the i -th constituency, but is covered by a flat-rate tax affecting citizens not benefiting from the transfer d_i . The players are involved in a competitive negative externality game (or, public bad game), where Nash equilibrium outcome is to impose excessive tax externality on other constituencies. A one-shot n -person Prisoner's Dilemma game without enforceable commitments leads to the unique non-cooperative equilibrium.

The rationale of the model is acceptable, but at least two drawbacks can be found. First of all, the authors applied a Cobb-Douglas function for an objective function of each cabinet member:

$$u = \prod_{i=1}^n d_i^{\alpha_i} \quad \text{where} \quad \sum_{i=1}^n \alpha_i = 1$$

This function has a very difficult interpretation in reality, however. It is a common wisdom that the Cobb-Douglas function is maximized when the source is distributed exactly by constant shares α_i among the recipients. Why should the shares be constant, however? The only plausible explanation is that it reflects bargaining on the political market, thereby the relative pressure of respective constituencies. But the relative gains property is in fact not maintained in the model, since only *gross* transfers, not *net* gains, satisfy the constant-share criterion. Why should the groups be interested in gross transfers instead of net gains $d_i - \tau_i$, whose ratio diverges from α_i with the growing tax rate?

Second, we may ask why the government allows for decentralized spending when all variables, including the burden of taxation, are in common knowledge. The political entrepreneur (Prime Minister, or Treasury Minister) could skip the exploitation of budgetary commons in a very simplistic way: he would offer a fully-specified budget, and it would be accepted by all parties. Unless any the following assumptions is violated (note all have been set by Hallerberg and von Hagen 1999), the coordinated budgetary offer is a mutual best response of all players:

- a) The tax rate is institutionally set as a proportional rate.
- b) All spending ministers have also the same objective function.
- c) The coordinated outcome is a Pareto-efficient allocation.

How to tackle with the two qualifications? An incomplete information game with private information about the shares of tax burden could be established, but would be very difficult to solve. Therefore I only improve the first property by setting up a new model. Although it is based on a widely received framework given in Hallerberg (2004, Chapter 2), I have augmented it since his treatment of the problem suffers from a few debatable premises:

1. The model specified an ideal budget for a ministry a priori. But the ideal spending is obviously endogenous, and depends on the tax held by the constituency. It is no point to specify a utility function as a deviation from a given ideal spending variable, when deviation from cost variable is not treated equally.
2. The propensity to enjoy the fortunes of power is the same for all decision-makers. I shall relax the requirement.
3. The main problem is that Hallerberg (2004), for the sake of demonstration, proposed identical ideal budgets across ministries; similarly he set constituencies to be

of equal size, therefore with equal tax receipts. We will see that by departing from these illustrative assumptions we encounter counterintuitive consequences.

The model

Assume n spending ministers ($i = 1 \dots n$) form a government. The ministers are responsible for the specific agenda, and cater their interest groups. We can assume n interest groups which are the key constituencies for the ministers. A proportional tax affects the i -th constituency by a rate m_i , thus m_i is the constituency's share in the overall tax base. Tax cost for each constituency shall be denoted t_i , and the total tax receipts T :

$$t_i = m_i T \quad i = 1, \dots, n \quad \sum_{i=1}^n m_i = 1$$

Suppose the dead-weight loss of taxation is a quadratic function of total tax receipts, namely $DWL = \frac{1}{2}T^2$.

Let the ministers propose budgets x_i for their departments. Their utility function reflects the private interest (fortunes of large budgets) and the political pressure incurred by the constituency. In general, the function takes the following form:

$$u_i = \lambda_i x_i + f(x_i, t_i) - \frac{m_i}{2} T^2 \quad (1)$$

$$f_x > 0, f_t < 0$$

The first term is related to the private interest (λ_i being the propensity of ministers to enjoy the magnitude of transfers), the second is the net transfer for a representative voter, and the last one is an excess burden of taxation. The voter's net utility is the function of the net transfer minus the taxation burden ($x_i - t_i$).

Balanced budget (Case 1)

The traditional setup for a tragedy of commons is to assume that ministers simultaneously select the spending for their departments, x_i , and the overall outlays are covered by a tax specified after all claims are collected. To solve this complete information game, we look for a non-refined Nash-equilibrium, i.e. the mutual best claims, given claims of the other ministries.

The crucial property of ex post (and also ex ante) budgetary balance has been maintained from Hallerberg's (2004) framework. For easiness of exposition, I took a utility function that is linear in voter's net benefit (although decreasing marginal utility is more plausible).

$$u_i = \lambda_i x_i + [x_i - m_i(x_i + x_{-i})] - \frac{m_i}{2}(x_i + x_{-i})^2 \quad (2)$$

$$x_i^*(x_{-i}) = (1 + \lambda_i)m_i^{-1} - 1 - x_{-i} \quad (3)$$

$$\text{where } x_{-i} \equiv \sum_{j=1, j \neq i}^n x_j^*$$

Total outlays will be set accordingly.

$$T = \sum_{i=1}^n x_i^* = \sum_i [(1 + \lambda_i)m_i^{-1} - 1] \quad (4)$$

Since we want to compare a decentralized solution with a coordinated one, we need to see a change in the total outlays. This task is not easy to solve for general n players, so I will use an example with three players only, player 1, 2, and the rest ($n-2$).

Example: Decentralized vs. centralized solution for 3 players

In the decentralized setting, we need to find a saddle point by solving simultaneously $x_1^*(x_2^*, x_{-1,2})$ and $x_2^*(x_1^*, x_{-1,2})$.

$$x_1^*(x_2^*, x_{-1,2}) = (1 + \lambda_1)m_1^{-1} - 1 - (x_2^* + x_{-1,2})$$

$$\begin{aligned}
x_2^*(x_1^*, x_{-1,2}) &= (1 + \lambda_2)m_2^{-1} - 1 - (x_1^* + x_{-1,2}) \\
x_1^* + x_2^* &= \frac{1 + \lambda_1}{2m_1} + \frac{1 + \lambda_2}{2m_2} - (x_{-1,2} + 1)
\end{aligned} \tag{5}$$

In the second part, let us discuss how a centralized solution for 3 players looks. We shall first define how the self-interest transforms into a new composed value. We may assume the result is influenced by the weight of the respective tax base (constituency size):

$$\lambda_{12} = \frac{\lambda_1 m_1 + \lambda_2 m_2}{m_1 + m_2} \tag{6}$$

To find a centralized solution, imagine the players 1 and 2 merge into one player, maximizing utility function (2) with private interest set in (6); the solution only replicates (3).

$$x_{12}^*(x_{-1,2}) = \frac{m_1(1 + \lambda_1) + m_2(1 + \lambda_2)}{(m_1 + m_2)^2} - (x_{-1,2} + 1) \tag{7}$$

What is the message given by comparison of the solutions? For Hallerberg (2004), maximization in a coordinated framework generates clearly lower budgetary bids. This optimistic outcome however stems from essentially two assumptions: homogeneous λ and identical $f(x_i, t_i)$ across the board of ministers. If we relax both assumptions, will the coordination effect of common-pool problem persists ($x_1^* + x_2^* > x_{12}^*$)?

