DEPARTMENT OF ECONOMICS

Are There Political Fiscal Cycles in NMS?

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Abstract

It is a generally documented fact that political cycles are a phenomenon of new democracies. In this paper we deepen the evidence for the new EU member countries that are a prominent example of recently established democratic systems. We show that, in line with the opportunistic theory, primary balances tended to deteriorate in the years of elections, if taking NMS 'en bloc'. This was mainly driven by the cycle in government expenditures. However, careful cross-country and cross-time analysis challenges the general view. It turns out that the political cycle cannot be attributed to all new European democracies, in particular, not to those that made long-run attempts to integrate into EMU. Moreover, we document that with the time passing, opportunism has evaporated from the overall sample of the NMS. This comes from the fact that the political cycle has diminished in countries that were prone to opportunistic manipulation in the initial period.

JEL: E62, E32, H62
Keywords: fiscal policy, opportunistic cycle, business cycle, government expenditures, NMS, CEE countries

I. Introduction

The concept of a 'political business cycle' is summarized in the hypothesis that the macroeconomic cycle is induced by the political cycle in economic policies, particularly in the fiscal policy. Indeed, recent empirical evidence confirms the theoretical reasoning. More precisely, the political deficit cycle appears as a phenomenon of new democracies (Brender and Drazen, 2005). Still more attention is paid to political cycles and economic policies in developing countries (e.g. Brender and Drazen, 2007, Chauvet and Collier, 2009).

The political economy literature usually views the political business cycle under two distinct approaches. In principle, the opportunistic approach assumes, without regard of previous position, political motives in budgetary decisions of incumbent governments around elections. On the other hand, the partisan approach attributes governments' preferences with respect to inflation and unemployment to their party ideology (e.g. Nordhaus 1989, Sieg 2006, Brauninger 2005, Reichenvater 2007). In modern political literature, there is a large consensus that both these approaches are important (Sieg, 2006).

In this paper, we focus on the ten EU members from last two accessions in 2004 and 2007 (with exclusion of Malta and Cyprus). Countries of 'Central and Eastern Europe' are a prominent example of recently established democratic systems. What makes this region even more interesting from a researcher's point of view is the fact that these are at the same time former transition economies. In further text, we denote them as NMS (New Member States) or CEE (Central and East European) countries. We do not neglect the importance of the partisan theory, in this paper, however, we focus on electoral (opportunistic) cycle only.

Is there such a cycle present in fiscal policies of the new EU members? Existing literature documents on this rather indirectly. Brender and Drazen (2005) observe that the budget cycle disappears when new democracies, among which also NMS, are removed from the larger sample of 106 countries.

The question of the political business cycle involves establishing multiple sorts of evidence. One needs to understand the link between fiscal policy and the business cycle, between fiscal policy and the electoral cycle and, third, between the business cycle and the electoral cycle. We have examined the first point to a large detail elsewhere by means of a small-scale VAR model[1]. In this paper, we build on some results of the VAR exercise and focus on the remaining two points.

In a stylized view, we observe variation in both the economic activity and the budget balances over the electoral cycle (Figure 1). On average, the primary balance in CEE countries markedly worsens in the election years. On the other hand, output growth is most pronounced in the years prior to elections. The preliminary evidence motivates us to examine these relationships more formally in next sections.

[1] In Stanova (2009): (First) Insights on Fiscal Policies in NMS from Vector Autoregressions. In further text it is referred to as [companion paper].

Are we able to establish solid evidence on political fiscal cycles in new European member countries? If yes, is the evidence on opportunistic cycles homogeneous over the ten countries? Does the political cycle seem to diminish as time is passing? How did the integration process influence the political cycle? What are the effects of political fiscal cycles in NMS on economic activity? These are some of the questions we are going to address.

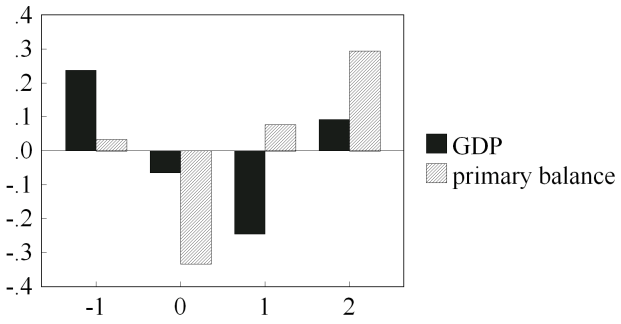

Figure 1: **Economic activity and fiscal discipline over the electoral cycle**
Note: Average for the 10 NMS over 1997-2008. Particular years of a regular 4-year electoral cycle are denoted as the following: -1 is pre-election year, 0 is the year of elections and 1 and 2 stand for the first and second year thereafter. A detailed description of data is in Appendix A.

The remainder of this paper is organized as follows. Section II presents evidence on the political cycle in a set of aggregate and disaggregated fiscal indicators. In Section III, we complement the overall picture by a more in-depth cross-country analysis. As a result, we present a couple of cross-country characteristics that appear important to understand opportunistic cycles in CEE countries. We close the evidence by analysing effects of politically motivated fiscal measures on economic activity in Section IV. The final section concludes.

II. General Evidence on Opportunistic Cycles in NMS

Analysis of political business cycles in NMS can only go into the past insofar as available data allow it. In this paper we are limited to the time span as from 1997[2]. Until 2008, each of the new countries has passed 3 or 4 electoral periods in total (Table 1). If neglecting the 'running' cycles reaching beyond 2008, as many as 27 electoral terms, the length of which is known, were complete 4-year cycles. We limit the scope of this analysis to the 'complete' cycles only.

Throughout the paper, we use both cyclically adjusted and non-adjusted fiscal variables. First order dynamics in non-adjusted (original) fiscal series can be understood as *improvements* or *deterioration of budgetary performance*. On the other hand, to account for discretionary stance of

[2] We have reliable data on output and fiscal indicators at hand as from 1995. We wish to include, for an identical period, cyclically adjusted series into the analysis that are outcome of the VAR(1) model. It implies that we lose one observation. Another observation is absorbed by considering first order dynamics in output and fiscal indicators.

Table 1: **Elections in New European Democracies 1997 - 2008**

	BG	CZ	EE	LV	LT	HU	PL	RO	SI	SK
1997	04	n.a.		n.a.			09			
1998		06		10		05				09
1999			03							
2000					10			11	10	
2001	06						09			
2002		06		10		04				09
2003			03							
2004					10			11	10	
2005	06						09			
2006		06		10		04	n.a.			06
2007		n.a.	03	n.a.		n.a.	[10]			n.a.
2008		n.a.	n.a.	n.a.	10	n.a.	n.a.	11	09	n.a.
Cycles[1]	2 (1)	2 (0)	2 (1)	2 (0)	2 (1)	2 (1)	2 (0)	2 (1)	2 (1)	2 (1)

[1] Numbers of 4-year electoral terms that fall entirely (from a fraction) in the period of 1997-2008.

