

**POLITICAL BUDGET CYCLES
IN TRANSITION ECONOMIES:
EVIDENCE FROM FSU COUNTRIES**

by

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Abstract

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In this thesis I use a panel data set on 15 former Soviet Union countries to examine the relation between elections and change in the composition of government budget expenditures in these countries.

Results show that election-year government expenditures shift towards more visible current consumption and/or away from government investment goods. The magnitude of such distortions depends heavily on the existing state of democracy in the specific country: the more democratic is society the less opportunity an incumbent has to manipulate the budget with impunity in order to maximize the number of votes and to be reelected. Interestingly, in the least democratic countries (e.g. Tajikistan) the incumbents have concentrated such a vast political and economic power (that flows into a complete control over the elections institutions, if those exist at all) that makes it virtually impossible for non-incumbent parties/candidates to win the office. Thus, for the least democratic countries we can observe only negligible changes in budget expenditures composition due to elections.

The extent of manipulations depends also on the incumbent’s popularity before elections: incumbents manipulate only in proportion to the value of buying a few marginal votes.

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GLOSSARY

Opportunistic party – chooses policy to maximize the probability of election (reelection) without regard to past position.

Partisan party – set policy to attain certain economic and social objectives and give no independent weight to gaining office or political popularity. (Nordhaus, 1989)

Budget cycle – recurring or overlapping events in the budgeting and spending process.

Political budget cycle – theory (developed primary in Rogoff and Sibert(1988) and Rogoff (1990)) that emphasizes fiscal policy effect of elections rather than output/inflation/unemployment outcomes or monetary policy effects.

Separating equilibrium – an equilibrium where the different types of informed players act differently (Gardner, 1995). In a separating equilibrium, the incumbent's choice of fiscal policy perfectly reveals his competency type (high or low level of competency) (Rogoff, 1990).

Pooling equilibrium – an equilibrium where all informed players act similarly (Gardner, 1995). In a pooling equilibrium, the incompetent type of incumbent might mimic the competent type (Rogoff, 1990).

Sequential equilibrium – is a non-empty set of strategies for incumbent and each voter, and a set of belief for voters, which together satisfy backward induction on all information sets (Gardner, 1995). Sequential equilibrium arises in a signaling game where the incumbent, contrarily to voters, possesses information about his/her competency (information asymmetry) and by choosing the particular strategy wants to signal to voters his competency type. Sequential equilibria may include both separating and pooling equilibria.

Opportunistic political cycle – is a result the incumbent behavior that use expansionary policy to improve their economic performance before an election and re-election chances if voters judged incumbents by economic performance, and contractile policy afterwards.

Partisan political cycle – follows from the assumption that politicians decide the course of economic policy according to their ideological preferences. The differences in these preferences between previous and following governments lead to political cycle.

Chapter 1

It is impossible to consider the ordinary course of affairs in the United States without perceiving that the desire to be re-elected is the chief aim of the President ; ... and that especially as [election] approaches, his personal interest takes the place of his interest in the public good.

- *Alexis de Tocqueville, Democracy in America*

So, if even in the highly democratic United States we can observe dishonest incumbents, what could we expect then about Ukraine or other FSU countries?

INTRODUCTION

In political economy models of electoral competition, the traditional intuition has been that opportunistic politicians will manipulate economic policy around election times for political gain. The hypothesized relationship between political and economic cycles has been widely studied for the OECD democracies and, to a lesser extent, for the developing countries. However, none of the previous studies concentrated specifically on the post soviet countries. For my mind, the primary reason was absence of sufficiently large time horizon to make reliable conclusions due to the short history of these countries. In fact, the incidence of political budget cycles is particularly interesting in the context of post-Soviet countries that, indeed, stand aside of the rest of developing countries as a result of very specific historical path that shaped and continue to influence relationships in their economic and political sphere.

**HISTORICAL DEVELOPMENT OF POLITICAL BUDGET CYCLES:
A REVIEW OF THEORY AND EMPIRICAL TESTING**

Economists and political scientists have long been intrigued by the coincidence of elections and economic policy cycles. The general development of this interest obtained its reflection in different theories on political *business* cycles. Among them the political *budget* cycle theory, in particular, emphasizes fiscal policy effect of elections rather than output/inflation/unemployment outcomes or monetary policy effects. However, as long as the latter theory stemmed in its development from the former one and, in fact, the assumptions on which the political budget cycles theory relies should be regarded in the tight connection with political business cycles, I will start this literature review by looking at research that have been done on political budget cycles while considering basic features of political business cycles.

In general, there are two strands of thought which formalize the common notion that politics matter for the conduct of economic policy, i.e. the *Opportunistic* and the *Partisan Schools*.

The *opportunistic school* originated directly from the pioneering Nordhaus's (1975) formal model¹ of the political business cycle. It argues that incumbent governments have an incentive to use expansionary policy to improve their economic performance before an election and re-election chances if voters judged incumbents by economic performance. After re-election governments

¹ The idea of strong electoral and partisan motivations regarding the degree, nature, and timing of economic-policy activity can be found earlier in the works by Schumpeter (1939), Kalecki (1943), Åkerman (1946, 1947).

would contract the economy (decrease current spending) to prepare it for a new upswing, creating something like a *rational opportunistic cycle*.

The other line of thought in the field, the *partisan school*, was initiated by Hibbs (1977). He argued that politicians are not opportunistic, but decide the course of economic policy according to their ideological preferences. "Right" governments will, in general, pursue a less expansionary policy than "left" governments. This difference in policy would influence the real economy, probably generating something like a "partisan cycle" or partisan trends.

Another key distinction between the Opportunistic and the Partisan Schools is that the former one relies explicitly on a median voter theorem that under single peaked preferences and simple majority voting implies that the policy (or outcome target) selected by the government is the one preferred by the median voter. Yet, the Partisan School assumes two or more distinct voting blocks.