Homogeneity in λ

For homogeneity in λ , the proof is trivial. We receive it by comparing (5) and (7), and considering $m_1 > 0 \wedge m_2 > 0$ in parallel.

$$\begin{aligned}
\frac{1 + \lambda}{2m_1} + \frac{1 + \lambda}{2m_2} &> \frac{1 + \lambda}{m_1 + m_2} \\
m_1^{-1} + m_2^{-1} &> 2(m_1 + m_2)^{-1} \Rightarrow x_1^* + x_2^* > x_{12}^*
\end{aligned} \tag{8}$$

Heterogeneity in λ

With different propensity to enjoy the political possessions (heterogeneous λ), the outcome surprisingly changes. In this case, not all 4-tuples of strictly positive m_1, m_2, λ_1 and λ_2 in a centralized solution bring out lower total bid.³

$$\begin{aligned}
\frac{1 + \lambda_1}{2m_1} + \frac{1 + \lambda_2}{2m_2} &\triangleleft \frac{m_1(1 + \lambda_1) + m_2(1 + \lambda_2)}{(m_1 + m_2)^2} \\
(1 + \lambda_2)m_1^3 + (1 + \lambda_1)m_2^3 + m_1 m_2 [m_1(1 + 2\lambda_2) + m_2(1 + 2\lambda_1) - (\lambda_1 m_1 + \lambda_2 m_2)] &\triangleleft
\end{aligned} \tag{9}$$

How come that after introducing different propensity to enjoy the political possessions, the desirable improvement from coordination disappeared? This could be in a situation when the minister with a largely bigger portfolio is also having a higher utility from being in the office – for example, when the modest minister (Ascetic, λ_1) has a smaller budget ($m_2 > m_1$) than the more power-indulging minister (Epicurean, λ_2 , where $\lambda_2 > \lambda_1$).

The same result could be achieved if we selected an alternative aggregation method of self-interest λ , e.g. best-shot, which could have a reasonable interpretation (for instance, Darwinian selection of the fittest).

Fixed subsidy (Case 2)

Fiscal federalism as well as other intergovernmental fiscal schemes operates by providing granted subsidies from higher-level government to lower-level governments. In this set-up, does policy coordination again improve upon the status quo? We can therefore imagine spending units with balanced budgets softened by a fixed subsidy B_i . The fiscal balance, unlike in previous case, is set locally; the unit can tax only its constituency. We abstract from

³ As an example, insert the vector $[m_1, m_2, \lambda_1, \lambda_2] = [0.5, 0.1, 100, 1]$.

mobility of capital and labor and assume that citizens cannot avoid exploitation of the tax base.

$$x_i = B_i + t_i, B_i > 0 \quad (1)$$

$$u_i = \lambda_i x_i + (x_i - t_i) - \frac{t_i^2}{2} = \lambda_i (B_i + t_i) + B_i - \frac{t_i^2}{2} \quad (0)$$

$$\frac{\partial u_i}{\partial t_i} = (\lambda_i - 1)t_i \quad (1)$$

$$\lambda_i > 1 \Rightarrow t_i^* = \infty; \lambda_i < 1 \Rightarrow t_i^* = 0; \lambda_i = 1 \Rightarrow t^* \in (-\infty, \infty)$$

The situation exhibits several new features. The common-pool problem has vanished, but the decentralized fiscal policy suffers from a new danger – possible total tax exploitation (to be interpreted as a full-blown socialism). Total exploitation arrives with rulers whose private benefit from controlling an economy is very high. We can divide rulers by their private benefit from political control into Socialists ($\lambda_i > 1$) and Liberals ($\lambda_i < 1$).

Decentralized budgetary process sets the tax rate of each jurisdiction in accordance with the identity of its representative. Some jurisdictions will be liberal, and some socialist.

Now consider merging jurisdictions (a collectively set budget). For two identical types and regardless specification of aggregation, the effective λ_{12} will not change; jurisdiction will remain either socialist, or liberal. An interesting case, however, arises once a Liberal jurisdiction joins a Socialist one. If bargaining power of both rulers stays intact, the expected propensity to exploit in favor of private interest will be a compounded value as in equation (6). This could *discontinuously* change the tax rate in one of the jurisdictions.

Two thresholds can be identified. One regards the district (tax-base) size and the other difference in private interest. The first threshold, given in Condition (12), and also the second one in the analogous Condition (13), show when the merged jurisdiction gets liberal.

$$m_1 > m_2 \frac{\lambda_2 - 1}{1 - \lambda_1}, \lambda_1 < \lambda_2 \quad (1)$$

$$\lambda_1 < m_1 + (1 - \lambda_2)m_2, \lambda_1 < \lambda_2 \quad (1)$$

(3)

Fixed-percentage subsidy (Case 3)

A spending minister could conceivably receive a subsidy which is not fixed in amount, but in percentage. This happens when the donor wants to induce the recipient to search for additional sources (e.g. EU structural funds). In the model, suppose each minister can submit an application for a department-specific grant from the donor, at a share δ_i . Assume for simplicity that he can put his entire budget x_i into the project bid; he is supposed to cover the amount $(1 - \delta_i)x_i$ by his tax revenues, which equals to obtaining a conditional grant $\delta_i x_i$. The utility transforms from (2) to (14):

$$u_i = \lambda_i x_i + [x_i + \delta_i x_i - m_i (x_i + x_{-i})] - \frac{m_i}{2} (x_i + x_{-i})^2 \quad (1)$$

$$x_i^* (x_{-i}) = (1 + \lambda_i + \delta_i) m_i^{-1} - 1 - x_{-i} \quad (1)$$

(5)

What is the expected effect of introducing fixed-percentage subsidy? *The common-pool problem may get either for better or worse.* Note that the share δ_i directly substitutes for λ_i . Hence, an unequal subsidy, targeted only at selected departments, causes higher fiscal irresponsibility in case of homogeneous private interests. On the contrary, when propensities to enjoy political power differ widely, as in (9), the fixed percentage subsidy may return the excessive expenditures at centralized level down to the decentralized equilibrium. A subsidy resembles compensation.

Puppets vs. players

Now, when the number of players is found to be a key variable, the question is what exactly to measure. Weingast, Shepsle and Johnsen (1981) propose a number of *constituencies*, e.g. number of electoral districts. In Section 2.2, however, I indicated that the common-pool logic could be applied not only to Legislature, but also to autonomous agents in a coalitional government. Who are they, then? Kontopoulos and Perroti (1999), along with Volkerink and de Haan (2001), suspect *spending ministers* to be the autonomous spenders. But all ministers are party members, hence often puppets of party chiefs, who are the effective players; the *cabinet parties* are the ultimate bodies as suggest Roubini and Sachs (1989), Alesina and Drazen (1991) and Hallerberg and von Hagen (1997). Yet loyalty in a party varies, especially in small parties, so it would be even more precise to study *party factions*, or indirectly *the strongest interest groups*.

We can see that precise determination of influence is a complex task of revealing intra-party mechanisms. As regards Legislature, individual legislators representing constituencies are grouped in party clubs disposing with selective incentives, coordination mechanisms, threats and punishments, so we could use party clubs as a proxy for fragmentation of the legislation, regardless of district size.⁴ Kontopoulos and Perrotti (1999) also consider party discipline sufficient in the Legislature, thus use a number of parties as a proxy for *coalition size*. However they find it insufficient in the executive, and take a number of ministers as the proxy for the *cabinet size*.

I will argue for taking number of parties in the cabinet instead for number of spending ministers for the following reasons:

1. *Party trademark*. Parties strive for reputation which makes policy commitments more credible and thus more acceptable for the presumably risk-averse voters. The need to build credibility introduces long-term considerations of executive party members.

2. *Disciplining mechanisms*. The ministers have a mandate conditional on the support of the Prime Minister, who is under pressure of the executive committee of a party if ministers do not follow party line. Despite some degree of slack, there is always a constraint.

3. *Reduced self-selection*. Parties do not allow self-selection to sub-committees, if that would mean to put interests of one party faction against the other; the minister can expect control even from his own party experts.

We would need to explore party dynamics to assess if a party is more than an ad hoc coalition of unregulated small interests. At this point, the selection of cabinet fragmentation criterion is rather deliberate; anyway, because of the aforementioned arguments and for the sake of consistency, I shall consider only parties to be the autonomous players, and party MPs and ministers to be “puppets”. This also implies that a party is promoting “special-interests party” or an “encompassing-interest party” is endogenous, depending on the number of parties that passed electoral threshold.

Can we substitute fragmentation by electoral system?