Note: Figures denote particular months of elections. Fields denoted 'n.a.' (not applicable) or in [ ] represent years with electoral term shorter than regular 4 years or of unknown length (currently running). Individual countries are denoted as follows: BG - Bulgaria, CZ - Czech Republic, EE - Estonia, LV - Latvia, LT - Lithuania, HU - Hungary, PL - Poland, RO - Romania, SI - Slovenia, SK - Slovakia. Major part of data on elections was collected by Maret Veiner. Remaining data were complemented based on www.parties-and-elections.de, www.wikipedia.org and the Internet.

fiscal policy, we use cyclically adjusted series obtained from the small-scale VAR model in the [companion paper][3]. The exact computation is summarized in Appendix B[4]. First order dynamics in 'discretionary' policy series captures *fiscal tightening* or *easing*.

We have 12 observations at hand for each of the 10 countries. In a single country setup, a sample size of 12 observations would impose limitations to econometric work. Since we are interested in a more general evidence on political cycles in NMS, we work, in a basic setup, with 120 observations in total. The fact that we do not split the sample implies that we completely give up heterogeneity across countries. Later in this section and in Section III, this constraint is relaxed in a more in-depth cross-time and cross-country analysis.

The purpose of this paper is not to characterize interactions between fiscal policy and output. This job is done in the [companion paper] using a more advanced approach than just a single equation specification. This fact enables us to use a narrow specification here. We limit the dynamics to the inclusion of endogenous variables' own lag and focus instead on elections. The simple setup links fiscal policy and output with the electoral cycle, however, without the need to explain a major part of variance in the dependent variable.

[3] One of the goals of this analysis is to understand effects of fiscal policy and of the political cycle in fiscal policy on economic activity. For this reason we want to approximate the stance of fiscal policy by cyclically adjusted budget categories. Our model based proxies differ in nature from theoretically derived indicators of discretionary policy. For a discussion see e.g. Buti and Van den Noord (2004).

[4] We dispose over cyclically adjusted variables for all NMS except for Estonia and Latvia.

A base set of seven equations to be estimated goes as follows:

$$dX_t = \alpha dX_{t-1} + \beta dummy_{i,t} + \epsilon_t$$

where X stands for output, and for each of the following fiscal variables, both cyclically adjusted and non-adjusted: primary budget balance, government revenues and non-interest expenditures[5], respectively. A detailed description of data is in Appendix A. In each equation, we consider one dummy for the year prior to elections and one electoral year dummy[6].

What we do expect, assuming the presence of a political fiscal cycle, is worsening of fiscal performance and, in terms of cyclically adjusted variables, loosening of the fiscal stance in either or both of these years. Estimated coefficients at the political dummies indicate how much different on average is dX if the event (pre-election or election year) occurs from what it is otherwise.

Before we present a first set of regression results, we make one exclusion that applies to findings throughout the remainder of the text. We should bear in mind that NMS are not just new democracies, but also new economies. Working with aggregate government revenues and expenditures is somewhat crude in this context. Even in case we succeed to establish econometric evidence on a deterioration of fiscal performance in election years, we should understand that this may not be driven exclusively by political incentives. NMS as transition economies objectively required clear-cut measures, both on the side of tax revenues and government expenditures. In particular, all of these countries witnessed reforms of taxation systems with a shift to indirect taxes. As for expenditures, NMS typically had underdeveloped infrastructure which implied the necessity of huge investments in motorways, engineering networks, etc. Governments typically accounted for a substantial part of such expenses in the years of transition. Some of those measures may appear as fiscal expansions in pre-electoral or electoral years. Accounting fully for these factors would, however, require more in-depth data. Such data for the NMS are not at our disposal. Nevertheless, it is important to bear this fact in mind as a sort of caution every time one draws conclusions from small-scale econometric specifications.

It appears that, on average, primary balances in CEE countries over 1997-2008 reversed from improvement in the years prior to elections to a statistically significant deterioration in the election years (Table 2). The political cycle in primary balance appears to be driven by the increase in government expenditures in the years of elections. The simultaneous decline in tax revenues was not found statistically significant. Turning to the cyclically adjusted variables, on average we do not find evidence on opportunistic cycles in NMS based on such data. What we intuitively observe

[5] We consider it necessary to work with non-interest expenditures to see how governments decide on spending the sources after costs of debt have been covered.

[6] A pre-election and an election year dummy were also used e.g. in Buti and Van den Noord (2004). A slightly different idea was utilized in Andrikopoulos et al. (2004) who used fractional dummy variables depending on particular month in which the elections took place. This way, the authors partly accounted for pre-election years in their analysis. A theoretically more elaborate approach was employed by Krause and Mendez (2006) who propose two criteria for opportunism. By contrast, some other authors only do consider election year dummy variables, e.g. Donahue and Warin (2007), Brender and Drazen (2005).

is a slight easing in the discretionary policy (more on the side of the expenditures) in years when elections take place. However, based on econometric significance this cannot be attributed to the elections. Overall, there seems to be a 'correction' tendency present in the cyclically non-adjusted primary balance[7].

Table 2: **Fiscal indicators, output and elections** (Pool estimates for 10 CEE countries, 1997-2008)

Dependent variable	Own lag		Pre-electoral year dummy		Election year dummy		Adj. R^2	D-W Stat.
GDP growth	0.551 ***	(0.084)	0.228	(0.159)	-0.069	(0.151)	0.28	1.64
Primary balance	-0.153 *	(0.093)	0.057	(0.177)	-0.457 ***	(0.166)	0.07	1.86
Revenues	0.022	(0.091)	0.003	(0.185)	-0.170	(0.175)	0.01	1.82
Expenditures	-0.131	(0.089)	-0.028	(0.176)	0.425 **	(0.165)	0.06	1.79
Cyclically adj. primary balance	-0.473 ***	(0.094)	0.059	(0.186)	-0.200	(0.177)	0.22	2.15
Cyclically adj. revenues	-0.427 ***	(0.092)	-0.061	(0.185)	-0.227	(0.176)	0.20	2.29
Cyclically adj. expenditures	-0.509 ***	(0.086)	-0.067	(0.179)	0.100	(0.171)	0.28	2.30

Note: Sample (adjusted): 1998 2008, periods included: 11, cross-sections included: 10 (in case of cyclically adjusted variables 8), total observations: 110 (88). Standard errors to estimated coefficients are in brackets. Cyclically adjusted series were obtained from the VAR exercise in [companion paper]. ***, ** and * denote significance at 1, 5 and 10 per cent level.

Let us encapsulate the general evidence in one more picture. Intuitively, deterioration in public finances and fiscal easing in the 10 new member countries is concentrated in the election years, although the years prior to elections do not seem intact either (Figure 2). However, based on the econometric evidence, only worsening in cyclically non-adjusted primary balance and in government expenditures may be labeled as 'opportunistic'.

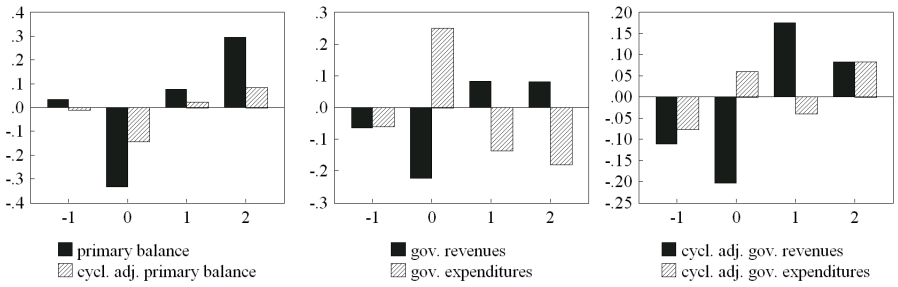

Figure 2: **Various Budget Categories Over the Electoral Cycle**
Note: Average for the 10 NMS over 1997-2008. Particular years of a regular 4-year electoral cycle are denoted as the following: -1 is pre-election year, 0 is the year of elections and 1 and 2 stand for the first and second year thereafter. A detailed description of data is in Appendix A.