This review of classical and modern studies of political business cycles follows (with some extension) Alesina's (1988) taxonomy of models. That classification is based on 2 criteria:

1. whether voters evaluate candidates retro- or prospectively, which corresponds to adaptive or rational expectations peculiar to economic actors, and
2. whether policy makers have opportunistic (office-seeking) or partisan motivations (Table 1).

			Expectations and Evaluations	
			<i>Adaptive, Retrospective</i>	<i>Rational, Prospective</i>
Motivations*	<i>Opportunistic (Office-seeking)</i>	Nordhaus (1975), Tufte (1978)	Cukierman & Meltzer (1986), Rogoff & Sibert (1988), Rogoff (1990)	
	<i>Partisan</i>	Hibbs (1977, 1987a,b)	Alesina (1987, 1988), Alesina & Rosenthal (1995), Alesina et al. (1997)	

* This criterion has been put to distinguish between opportunistic and partisan Schools in the theory of political business cycles.

TABLE 1. Classification of political-business-cycle theories

Additionally, Franzese (2002) distinguishes policy cycles (cycles revealed as changes in policy instruments, e.g. fiscal, monetary) from outcome cycles (cycles resulted in real outcomes, e.g. output, employment etc.).

2.1. OPPORTUNISTIC CYCLES (OFFICE-SEEKING POLICY MAKERS)

Adaptive, Retrospective Citizens

Nordhaus (1975) developed his model in the context of a naïve Phillips curve model under the following assumptions:

1. Economic actors are characterized by adaptive expectations (i.e., their expectations of current policy are built upon past policy), so the economy is described by an expectations-augmented Phillips curve.
2. Voters favor incumbents who preside over low inflation and high growth and employment, and they discount recent outcomes less than distant ones in their retrospective evaluations.
3. Incumbent policy makers (a) seek reelection and (b) control Phillips-curve stimulatory policies.

With fixed election dates, Nordhaus predicted that incumbents will conduct stimulatory policy to improve real outcomes (e.g., output, income, employment) in pre-electoral periods. After the elections, contractile policies

are implemented to combat the resulting inflation and to prepare to stimulate economy again for the next election (Nordhaus, 1975).

Applying Tufte's (1978) murder-mystery terms, points 2 and 3a create the "motive," point 1 creates the "opportunity," and point 3b creates the "weapon" for incumbents to electioneer.

There have been many econometric tests of the opportunistic PBC, both for economic outcomes and for policy instruments. The most common form of econometric test of these models in terms of outcomes is to run an autoregression of an economic performance measure on itself, a small set of economic variables, and political dummies to test a specific theory. Consider a regression of the form:

$$Y_t = \sum_{i=1}^s a_i Y_{t-i} + b_0 + \sum_j a_j X_{jt} + dPDUM_t + \xi_t$$

where Y is an outcome variable such as GDP, the X are other economic variables that may also affect Y, such as world economic activity, and PDUM is a political dummy variable (or set of variables) meant to represent a given political model. The auto-regressive specification for Y is adopted as a parsimonious representation of the time series behavior of Y, instead of using a structural model.

As estimated in practice the theoretical model proposed by Nordhaus found little supportive evidence. Many researchers (Alesina & Sachs (1988), Alesina & Roubini (1992), Alesina et al. (1992, 1993a, b, 1997), Alesina & Rosenthal (1995), Paldam (1979), (1981), (1982)) conclude similarly that evidence from the United States or OECD democracies offers inconsistent support for electoral policy cycles and very little support for electoral outcome cycles, especially in real outcomes.

Rational, Prospective Citizens

Lack of such supportive evidence induced the political-business-cycles theorists to revise the assumptions of the theoretical models, among which

the weakest one was the assumption of adaptive expectations. “Economists observed that electoral cycles in these models consistently fool voters and economic actors (violating Lincoln’s famous adage), yet voters can easily foresee elections and policy-maker incentives. Thus, electoral cycles should not exist or should have no real effects if voters and economic actors are rationally foresighted” (Franzese, 2002).

The main sources of electoral cycles in rational-expectations political-business-cycle models (Cukierman & Meltzer 1986; Rogoff & Sibert 1988; Rogoff 1990; Ellis & Thoma 1991a; Sieg 1997; Heckelman & Berument 1998; Lohmann 1998, 1999; Carlsen 1999; Faust & Irons 1999; Gärtner 1999; Gonzalez 1999a,b, 2000) are information advantages that elected policy makers enjoy over voters; they possess some outcome-affecting characteristics that persist over time, and control some policies with which they can leverage their advantages to signal or to feign beneficial characteristics. They achieve here similar (as under adaptive expectations assumption) electoral effects by exploiting

(a) differences in the timing with which various policies become clear to rational voters and

(b) private information on their own competence.

For example, in Persson & Tabellini (1990) model incumbents have information advantages over voters regarding exogenous macroeconomic shocks and control policies that can counteract such shocks. Some policy makers manage macroeconomic policies more competently, achieving greater real stabilization at lower nominal cost (inflation), and such competence persists but is unknown to voters. Under these conditions, prospective voters rationally evaluate incumbents retrospectively, preferring those who have recently delivered above-average mixtures of inflation and stabilization because (by Bayes’ Law) the probability of high competence incumbents given recent strong performance is greater. Thus, voters expect better real outcomes if they reelect incumbents than if they elect random,

unproven (i.e., expected average-competence) challengers. Accordingly, incumbents would like to signal or to feign competence with stimulatory policies around elections, and either all incumbents will electioneer in this way (“pooling equilibrium”) or only the more competent will (“separating equilibrium”).

As several researchers (e.g., Alesina et al. 1997; Drazen 2000, 2001; Persson & Tabellini 2000) have summarized in their empirical testing, the main observable difference between rational-expectations-equilibrium electoral cycles and the Nordhaus (1975)/Tufte (1978) variety of electoral cycles is that the former model predicts smaller and less regular cycles, especially in real outcomes.