The link between electoral systems, party fragmentation, and political stability is a very well established topic in political science (Taagepera and Shugart 1989, Cox 1997, Lijphart 1999 and Powell 2000). Electoral formula (proportional or majoritarian), district magnitude and ballot structure are long known for their impact on fragmentation. Political scientists

⁴ To reveal the complexity more in depth – in the Legislature, it is ambiguous to determine the degree of regional-interest representation only on the basis of number of political parties. Multi-party systems are mainly created by the by proportional electoral formula, which makes MPs less accountable to narrow regional interests; however, the number of parties is large. A bi-party system, as produced by a majoritarian election, in contrary entails regionally located MPs from two parties. To assess implications of each system for representation requires a more specified model of bargaining.

moreover investigate into how electoral rules change the degree of competitiveness, hence stability of political system, accountability and flexibility.

One could therefore ask if electoral formula could be used as a rough proxy for fragmentation; or, to put it more ambitiously, whether electoral rules determine fiscal performances as such.

Within last few years, there has indeed been considerable progress in both theory and empirics of economic performance of electoral rules. The sophisticated theoretical part represent Austen-Smith (2000) and Persson and Tabellini (2000). Empirical findings by Persson and Tabellini (2003, 2004) are also impressive; electoral rules are found to affect overall spending, composition of spending, and the accumulation of debt.⁵ In accordance with a common-pool problem hypothesis, *a move towards plurality (majoritarian) vote is found to lead to the lower party fragmentation and to more intensive struggle for median voter.* To aggrandize: the more parties, the less efficient fiscal policy. The former reduces the common-pool problem directly, while the latter indirectly via higher accountability.

On the other hand, there is a need to be particularly careful as electoral rules do not substitute for fragmentation in fragmented societies; a large number of parties is present regardless of electoral rule. Moreover, general exploitation of voters (high political rents due to low accountability) is not equal to exploitation of voters of non-government parties (high fiscal externality).

An example follows: a representative of a small district will have an incentive to strongly fight for narrowly-defined benefits at the expense of entire population (high fiscal externality); he will engage in sophisticated logrolling. On the other hand, he cannot extract as large rents (low rents) as he could in a proportional system (PR) with party lists, where candidates free-ride on each other; in addition, in PR a position on a candidate list not necessarily reflects the expected ability to attract voters, but – for instance – the loyalty to party chiefs.

I resist replacing fragmentation with electoral rules to stick to a classic political economy exploration of fragmentation affecting performance. In general, however, it is obvious a comprehensive study must capture the links going from electoral rules (and other constitutional variables) via party structure, government formation and legislative bargaining up to the policy formation.

Empirics of party fragmentation

Various measures of fragmentation have been found as significant explanatory variables of spending, short-term and long-term fiscal imbalances, and allocation in cases of windfall curse. Particular stress has usually been put on macro data of national fiscal authorities, but recently as well on micro data from local municipalities (Sørensen 2004). Measures of fragmentation particularly tend to correlate with levels of public spending and debt. Among seminal empirical studies belong Roubini and Sachs (1989), Edin and Ohlsson (1991) and Grilli, Masciandaro and Tabellini (1991); the second generation studies include Hallerberg and von Hagen (1999), Kontopoulos and Perotti (1999), Scartascini and Crain (2001) and Bradbury and Crain (2001). Some counter-evidence has been given by Hahm, Kamlet et al. (1996).⁶

Procedural remedies

⁵ The influence upon budget deficit is particularly striking – majoritarian electoral rule is associated with smaller deficits of about 2% GDP – see Persson and Tabellini (2003:183).

⁶ The last generation poses novel questions and offers disconfirming evidence. Huber, Kocher and Sutter (2003) claim it is *dispersion*, not number of parties, what matters as an empirically significant explanandum of fiscal behavior. Ricciutti (2004) considers all size fragmentation measures insignificant, as well as time fragmentation (cabinet instability). Dependency has been confirmed only for institutional fragmentation (checks and balances etc.).

Although suboptimal fiscal policy is not exclusively a result of common-pool problems, it is a major suspect. In this subsection, I therefore limit attention to rules addressing the common-pool problem, specifically procedural rules (or fiscal governance in a narrow sense). From the lasting debate on pros and cons of fiscal rules, I deduce that the procedural rules possess at least two advantages: they internalize tax externalities as modeled in section 2.3, and do not systematically overshoot.⁷

To wit, we do not have one ideal procedural rule, but several, depending on the enforcement mechanisms (Hallerberg 2004). Three ideal modes of fiscal governance can be found – *Delegation*, *Commitment*, and *Mixed* mode (whilst *Delegation* and *Commitment* are sometimes referred to as *Hierarchical* and *Collegial* modes, e.g. by Alesina and Perroti 1999). Missing fiscal governance is called *Fiefdom*.

1. In *Delegation*, the goal is to improve the discretion of the finance minister or the prime minister by the following instruments: veto over final budget or items, strong bargaining position in the cabinet overall, spending targets, and mechanisms to deal with open-ended expenditures. The *Delegation* also requires limiting the Legislature's amendment abilities. More or less, it is a unilateral mode, which strengthens the position of the tax-internalizing decision-maker.

2. In *Commitment*, budgets are submitted to multi-annual fiscal plan which is agreed by parties and later enforced (targets, written contract etc). The enforcement goes not only via written contracts, but via powerful parliamentary (consensual) committees. Unlike *Delegation*, it is a multilateral mode.

3. A special mode is *Mixed*, which occurs for minority government; in the negotiation stage, it is a *Commitment* mode, and in the operative stage a *Delegation* mode.

The division reflects a basic philosophy – in fragmented cabinets, it is essential to counter incentives of *parties* to exploit common pool. Parties can be disciplined by means of a contract which, once broken, threatens to cause the coalition to disintegrate. On the other hand, in coherent cabinets (ideally majority one-party government), we need only to limit individual *ministers* to encourage fiscal prudence, which can be done by the authority of the Finance Minister, and the Prime Minister.

The key variable distinguishing between efficacy of a mode of governance is thus the political fragmentation as measured in Section 4.

Quest for ideal fiscal governance

In case of new EU member states, the only studies existing to date have been produced by Branson, de Macedo and von Hagen (1998) and Gleich and von Hagen (2002). The former study is however based only on data from 1993-1996; the latter is methodologically more promising, but ends with data in 2000, when reversing trends in fiscal governance were observed in Poland, Czech Republic, and Lithuania. Moreover, it takes measures of ethnic and sectoral fragmentation, which might be highly distorting.⁸

Political variables

A list of variables employed in the study opens the empirical part. Only Lower Chamber is selected because of its key role when composing a cabinet, and normally dominant role in budgetary process. Not less importantly, the inclusion of data from upper chambers would demand to consider a great number of additional institutional differences in inter-chamber relations (on case-by-case basis).

⁷ Common wisdom claims “no need to swat flies with a hammer”. For instance, see a response by Peletier et al. (1999) to a numerical fiscal rule proposed by Tabellini and Alesina (1990).

⁸ To give an example from the Czech Republic: members of Roma ethnic group have widely reported themselves as a „Czech nationality“ in survey in 1996, despite constituting the biggest minority in the country at that period.

Parliamentary fragmentation⁹

Number of parties elected in the Lower Chamber of the Parliament (NoP). Although this measure doesn't reflect the size, it is valuable, since it serves as a complement to a measure of size of cabinet, where nominal number of parties is rather a justifiable variable.

Effective number of parties (ENPP). Accepted widely in political science (under label "Laakso-Taagepera index") as well as in economics as a measure reflecting simultaneously absolute and relative dispersion. As a proxy of fragmentation of parliament, it indicates the possibility of creating alternative cabinets, and the likely size of the cabinet.

$$ENPP = \left(\sum_{i=1}^n p_i^2 \right)^{-1} \quad \text{where } p_i \text{ denotes shares of votes in}$$

the Lower Chamber

We might also consider the total representation, specifically the "votes not lost" variable as it has been calculated in the dataset. The idea would be that the more votes are balloted to parties which fail get in, the higher fiscal spillovers are imposed on the non-represented part of population.

Cabinet fragmentation

Number of parties in the cabinet (NoCP). Hallerberg and von Hagen (2001) use only this variable, plus the identity of veto players on the parliamentary stage, in order to determine the fiscal governance. In specific, they distinguish between "one-party or bloc" and "multi-party" governments.