In the political literature, it is theoretically supposed and also empirically observed that the scope for political fiscal cycles diminishes with increasing democratic experience of the electorate (e.g. Brender and Drazen, 2005). In the case of the NMS, the democratic experience is rather short compared to other 'new democracies'. Nevertheless, we find it important to control for this

[7] Reversals in dynamics are signalized more strongly by the cyclically adjusted fiscal variables. However, this may be in part influenced by their origin linked to the VAR model reduced form residuals.

possibility. Concretely, we consider two separate periods, 1997-2002 and 2003-2008, and for each of these we estimate the set of seven equations as before (Table 3).

Table 3: **Fiscal indicators, output and elections over time** (Pool estimates for 10 CEE countries, period-wise)

Dependent variable	Own lag		Pre-electoral year dummy		Election year dummy		Adj. R^2	D-W Stat.
1997 - 2002[a]								
GDP growth	0.444 ***	(0.100)	-0.237	(0.180)	-0.332 **	(0.164)	0.088	2.260
Primary balance	-0.123	(0.119)	-0.052	(0.265)	-0.746 ***	(0.230)	0.153	2.086
Revenues	0.036	(0.126)	0.117	(0.306)	-0.484 *	(0.271)	0.017	1.761
Expenditures	-0.093	(0.125)	0.179	(0.301)	0.560 **	(0.265)	0.056	1.807
Cyc. adj. primary balance	-0.459 ***	(0.139)	0.141	(0.285)	-0.090	(0.241)	0.186	2.030
Cyc. adj. revenues	-0.402 ***	(0.132)	0.077	(0.321)	-0.175	(0.274)	0.177	2.290
Cyc. adj. expenditures	-0.552 ***	(0.131)	-0.078	(0.324)	0.026	(0.276)	0.286	2.397
2003 - 2008[b]								
GDP growth	0.451 ***	(0.143)	0.609 **	(0.249)	0.219	(0.263)	0.109	1.556
Primary balance	-0.205	(0.148)	0.141	(0.238)	-0.161	(0.238)	0.011	1.740
Revenues	-0.018	(0.138)	-0.080	(0.226)	0.149	(0.225)	-0.052	2.046
Expenditures	-0.199	(0.133)	-0.188	(0.207)	0.281	(0.207)	0.048	1.816
Cyc. adj. primary balance	-0.485 ***	(0.131)	0.003	(0.253)	-0.310	(0.264)	0.222	2.374
Cyc. adj. revenues	-0.455 ***	(0.138)	-0.144	(0.228)	-0.288	(0.237)	0.187	2.325
Cyc. adj. expenditures	-0.448 ***	(0.117)	-0.072	(0.208)	0.188	(0.217)	0.236	2.402

[a] Sample (adjusted): 1998 2002, periods included: 5, cross-sections included: 10 (in case of cyclically adjusted variables 8), total observations: 50 (40).
[b] Sample (adjusted): 2003 2008, periods included: 6, cross-sections included: 10 (in case of cyclically adjusted variables 8), total observations: 60 (48).
Note: Standard errors to estimated coefficients are in brackets. Cyclically adjusted series were obtained from the VAR exercise in [companion paper]. ***, ** and * denote significance at 1, 5 and 10 per cent level.

It appears that results from period-wise regressions support the hypothesis outlined above. At the baseline, we only find evidence on the opportunistic cycle in the initial period, running until 2002. On average over 1997-2002, the cycle in primary budget balance was driven mainly by a cycle in government expenditures, although we also found a weakly significant decline in tax revenues. Since 2003, the opportunistic cycle seems to have evaporated from the overall sample of the NMS. The period-wise evidence from cyclically adjusted variables is the same as from the overall sample. As for output, it turns out that pre-election and election years were on average marked by economic slowdowns in the earlier period and by upswings more recently. The finding from the overall sample on a diminishing political cycle in NMS is important. We submit it to a closer examination below.

III. Are there Differences in the Political Cycle across NMS?

From regressions in Section II we learned about electoral patterns in output and fiscal indicators that generally prevail in the overall sample of CEE countries. Working upon all 10 countries in a pool is somewhat simplified. The country-individual VAR analysis in the [companion paper] suggests that the relationship between fiscal policy and the business cycle is rather complex and

marked by large heterogeneity across countries. It is justified to assume that there is an amount of cross-country differences with respect to the political cycle as well.

In this context, however, working upon individual countries is not the way to go. On the one hand, we find that 2 or 3 electoral cycles each of the countries has passed until 2008 do not suffice to draw valid conclusions on the political cycle in a single country setup. On the other hand, we are actually not interested in saying 'there is political cycle present in country A and B, but not in C'. Instead, we want to understand key circumstances, empirically relevant, that signalize the possibility of political fiscal cycles to arise in young Europe. The VAR exercise in the [companion paper] is of help to propose one such feature. In further analysis, we break-down the group of ten CEE countries according to the following criteria (summarized in Table 4):

(1.) Arrangement of elections as an explicit political characteristic. Over 1997-2008, there has been a regularity in arrangement of elections in the ten CEE countries. In four of them, elections take place in March up to June of the year, whereas in the remaining ones, voting falls on September up to December[8]. Practically it means that if incumbent governments in countries with 'early' elections want to achieve a full effect of opportunistic measures, they need to make a part of their efforts visible to voters already in the year prior to elections. By contrast, in 'late election' countries we would expect eventual manipulation to appear in budgetary figures mainly in the election year when it is fresh in the memory of the electorate.

(2.) Lack of fiscal discipline, captured in persistent levels of debt, as a possible proxy for political fragility in the CEE region. Since 1995, three of the ten NMS witnessed an average ratio of debt to GDP exceeding 40 per cent. Such a level is relatively low in the eyes of many 'old' EU countries, however, it is well above the overall CEE average (30.6 per cent). A relatively high level of debt on itself may not say much on the politics. Therefore we specify this criterion more precisely as 'persistently high' levels of the debt. This way we have to drop Bulgaria, where the debt ratio has been steadily declining from above 105 per cent in 1997 to just 14 per cent in 2008. Two countries remain, Poland and Hungary, with the debt ratios virtually locked between 50-70 and 37-47 per cent, respectively. Intuitively, these two countries have been reported experiencing political instability[9]. Can we indeed show that the presence of political cycles goes hand in hand with a bad discipline?

(3.) Serious attempts to adopt the Euro. Even if failed at some point (like Lithuania in 2006), five out of ten CEE countries showed steady interest to integrate into EMU, demonstrated by fixed or interval target dates of euro adoption and a range of other formal steps. Whether or not they have meanwhile achieved the goal (like Slovenia in 2007 and Slovakia in 2009), attempts to adopt the euro could appear as an hand-tying circumstance with respect to budgetary decisions, thus

[8] The single exception were elections 2006 in Slovakia, taking place in June instead of September.

