Does divided government moderate electoral cycles in fiscal and monetary policy?
Annual and quarterly evidence from Latin America and the OECD

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Very preliminary - Comments welcome

Abstract: We explore whether effective checks and balances, measured by the presence of veto players in countries with high compliance with the law, moderate electoral cycles in fiscal and monetary policy. Annual data from 39 Latin American and OECD countries over the 1980-2005 period show that the aggregate budget surplus (our fiscal variable) and the rate of change of international reserves (our monetary variable) fall significantly before elections and rise afterwards only in Latin America, not in the OECD. Quarterly data allow to identify the electoral period much more precisely, suggesting the presence of cycles in the OECD. Moreover, our measure of institutional constraints on executive discretion turns out to be significant in explaining variations in electoral cycles across regions. Quarterly data show that effective checks and balances are significant in moderating fiscal and monetary cycles in both regions.

JEL classification codes: D72, D78, H60
Key words: electoral cycles, fiscal policy, monetary policy, checks and balances, veto players, rule of law

I. Introduction

As North and Thomas (1973, chapter 1) point out, without an appropriate institutional framework self-interest may direct actions to areas where private and social returns do not match. In this regard, we study the influence of institutions on electoral cycles in economic policy. Electoral cycles in monetary and fiscal policy have been widely debated since the pioneering studies by Nordhaus (1975) and Tufte (1978). In his review of twenty-five years of literature, Drazen (2001) points out that both types of cycles might

be interrelated, summing up the evidence by saying that active fiscal policy is the main impulse behind electoral cycles, while monetary policy has a passive role of accommodating expansionary fiscal policy.

While elections allow voters to select the most competent candidate, under asymmetric information incumbents have a temptation to engineer cycles in fiscal and monetary policy to improve their reputation and enhance their probability of reelection (Rogoff and Sibert 1988, Persson and Tabellini 1990). Our conjecture is that each government will exploit the instruments over which it has more discretionary power, so electoral cycles may differ from country to country. The specific institutional remedies we look into are legislative constraints on executive discretion.

We investigate in particular to what extent the presence of veto players in countries with high rule of law affect cycles. Our proxy for effective checks and balances on executive discretion combines the presence of a legislative veto player, built using the Henisz (2002) political constraints index, with the degree of compliance with the law, based on the ICRG law and order index. Both variables are drawn from the Henisz (2005) dataset, which is updated up to 2004.

Our aim is to see to what extent there are indeed joint cycles in monetary and fiscal policy. For electoral cycles in fiscal policy, we use an aggregate measure, the budget balance, which is a more sensitive indicator of electoral cycles than either aggregate expenditure or aggregate revenues, because it captures developments on both sides of the budget. For monetary cycles in fiscal policy, we first use the variation in international reserves (later we plan to incorporate interest rates).[1] International reserves might be a more appropriate indicator of monetary policy in developing countries, where monetary authorities often target exchange rates. On the other hand, in developed countries interest rates might be a more appropriate indicator of the stance of monetary policy.

As to the influence of checks and balances on monetary policy, Lohmann (1998) shows the crucial importance of veto players, represented by representatives of regional governments in the board of the Bundesbank not aligned with the federal government for

[1] Since Stein and Streb (2004) find that in Latin America there is a pattern of postponing exchange rate adjustments until after elections, this led us to look at the behavior of international reserves.

the independence of monetary policy in Germany. Keefer and Stasavage (2003) also stress the influence of veto players, and of the polarization between them, on central bank independence and inflation. We intend to explore the influence of checks and balances on alternative monetary policy instruments, starting by international reserves that should be affected if central banks try to electorally manage exchange rates.

As to the influence of checks and balances on fiscal policy, Schuknecht (1996) conjectures that political budget cycles are stronger in developing countries because of the lack of checks and balances. Streb, Lema and Torrens (2008) study this conjecture using a measure of effective checks and balances from the 2002 release of the Henisz dataset. However, a drawback of these papers, as of almost all the literature on fiscal cycles using cross-country panel data, is the use of annual observations. As Akhmedov and Zhuravskaya (2004) emphasize in their country study of Russia, since the sign of policies is reversed after elections, lower frequency data mask cycles because the effects around elections cancel out.