2.2. PARTISAN CYCLES (POLICY-SEEKING POLICY MAKERS)

Adaptive, Retrospective Citizens

Similar to Nordhaus, Hibbs’s partisan model was also based upon voters’ myopia. His two-party model envisaged a left-wing party and a right-wing party. The former would be willing to reduce unemployment at the expense of high inflation, while the latter would be prepared to tolerate more unemployment with lower inflation. With left-wing victories, cycles are post-election as opposed to pre-election with right-wing victories (Hibbs, 1987).

Estimating different models of partisan economic-outcome models from U.S. data, Hibbs (1977, 1987a) shows roughly long-run 1.5%--2% higher unemployment and 5.3%--6.2% lower real growth under Republicans than Democrats (1987a, p. 225). Hibbs (1987b, 1992, 1994) finds appreciably distinct economic outcomes under left and right governments not only in the United States but also in broader samples of OECD democracies, as does Paldam (1989). Alesina and colleagues concur on the existence of both U.S. and OECD partisan outcome cycles. Alt (1985), Alvarez et al. (1991), and Beck et al. (1993) find partisan patterns in unemployment or growth in OECD countries that depend on institutional and strategic context.

Even more interesting for modeling from the empirical perspective become the partisan economic-policy cycles. A mammoth empirical literature addresses various aspects of partisan policy. For example, Imbeau et al. (2001) offer meta-analysis of 43 of over 600 publications they uncovered from, among other sources, Bartolini et al.'s (1998) database of 11,500 studies of European parties and party systems. Hibbs (1987a, p. 249) finds that U.S. fiscal policy (cyclically adjusted deficits controlling for wars) and monetary policy (M1 money-supply growth) track presidential partisanship (and, to a lesser degree, House and Senate partisanship), consistent with the outcome effects he has noted. Alesina and colleagues likewise interpret the partisan monetary and fiscal cycles they find in U.S. and OECD postwar samples as capable of producing the outcome effects predicted by rational partisan theory.

However, as one might expect with so many samples, methodologies, and specifications, the wider empirical record is mixed. In Imbeau et al.'s (2001) meta-analysis, 37 of the 43 studies address economic policy, spanning welfare, education, health, social-security, privatization, intervention, public-employment, spending, revenue, debt, deficit, and other economic policies to yield 545 correlations or regression coefficients. Of these, 395 (72.5%) sign as standard partisan theory predicts, with 135 (24.8%) significant at $p=0.10$; 145 (26.6%) have wrong sign, 45 (8.3%) significantly; 5 (0.9%) report no relation.

Rational, Prospective Citizens

In contrast to electoral cycles, no particular empirical puzzle motivated the introduction of rational expectations into partisan theory. As shown above, the evidence was solid for partisan cycles in real and nominal outcomes and sufficient if not unequivocal for some policy cycles that could produce those outcomes.

Alesina's (1987, 1988) seminal "rational partisan theory" filled more-pressing theoretical needs, providing a framework logically coherent with modern rational-expectations economics, the central tenet of which is that fully expected macroeconomic policies, such as those assumed by traditional electoral or partisan policy-cycle models, are ineffective. In rational-expectation partisan theory, only unexpected monetary and fiscal policy can create such real-economic effects, so when left (right) governments are elected, to the degree this was not completely foreseen, growth, employment, and inflation rise (fall). However, as time elapses, new economic actors can agree to new price and wage contracts expecting the higher (lower) inflation, so growth and employment return to their natural rates, while inflation remains higher (lower). Thus, Alesina et al. (1997) claim that rational and non-rational versions of partisan theory differ primarily in whether the real effects of partisan shifts in government persist or fade over the term of the government.

Alesina and colleagues have examined aggregate political and economic data over the postwar period from the United States separately and from many OECD countries together (including the United States). They conclude that the evidence remarkably consistently favors the rational-expectations models; that it indicates strong partisan effects but few discernible election-year effects on macroeconomic outcomes; and that it suggests both election and partisan effects on macroeconomic policies. Moreover, they find that partisan policy and outcome effects are clearer in two-party/bloc than in multi-party/bloc systems, and that the net economic benefits of credibly delegating monetary authority to conservative policy makers (e.g., central-bank independence) are larger than would be expected in the absence of electoral and partisan policy-making cycles.

In sum, Alesina and colleagues' rational partisan theory and associated empirical work demonstrates important partisan effects on macroeconomic policies and outcomes.

2.3. POLITICAL BUDGET CYCLE THEORY.

The political *budget* cycles theories started its development from the works of Cukierman and Meltzer (1986), Rogoff and Sibert (1988), and Rogoff (1990). Unlike the earlier models of opportunistic business cycles with adaptive expectations, they assumed rational expectations of voters and emphasized “political budget cycle” in fiscal policy rather than output and inflation. In particular, these theories predict distortions in the *composition* of public spending, if not in its level.

In his “signaling model” Rogoff (1990) showed that, by shifting government expenditure towards easily observed consumption spending and away from investment, the incumbent can signal his competence and increase his chance of reelection. For Rogoff, however, the primary point of interest is not so much that office-seeking (e.g., opportunistic) politicians would engage in pre-election budgetary distortions, but rather why rational voters would allow their expectations about post-election performance to be influenced by such “antics.”

In particular, Rogoff (1990) posits that voters maximize a utility function including the consumption of both private goods c , and public goods g . The public goods production function (e.g., the government budget constraint) takes the form:

$$g_t + k_{t+1} = \tau_t + \varepsilon_t$$

where g is the public consumption good, k is the public investment good, τ is lump-sum taxes, and ε is a stochastic “competency” shock (with an MA(1) structure so that competency persists, but only for one period). A critical characteristic of this specification is that public investment decided at time t only becomes visible and productive at time $t+1$. The policy cycle arises here from a moral hazard problem: the incumbent’s ability to manipulate policy instruments is observable only with a lag: voters in the pre-election period

observe g_t and k_t , but not k_{t+1} and hence neither do they ε_t until time $t+1$ (though it is known contemporaneously by the incumbent).

The incumbent's competence is thus signaled by the ability to provide the greatest quantity of g for a given τ .