[9] 'Political Tensions Heighten in Poland', *The Washington Post* informed on July 27, 2007. As a result, premature elections took place just 2 years after last regular elections in 2005. Under the title 'Hungary: Tensions Brought to the Boil', Condon and Eddy analyzed reasons for the growing political unrest in Hungary for *Financial Times*, on December 19, 2006.

leaving less room for political manipulation.

(4.) Presence of crowding out effect, signalized by a negatively signed output response to a shock in government expenditures. This characteristic will appear useful to understand the effects of political cycles on the economy.

(5.) As last, the *exchange rate regime*. Exchange rate regimes have been discussed in the literature in connection with the political business cycle (e.g. Hall, 2008) and with the question of fiscal discipline. Some authors argued that fixed regimes impose a disciplinating restriction on governments, while a couple of more recent studies questioned that sort of conventional wisdom (e.g. Tornell and Velasco, 2000). It may be interesting to examine whether there are differences in evidence on political cycles between the 'fixed' and 'flexible' countries.

Table 4: **Selected characteristics of CEE countries**

	Elections in first half of election year[a]	Average debt ratio steadily >40% in 1995-2008	Regime of exchange rate fixed peg or CBA[b]	Presence of crowding out effect[c]	Serious long-term attempts for EMU integration
Bulgaria	x		x	x	
Czech Republic	x				
Estonia	x		x	x	x
Latvia			x	x	x
Lithuania			x		x
Hungary	x	x	x		
Poland		x		x	
Romania				x	
Slovenia				x	x
Slovakia					x

[a] In remaining CEE countries, elections regularly took place in September - December of the election year.

[b] The criterion reflects exchange rate strategies that prevailed in the particular country over 1997-2008. A detailed information on exchange rate regimes according to classification of IMF is provided in Appendix C.

[c] Based on estimated impulse response functions from VAR(1) model in the [companion paper].

To sum up, we now put the question of political fiscal cycles in the NMS under a more detailed view, using a rich set of cross-country characteristics[10]. For each of the break-downs, we estimate seven equations as specified in the previous section[11]. Indeed, it appears that it is justified to allow for a sufficient amount of heterogeneity when working with the CEE region. Detailed results of the

[10] Since we use normalized series, it is directly possible to compare results from subgroups with a different number of countries, without the necessity to consider weighted averages.

[11] Alternatively, we also estimated the set of seven equations, using modified dummy variables. Instead of indicating just occurrence of the pre-election or the election year, we constructed bivariate dummies so that they indicate the occurrence of either of those years and simultaneously the occurence of a certain country characteristics. The results from the alternative regressions were similar and do not principally alter our conclusions. In the text we instead decided to report estimates from the break-downs, to illustrate what has been happening in countries with a particular feature. We do not strictly understand the approach employed in this section as a theoretical validation of the country characteristics to cause political cycles.

group-wise regressions are in Appendix D. The extended analysis provides insightful information that can be summarized as follows:

First, it was impossible to establish evidence on political cycles in all of the country subgroups. In particular, we found no statistically significant evidence on opportunism in the subgroup where countries showed long-run attempts to adopt the euro (Table 5). This finding is important and we deepen it to more detail below.

Table 5: **Overall effects of EMU integration** (Pool estimates for CEE country subgroups, 1997-2008)

Dependent variable	Own lag		Pre-electoral year dummy		Election year dummy		Adj. R^2	D-W Stat.
Countries attempting for EMU[a]								
GDP growth	0.479 ***	(0.142)	0.244	(0.255)	-0.140	(0.239)	0.164	1.569
Primary balance	-0.356 **	(0.136)	0.404	(0.245)	-0.199	(0.278)	0.132	1.760
Revenues	-0.078	(0.128)	0.128	(0.258)	-0.084	(0.239)	-0.023	1.773
Expenditures	-0.210	(0.138)	-0.278	(0.256)	0.295	(0.236)	0.056	1.680
Cyc. adj. primary balance	-0.405 ***	(0.141)	0.354	(0.278)	-0.238	(0.266)	0.226	1.973
Cyc. adj. revenues	-0.344 **	(0.150)	-0.004	(0.299)	-0.180	(0.280)	0.111	2.239
Cyc. adj. expenditures	-0.467 ***	(0.136)	-0.315	(0.270)	0.129	(0.257)	0.267	2.135
Other countries[b]								
GDP growth	0.619 ***	(0.097)	0.208	(0.193)	0.025	(0.185)	0.422	1.777
Primary balance	-0.027	(0.128)	-0.255	(0.249)	-0.633 **	(0.241)	0.095	1.919
Revenues	0.153	(0.136)	-0.206	(0.274)	-0.230	(0.259)	0.003	1.789
Expenditures	-0.106	(0.118)	0.208	(0.245)	0.545 **	(0.238)	0.060	1.832
Cyc. adj. primary balance	-0.522 ***	(0.127)	-0.140	(0.249)	-0.198	(0.240)	0.222	2.165
Cyc. adj. revenues	-0.484 ***	(0.124)	-0.057	(0.248)	-0.283	(0.235)	0.218	2.242
Cyc. adj. expenditures	-0.544 ***	(0.113)	0.109	(0.242)	0.092	(0.232)	0.279	2.340

[a] Cross-sections included: 5 (in case of cyclically adjusted variables 3), total observations: 55 (33).

[b] Cross-sections included: 5, total observations: 55.

Note: Standard errors to estimated coefficients are in brackets. Sample (adjusted): 1998 2008, included observations: 11 after adjustments. Cyclically adjusted series were obtained from the VAR exercise in [companion paper]. ***, ** and * denote significance at 1, 5 and 10 per cent level.

Second, in line with our assumption, we found stronger evidence on opportunistic behaviour in countries that lacked fiscal discipline than elsewhere. This regards countries with persistent levels of debt (Table 10 in Appendix D). On average, the political deficit cycle in these countries appears to be driven both by tax revenues as well as government expenditures. We also found evidence on opportunistic manipulation from cyclically adjusted revenues and expenditures.

Third, we found slight differences in the timing of political cycles across countries, that is whether deterioration in fiscal performance or fiscal easing occurred in the year of elections or in the preceding year. The question is, what reason shall this be attributed to? We tend to think that the key circumstance to account for the timing of opportunistic cycles in NMS is the arrangement of elections (whether these do take place early or late in the election year). This conclusion is supported by the explicit break-down according to the arrangement of elections (Table 6). There is a clear difference in the sign of estimated coefficients at the pre-election dummy between the 'early' and the 'late' countries, including cyclically adjusted variables (although the coefficients are on the

edge of statistical significance). In countries with elections in September-December, the political manipulation with the budget has clearly concentrated in the year of elections. By contrast, 'early' election countries witnessed deterioration in fiscal performance as early as in the pre-election year.

Fourth, we noticed that the vast majority of evidence on political fiscal cycles in NMS is due to the cycle in government expenditures. This suggests that it was relatively easier to politically 'adjust' budget on the side of expenditures rather than revenues. The observation is somewhat in contrast with the knowledge from the existing literature. Namely, as Buti and Van den Noord (2004) put it, most models predicted tax cuts while the implication for governments spending was less clear-cut. A possible reason for this mismatch in evidence could be the fact that opportunistic tax cuts were primarily observed in other types of economies than the NMS. The sustained pressure to reform taxation systems during transition years could have prevented, to some extent, opportunism on the side of revenues.