Our contribution is to analyze how institutional constraints on executive constraints affect both electoral cycles in fiscal and monetary policy, using annual and quarterly data from a wide cross-country panel that comprises 39 countries, 19 from Latin America and 20 from the OECD, over the 1980-2005 period. An open question in the literature is whether pre- and post-electoral effects in fiscal policy are concentrated around the quarters closest to elections. We check the behavior of fiscal and monetary variables as one shifts from annual to quarterly frequencies. Higher frequency data allow to uncover the electoral patterns more distinctly, and to identify the electoral period more precisely.

II. Database

Table 1 has the definition and sources of the variables we use in our econometric estimates. The fiscal and monetary variables are from the IMF's *International Financial Statistics*, while the GDP figures are from the World Bank. To construct the ratio of fiscal variables to GDP on a quarterly basis, we interpolated nominal GDP with the quarterly import series, using the Fernández (1981) procedure in MATLAB. We interpolated real GDP as well, to construct quarterly growth figures.

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The variables on veto players and rule of law are taken from the Henisz (2005) dataset.

III. Electoral cycles in fiscal policy: the behavior of the budget surplus

Previous cross-country panel studies of aggregate fiscal cycles in developing and developed countries use annual data to analyze the behavior of the budget surplus. This is the case of Persson and Tabellini (2003), Brender and Drazen (2005), Shi and Svensson (2006), and Streb, Lema and Torrens (2008).

As a preliminary measure of electoral cycles in fiscal policy, in Figure 1 we present an average of the budget balance around electoral years (which are year zero).

<please see Figure 1>

We now present yearly data from our dataset of 39 countries from Latin America and the OECD. While there are cycles in the whole sample, this is due to Latin American countries. However, once we control for effective checks and balances, we find significant fiscal cycles in the OECD (Streb, Lema and Torrens 2008 have somewhat similar results using another sample, the Brender and Drazen dataset).

<please see Table 2>

Table 3 presents the results with quarterly data. There is a significant electoral cycle not only in Latin American countries, but also in OECD countries (at the 5% level). Fiscal cycles are stronger in Latin America, something consistent with the previous literature that points to stronger cycles in developing countries (Schuknecht 1996, Shi and Svensson 2006). However, once we control for effective checks and balances, cycles are as significant in both regions.

IV. Electoral cycle in monetary variables: the behavior of international reserves

Stein and Streb (2004), using monthly data on exchange rates, found that in Latin American countries the rate of devaluation typically rises after elections, and more specifically one month after government changes. If governments are putting their foot on the rate of nominal devaluation during electoral periods, there is an obvious variable to look at: international reserves. Central Banks have to be willing to lose reserves in order to stabilize the exchange rate around elections.

Figure 2 shows that there are clear electoral cycles in the growth of international reserves in Latin America, but not in the OECD.

<please see Figure 2>

Table 4 looks at annual data on the rate of change of real reserves. In the total sample (column 1), the growth rate of reserves falls in the election year and recovers afterwards. This is determined by Latin American countries, whereas in OECD countries there is no evidence whatsoever of a cycle. Even after controlling for checks and balances, there in no cycle in the OECD.

<Please see Table 4>

Moving to quarterly data in Table 5, again, there is no evidence of cycles in OECD countries. However, once we introduce checks and balances, we find cycles in the OECD.

<Please see Table 5>

V. Final words

Our study has implications for the consensus that has developed on electoral cycles in fiscal policy being a developing country phenomena (Shi and Svensson 2006), or a phase experienced by countries while they are young democracies (Brender and Drazen 2005). Akhmedov and Zhuravskaya (2004) voice this consensus when they concentrate on Russia because it is a young democracy in an emerging economy.[2]

This consensus has been explained with the rationale that voters in developed countries are fiscal conservatives that punish deficit spending (Peltzman 1992). However, even in developed countries, if voters have problems of asymmetric information about fiscal policy, incumbents may be tempted to use debt for electoral purposes. Indeed, conditional on the existence of low fiscal transparency, Alt and Lassen (2006) find fiscal cycles in OECD countries.

The evidence we present is preliminary, but as it shows that institutional contraints on executive discretion matter. Furthermore, our results show that temporal aggregation matters too. The fiscal evidence with yearly data is similar to most previous studies: we find significant cycles in the total sample, but the results are driven by what has been described as a developing region with young democracies, Latin America. There are no cycles in OECD countries. However, once we move to quarterly data, our sample of OECD countries allows to uncover a significant electoral cycle when we introduce effective checks and balances. Moreover, quarterly data reveal that the effects of a fall in the surplus before elections, and a surge afterwards, are almost perfectly symmetric.