This production structure, combined with the informational asymmetry regarding competence, can give rise to a separating equilibrium in which the competent incumbent biases pre-election fiscal policy towards easily observed consumption expenditures and away from government investment. The MA(1) structure of the competency shock further implies that politicians' incentive to create political budget cycles is limited to pre-election periods. Ironically, Rogoff (1990) also demonstrates that the greatest budgetary distortions are promulgated by the most competent politicians, implying that such distortions are welfare enhancing costs of identifying the most competent leaders.

While Rogoff (1990) provides a firm theoretical foundation for the possibility of electorally-timed shifts in the composition of public spending, one might question the applicability of such an equilibrium model to developing countries. Many developing countries are undergoing transitions to democracy, and many voters in developing countries lack the experience of voting, thus, can be easily deceived by political manipulation that may strictly conform to the model's suppositions. Yet, the primary question of concern is not the precise applicability of a particular rational expectations model, but rather whether the increasing frequency of elections in developing countries will be associated with increasing budgetary distortion.

Gonzalez (1999a) and Shi and Svensson (2000) extend the Rogoff (1990) model of political budget cycles to study the effect of the degree of democracy on the magnitude of fiscal cycles. Gonzalez considers the fiscal model including two further variables: the cost of removing a policymaker from office (the "degree of democracy") and "transparency," meaning the probability that voter's learn the incumbent's competence costlessly, that is,

independent of signaling. She finds that with a high enough cost of removing officeholders, incumbents will not be removed from office and will follow their full information optimal policy. An electoral budget cycle emerges only if removing a politician from office is not too costly. Transparency also has intuitive effects: the higher the degree of transparency, the lower the amount of distortion away from the first best in the political budget cycle. Interestingly, when there is a positive correlation between the degree of democracy transparency, political budget cycles arise only at intermediate levels of democracy, where both measures are at intermediate levels. Shi and Svensson include a similar measure of transparency in a Rogoff political budget cycle model, but where government spending is chosen before the government learns its competence, so that no signaling occurs.

2.4. POLITICAL BUDGET CYCLES EVIDENCE.

Even before the development of the theoretical background of the political budget cycles there were numerous studies that attempted to find empirical evidence of the fiscal policy cycles prompted by elections. At the early stage of political business cycles theory development theorists considered fiscal instruments as a convenient and easily maneuverable policy instruments that incumbent governments can use to deliver carefully timed and “...clearly palpable and attributable (to incumbents) economic benefits to large numbers or specific groups of voters” (Tufte, 1978). This, Tufte notes, suggests economic-policy cycles, where as a policy instruments the incumbents use transfers (e.g., social security, veterans’ benefits, or other direct payments), tax cuts or delayed hikes, certain types of spending increases or delayed cuts (especially public works), and public hiring or delayed firing.

The empirical literature on political budget cycles focuses mostly on advanced industrial countries. Tufte (1978) documents a number of clear incidents of pre-electoral opportunistic manipulation of fiscal transfers, both social security payments and veterans’ benefits. Keech and Pak (1989) found an

electoral cycle for veterans' benefits in the United States between 1961 and 1978, but argue that it has subsequently disappeared. Similarly, Alesina (1988) shows that there was an electoral cycle in net transfers relative to GNP over the period 1961 to 1985, but that the electoral effect disappears if one extends the sample back to 1949.

The U.S. and comparative evidence supports² also the existence of partisan effects in the fiscal policy. Using the theoretical framework of partisan adaptive political business cycles, Wilensky (1976, 1981) finds many but often insignificant bivariate correlations of partisanship with various social, welfare, or fiscal policies in 19 OECD countries during 1965--1971. Hewitt (1977) finds slightly stronger signs of partisan effects on redistribution with controls in 17 OECD countries during 1962--1974. Cameron (1978) finds mildly or nearly significant partisan effects on total public revenues in an early cross-section, and an early time-series study by Pommerehne & Schneider (1980) finds Australian Liberal (right) and Labor (left) parties in 1960--1977 pursuing partisan spending and tax policies. Hicks & Swank (1984a,b) find stronger partisan cycles in social and welfare policies than in fiscal budgetary policies, and Swank (1988) finds that left parties spent more than right and center parties in the 1960s but less than center in the 1970s. Finally, perhaps most prolifically and representatively, Castles and colleagues report fully 183 correlations and regression coefficients relating partisanship to social, education, welfare, health, and total spending, of which 166 (90.7%) have correct sign, 57 (31.1%) significantly so, and 16 (8.7%) have incorrect sign, 2 (1.1%) significantly so (Castles & McKinlay 1979a,b; Borg & Castles 1981; Castles 1981, 1982, 1986, 1989).

Garrett (1995, 1998), Swank (1992), and Hallerberg & Basinger (1998) study partisan effects on government's relative reliance on capital, income, and consumption taxation, finding that the left favors income over consumption

² Although conditionally on various domestic political-economic institutional, structural, and strategic contexts

taxation, but also, counter intuitively, that international exposure has induced greater capital-tax cuts from the left.

Recent research has found that the fiscal cycle is especially strong in developing countries. As in the United States there is much anecdotal evidence of fiscal manipulation before elections in other countries. For example, in Israel³, Ben-Porath (1975) shows convincingly that opportunistic policymaking in light of elections was quite consistent over the period 1952-73, with tax cuts implemented before elections, but tax increases only after. Pre-electoral fiscal manipulation was especially strong in the 1982 elections, and Brender (1999) finds evidence of fiscal manipulation before the most recent elections (although he argues that it hurt rather than helped the incumbents.) Krueger and Turan (1993) argue that pre-electoral fiscal manipulation was common in Turkey in the period 1950-1980. Pre-electoral fiscal manipulation is common in Latin America, the increase in the quasi-fiscal deficit in Mexico before the 1994 elections being but one of many examples. (Gonzalez[1999b] shows the existence of an electoral cycle in government spending in Mexico over the period 1958-1997 in both presidential and congressional elections). Several studies have found significant pre-electoral increases in public spending in India before elections.