Table 6: **Cross-country differences in a break-down by arrangement of elections** (Pool estimates for CEE country subgroups, 1997-2008)

Dependent variable	Own lag		Pre-electoral year dummy		Election year dummy		Adj. R^2	D-W Stat.
Countries with elections in March - June[a]								
GDP growth	0.519 ***	(0.140)	0.237	(0.251)	-0.029	(0.235)	0.247	1.382
Primary balance	-0.051	(0.146)	-0.281	(0.280)	-0.516 *	(0.268)	0.057	1.861
Revenues	0.236	(0.155)	-0.066	(0.304)	-0.317	(0.289)	0.036	1.703
Expenditures	-0.152	(0.153)	0.274	(0.291)	0.460	(0.282)	0.045	1.601
Cyc. adj. primary balance	-0.432 **	(0.159)	-0.439	(0.327)	-0.256	(0.313)	0.204	2.147
Cyc. adj. revenues	-0.436 ***	(0.154)	-0.113	(0.321)	-0.462	(0.289)	0.221	2.054
Cyc. adj. expenditures	-0.468 ***	(0.157)	0.355	(0.331)	0.143	(0.318)	0.195	2.200
Countries with elections in September - December[b]								
GDP growth	0.568 ***	(0.109)	0.231	(0.213)	-0.093	(0.201)	0.283	1.760
Primary balance	-0.241 *	(0.124)	0.289	(0.230)	-0.369 *	(0.216)	0.097	1.790
Revenues	-0.107	(0.113)	0.021	(0.232)	-0.062	(0.218)	-0.017	1.908
Expenditures	-0.116	(0.111)	-0.231	(0.221)	0.411 *	(0.209)	0.064	1.874
Cyc. adj. primary balance	-0.492 ***	(0.120)	0.322	(0.224)	-0.151	(0.219)	0.260	2.109
Cyc. adj. revenues	-0.429 ***	(0.121)	-0.031	(0.237)	-0.093	(0.228)	0.167	2.359
Cyc. adj. expenditures	-0.543 ***	(0.104)	-0.293	(0.209)	0.053	(0.204)	0.350	2.375

[a] Cross-sections included: 4 (in case of cyclically adjusted variables 3), total observations: 44 (33).
[b] Cross-sections included: 6 (in case of cyclically adjusted variables 5), total observations: 66 (55).
Note: Standard errors to estimated coefficients are in brackets. Sample (adjusted): 1998 2008, included observations: 11 after adjustments. Cyclically adjusted series were obtained from the VAR exercise in [companion paper]. ***, ** and * denote significance at 1, 5 and 10 per cent level.

To mention some of the miscellaneous findings, we have not identified major differences in 'political' evidence between countries that operated flexible or fixed exchange rate regimes. Unlike regressions in the total sample, some of the break-downs showed a weak presence of the political cycle also in cyclically adjusted data (e.g. in countries with steady levels of the debt, Appendix D). In terms of what is statistically significant, the overall evidence from cyclically adjusted data does not signalize any systematic presence of political cycles in the NMS. Yet we intuitively observe a slight tendency to loosen the fiscal stance on the way towards the elections. In

all subgroups, the lagged value in the primary balance equation was negatively signed, although not always statistically significant. This provides weak evidence that despite the occurrence of opportunistic behaviour around elections, budget deficits were on average not persistent.

Turning to the question how the integration process influenced the presence or absence of political fiscal cycles in NMS, we deepen the evidence from the 'EMU' break-down for period-wise regressions. More precisely, we estimated the seven equations for both country subgroups for each of the periods 1997-2002 and 2003-2008 (Table 7). Countries that did not attempt to adopt the euro, at least not in the near future, appeared particularly prone to the occurence of political fiscal cycle in the initial period running until 2002. However, the cycle seems to have diminished in this subgroup more recently. This also explains why the political fiscal cycle evaporated from the overall sample with the time passing, as documented in Section III.

As for the 'EMU membership seeking' countries, we did not find statistically significant deterioration of fiscal performance or fiscal expansions in either of the two critical years over 1997-2002. However, we observed on average a weakly significant fiscal loosening in the election years over 2003-2008. We qualify it as a slight tendency rather than evidence on a political cycle in the more recent period. Yet, the slight tendency signalizes questions for future research. If one repeats these regressions in a few years from now, will political cycles appear in NMS that approached the euro adoption most closely? Von Hagen (2003) observed 'consolidation fatigue' in many of the 'old' EU countries after the threat of not making it to the EMU membership disappeared. However, this finding concerns fiscal discipline rather than political cycles. The fact that the opportunistic cycle has diminished from budgets in countries for which we earlier found a clear evidence speaks rather for an optimistic prediction.

IV. Effects of Opportunistic Easing on Output

In previous sections of this paper and in the [companion paper] we have established a link between fiscal policy and the electoral cycle and between fiscal policy and the business cycle, respectively. To close the chain, now we need to link elections with the business cycle. More precisely, how does the political fiscal cycle pass-through into output fluctuations?

To demonstrate how GDP of CEE countries would react to what could be called 'electoral shocks', we use impulse response coefficients and a set of structural fiscal shocks, estimated by the VAR model in [companion paper]. The specification of fiscal shocks is summarized in Appendix B. More precisely, for each of the countries[12] we first construct average shocks in government revenues and expenditures that historically occurred in pre-election and election years (shocks are illustrated by Table 8). Subsequently, we construct overall response of output to a mix of these shocks: at zero, an average 'pre-election shock' happens, and at period one (a year later) an average 'election shock'. It appears that overall response of GDP to these stylized 'political shocks' is

[12] Estonia and Latvia are not included in the simulation. For these countries the VAR model was not estimated in levels, but only in first order differences.

Table 7: **Effects of EMU integration over time** (Pool estimates for CEE country subgroups, period-wise)