We also turn to the behavior of a variable that we have not seen studied in the literature, international reserves. The data also show that in Latin American countries, where countries try to manage their pegs before elections, there is a clear cycle where international reserves grow more slowly before elections, recovering afterwards. In OECD countries we are only able to uncover a cycle once we introduce our variable on effective checks and balances.

The fact that we found fiscal expansions before elections should in principle point under managed exchange rates to a gain in reserves, rather than a loss, before elections. The pattern of a loss of reserves under executive discretion may point to unsustainable

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[2] However, Persson and Tabellini (2003) find significant electoral cycles in fiscal policy in all types of democracies. Streb, Lema and Torrens (2008) also find cycles in OECD countries.

fiscal policies, where a devaluation after elections can be used to eliminate the increase of real government expenditure before elections.

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Table 1. Definition of variables

Variable	Description	Source
exp	Total government expenditure (year/quarter)	IFS
rev	Total government revenue and grants (year/quarter)	IFS
bal	Fiscal balance (year/quarter), equals *rev-exp*	IFS
exp_gdp	Total government expenditure as a percentage of GDP	A.C.
rev_gdp	Total government revenue and grants as a percentage of GDP	A.C.
bal_gdp	Fiscal balance as a percentage of GDP, equals *rev_gdp-exp_gdp*	A.C.
y(-t)	Dependent variable lagged *t* periods	A.C.
lngdp_pc	Natural log of GDP per capita in constant 2003 dollars (year/quarter)	World Bank and A.C.
gdpr	Growth rate of real GDP (year/quarter)	World Bank and A.C.
$ln(reserves\_r)$	International reserves in constant 2005 dollars, deflated by the US CPI index	IFS
$\Delta ln(reserves\_r)$	The log difference of real international reserves	IFS
*quinquenium*1	Dummy that takes value 1 in period 1980 to 1984	A.C.
*quinquenium*2	Dummy that takes value 1 in period 1985 to 1989	A.C.
*quinquenium*3	Dummy that takes value 1 in period 1990 to 1994	A.C.
*quinquenium*4	Dummy that takes value 1 in period 1995 to 1999	A.C.
*quarter*N	Dummy that takes value 1 in quarter N and 0 otherwise, where N=1, 2, 3.	A.C.
polcon3	Political constraints index	H 2005
vetoplayer	Takes value 1 if *polcon3* $\geq$ 2/3, and 3/2*polcon3 otherwise	A.C.
law	Law and Order index, combined with the ICRG Rule of Law index in the early years when the former is not available, divided by 6	H 2005 and ICRG
lawd	Dummy, takes value 1 for country if *law*$\geq$4 always, 0 otherwise	A.C.
checks	Effective veto player, given by *vetoplayer*lawd*	A.C.
ele	Takes value 1 in election year/quarter, 0 otherwise	A.C.
ele(-t)	Takes value 1 *t* periods before election, 0 otherwise	A.C.
ele(t)	Takes value 1 *t* periods after election, 0 otherwise	A.C.
pbc	*ele* minus its lead *ele(+1)*; with annual data it takes value 1 in election year, -1 in the following year, and 0 otherwise; with quarterly data, it takes value 1 in three quarters up to election, -1 in the three quarters after elections, and 0 otherwise.	A.C.
pbc_checks	Influence of *checks* on PBCs, given by *pbc* checks*	A.C.
pbc_dis	Discretional component of cycle, given by *pbc* (1 – checks)*	A.C.

Notes: IFS refers to the IMF *International Financial Statistics*; H 2005 to the Henisz (2005) database, ICRG to Internationa Country Risk Guide, A.C. to variables that are the authors' construction.