Cross-country studies yield similar results. Ames (1987) presents a panel study of 17 Latin American countries in which he shows that over the period 1947-1982, government expenditures increased by 6.3% in the pre-election year and government capital spending decreased by 7.6% in the pre-election year. Block (2000) presents evidence of a political business cycle in both fiscal and monetary policy in a cross-section of 44 Sub-Saharan African countries. Schuknecht (1996) is the comprehensive study of the political business cycle in 35 developing countries over the period 1970-92. He argues that there should be more room for manipulation in developing countries, as checks and balances are weaker and the incumbent has more power over monetary and

³ During the period tested (1952-1973) Israel was regarded as a developing country.

fiscal policy. He argues that in developing countries expenditure policies are probably more effective than tax cuts to affect voter behavior, such as distribution of free or subsidized goods or employment generation via public works programs. He uses a political dummy which is positive in the year of elections, negative in the year after and zero otherwise in fiscal deficit and output autoregressions such as (4) and finds a clear significant effect of elections on the fiscal balance, but no significant effect on output.

Gonzales (1999b) considers the relation between the level of democracy and the strength of the political cycle in a sample of 43 countries over the period 1950-97 and finds that the cycle is strongest in countries with intermediate levels of democracy. Shi and Svensson (2000) consider regression for a sample of 123 developed and developing countries over the period 1975-95 and similarly include an index of democracy. They also find a fiscal political business cycle is especially strong in developing countries.

Table 2A summarizes previous empirical studies of political budget cycles by variables tested, country coverage, and general results. It is clear from this table that political budget cycle theory has found its most favorable tests in developing rather than in developed countries. However, despite these all, in fact none of these studies concentrate on transition countries, and most restrict the sample to a subset of the developing world (for example Africal countries). Moreover, existing studies typically place strong (untested) restrictions on the model to avoid using dynamic panel data estimation. As a result, there is no systematic evidence on political business and budget cycles based on a sample of transition countries.

The present paper thus presents the first cross-country test of electoral effects on the composition of public spending in developing countries in post soviet countries, which are on the way of transition.

**MEASUREMENT FRAMEWORK OF CONDITIONAL
POLITICAL BUDGET CYCLES**

The assumption in both the traditional and the rational opportunistic budget cycle models is that the main motivation of policymakers is reelection (Schumpeter, 1942; Downs, 1957). Both models predict that incumbents will manipulate some fiscal policy instrument just before election in order to increase their reelection chances. Typically, these models are tested by estimating

$$g_{it} = \alpha + \lambda ELE_{it} + \varepsilon_{it}, \quad (1)$$

where g_{it} is the fiscal policy instrument of interest for unit i in period t , $i=1,..,N$; $t=1,..,T$; ELE is an election year indicator taking the value 1 in the election year and otherwise zero, and ε is an error term that capture the other factors that influence the dependent variable. If we treat g_{it} as current public consumption (the most easily observed by voters type of government spending) we will expect $\lambda > 0$, since it is typically assumed that voter's utility is increasing in spending. Thus, just before the election an incumbent will try to increase visible part of fiscal budget in order to "signal" voters his competence. Simultaneously, Rogoff (1990) argues that incumbent will shift spending away from public investment expenditures (capital spending), thus we expect $\lambda < 0$ for g_{it} - public investment good (less visible budget item comparing to current public consumption), which is observed with a one-period lag (Rogoff, 1990). In this research I want to test simultaneously the hypothesis that before an elections there will be increase in current consumption spending and decrease in capital expenditures made by the government, therefore I define my dependent variable in (1) as the ratio of these 2 budget spending.

The key identifying assumption for (1) is that elections are exogenous with respect to fiscal policy choices, an assumption that can be stated as $E[\varepsilon_{it} | ELE_{it}] = 0$. This assumption is highly questionable in jurisdictions where the election timing is subject to choice by incumbents. In this case the assumption is less restrictive than what it might appear. Indeed, the assumption is not that the timing of elections is exogenous, but that it is predetermined relative to the fiscal variables. Thus, if elections are held earlier than expected for reasons unrelated to fiscal policy outcomes, the identifying assumption is valid.

Aside from purely election year consideration, obviously, there are some other factors that influence the incumbent's decision about the spending composition.

The application of political business cycle theory to developing countries raises an additional question relating to institutional context. The theories described above take for granted the existence of particular institutions, such as competitive elections. This assumption is relatively benign in the developed country setting for which the models were originally conceived. Yet, the existence of democratic elections may not be assumed in developing countries. As argued in Block, Ferree, and Singh (2001) and earlier by Schultz (1995), bringing institutional context into political business cycle theory has direct implications for the model's predictions. Rogoff (1990), for instance, attributes the same utility function to office-holders and voters, with the exception of ego rents which enter exclusively into the utility of incumbents. Yet, both incumbents and voters share a disutility from economic distortion. Thus, incumbents are willing to create electorally-timed distortions because they are compensated for the disutility by ego rents. However, if elections are not democratic, and incumbents face a near zero probability of losing office, the ego rents are not at risk and the incentive to distort is greatly diminished. In short, relaxing the model's assumption of competitive elections leads to a somewhat more context-sensitive prediction that political budget cycles will

be smaller if they exist at all in non-competitive electoral systems. In the same time, for highly democratic societies there the political system of checks-and-balances is particularly strong, incumbents discretion over the budgetary spending is highly restricted, moreover voters in such countries have higher level of political culture, so that they can easily discern the incumbent's antics. Hence, in such countries incumbents face very high reputation cost of budget manipulations. The possibility for manipulations is limited and even if the incumbent venture to distort the budget for its electoral purposes, voters will expose it immediately and do not vote for such mercenary incumbent, what is more his reputation will be greatly breathed upon and it will be extremely hard for him to continue a carrier in politics further.

These all considerations give raise to the quadratic dependence of election year budgetary distortions and democracy level in the country.