The obvious problem is to separate a bloc and a multi-party government. Without this separation, we cannot make the crucial difference between Delegation and Commitment framework. Therefore, we shall carefully use several measures of cabinet fragmentation. The difficulty to determine if a cabinet is internally coherent (bloc) or split (multiple parties) is especially troublesome for minority multi-party governments, which occurred for instance in Latvia (1994, 2003), Lithuania (2000) or Poland (1992-93, 2000). According to Hallerberg and von Hagen (2001), multi-party minority governments are expected to have nil fiscal governance (Fiefdom), while "one bloc" minority governments require Mixed fiscal governance. The difference between nil and Mixed fiscal governance is nonetheless dramatic – the latter features both strong Finance Minister and the Legislature, while the former is a case of weak Finance Minister and a weak Legislature.

Concentration (CC). A cabinet analogy of parliamentary ENPP is given by Concentration value, computed as Herfindahl index, going from 0 to 1. I have opted for this variable, instead for the effective number of cabinet parties, just to be in line with other studies (Persson 2003, Sørensen 2004).

$$CC = \sum_{i=1}^n p_i^2 \quad \text{where } p_i \text{ denoted the shares of}$$

votes in the Lower Chamber

Political cohesion (COH). What follows is a key variable of the study. Roubini and Sachs (1989) developed this index to comfortably capture effects of cabinets of different sizes. Even though the index received some criticism,¹⁰ the variable is useful as the first proxy

⁹ Dispersion of power in the parliament could also be measured by the dispersion of voting power. Huber, Kocher, and Sutter (2003) suggest *the standard deviation of Banzhaf indices of all parties* to measure the average size of a party. Another variable constructed along similar reasoning would be *the average number of parties across all possible coalitions*. This has not been done yet for computational reasons.

¹⁰ Edin and Ohlsson (1991) commented on Roubini and Sachs (1989) regressions, where almost all fiscal irresponsibility effects were given only by minority governments. Instead, they proposed employing separate dummies for each type of government. We need not to run regressions in the study, and the cohesion variable is used only as a proxy for effective size of the cabinet.

of types of government. When the President can deliberately dissolve the Lower Chamber (presidential regime), COH takes 0 for any majority cabinet, and 3 for any minority cabinet (for a presidential regime, the party fragmentation issue is a subsidiary problem, since the President can always threaten with parliamentary elections in case of coalition members' disobedience). For the parliamentary-regime governments, the COH takes the following values:

$$COH = \left\{ \begin{array}{l} 0.... One\ party\ majority \\ 1.... Two\ parties\ majority \\ 2.... Three\ or\ more\ parties - majority \\ 3.... Minority \end{array} \right\} \quad \text{Parliamentary regime} \qquad COH = \left\{ \begin{array}{l} 0.... Majority \\ 3.... Minority \end{array} \right\} \quad \text{Presidential regime}$$

Party dominance (PD). Hallerberg (2004) advocates party dominance as a very adequate measure of fragmentation. It shall be calculated only for the party that is in the cabinet the longest (dominant party); the dominance is computed as the proportion of time the dominant party remained in government over the given electoral period (i.e. a dominant party taking part in all cabinets over a given electoral period gets 1). We shall see that PD is not very helpful for us, but will use it as a complementing measure of stability.

Effective representation (ER). The same idea driving the inclusion of total representation variable would justify using the effective representation, as a share of votes balloted for cabinet parties. A lower effective representation would induce a higher redistribution. Since we are only concerned about fiscal governance determinants, we limit its application exclusively for unclear cases, to determine how many votes a minority government misses to pass a budget (which indicates the intensity of an interest into Mixed, rather than simply Commitment framework).

We could incorporate other variables, which have been now omitted for the lack of data or in order to keep data-gathering and data-processing manageable.¹¹

Stability

Dissolving rate (DR). Riciutti (2004) calls an analogous variable “over time fragmentation“, comprising the rate of government turnover. Yet normal electoral periods differ, so to avoid a misleading usage of this variable in panel data, I constructed my DR in a different way. DR counts 1 if a government in a given year was dissolved, and 0 if it survived. If two cabinets divide the year approximately by half, I split the ties.

Rotation of type of government (R). The fiscal governance framework will only evolve and accommodate as long as the type of government does not frequently change. (By the type of government, I mean types differentiated by the political cohesion variable, COH). Any switch (rotation) to a different type of government changes the ideal fiscal governance, and prohibits political entrepreneurs from establishing a stable framework.

An index for concentration of the types of government can be measured by calculating uninterrupted sequences of years of stable government type:

¹¹ Four additional variables are worth considering: *Dispersion of voting power* in coalition governments, representing the bargaining power of parties. Like in the case of Parliament, we may use the standard deviation of Banzhaf indices. Huber, Kocher and Sutter (2003) found that variable significant as a determinant for annual debt accumulation. *Ideological distance* - the higher distance, the more commitment, as proved by Volkerink and de Haan (2001). *Index of government strength* (Borelli and Royed 1995), calculated yearly as a sum of the average number of parties in the government in a given year, the number of governments in the given year, and a dummy variable indicating election year. *Number of spending ministers* has been applied both by Kontopoulos and Perroti (1999), and Volkerink and de Haan (2001).

$$R = \sum_{i=1}^m r_i^2$$

where r_i denotes an uninterrupted

period of a government type, and m is the total number of the stable-government-type periods

A feasible refinement of the concept of stability would mean also to include dummies for electoral-rule changes, and for other systemic changes.

Table 1 – The list of variables

Parliament	NoP	Number of political parties in the Lower Chamber
	ENPP	Effective number of all political parties
Cabinet	NoCP	Number of coalition parties
	COH	Political cohesion
	CC	Concentration of power
	PD	Party dominance
	ER	Effective representation
Stability	DR	Dissolving rate
	PD	Party dominance
	R	Rotation of type of government

Political variables in the new EU member states

Democratic political regimes can be classified by multiple criteria, with the most important being the checks and balances and electoral rules. In our sample (see Table 2), I only search for the most relevant institutional differences.

Table 2 – Classification of the new EU countries by core political variables

Power division	Electoral rule	Countries
Presidential		<i>Cyprus</i>
Parliamentary	Proportional rule	<i>Czech Republic, Estonia, Latvia, Poland, Slovakia, Slovenia</i>
	Mixed non-compensatory rule	<i>Hungary, Lithuania</i>
	Majoritarian rule	<i>Malta</i>

Source: CIA World Fact Book, www.cia.gov

Fragmentation

The country-specific values, calculated from a number of sources, are depicted in Table 3. The table includes mean values, calculated across “electoral” years 1992-2003.¹² The period was selected because 1992 was a year with elections in many countries, in case of CEEC being the first elections with established parties, not mass movements.

Table 3 – Mean values of political variables

	CYP	CZE	EST	HUN	LAT	LIT	MLT	POL	SVK	SLO
ER	51.7	37	44.3	47.8	53.8	39.8	51.6	40.5	47.4	53.2
NoCP	2.83	2.25	2.92	2.5	4.25	1.96	1	2.71	3.29	3.83
COH	0.5	2.5	2.25	1.5	1.96	1.58	0	1.92	2.04	2.17
PD	0.92	1	1	1	1	0.96	1	1	0.97	1
DR	0.5	0.08	0.42	0	0.58	0.08	0	0.63	0.46	0.42
CC	0.15	0.13	0.13	0.22	0.14	0.21	0.28	0.18	0.14	0.12
NoP	6	6.17	7.42	7.67	6.96	14.3	2	10.6	6.5	9.17
ENPP	3.11	4.16	5.08	3.33	5.66	3.27	1.99	4.66	4.62	5.78

¹² An electoral typically starts in May or June after elections, lasting to May or June of next year. In some countries, electoral years begin in October or November.