Dependent variable	Own lag		Pre-electoral year dummy		Election year dummy		Adj. R^2	D-W Stat.
Countries attempting for EMU								
1997 - 2002[a]								
GDP growth	0.375	(0.189)	-0.357	(0.282)	-0.345	(0.273)	-0.270	2.388
Primary balance	-0.329 *	(0.184)	0.377	(0.416)	-0.306	(0.385)	0.108	1.956
Revenues	-0.055	(0.186)	-0.029	(0.441)	-0.426	(0.406)	-0.091	1.612
Expenditures	-0.180	(0.193)	-0.337	(0.445)	0.278	(0.411)	-0.008	1.797
Cyc. adj. primary balance	-0.412 *	(0.228)	0.260	(0.583)	0.115	(0.511)	0.081	1.934
Cyc. adj. revenues	-0.257	(0.254)	0.228	(0.658)	0.037	(0.566)	-0.040	1.967
Cyc. adj. expenditures	-0.508 **	(0.204)	-0.100	(0.555)	-0.188	(0.482)	0.229	2.372
2003 - 2008[b]								
GDP growth	0.334	(0.234)	0.792 *	(0.410)	0.113	(0.421)	0.031	1.445
Primary balance	-0.422 *	(0.239)	0.439	(0.307)	-0.096	(0.286)	0.087	1.494
Revenues	-0.201	(0.188)	0.254	(0.301)	0.266	(0.290)	-0.014	1.943
Expenditures	-0.302	(0.232)	-0.241	(0.309)	0.311	(0.283)	0.041	1.565
Cyc. adj. primary balance	-0.401 **	(0.176)	0.408	(0.269)	-0.520 *	(0.272)	0.384	2.148
Cyc. adj. revenues	-0.533 **	(0.186)	-0.120	(0.272)	-0.412	(0.272)	0.314	2.329
Cyc. adj. expenditures	-0.363 *	(0.198)	-0.421	(0.268)	0.412	(0.274)	0.298	2.329
Other countries								
1997 - 2002[c]								
GDP growth	0.485 ***	(0.113)	-0.108	(0.238)	-0.339	(0.204)	0.325	1.803
Primary balance	0.066	(0.134)	-0.533 *	(0.272)	-1.007 ***	(0.234)	0.451	1.915
Revenues	0.125	(0.183)	0.230	(0.454)	-0.550	(0.380)	0.038	1.914
Expenditures	-0.105	(0.165)	0.747 *	(0.397)	0.812 **	(0.348)	0.157	1.666
Cyc. adj. primary balance	-0.558 **	(0.199)	0.105	(0.323)	-0.234	(0.269)	0.206	1.808
Cyc. adj. revenues	-0.535 ***	(0.162)	0.088	(0.369)	-0.359	(0.311)	0.295	2.229
Cyc. adj. expenditures	-0.605 ***	(0.185)	-0.075	(0.422)	0.166	(0.359)	0.266	2.261
2003 - 2008[d]								
GDP growth	0.590 ***	(0.167)	0.411	(0.290)	0.402	(0.320)	0.234	1.843
Primary balance	-0.129	(0.203)	-0.083	(0.377)	-0.155	(0.408)	-0.056	1.869
Revenues	0.257	(0.213)	-0.557	(0.335)	0.175	(0.354)	0.025	1.938
Expenditures	-0.144	(0.171)	-0.172	(0.297)	0.230	(0.320)	-0.014	1.983
Cyc. adj. primary balance	-0.527 ***	(0.177)	-0.307	(0.381)	-0.163	(0.411)	0.200	2.406
Cyc. adj. revenues	-0.403 *	(0.199)	-0.193	(0.352)	-0.174	(0.370)	0.107	2.251
Cyc. adj. expenditures	-0.509 ***	(0.150)	0.217	(0.301)	0.024	(0.316)	0.247	2.412

[a] Sample (adjusted): 1998 2002, included observations: 5 after adjustments, cross-sections included: 5 (in case of cyclically adjusted variables 3), total observations: 25 (15).

[b] Sample (adjusted): 2003 2008, included observations: 6, cross-sections included: 5 (in case of cyclically adjusted variables 3), total observations: 30 (18).

[c] Sample (adjusted): 1998 2002, included observations: 5 after adjustments, cross-sections included: 5, total observations: 25.

[d] Sample (adjusted): 2003 2008, included observations: 6, cross-sections included: 5, total observations: 30.

Note: Standard errors to estimated coefficients are in brackets. Cyclically adjusted series were obtained from the VAR exercise in [companion paper]. ***, ** and * denote significance at 1, 5 and 10 per cent level.

in most cases negatively signed and positive effects, if they occur, come in later on.

Table 8: **Average structural shock in primary balance, 1997 - 2008**

	BG	CZ	LT	HU	PL	RO	SI	SK
pre-election year	-0.26	-0.45	0.43	-0.12	-0.64	0.44	0.27	0.24
year of elections	0.78	-0.25	-0.52	-2.69	0.09	-0.31	-0.21	-0.24

Note: Shocks are expressed in % of GDP. Individual countries are denoted as follows: BG - Bulgaria, CZ - Czech Republic, LT - Lithuania, HU - Hungary, PL - Poland, RO - Romania, SI - Slovenia, SK - Slovakia. Overall shocks in primary balance are reported for illustration purposes. In simulations, individual revenue and expenditure shocks were used. Shocks were constructed using estimates from VAR model in [companion paper].

To some extent, this exercise supports the preliminary evidence from the introductory section that shows variability in GDP growth over the particular years of the electoral cycle. To recall the first figure, GDP growth tended to slow down around or after elections and accelerate on the way towards elections. Our simulation of 'political shocks' suggests that voters may not witness the 'good' of opportunistic manipulation immediately, if such a 'good' ever occurs. It rather seems that in some of the countries incumbent governments should start to act early after elections to make the effects on output visible to the electorate within the horizon of a regular 4-year cycle (Figure 3).

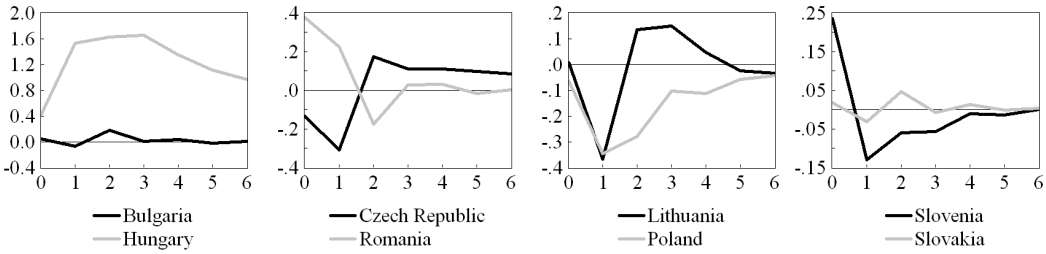

Figure 3: **Response of Output to a Mix of Electoral Shocks**
Note: Based on estimates from VAR model in [companion paper]. Coefficients are reported as % of GDP.

In addition, from our analysis it appears that governments concerned about macroeconomic stabilization should take carefully into account the actual response of economic activity to fiscal shocks. Our country characteristic captured in the presence of crowding out effect is particularly insigthful in this respect. Namely, variation in GDP growth has been markedly larger in CEE countries with crowding out effect, than otherwise. As documented in Appendix D (Table 10), we found evidence on opportunistic cycles in both country subgroups under this break-down. It seems that in the long run, countries with crowding out effect have not been rewarded for more variability in output by more economic growth (Figure 4). Indirectly, the simulation results also say something about possible effects of economic reforms. Typically, reformist measures are less popular with the electorate. However, it appears that if governments in NMS undertook reforms, involving a similar mix of fiscal shocks but with opposite sign as those around elections, in some

cases they actually could foster growth. Again it depends on the response of output to shocks in government expenditures and tax revenues.

It turns out that the political cycle has not passed through into business fluctuations of CEE economies automatically. To some surprise, we find the lowest standard deviation in output growth for those CEE countries that witnessed the most pronounced presence of opportunistic cycles. This regards particularly countries with persistently high debt ratios. On the other hand, we also observed that in the more disciplined countries, the higher variance in output growth went hand in hand with faster economic progress.