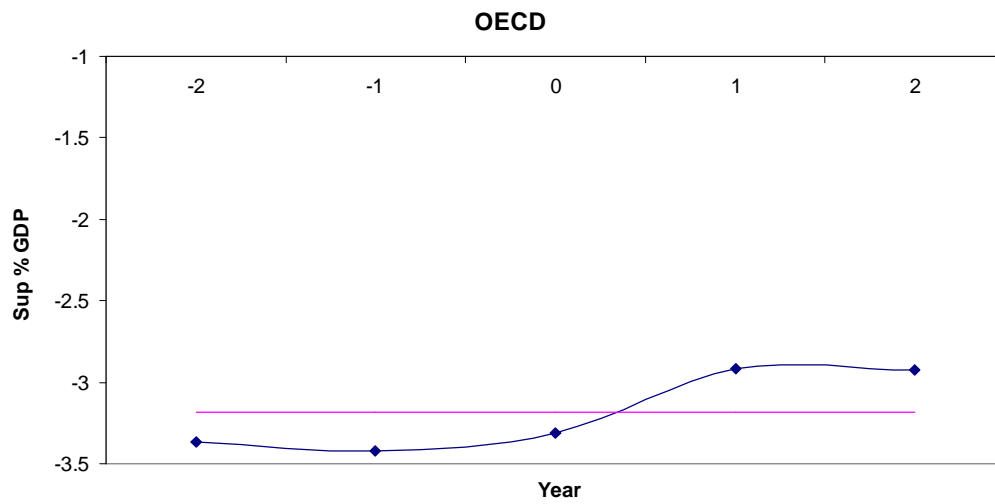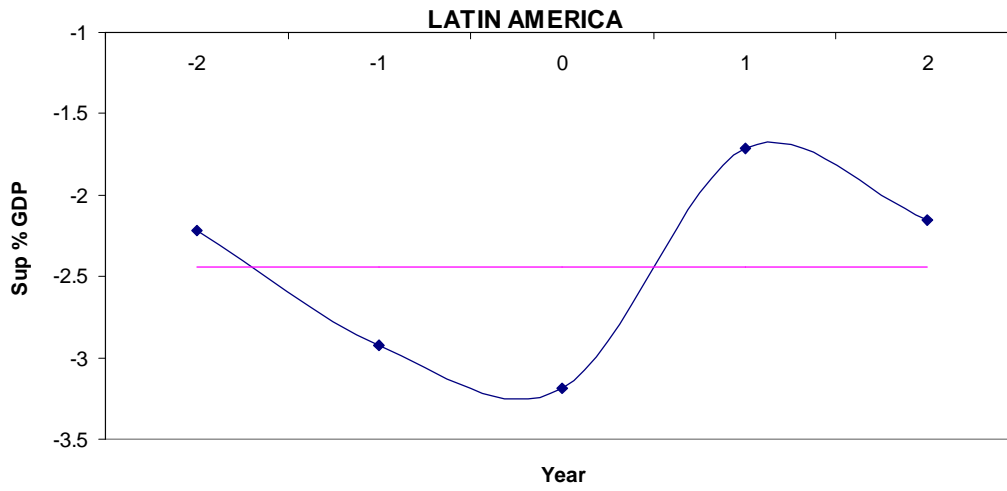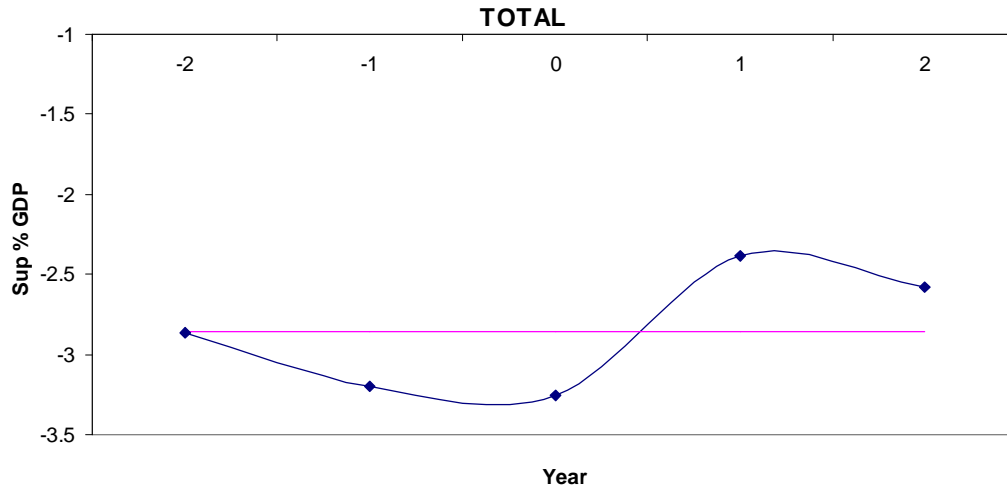**Figure 1. Budget balance around election years**

TOTAL

LATIN AMERICA

OECD

10

Table 2. Electoral cycles in ratio of budget surplus to GDP, *bal*, annual data 1980-2005