Sources: See Appendix A

To get an overall idea of position of countries, I ranked the countries by each criterion ($j = 1, \dots, 8$) and counted up an aggregated ranking AR for each country ($i = 1, \dots, 12$). The results follow in Table 4.

$$AR_i = \sum_{j=1}^8 \frac{rank_j(x_{i,j})}{8}$$

Table 4 – Aggregate ranking AR (the mean value of all ranks)

	MLT	HUN	CYP	LIT	CZE	LAT	POL	EST	SVK	SLO
ER	4	5	3	9	10	1	8	7	6	2
NoCP	1	4	6	2	3	10	5	7	8	9
COH	1	3	2	4	10	6	5	9	7	8
PD	1	1	10	9	1	1	1	1	8	1
DR	1	1	8	3	3	9	10	5	7	5
CC	1	2	5	3	8	7	4	9	6	10
NoP	1	7	2	10	3	5	9	6	4	8
ENPP	1	4	2	3	5	9	7	8	6	10
Mean	1.38	3.38	5	5.38	5.38	6	6.13	6.5	6.5	6.6

Note: Sorted by AR

Two groups of countries emerge: *low fragmented* (MLT, HUN and CYP) and, at the other extreme, *highly fragmented* (LAT, POL, EST, SVK and SLO).

First of all, I shall examine the correlation between the variables; highly correlated values ($|\delta| > 0.5$) will not be used simultaneously in classifying algorithms.

Table 5 – Correlation coefficients between fragmentation measures

	ER	NoCP	COH	PD	DR	CC	NoP	ENPP
ER		0,391	-0,44*	-0,1	0,251	0,01	-0,46*	0,081
NoCP			0,567**	0,033	0,74**	-0,79**	0,186	0,88**
COH				0,408	0,286	-0,71**	0,442*	0,81**
PD					-0,16	0,079	-0,12	0,348
DR						-0,62**	0,133	0,68**
CC							-0,14	-0,8**
NoP								0,286

Note: * denotes at significance at 10 percent level, ** at 5 percent level

COH is the only variable that captures the relative power of the opposition as well as the nominal fragmentation. Here it is highly significantly correlated only with CC and ENPP, so I shall try to combine it with other variables.

NoP and NoCP are uncorrelated, so I will use them together (see Classification 2). For Classification 3, we will need to combine effective values, i.e. ENPP and CC. However, the level of correlation is high, so utmost care will be given to interpreting the results.

What kind of political variable do we look for? We want to find proxies for two values – the *identity of veto players*, and the *coalition fragmentation*, to predict types of governance in accordance with the clue in Table 6.

Table 6 – Predicted types of fiscal governance

	One Party/Bloc	Multi-Party
Identical veto players	Delegation	Commitment
Different veto players	Mixed	-

Source: Hallerberg and von Hagen (2001:6)

Opening classification by mean COH

At the outset, we shall use political cohesion variable because it examines both the identity of veto players and the number of parties. Recall, in parliamentary systems, minority governments receive $COH = 3$, whereas for majority governments $COH \in \{0,1,2\}$.

We shall use observed densities of COH to obtain the opening classification of countries. As a complementary index, I used the mean value of COH:

$$\overline{COH}_i = \sum_{t=1}^{12} \frac{COH_{i,t}}{12}$$

Table 7 – Empirical distribution of COH (over 12 years)

Value	MLT	CYP	HUN	LIT	POL	LAT	SVK	SLO	EST	CZE
3	0	2	0	3	4	1.5	1.5	2	4	6
2	0	0	6	5	3	9.5	9.5	10	7	6
1	0	0	6	0	5	0	1	0	1	0
0	12	10	0	4	0	1	0	0	0	0
Mean	0	0.5	1.5	1.58	1.92	1.96	2.04	2.2	2.3	2.5

The ranking based on mean values of COH is far more promising than the aggregate ranking based on multi-correlated variables. Three types of countries can now be classified:

1. Delegation candidates (D) – MLT, CYP.
2. Commitment candidates (C) – LAT, SVK, SLO.
3. Mixed governance candidates (M) with high incidence of minorities – CZE.

Four cases still rest on the margin: HUN (high incidence of two-party governments indicate possibly D or C), LIT (a high variation prohibits to deduct the type – could be any type – C, M or even D), and POL (also a high variation, indifferent between C and M). EST indicates a high incidence of minority governments, but the clear majority of years it had a multi-party majority government. In the ensuing parts, I attempt to find suitable groups for the four “marginal” countries.

Classification 1 – Number of parties in the cabinet (NoCP)

The first refinement applies the number of coalition parties (NoCP), as preferred by Hallerberg and von Hagen (2001). Relatively low numbers are associated with Delegation, or Mixed; high numbers indicate Commitment. The problem is to use this measure to distinguish between Mixed and Delegation, which seems to be the problem for Lithuania.

Table 8 – Observed NoCP means for the marginal countries

Average	2.754
HUN	2.5
LIT	1.96
POL	2.71
EST	2.92

Hungary, Poland and Estonia have values significantly close to the average value (calculated of all 10 countries), thus deserve to be put into the C group. In the case of Lithuania, a small number of parties may indicate a high occurrence of minority governments with veto players from opposition, or strong one-party (or two-party) majoritarian coalitions. Lithuania is therefore classified as C/M. See the respective column in Table 15.

Classification 2 – Numbers of parties (NoCP and NoP)

A low number of coalition parties (NoCP) as such cannot determine the outside options of the coalition. When the coalition can only scarcely replace the leaving member with an alternative party (since opposition is highly fragmented), the exit threat is credible. The discretion of the Finance Minister must be consequently relaxed.

How to measure the outside options of a coalition? We may, in the first instance, use the number of parties in the Parliament (NoP). Recall $Corr(NoP, NoCP) = 0,186$; a simultaneous use may deliver new information. Four events can be found, with results in Table 9:

1. *Low fragmentation in the cabinet* (low NoCP) and *low fragmentation in the Parliament* (low NoP). Most likely, two blocs of parties face each other; a reshuffle in the cabinet would replace one bloc with another, which could be acceptable only to pivot central parties. Delegation is thus more suitable than Commitment.

2. *Low fragmentation in the cabinet* (low NoCP) and *high fragmentation in the Parliament* (high NoP). If the coalition is majoritarian, it consists of a few big parties, facing fragmented opposition. The exit-threat is very strong, and Commitment is the effective governance. Perhaps the coalition is in minority, however; this leads to Mixed governance.

3. *High fragmentation in the cabinet* (high NoCP) and *low fragmentation in the Parliament* (low NoP). The situation is puzzling – how come that a dispersed coalitional cabinet was formed against a coherent opposition? The two explanations are as follows: first, the coalition is actually a minority (Mixed governance), or, the coalition is united against a politically very distant opposition (Commitment).

4. *High fragmentation in the cabinet* (high NoCP) and *high fragmentation in the Parliament* (high NoP). A very unstable party system with many possible coalitions requires Commitment for a cabinet to survive votes on confidence.

Table 9 – Expected mode of governance given NoP and NoCP

	Low NoP	High NoP
Low NoCP	<i>D</i> (1)	<i>C, M</i> (2)
High NoCP	<i>C, M</i> (3)	<i>C</i> (4)

Table 10 – Observed NoP means for the marginal countries

Country	NoCP	NoP
Average	2.754	7.679
HUN	2.5	7.67
LIT	1.96	14.33
POL	2.71	10.58
EST	2.92	7.42

Lithuania is a classic example of a small-size cabinet in a fragmented Parliament, suiting a Commitment or Mixed framework; cannot be distinguished now. Both Hungary’s values are near average; Delegation and Commitment are equally possible (not Mixed mode, since there was no minority government); again there is no reason to bet either on Delegation, or Commitment. Poland fits most likely into the Commitment type because of high NoP, and Estonia is unpredictable, with a prospect of Mixed or Commitment frameworks.