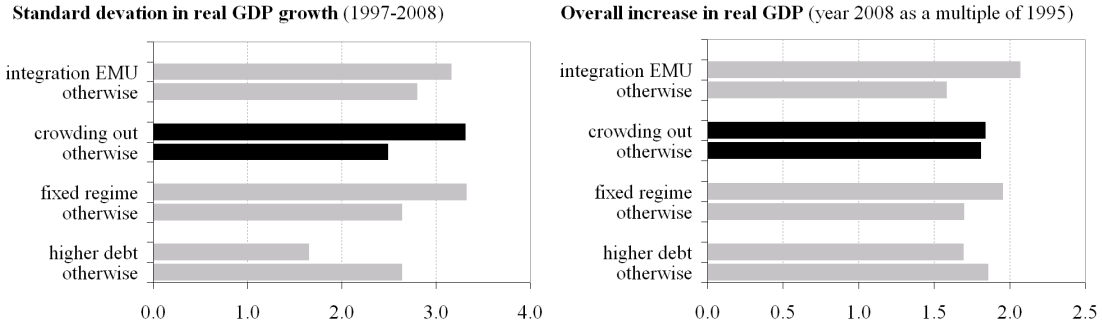

Figure 4: **Variance in Growth and Overall Performance**
Note: Averages for CEE country subgroups in break-downs according to Table 4.

Certainly, establishing a detailed causal chain from political incentives to discretionary measures taken to actual effects of these measures on economic activity would require more complicated work. In the case of CEE countries, such an exercise would also require more (and more detailed) data. Nevertheless, the message of our study with respect to macroeconomic stability is a clear concern: It appears that opportunistic manipulation with budgets has probably contributed to output fluctuations in some of the CEE countries (in those with a negatively signed response of GDP to government expenditures).

V. Concluding Remarks

We invite everybody to continue this research with a couple of questions that are beyond the scope of this paper. In particular, this evidence could be extended by a comparison with a larger set of countries (e.g. 'old' EU-15 or OECD economies). With time passing, it could also be possible to include a set of political dummy variables directly into the VAR model. With the data set of our length we observed that direct inclusion of dummies would absorb the vast majority of the dynamics which is theoretically difficult to accept. For this and other reasons, we have decided to run 'political' regressions separately.

In this paper, we contribute to a deeper understanding of political business cycles in the NMS insofar as available data allow to go. The VAR exercise in the [companion paper] provided exten-

sive help to this analysis in a number of ways: first, it delivered cyclically adjusted fiscal variables; second, it served as an information source to identify a country characteristic that appeared particularly important for understanding the economic effects of the political cycle; and third, knowledge from impulse response functions enabled us to simulate output responses to average 'electoral shocks' in the budget components.

We show that, considering the CEE region 'en bloc', there is a statistically significant evidence on political cycle in the primary budget balance. This was driven predominantly by the cycle in government expenditures. Our paper thus supports, to some extent, the conclusion from large cross-country studies, such as Brender and Drazen (2005), that political fiscal cycles are a phenomenon of new democracies.

However, detailed cross-time and cross-country analysis challenged the general view. We were not able to establish evidence on opportunistic fiscal cycles in all of the country subgroups. In particular, steady attempts to integrate into EMU seem to have prevented occurrence of such a cycle in a couple of the NMS. Moreover, we show that the opportunistic cycle has evaporated from budgets in the the overall sample of CEE countries with the time passing. This was due to the fact that the cycle diminished more recently in those CEE countries that were prone to political budget manipulation in the initial period.

In line with our assumption, we found stronger evidence on political cycles in those new European democracies that were characterized by a lack of fiscal discipline. The 'political' evidence appeared particularly pronounced in countries where governments failed, over the long run, to consolidate debt.

In a last step, we document effects of political cycles on economic activity in the NMS. We construct response of output to a set of 'electoral shocks'. This exercise enables us to address a two-fold message to governments: if seeking for political success, they should keep in mind that, if anything, voters are going to witness the 'good' of opportunistic budget manipulation with a delay. On the other hand, if concerned rather about macroeconomic stability, governments should take carefully into account the actual responses of output to discretionary fiscal shocks, in particular, the presence of a crowding out effect.

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Appendices

Appendix A: Description of Economic Data

For reasons of statistical quality and compatibility, the main source of data used is the AMECO database of the European Commission. In a few cases we have complemented the series with data drawn from the EBRD Transition Report database and the International Financial Statistics database of IMF. This way we obtain a data set for the ten CEE countries over the period of 1995-2008. In terms of the AMECO terminology, our series are defined as 'gross domestic product at current market prices' (UVGD), 'general government total revenue' (URTG) and 'general government total expenditure excluding interest' (UUTGI). All three series are deflated by GDP price deflator (PVGD). Primary budget balance is constructed as the difference between revenues and non-interest expenditures.

All fiscal variables and output are expressed in terms of first order differences. First differences of the cyclically non-adjusted fiscal variables are taken from the ratios on GDP. To set off cyclical fluctuations in output, first differences of cyclically adjusted variables were taken from the ratios on GDP linear trend. The trend for each country was constructed using initial value as in 1995 and average growth rate over 1996-2008. The series are, after taking first differences, normalized by subtracting the mean and dividing by the standard deviation. Normalization ensures that we view all variables by means of a measure that is universal for various countries. This step is essential, if we want to draw correct conclusions from pooled regressions in Section II-III and charts in Section I-II.

Appendix B: Fiscal Shocks and Cyclically Adjusted Fiscal Variables

Full reference to the estimated VAR model is provided in the [companion paper]. This appendix summarizes specification of cyclically adjusted fiscal variables we obtained for CEE countries (except Estonia and Latvia) from country-individual VAR(1) models in levels. Starting with reduced form $\mathbf{Z}_t = \mathbf{A}\mathbf{Z}_{t-1} + \mathbf{U}_t$, left-hand side expression $\mathbf{Z}_t \equiv [Y_t, T_t, X_t]'$ is a vector of output, government revenues and non-interest expenditures, and $\mathbf{U}_t \equiv [u_t^Y, u_t^T, u_t^X]'$ is the corresponding vector of reduced form residuals. We adopt a triangular identification strategy with $\mathbf{P}$ the transformation matrix and ϵ_t the vector of structural shocks, $\mathbf{P}\mathbf{U}_t \equiv \epsilon_t$. The set of structural shocks is specified as $\epsilon_t^Y = u_t^Y$ (unexpected movements in GDP), $\epsilon_t^T = p_{21}u_t^Y + u_t^T$ (shock in tax revenues) and $\epsilon_t^X = p_{31}u_t^Y + p_{32}u_t^T + u_t^X$ (shock in government expenditures). Cyclically adjusted tax revenues are then $\epsilon_t^{'T} = \epsilon_t^T$ and cyclically adjusted government expenditures are given as $\epsilon_t^{'X} = \epsilon_t^X - p_{32}u_t^T$. Finally, cyclically adjusted primary balance is specified as $bal_t' = \epsilon_t^{'T} - \epsilon_t^{'X}$.