	Total				Latin America				OECD			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
bal(-1)	0.5932***	0.5874***	0.5949***	0.5944***	0.4562***	0.4460***	0.4497***	0.4496***	0.7701***	0.7699***	0.7917***	0.7900***
	(0.0488)	(0.0493)	(0.0515)	(0.0514)	(0.0815)	(0.0797)	(0.0771)	(0.0770)	(0.0367)	(0.0355)	(0.0313)	(0.0321)
lngdp_pc	0.0001**	0.0001**	0.0001**	0.0001**	-0.0010	-0.0010	-0.0012*	-0.0012*	0.0001	0.0001	0.0000	0.0000
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0006)	(0.0006)	(0.0006)	(0.0006)	(0.0001)	(0.0001)	(0.0000)	(0.0000)
gdpr	0.1037***	0.1053***	0.1106***	0.1102***	0.1102**	0.1085**	0.1062**	0.1064**	0.1597**	0.1601**	0.1673**	0.1681**
	(0.0335)	(0.0346)	(0.0365)	(0.0365)	(0.0412)	(0.0418)	(0.0422)	(0.0418)	(0.0602)	(0.0613)	(0.0643)	(0.0647)
ele	-0.2150				-0.4555				-0.1892			
	(0.1696)				(0.2630)				(0.2131)			
ele(+1)	0.7882***				1.2941**				0.1904			
	(0.2766)				(0.5100)				(0.2564)			
pbc		-0.4939***	-1.0141***			-0.8746**	-1.0180**			-0.1763	-0.8643***	
		(0.1620)	(0.3439)			(0.3185)	(0.4331)			(0.1350)	(0.1798)	
pbc_checks			1.3001**				0.9428				1.1483***	
			(0.4887)				(0.6858)				(0.2997)	
pbc_dis				-0.9586***				-1.0199**				-0.6620***
				(0.3199)				(0.4275)				(0.2239)
Constant	-3.5432***	-3.4196***	-3.2319***	-3.2306***	1.0865	1.4259	1.4661	1.4687	-2.2363	-2.2408	-0.6328	-0.6787
	(0.9681)	(1.0016)	(0.9820)	(0.9803)	(2.0071)	(2.1156)	(1.7890)	(1.7794)	(2.0325)	(2.0308)	(1.1376)	(1.1494)
Observations	789	789	736	736	359	359	325	325	430	430	411	411
R-squared	0.470	0.468	0.482	0.481	0.320	0.317	0.325	0.325	0.730	0.730	0.743	0.742
Number of id	39	39	38	38	19	19	18	18	20	20	20	20

Notes: robust standard errors in parentheses below coefficients. *** $p<0.01$, ** $p<0.05$, * $p<0.1$. We control for time effects using four quinquennial dummies (the first takes value 1 in the years 1980 to1984 and 0 otherwises; the other dummies cover the periods 1985-1989, 1990-1994 and 1995-1999).

Table 3. Electoral cycles in ratio of budget surplus to GDP, *bal*, quarterly data 1980:I-2005:IV

	Total					Latin America					OECD				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
lngdp_pc	1.0393	1.0228	1.0093	0.9417	0.9239	-2.7796**	-2.8615**	-2.8509**	-2.8451**	-2.8549**	3.4945*	3.4317*	3.4141*	3.0563	3.0352
	(1.0906)	(1.0942)	(1.0931)	(1.1395)	(1.1385)	(1.2719)	(1.2706)	(1.2714)	(1.2767)	(1.2770)	(1.9582)	(1.9573)	(1.9538)	(1.9851)	(1.9827)
gdpr	0.1031**	0.1047**	0.1049**	0.1095**	0.1086**	0.1564***	0.1596***	0.1608***	0.1455**	0.1438**	0.0528	0.0591	0.0612	0.0735	0.0704
	(0.0462)	(0.0465)	(0.0464)	(0.0498)	(0.0498)	(0.0573)	(0.0580)	(0.0581)	(0.0657)	(0.0660)	(0.0663)	(0.0658)	(0.0662)	(0.0670)	(0.0670)
ele(-2)	-0.1120					-0.6731**					0.4154				
	(0.2520)					(0.3245)					(0.3672)				
ele(-1)	-0.3737					-0.2610					-0.4154				
	(0.3510)					(0.3965)					(0.5816)				
ele(0)	-1.2048***					-1.4105***					-0.9074*				
	(0.3368)					(0.4563)					(0.4858)				
ele(+1)	-0.0092					-0.7782					0.5731				
	(0.3942)					(0.7377)					(0.3784)				
ele(+2)	1.4158***					1.7494***					0.9831***				
	(0.2904)					(0.4242)					(0.3794)				
ele(+3)	0.2953					0.6254*					-0.0935				
	(0.2680)					(0.3427)					(0.3657)				
collapse(-1)		-0.5696***					-0.7863***					-0.3150			
		(0.1922)					(0.2487)					(0.2851)			
collapse(+1)		0.5732***					0.5387*					0.4924**			
		(0.2015)					(0.3207)					(0.2356)			
pbc			-0.5648***	-0.9406***				-0.6634***	-0.7340***				-0.3952**	-1.3608**	
			(0.1283)	(0.2062)				(0.1871)	(0.2058)				(0.1729)	(0.6077)	
pbc_checks				1.1906***					1.7996*					1.6793*	
				(0.3466)					(1.0555)					(0.8573)	
pbc_dis					-0.9010***					-0.7065***					-1.1818**
					(0.1962)					(0.2042)					(0.4918)
Constant	-9.3042	-9.1289	-9.0276	-8.5701	-8.4342	15.5702*	16.1531**	16.0474*	15.5557*	15.6177*	-31.7249*	-31.1401*	-30.9631*	-27.8108	-27.6234