Classification 3 – Effective numbers of parties (ENPP and CC)

The previous case certainly provokes to pose a qualifying remark – how can we measure solely a nominal number of parties, when the relative size counts as well? For example, to face an opposition consisting from three parties of equal-size is much different from competing with one super-party with two satellites. There is a need to consider relative size of parties, which could be measured by the effective number of parties in the Parliament (ENPP) and the concentration in the cabinet (CC). Table 11 is thus a transformed Table 9, generated by subsuming nominal numbers by effective numbers.

Table 11 – Expected mode of governance given ENPP and CC

	Low ENPP	High ENPP
Low CC	<i>D</i>	<i>C, M</i>
High CC	<i>C, M</i>	<i>C</i>

Now, consider the observed values for Lithuania, Poland, Hungary and Estonia.

Table 12 – Observed values of ENPP and CC means

	ENPP	CC
Average	4.167	0.171

HUN	3.33	0.22
LIT	3.274	0.211
POL	4.664	0.184
EST	5.081	0.128

With the help of Tables 11 and 12, we deduct the following: Hungary becomes a Commitment candidate, Lithuania remains still both in Mixed and Commitment camps, Estonia as well (for opposite reasons, though) and Poland is reaffirmed as a clear-cut case for Commitment mode. Only the position of Hungary reversed comparing to purely nominal numbers.

Classification 4 – Discounted political cohesion (DCOH)

The path dependency gradually diminishes. It would be really improper to put the same weight on turbulent times in early 1990ies, when the changes of electoral rules, preferences, and political management were abundant, and on the last few years. The highly dispersed parliaments, and minority governments in the past arguably influence the current fiscal governance much less than the current political landscape. That is why I introduce a discounted political cohesion variable, calculated in period t over last n periods:

Table 13 – Observed values of DCOH means

MLT	CYP	HUN	POL	LIT	SVK	LAT	SLO	EST	CZE
$DCOH_{t,n} = \sum_{i=1}^n \delta^{i-1} COH_{t-i+1}$									
0	2.5	11	14.1	14.1	14.5	14.6	16	16	18

Notes: $n=12$, $t=2003$, $\delta=0.9$

Hungary is again a candidate for Delegation, though a very weak one. The Mixed governance could now be attributed not only to the Czech Republic, but possibly to Estonia and Slovenia as well.

Classification 5 – Discounted effective party numbers (DENPP and DCC)

To check up the position of countries in marginal groups (Hungary, Estonia and Slovenia), we shall apply the same framework as in Classifications 2 and 3. Now we will discount also ENPP and CC, and receive DENPP and DCC. Correlation coefficient is -0.8096(**), which indicates that the countries with very high DENPP and very low DCC (or otherwise) are true outliers.

Table 14 – DENPP and DCC observations for HUN, EST and SLO

	DENPP	DCC
Mean	29,281	1,181
HUN	23,369	1,5
EST	36,318	0,9
SLO	39,559	0,92

The observations prescribe Hungary the Delegation mode, while both Slovenia and Estonia remain in group Mixed/Commitment countries.

Table 15 – Potential modes of governance predicted by Classifications 1-5

	Opening	1	2	3	4	5
Variables	COH	COH NoCP	COH NoP NoCP	COH ENPP CC	DCOH	DCOH DENPP DCC

D	MLT, CYP	MLT, CYP	MLT, CYP	MLT, CYP	MLT, CYP	MLT, CYP, HUN
D/C	HUN, LIT		HUN		HUN	
C	LAT, SVK, SLO	LAT, SVK, SLO, EST, HUN, POL	LAT, SVK, SLO, POL	LAT, SVK, SLO, POL, HUN	LAT, SVK, POL, LIT	LAT, SVK, POL, LIT
C/M	LIT, POL, EST	LIT	LIT, EST	LIT, EST	EST, SLO	EST, SLO
M	CZE	CZE	CZE	CZE	CZE	CZE

Additional criterion and final classification

To distinguish between a Mixed and Commitment suitable country is not an easy task. An additional helpful variable could be effective representation (ER). We could argue that a low ER indicates a need for support from opposition, thus Mixed type. Interestingly, the countries with the lowest ER are CZE, LIT, POL and EST.

Due to results above, I found the hypothesized division of countries the following:

- a) Delegation (D) – MLT, CYP.
- b) Delegation or Commitment (D/C) – HUN.
- c) Commitment (C) – LAT, SVK, POL.
- d) Commitment or Mixed (C/M) – LIT, EST, SLO.
- e) Mixed (M) – CZE.

Stability

The countries in our sample experienced different conditions of stability over the period 1992-2003; the lengths of “peaceful” periods when the adjustment to fiscal governance mode was feasible were strikingly different. Whereas some countries enjoyed a unique stability of a type of government (e.g. in Malta, one party is always in power, having a majority of seats), others exhibit cycles of rotating minority governments, multi-party coalitions and two-party majorities (e.g. Lithuania). Also, the countries have been differing in cabinet stability, approximated by the rate of survival of a cabinet (DR) and party dominance (PD). In this subsection, I shall try to measure the political stability in order to assess conditions of stability of the new EU member states, which could determine the progress in adopting fiscal governance framework.

Government type stability (R)

Rotation variable (R) is a proxy for the stability of political cohesion variable; it is found to be the highest (thus, expected adjustment the quickest) for MLT, SVK and LAT and the lowest for EST and SLO (see Table 16).

Cabinet stability (PD-DR)

Two variables denote cabinet stability – dissolving rate (DR) and party dominance (PD). Differences in party dominance are but negligible, so I took a simple subtract of PD and DR variables which is dominated by differences in DR; for results see Table 16. We can see high value (the fast expected adjustment) in cases of MLT, HUN, CZE, and LIT. At the other extreme CYP, LAT, and POL are located.

Table 16 - Cabinet and regime-type stability

	CYP	CZE	EST	HUN	LAT	LIT	MLT	POL	SVK	SLO
PD-DR	0.42	0.92	0.58	1	0.42	0.88	1	0.38	0.51	0.58
R	54	56	33	42.5	75.5	50	144	36	84.5	36

The two indices provide two guides as to what speed of adjustment to expect.

1. Slow adjustment – POL, CYP, EST, SLO

2. Unclear – LAT, HUN

3. Quick adjustment – SVK, LIT, CZE, MLT

Observed fiscal governance

The survey collecting data (see Appendices B and C3) has been based on the simple method by Hallerberg and von Hagen (2001).¹³ Four questions regarding parliamentary committees, which I understand as part of functioning fiscal governance framework, have been added in line with reasoning in Hallerberg (1999).

First of all, we shall define all variables. A more interested reader may find it useful to consult the Appendix B to check the how the questions were posed. I shall consistently denote an *i*-th question as Q_i , with a value of 1 if true, and 0 if false; other values of Q_i shall be indicated on the case-by-case basis.

Finance Minister power

Power in the Cabinet ($CP=Q1+Q2+Q3+Q5+(Q6a+Q6b+Q6c+Q6d)/4+Q7-Q8+Q9$). This variable captures the bargaining position of the Finance Minister in the preparatory stage. It includes Finance Minister's agenda-setting powers, options of expenditure ceilings, and veto power in the Cabinet.

Implementation Power ($IP=Q14+Q15+Q16+Q17$).¹⁴ Like CP, IP describes the bargaining power, but in the subsequent (implementation) stage. The variable captures cases when Finance Minister's approval is necessary to change the budget. It also takes into account rules dealing with unexpected windfalls.

Total Bargaining Power ($BP=CP+IP$). A proxy for total bargaining power of the Finance Minister in the Cabinet in all stages.

Total Finance Minister's Power ($FM=BP-PI$). The Finance Minister is not only disciplining cabinet members, but also struggles with members of the Parliament during the approval stage of the budgetary act. The higher is the influence of the Parliament (PI), the weaker is the FM. (For the definition of PI, see below.)

Influence of the legislature

Parliamentary Influence ($PI=Q11+Q12+Q13$). This variable captures the degree of parliamentary influence upon the composition of the budget, like the right to propose its own budget and the right to make non-offsetting amendments.