Another factor which I think determine tightly the election year budget distortions is incumbent's popularity before an elections (this may be referred as how the incumbent estimates his reelection chances). As it was noticed a quarter of century ago by Tufte "for incumbents manipulation of economic policy for political gain is politically costly, because it may limit maneuverability for future policy actions or their efficacy" (Tufte, 1978). Therefore, incumbents will manipulate only in proportion to the value of buying a few marginal votes, e.g., only to the degree that they expect a close electoral contest. If, for example, there are just two candidates for office, the incumbent and the challenger and each expects to receive approximately 50% of the popular vote we would generally consider that to be a close election. On the other hand, assume the incumbent is very popular and expects to get over 65% of the vote. Under the first scenario we would expect the incumbent to attempt to manipulate the election by increasing current expenditures, contrarily, under the second scenario there will be no incentive for the incumbent to attempt any manipulation, because his victory is guaranteed already.

While this supposition is highly influential for empirical analysis, only few researches actually tested it. In particular, Haynes & Stone (1988, 1989, 1990, 1994) in their empirical testing of political budget cycles in OECD democracies found that budget distortions persist there, and especially when empirical models allow cycles to be conditional on expected closeness.

One more thing that can be important for determining the size of budget cycle is the form of government in the country (presidential or parliamentary regimes). Theoretical research on how it shapes fiscal policy outcome is less widespread, despite a large literature where political scientists compare presidential and parliamentary regimes. Persson, Roland and Tabellini (1997, 2000) distinguish these forms of government depending on the rules for legislative bargaining. “In parliamentary democracies, bargaining between different legislative coalitions is disciplined by the threat of a government crisis. As such a crisis would result in the loss of valuable agenda-setting powers for the government coalition, party discipline and stable legislative coalitions are promoted. In a presidential system, instead, the executive cannot be brought down by the legislature, but it is directly accountable to the voters. Thus, legislators have weaker incentives to stick together and to vote according to party or coalition lines. Moreover, agenda-setting power is generally more dispersed among different committees, and checks and balances between the executive and the legislature give proposal and veto rights to several players. These differences create larger overall spending, larger broad programs (at the expense of targeted programs) and more wasteful spending in parliamentary regimes, compared to presidential regimes” (Persson and Tabellini (2002). Persson and Tabellini (2001) also found strong empirical support for the prediction that parliamentary regimes have larger governments.

If we do not formulate a specific model, we cannot make precise predictions regarding electoral cycles, but it is plausible that some of the conjectured policy differences across regimes should show up particularly strongly around

election time. Another difference between presidential and parliamentary forms of government is the individual vs. collective nature of the executive. Persson and Tabellini (2002) allege that individual political accountability gives stronger incentives than collective accountability, so we might expect stronger electoral cycles under presidential regimes (Lowry, Alt and Ferree, 1998, make a similar point when they argue — and show empirically — that voters respond more vigorously to policy in gubernatorial elections than in legislative elections in the US states.) But all in all, we have weaker priors when it comes to how electoral cycles might differ between presidential and parliamentary democracies.

Based on the above motivation, in the next chapter I formulate the econometric model of conditional political budget cycles which I will use to test the incidence of budget cycles prompted by elections in FSU countries depending on democracy level, political regimes in these countries, and closeness of election.

**EMPIRICAL EVIDENCE OF POLITICAL BUDGET CYCLES IN
FSU COUNTRIES**

4.1. ECONOMETRIC MODEL

The empirical test of the political budget cycles theory is proposed to be conducted by regressing the logarithm of the ratio of government current to capital expenditures (LRATIO) on variables that indicate presence of elections in corresponding year; institutional difference that measure the incentive for the incumbent to engage in budgetary extortions; type of regime in the country (presidential or parliamentary republic); type of election (parliamentary, or presidential, or both in the same year); closeness of elections for incumbent.

The basic specification for estimation takes the form

$$(2) \quad \begin{aligned} LRATIO_{it} = & \beta_0 + \sum_{j=1}^k \beta_j * LRATIO_{i,t-j} + \gamma_1 * ELE_t + \gamma_2 * ELE(-1)_t + \\ & + \gamma_3 * (ELE_t * DEM_t) + \gamma_4 * (ELE_t * DEM_t^2) + \gamma_5 * (ELE_t * CLOSE_t) + \\ & + \gamma_6 * PARL_t + \gamma_7 * PRES_t + \gamma_8 * TYPE_t + \alpha_i + u_{i,t} \end{aligned}$$

where

$$ELE_{i,t} = \begin{cases} 1 & \text{if } t \text{ is an election year} \\ 0 & \text{otherwise,} \end{cases}$$

Following the literature I treat ELE as an exogenous variable in estimating equation (1).

$$PRES_{i,t} = \begin{cases} 1 & \text{if } t \text{ is an election of the president year} \\ 0 & \text{otherwise,} \end{cases}$$

$$PARL_{i,t} = \begin{cases} 1 & \text{if } t \text{ is an parliamentary election year} \\ 0 & \text{otherwise,} \end{cases}$$

Note: there is no perfect multicollinearity between ELE, PARL and PRES, because there are years with simultaneous parliamentary and presidential elections.

$$TYPE_i = \begin{cases} 1 & \text{if country } i \text{ is a parliamentary republic} \\ 0 & \text{otherwise,} \end{cases}$$

α_i reflects an unobserved time-invariant country specific intercept.

DEM is an indicator that controls for heterogeneity in institutional arrangements, different rules of political game that exist in particular country. By introducing this variable I want to measure the extent to which participation in the voting process is meaningful. If democracy is not the guiding rule, either because the right to vote is restricted to only a few residents or the voting process is so corrupt that it is merely a facade, then the possibility for the incumbent to play budgetary games at election time is largely absent.

The Freedom House democracy index is taken to reflect this opportunity by combining political rights and civil liberties ratings.

The quadratic DEM is included to check the hypothesis that in the countries with either the lowest or the highest democracy state incumbents have, in the former case, no incentive (in totalitarian countries incumbents face almost zero chances to lose their office) or, in the later case, no possibility (because of highly developed system of checks-and-balances) to manipulate with the budget.