	(8.3845)	(8.4125)	(8.4071)	(8.7552)	(8.7480)	(8.2075)	(8.2078)	(8.2151)	(8.1300)	(8.1324)	(17.5676)	(17.5560)	(17.5352)	(17.7953)	(17.7751)
Observations	2723	2723	2723	2556	2556	1372	1372	1372	1237	1237	1351	1351	1351	1319	1319
R-squared	0.432	0.428	0.428	0.438	0.438	0.363	0.353	0.353	0.370	0.370	0.528	0.525	0.525	0.525	0.525
Number of countries	39	39	39	38	38	19	19	19	18	18	20	20	20	20	20
test ele(-2)+ele(-1)+ele(0) -ele(+1)-ele(+2)-ele(+3)=0	19.85	0.000146				12.61	0.325				5.343	0.206			
pP-value ()	(8.70e-06)	(0.990)				(0.000398)	(0.569)				(0.0210)	(0.650)			
test pbc - pbc_checks = 0				1.385					1.114					1.140	
p-value ()				(0.239)					(0.291)					(0.286)	

Notes: robust standard errors in parentheses below coefficients. *** p<0.01, ** p<0.05, * p<0.1. We control for time effects using four quinquennial dummies, the first of which takes the value 1 in the years 1980 to1984 and 0 otherwise, while the others cover the periods 1985-1989, 1990-1994 and 1995-1999. We control for seasonal effects using quarterly dummies for the first, second and third quarters. Four lags of the dependent variable are used.

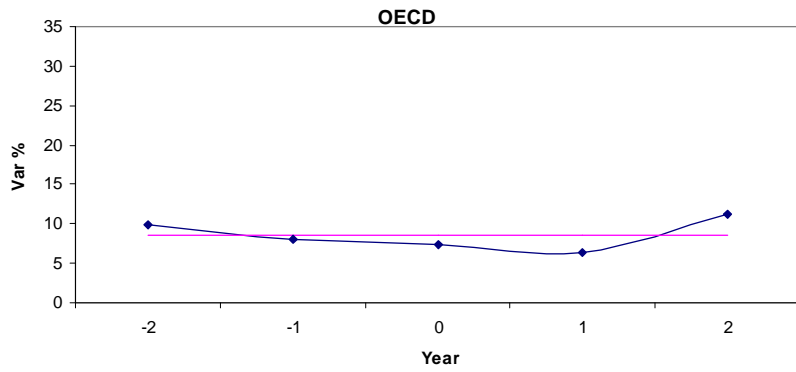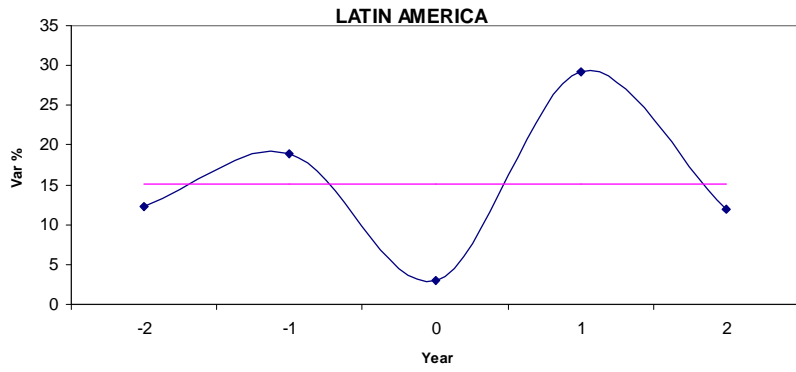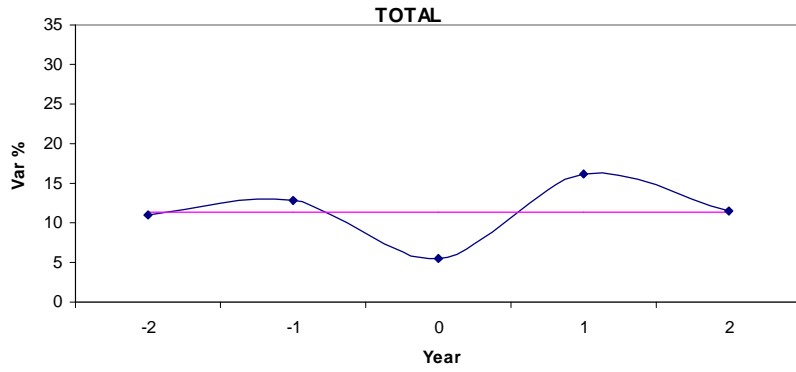**Figure 2. Annual rate of variation of international reserves around election years**