Committees Influence ($CI=Q28+Q29+Q30+Q31$). Hallerberg (1999) raised a hypothesis claiming that committees are more influential in Commitment states.¹⁵ The influence increases when the committees correspond to ministries (effectively control agenda), and are allowed to claim witnesses and documents from the executive.

Total Legislature's Influence ($LI=PI+CM$). This measure determines the presence of Mixed, or Commitment framework, and non-presence of Delegation.

Commitment framework

Multi-annual Plans ($MP=Q23+(Q24-2)+2*Q25+Q26$). It denotes how binding, politically enforceable and unbiased a multi-annual budgetary plan can be.¹⁶

¹³ Competing, very exhaustive survey methods of course exist; notably de Haan, Moessen and Volkerink (1999), or Gleich and von Hagen (2002). Any aggregate index, however, suffers from dangers of misspecification as discussed in Alesina and Perotti (1999: 27-31).

¹⁴ Two special cases have been mentioned in the survey. Estonia answered to Q14 that the FM can block only those expenditures which are not included in the Budget Act and Poland reported that the FM only approves transfers consisting in the increase or decrease of property expenditure.

¹⁵ The ratio of corresponding/non-corresponding committees (Q28) takes value of 1 if non-corresponding committees prevail, 2 if equal, and 3 as long as corresponding committees prevail. The composition of a typical committee (Q29) can reflect dominance of one party (-1), cabinet balance (0), or proportional representation (3).

¹⁶ Multi-annual plan can be formulated by Finance Minister on his own (Q23 taking zero value), or by Cabinet/Coalition agreement (1) of in negotiations with the opposition (2). The status of the multi-annual plan (Q25) can be indicative (0), political (1), or legal (2). Finally, for macroeconomic forecasts, Finance Minister

Commitment Framework in total (CM=LI+MP). Comprises both legislature’s influence and multiannual plan as both contribute to the efficacy of the Commitment/Mixed framework.

Comparing potential and observed governance

With the survey data from former Communist countries in year 2000, Gleich and von Hagen (1992) reported that the most advanced of the eight Central and Eastern European countries were Estonia, Latvia, and Slovenia; the least advanced were Hungary, Poland, and the Czech Republic. Unfortunately they put the commitment and delegation-relevant items into one index, which prohibitively complicates analysis of conditions for different fiscal governance types.

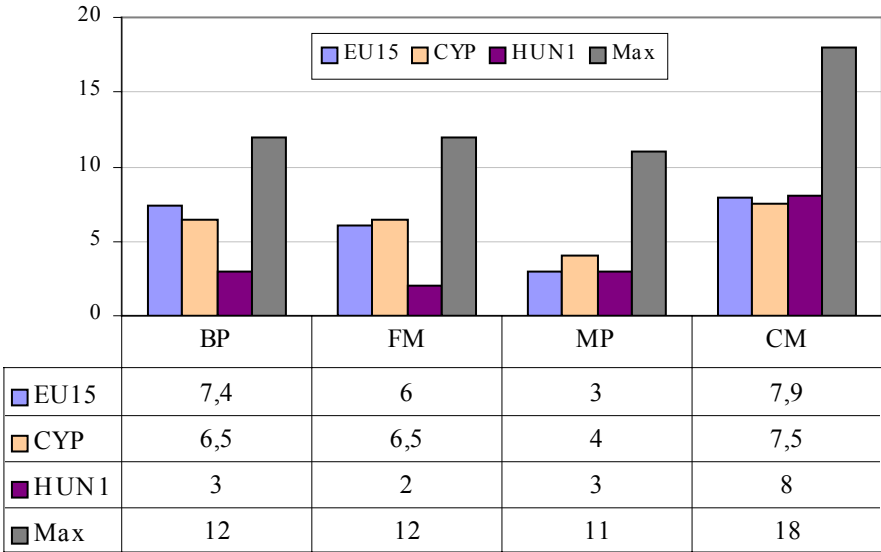
For benchmark values, I took up data for EU-15 countries (years 1999-2000) as provided in Hallerberg-von Hagen (2001); seven countries were identified as Delegation (AUT, FRA, GER, GRE, ITA, ESP and GBR), five as Commitment (BEL, FIN, IRL, LUX and NED), and three as Mixed type (DEN, POR, SWE).

Delegation type suspects

For Delegation countries, the EU-15 benchmark reveals that Finance Minister’s power (BP and FM) is generally more important than Commitment framework variables (MP and CM). Specifically, multi-annual plans are of low importance. We shall thus specifically follow the BP and FM variables.

We identified Malta¹⁷, Cyprus, and possibly Hungary as likely Delegation type countries. So, how do their fiscal governance frameworks fit the predicted Delegation pattern, given by the EU-15 values?

Figure 1 – Fiscal governance in Delegation type countries



Note: The last column (on the right) gives the maximum value of the index.

Cyprus has achieved the EU-15 standard in all values. Hungary has too a weak Finance Minister comparing to the EU-15 value, which can be explained by three propositions:

- a) Hungary, as a Delegation country, indeed requires a stronger Finance Minister; his weakness can be explained by lack of fiscal policy expertise.

typically exploits source of only Finance Ministry (0), Ministry plus Statistics Institute (1), or bases the budget on more sources (2).

¹⁷ We lack data for Malta in this stage of the project (August 2004).

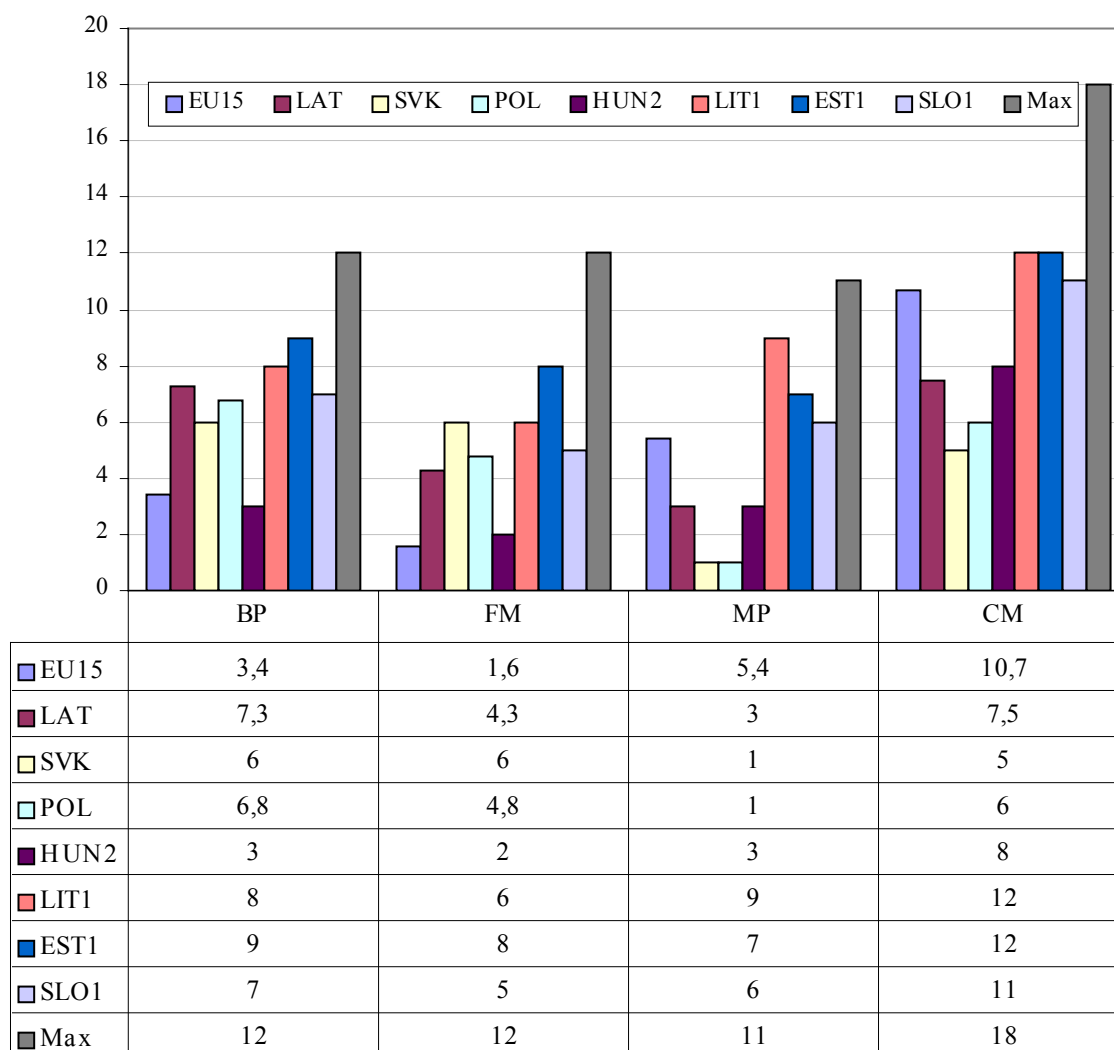
b) His weakness is given by political instability which is an obstacle for “fiscal entrepreneurs” who aim at a stable fiscal governance framework (but whether stability was high or low is not clear for Hungary – see Table 16).

c) Hungary in fact needs Commitment, hence this comparison is not applicable.