As long as I want to study whether DEM and/or DEM² amplifies the impact of elections on composition of budget spending, I include interaction terms ELE*DEM and ELE*DEM² into the model.

CLOSE – indicates closeness of election for the incumbent. This indicator refers to the number of votes the incumbent candidate expects to receive in the upcoming election. Because this variable impacts budget spending only in

relation to elections, in the econometric model I incorporated their interaction term (ELE*CLOSE).

Fiscal instruments display a great deal of inertia; thus, I include the lagged dependent variable $LRATIO_{i,t-j}$ on the right hand side. The appropriate number of lags (j) was determined by taking 10% of time available (the data for each country are on 10 years), thus only 1 lag was chosen as the most reasonable for the data.

The dependent variable in each specification is the logarithm of the ratio of government current to capital expenditures to be tested for evidence of political cycles.

Political budget cycle theory directly predicts an increase in the former during the election years (short-run effect).

$$(3) \frac{\partial LRATIO}{\partial ELE} = \gamma_1 + \gamma_3 * DEM + \gamma_4 * DEM^2 + \gamma_5 * CLOSE > 0$$

Equation (1) is an example of autoregressive distributed lag relation; there the long-run effect of elections is obtained by summing the partial derivatives

$$\frac{\partial LRATIO}{\partial ELE} + \frac{\partial LRATIO(+1)}{\partial ELE} + \frac{\partial LRATIO(+2)}{\partial ELE} + \frac{\partial LRATIO(+3)}{\partial ELE} + \dots$$

$$\frac{\partial LRATIO(+1)}{\partial ELE} = \beta_1 \frac{\partial LRATIO}{\partial ELE} + \gamma_2$$

$$\frac{\partial LRATIO(+2)}{\partial ELE} = \beta_1 \frac{\partial LRATIO(+1)}{\partial ELE} = \beta_1 \left[\beta_1 \frac{\partial LRATIO}{\partial ELE} + \gamma_2 \right]$$

$$\frac{\partial LRATIO(+3)}{\partial ELE} = \beta_1 \frac{\partial LRATIO(+2)}{\partial ELE} = \beta_1 \beta_1 \left[\beta_1 \frac{\partial LRATIO}{\partial ELE} + \gamma_2 \right] \text{ and so on.}$$

In the end, provided the stability condition $|\beta_1| < 1$ is satisfied, the sum is

$$(4) \quad \frac{[\frac{\partial LRATIO}{\partial ELE} + \gamma_2]}{1 - \beta_1} \text{ that can be referred as the long-run elections}$$

effect

After elections governments would contract the economy (decrease current spending) to prepare it for a new upswing by increasing government investment, which ensure long-run growth. Consequently,

$$(5) \quad \frac{\partial LRATIO}{\partial ELE(-1)} = \gamma_2 < 0 \text{ which is the short run response.}$$

The election-induced distortions are lower in the countries with the highest and the lowest democracy rank than in those with the intermediate one:

$$(6) \quad \frac{\partial LRATIO}{\partial DEM} = \gamma_3 * ELE + 2\gamma_4 * ELE * DEM > \text{ or } < 0$$

The greater chances to win the election race incumbent has before, the lower is his incentive to undertake budgetary distortion:

$$(7) \quad \frac{\partial LRATIO}{\partial CLOSE} = \gamma_{11} * ELE < 0$$

4.2. SAMPLE AND DATA DESCRIPTION

The data I use to test the predictions of the model is the unbalanced panel, which consists of 15 cross sections and from 4 to 9 time periods (1992-2000). In my sample I included 15 former Soviet Union (FSU) countries: Ukraine, Russia, Belarus, 3 Baltic countries, 3 Caucasian countries and 6 Central Asia countries.

The set of variables I used in my empirical estimations includes:

- 1) Government consumption expenditures. General government final consumption expenditure (general government consumption) includes all government current expenditures for purchases of goods and services (including compensation of employees). It also includes most expenditures on national defense and security, but excludes government military expenditures that are part of government capital formation. Data are taken for central government only, and are in current local currency;
- 2) Government capital expenditures. Capital expenditure is spending to acquire fixed capital assets, land, intangible assets, government stocks, and non-financial assets. Also included are capital grants. Data are shown for central government only, and are in local currency units.

The official source of these data is International Monetary Fund Financial Statistic dataset.

In my empirical estimations as an explained variable I used a ratio of government consumption expenditures to government capital expenditures. According to the theory in the election years this ratio is expected to increase that reflects expansion of the government consumption and contraction of government capital expenditures in these periods.

- 3) Election dates (include both parliamentary and presidential elections; no federal or other local elections were included). Their sources are:

- (1) <http://www.electionworld.org/calendar.htm> - Elections around the world;
- (2) <http://www.ifes.org/eguide/elecguide.htm> - ElectionGuide Organization;
- (3) <http://www.eurasianet.org/departments/election/index.shtml> - Elections in Caucasian and Central Asian countries;
- (4) <http://www.parties-and-elections.de/indexe.html> - Parties and elections in Europe.

It can be seen from the figure 1 that in election years (Elections=1) there is higher ratio of current consumption to capital expenditures, which can serve as a sign of budget distortions just before the elections (current consumption increases while capital expenditures fall).