Appendix C: Regimes of Exchange Rate in NMS According to IMF

Table 9: **De facto exchange rate regimes according to IMF, 1997-2008**

	Exchange rate strategy acc. to de facto classification as of July 31, 2006
Bulgaria	CBA
Czech Republic	flexible regime
Estonia	CBA
Latvia	fixed peg regime
Lithuania	CBA
Hungary	fixed peg regime
Poland	fixed peg (1997-1999), flexible regime (2000-2008)
Romania	flexible regime (1997-2000 and 2005-2008), fixed peg (2001-2004)
Slovenia	flexible regime (1997-2002), fixed peg (2003-2005), EMU (2006-2008)
Slovakia	fixed peg (1997 and 2006-2008), flexible regime (1998-2005)

Note: Table represents information as provided by www.imf.org on July 31, 2009. CBA stands for currency board arrangement. Exchange rate strategies are referred to as at the end of the year indicated in brackets. EMU denotes membership in Economic and Monetary Union.

Appendix D: Additional Results from Group-wise Regressions

Table 10: **Selected cross-country differences in fiscal policy over the electoral cycle** (Pool estimates for CEE country subgroups, 1997-2008)

Dependent variable	Own lag		Pre-electoral year dummy		Election year dummy		Adj. R^2	D-W Stat.
Countries with fixed regime of exchange rate[a]								
GDP growth	0.378 **	(0.150)	0.242	(0.251)	-0.039	(0.241)	0.105	1.462
Primary balance	-0.115	(0.128)	0.046	(0.242)	-0.405 *	(0.228)	0.035	1.596
Revenues	0.223	(0.126)	-0.044	(0.251)	0.005	(0.242)	0.019	1.705
Expenditures	-0.281 **	(0.122)	-0.105	(0.233)	0.518 **	(0.221)	0.138	1.510
Cyc. adj. primary balance	-0.390 ***	(0.138)	-0.042	(0.276)	-0.190	(0.274)	0.161	1.776
Cyc. adj. revenues	-0.389 **	(0.146)	-0.168	(0.284)	-0.237	(0.286)	0.166	2.153
Cyc. adj. expenditures	-0.356 **	(0.142)	0.025	(0.287)	0.233	(0.287)	0.124	1.982
Other countries[b]								
GDP growth	0.674 ***	(0.095)	0.288	(0.199)	-0.060	(0.184)	0.472	1.951
Primary balance	-0.190	(0.139)	0.060	(0.268)	-0.507 **	(0.247)	0.073	2.009
Revenues	-0.181	(0.130)	0.097	(0.267)	-0.329	(0.246)	0.026	1.838
Expenditures	0.000	(0.129)	-0.002	(0.266)	0.341	(0.246)	-0.009	2.098
Cyc. adj. primary balance	-0.526 ***	(0.131)	0.108	(0.254)	-0.186	(0.237)	0.228	2.258
Cyc. adj. revenues	-0.445 ***	(0.125)	-0.001	(0.251)	-0.207	(0.234)	0.187	2.306
Cyc. adj. expenditures	-0.607 ***	(0.109)	-0.126	(0.231)	0.004	(0.214)	0.356	2.373

Table 10 *(continued)*

Dependent variable	Own lag		Pre-electoral year dummy		Election year dummy		Adj. R^2	D-W Stat.
Countries with steadily higher debt ratio[c]								
GDP growth	0.651 ***	(0.221)	0.020	(0.445)	-0.239	(0.395)	0.251	1.744
Primary balance	-0.115	(0.231)	-0.239	(0.493)	-0.795 *	(0.445)	0.069	1.662
Revenues	0.457 **	(0.177)	-0.652 *	(0.365)	0.498	(0.349)	0.214	1.863
Expenditures	-0.073	(0.155)	-0.102	(0.357)	1.202 ***	(0.319)	0.367	1.829
Cyc. adj. primary balance	-0.404 *	(0.218)	-0.245	(0.474)	-0.379	(0.434)	0.082	2.053
Cyc. adj. revenues	-0.170	(0.234)	-0.786 *	(0.446)	0.144	(0.464)	0.105	2.197
Cyc. adj. expenditures	-0.393 **	(0.180)	-0.623	(0.411)	0.660 *	(0.373)	0.343	2.337
Other countries[d]								
GDP growth	0.531 ***	(0.092)	0.263	(0.172)	-0.032	(0.164)	0.278	1.612
Primary balance	-0.174 *	(0.103)	0.119	(0.190)	-0.379 **	(0.180)	0.062	1.850
Revenues	-0.041	(0.105)	0.106	(0.207)	-0.234	(0.198)	-0.001	1.756
Expenditures	-0.139	(0.103)	-0.015	(0.197)	0.258	(0.187)	0.018	1.708
Cyc. adj. primary balance	-0.509 ***	(0.106)	0.139	(0.201)	-0.133	(0.196)	0.259	2.099
Cyc. adj. revenues	-0.468 ***	(0.103)	0.107	(0.199)	-0.245	(0.195)	0.256	2.357
Cyc. adj. expenditures	-0.519 ***	(0.097)	0.065	(0.195)	-0.050	(0.190)	0.292	2.295
Countries with crowding-out effect[e]								
GDP growth	0.481 ***	(0.114)	0.318	(0.202)	-0.125	(0.205)	0.221	1.508
Primary balance	-0.053	(0.129)	0.115	(0.224)	-0.398 *	(0.223)	0.017	1.910
Revenues	0.054	(0.121)	-0.018	(0.240)	0.081	(0.239)	-0.029	1.742
Expenditures	-0.086	(0.119)	-0.124	(0.220)	0.440 *	(0.220)	0.029	1.783
Cyc. adj. primary balance	-0.553 ***	(0.147)	0.097	(0.262)	-0.055	(0.276)	0.228	2.033
Cyc. adj. revenues	-0.534 ***	(0.149)	0.241	(0.280)	-0.289	(0.281)	0.220	2.549
Cyc. adj. expenditures	-0.527 ***	(0.135)	0.008	(0.266)	-0.088	(0.274)	0.244	2.393
Other countries[f]								
GDP growth	0.660 ***	(0.128)	0.055	(0.262)	0.036	(0.226)	0.366	1.826
Primary balance	-0.268 *	(0.136)	-0.037	(0.296)	-0.567 **	(0.252)	0.134	1.670
Revenues	-0.053	(0.141)	0.020	(0.293)	-0.518 **	(0.254)	0.049	1.693
Expenditures	-0.176	(0.138)	0.127	(0.302)	0.413	(0.257)	0.054	1.757
Cyc. adj. primary balance	-0.414 ***	(0.125)	-0.011	(0.273)	-0.301	(0.235)	0.189	2.162
Cyc. adj. revenues	-0.398 ***	(0.120)	-0.346	(0.260)	-0.169	(0.220)	0.181	1.989
Cyc. adj. expenditures	-0.523 ***	(0.116)	-0.153	(0.256)	0.255	(0.219)	0.298	2.086

[a] Cross-sections included: 5 (in case of cyclically adjusted variables 3), total observations: 55 (33).

[b] Cross-sections included: 5, total observations: 55.

[c] Cross-sections included: 2, total observations: 22.

[d] Cross-sections included: 8 (in case of cyclically adjusted variables 6), total observations: 88 (66).

[e] Cross-sections included: 6 (in case of cyclically adjusted variables 4), total observations: 66 (44).

[f] Cross-sections included: 4, total observations: 44.

Note: Standard errors to estimated coefficients are in brackets. Sample (adjusted): 1998 2008, included observations: 11 after adjustments. Cyclically adjusted series were obtained from the VAR exercise in [companion paper]. ***, ** and * denote significance at 1, 5 and 10 per cent level.

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