TOTAL

LATIN AMERICA

OECD

Table 4. Electoral cycles in growth rate of international reserves, Δ*ln(reserves)*, annual data 1980-2005

	Total				Latin America				OECD			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Δln(reserves) (-1)	-0.0965*	-0.0598	-0.0929*	-0.0958*	-0.1477**	-0.1425**	-0.1625**	-0.1630**	-0.0626	-0.0633	-0.0655	-0.0674
	(0.0529)	(0.0561)	(0.0547)	(0.0551)	(0.0550)	(0.0536)	(0.0588)	(0.0585)	(0.0703)	(0.0697)	(0.0706)	(0.0710)
lngdp_pc	-0.0000**	-0.0000***	-0.0000*	-0.0000*	-0.0002***	-0.0002***	-0.0002***	-0.0002***	-0.0000	-0.0000	-0.0000	-0.0000
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0001)	(0.0001)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
gdpr	0.0067	0.0037	0.0073	0.0073	0.0090	0.0089	0.0085	0.0087	0.0020	0.0022	0.0030	0.0029
	(0.0057)	(0.0059)	(0.0058)	(0.0058)	(0.0073)	(0.0072)	(0.0076)	(0.0076)	(0.0079)	(0.0078)	(0.0077)	(0.0078)
ele	-0.0497				-0.1212**				0.0128			
	(0.0299)				(0.0476)				(0.0300)			
ele(+1)	0.0603**				0.0982**				0.0050			
	(0.0280)				(0.0430)				(0.0375)			
pbc		-0.0481**	-0.1250***			-0.1139***	-0.1148***			0.0057	-0.0895	
		(0.0205)	(0.0300)			(0.0306)	(0.0328)			(0.0210)	(0.0655)	
pbc_checks			0.1765***				0.0222				0.1429	
			(0.0439)				(0.0514)				(0.0856)	
pbc_dis				-0.1154***				-0.1169***				-0.0516
				(0.0292)				(0.0325)				(0.0601)
Constant	0.2197**	0.3335***	0.1680*	0.1687*	0.5887***	0.5818***	0.6529***	0.6552***	0.1450	0.1446	0.1170	0.1131
	(0.0839)	(0.0698)	(0.0899)	(0.0899)	(0.1571)	(0.1531)	(0.1784)	(0.1775)	(0.2096)	(0.2119)	(0.2150)	(0.2142)
Observations	860	928	801	801	416	416	377	377	444	444	424	424
R-squared	0.045	0.054	0.065	0.062	0.131	0.133	0.146	0.145	0.063	0.063	0.071	0.064
Number of id	39	39	38	38	19	19	18	18	20	20	20	20

Notes: robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. We control for time effects using four quinquennial dummies (the first takes value 1 in the years 1980 to1984 and 0 otherwises; the other dummies cover the periods 1985-1989, 1990-1994 and 1995-1999).