Commitment type suspects

By the same token, the Commitment suspects can be analyzed. For reference values, I again use EU-15 values.

Figure 2 – Fiscal governance in Commitment type countries



The first group of countries with similar characteristics are **Latvia, Slovakia, and Poland**. All of them have excessively (uselessly) strong Finance Minister (see high BP and FM), but too weak Commitment framework (see low MP and CM). In fact they resemble more Delegation type than Commitment type countries. So, although the three countries have a developed fiscal governance, it is not appropriate one for their political data. An alternative explanation could be that they are making short-term economic policy reforms, which requires more discretely acting Finance Minister than contractual properties in the Legislature. Or, their political regime is in change.

Again, **Hungary** serves as a special case. Now the power of the Finance Minister is in accordance with EU-15 value, but Commitment type variables are too small. To conclude: Hungary is unsatisfactory for both Delegation, and Commitment types.

Lithuania, Estonia, and Slovenia show surprisingly very high values of all variables. EU-15 data nevertheless reveal no need to have such a strong Finance Minister for a Commitment type. What is a possible explanation?

a) Lithuania, Estonia, and Slovenia have a temporarily high power of the Finance Minister (because of transition, for example) and are likely to achieve EU-standard Commitment type by reducing the power.

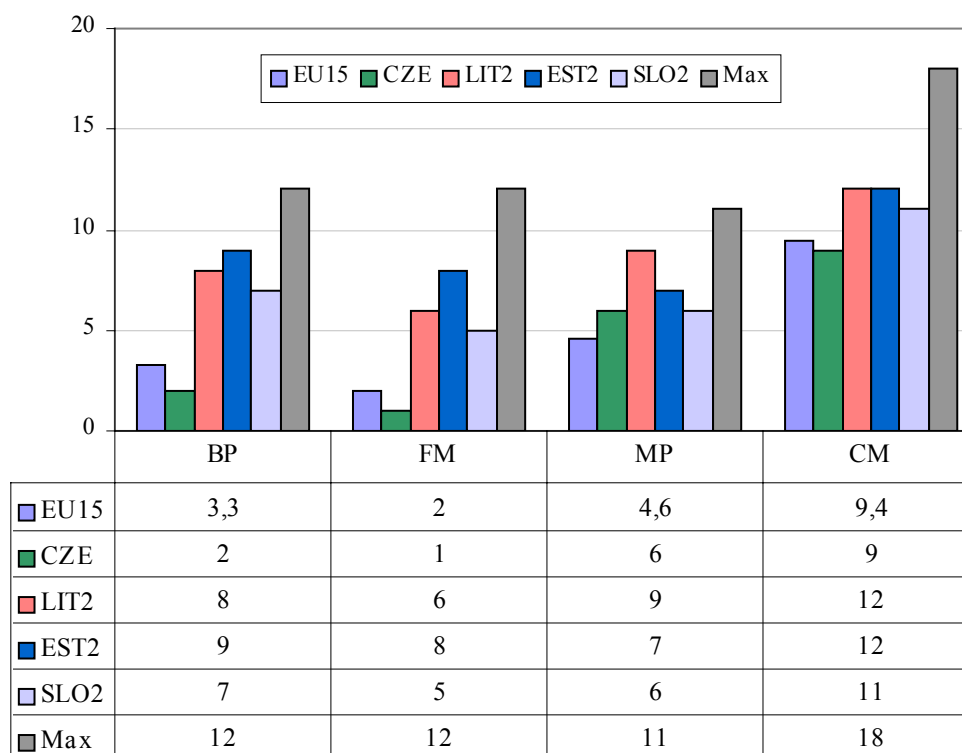
b) The countries are in fact not Commitment, but Mixed type. Although the available EU15 data do not indicate the difference between Finance Minister's power in Mixed and Commitment type to be significant, that could be due to very small number of observations (n=3).

c) There is a slow adjustment towards the potential fiscal governance. As Table 16 suggests, that could be the case for Estonia and Slovenia, but not for Lithuania.

Mixed type suspects

Only a handful of countries in the EU-15 are considered Mixed type (n=3), so we must be careful in assessing EU-15 value as a reliable benchmark for comparison.

Figure 3 – Fiscal governance in Mixed type countries



Czech Republic needs to strengthen the Finance Minister to become a Mixed type country of the same qualities as EU-15.

Lithuania, Estonia, and Slovenia again have a too strong Finance Minister. The explanation is the same like the previous case when we classified them as Commitment suspects.

Conclusion

The paper has reviewed the literature claiming the importance of procedural fiscal rules, i.e. fiscal governance, and assessed the current state of fiscal governance in the new EU member states. Three distinct modes of fiscal governance have been recognised – Delegation, Commitment, and Mixed; which one is to be used in a given country depended on the political fragmentation.

Political data and observed fiscal governance suggest the following:

1. **Malta** is expected to have Delegation type given the majoritarian elections and the high political stability (yet we still miss governance data).

2. **Cyprus** is a Delegation type country, fitting the EU-15 standard.

3. **Hungary** stands in the midway between Delegation and Commitment. Neither political fragmentation nor fiscal rules indicate which type would be more suitable. In any case, Hungary shall improve in either aspect – if prefers Delegation, a stronger Finance Minister is required; if Commitment, strict multi-annual budgeting is to be put in place.

4. **Latvia, Slovakia and Poland** surprisingly look like Delegation type, but politically need Commitment framework. The discrepancy might result from the need to finish politically costly fiscal reforms. We can however observe changes in fragmentation over the last years (esp. in Poland), so we could argue Delegation remains as long as the number of ruling parties and political volatility decreases.

5. **Lithuania, Estonia, and Slovenia** remain the most puzzling cases, since they exhibit excessively strong Finance Ministers. By reducing their powers, they could become either Commitment or Mixed types of EU-15 standards. However, other plausible explanations of simultaneously strong Finance Ministers and Legislature could be given: a) EU-15 sample is not a good indicator given the small number of cases, b) Lithuania, Estonia and Slovenia are more advanced in terms of fiscal governance than the “Old Europe”, or c) transition economies have different political equilibria given the need to drastically reshape the public sector.

6. **Czech Republic** needs to strengthen the powers of the Finance Minister to become a Mixed type country comparable to the EU-15.

I would argue for institutional reforms not only in the realm of fiscal governance, but also in the electoral systems. By reducing volatility of political fundamentals, we could change the effective number of parties (esp. in Poland, Latvia and Slovakia), and allow the Delegation framework to be established.

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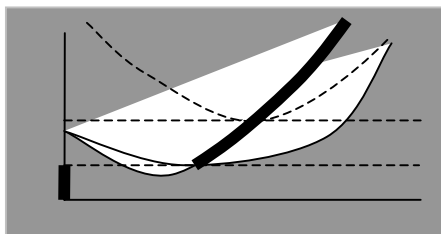
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