Table 5. Electoral cycles in growth rate of international reserves, Δ*ln(reserves),* quarterly data 1980:I-2005:IV

	LATINOAMERICA					OECD					TOTAL				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
Δ*ln(reserves_r)(-1)*	-0.0656**	-0.0640**	-0.0626**	-0.0618*	-0.0618*	-0.0796*	-0.0747*	-0.0701*	-0.0696	-0.0696	-0.0640*	-0.0659*	-0.0659*	-0.0666*	-0.0664*
	(0.0312)	(0.0313)	(0.0314)	(0.0324)	(0.0324)	(0.0414)	(0.0417)	(0.0419)	(0.0438)	(0.0438)	(0.0358)	(0.0359)	(0.0359)	(0.0364)	(0.0364)
lngdp_pc	-0.1514***	-0.1520***	-0.1520***	-0.1498***	-0.1503***	-0.2053***	-0.2069***	-0.2006***	-0.2074***	-0.2076***	-0.0711	-0.0705	-0.0700	-0.0698	-0.0710
	(0.0416)	(0.0416)	(0.0415)	(0.0438)	(0.0438)	(0.0706)	(0.0707)	(0.0706)	(0.0755)	(0.0755)	(0.0517)	(0.0519)	(0.0520)	(0.0531)	(0.0533)
gdpr	0.0002	0.0002	0.0003	0.0010	0.0009	0.0028	0.0029	0.0032	0.0045	0.0045	-0.0018	-0.0019	-0.0019	-0.0017	-0.0017
	(0.0018)	(0.0018)	(0.0018)	(0.0019)	(0.0019)	(0.0028)	(0.0028)	(0.0028)	(0.0031)	(0.0031)	(0.0024)	(0.0024)	(0.0024)	(0.0024)	(0.0024)
ele(-2)	-0.0234**					-0.0229					-0.0219**				
	(0.0104)					(0.0183)					(0.0104)				
ele(-1)	-0.0215					-0.0573**					0.0116				
	(0.0136)					(0.0231)					(0.0140)				
ele(0)	-0.0428***					-0.0886***					-0.0007				
	(0.0127)					(0.0204)					(0.0152)				
ele(+1)	-0.0133					-0.0467					0.0171				
	(0.0166)					(0.0311)					(0.0157)				
ele(+2)	0.0175					0.0379					-0.0004				
	(0.0151)					(0.0268)					(0.0142)				
ele(+3)	0.0100					0.0015					0.0162				
	(0.0133)					(0.0222)					(0.0155)				
collapse(-1)		-0.0292***					-0.0568***					-0.0035			
		(0.0078)					(0.0130)					(0.0086)			
collapse(+1)		0.0048					-0.0017					0.0106			
		(0.0092)					(0.0162)					(0.0094)			
pbc			-0.0166***	-0.0319***				-0.0275***	-0.0330***					-0.0065	-0.0315*
			(0.0055)	(0.0096)				(0.0097)	(0.0113)					(0.0055)	(0.0161)
pbc_checks				0.0412***					0.0482						0.0421*

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
					(0.0149)					(0.0307)					(0.0228)
pbc_dis					-0.0303***					-0.0327***					-0.0245*
					(0.0091)					(0.0112)					(0.0135)
Constant	1.2091***	1.2141***	1.2101***	1.1900***	1.1933***	1.3916***	1.4051***	1.3549***	1.3746***	1.3756***	0.6599	0.6530	0.6505	0.6516	0.6623
	(0.3210)	(0.3207)	(0.3199)	(0.3381)	(0.3380)	(0.4582)	(0.4594)	(0.4582)	(0.4829)	(0.4828)	(0.4628)	(0.4643)	(0.4652)	(0.4745)	(0.4764)
Observations	3291	3291	3291	3108	3108	1647	1647	1647	1497	1497	1644	1644	1644	1611	1611
R-squared	39	39	39	38	38	19	19	19	18	18	20	20	20	20	20
Number of countries	0.027	0.026	0.025	0.028	0.027	0.054	0.046	0.042	0.045	0.045	0.029	0.027	0.027	0.029	0.028
test ele(-2)+ele(-1)+ele(0) - ele(+1)-ele(+2)-ele(+3) = 0	9.806	3.452				7.904	6.965				1.809	0.253			
p-value ()	(0.00176)	(0.0633)				(0.00499)	(0.00839)				(0.179)	(0.615)			
test pbc - pbc_checks = 0				1.342					0.333					1.299	
p-value ()				(0.247)					(0.564)					(0.255)	

Notes: robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. We control for time effects using four quinquennial dummies, the first of which takes the value 1 in the years 1980 to1984 and 0 otherwise, while the others cover the periods 1985-1989, 1990-1994 and 1995-1999. We control for seasonal effects using quarterly dummies for the first, second and third quarters.