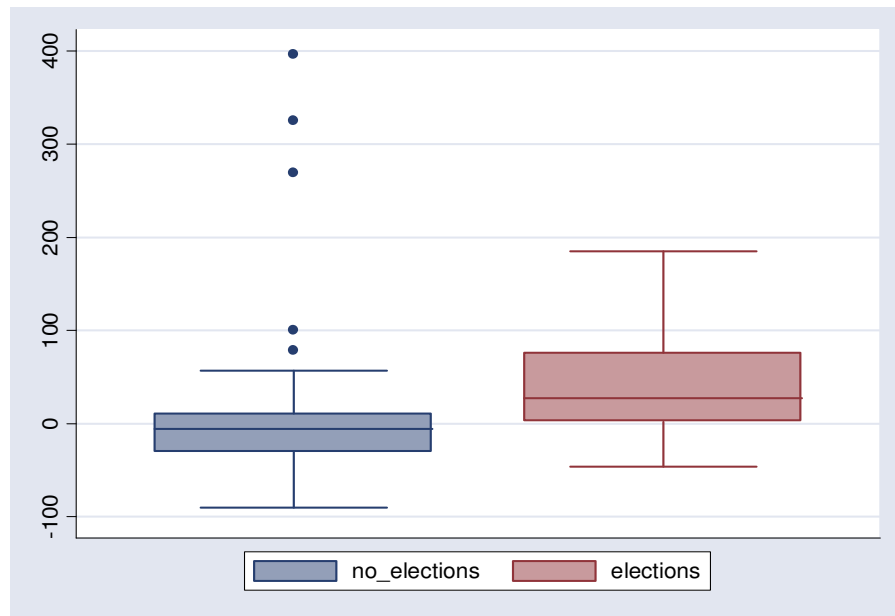


Figure 1. Composition of Budget Expenditures.

4) Indices of democracy computed by the Freedom House organization (<http://www.freedomhouse.org>). By combining political rights and civil liberties ratings⁴ the Freedom House democracy index reflects the opportunity of the incumbent to manipulate the budget, which exists in each country. Accordingly, the opportunity to manipulate in the most democratic country will be significantly smaller comparing with the less democratic country.

The original Freedom index rates political rights and civil liberties on a seven-category scale with 1 representing the most free and 8 the least free countries. However, for the easier interpretation in the context of my research I modified it slightly by taking $DEM=8-\text{Freedom House Index}$. According to this new index each country and territory is classified as:

- 5.5 - 7 points - “Free”;
- 2.6 -5.0 points - “Partly Free”;
- 0 – 2.5 points - “Not Free”.

The figure below displays relation between democracy level and election year budget distortions. Simple visual inspection reveals rather strong positive link for low and middle democracies, which reverts for more democratic states. The information in the table 1 confirms these findings. These all suggest quadratic relation between budgetary distortions in election year and state of democracy in the country.

⁴ The Political and Civil liberties Rights checklists could be found in the Appendix.

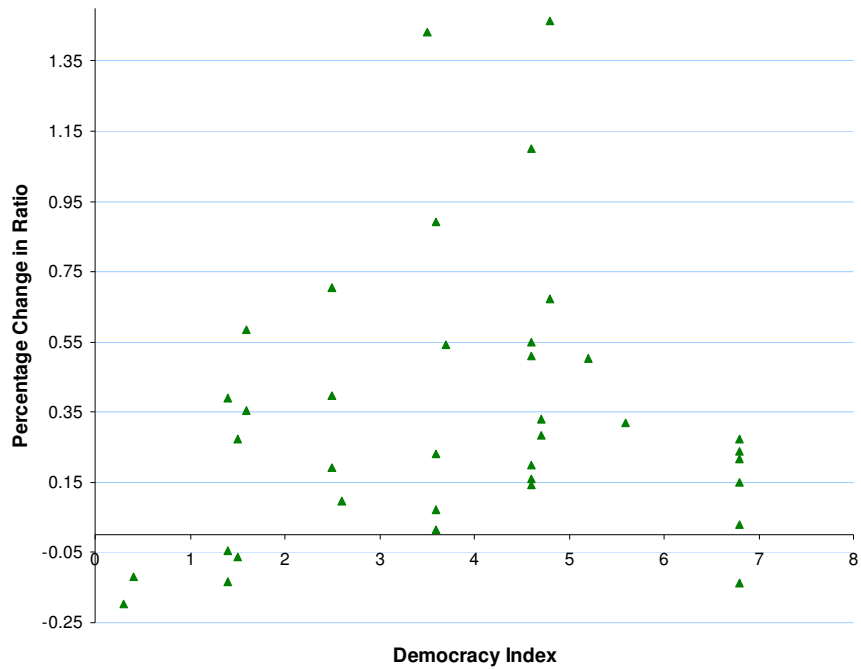


Figure 2. Democracy and Election Year Budgetary Distortion*

* - Election Year Budgetary Distortion = percentage change in the Ratio of Current Consumption to Capital Government Expenditures (relative to previous year)

<i>Level of democracy</i>	<i>Scale Points</i>	<i>Average democracy in the sample</i>	<i>Average distortion</i>
“Not free”	0 - 2.6	1.61	12.61
“Partially Free”	3-5	4.22	77.71
“Free”	5-7	6.6	20.41

Table 2. Average budgetary elections distortion associated with different democracy levels.

5) Closeness of elections. As a relevant proxy, which is frequently used in the political choice literature, I used ex post measures, the actual election outcome, rather than ex ante expectations. Each observation takes value 0

in non-election year and the proportion of votes taken by incumbent in elections. The source of the information is

- (1) <http://www.electionworld.org/calendar.htm> - Elections around the world;
- (2) <http://www.parties-and-elections.de/indexe.html> - Parties and elections in Europe;
- (3) <http://www.elections.am/> - Central Electoral Commission of Armenia;
- (4) <http://www.ipu.org/parline-e/parlinesearch.asp> - Parliamentary DataBase;
- (5) <http://www.cec.gov.ge/> - Central Electoral Commission of Georgia;
- (6) <http://www.election.kz/> - Central Electoral Commission of Kazakhstan;
- (7) <http://cec.bishkek.su/> - Central Electoral Commission of Kyrgyz Republic;

The most important (and indeed the most time-consuming) thing here was to determine precisely the party (if there was parliamentary election) or candidate (if the president was to be elected) which held incumbency before the elections. For this purpose I studied the post-1991 political history of FSU countries to trace neatly the alternation of incumbents there. The following links were extremely informative here

<http://www.rulers.org> contains lists of heads of state and heads of government.

Descriptive statistics of the data can be found in Appendix A3.

4.3. ESTIMATION STRATEGY

Equation (1) is a standard dynamic panel data specification. The presence of lagged dependent variables and the country-specific effects render the Ordinary Least Squares estimator to be biased. Fixed-effects estimators can eliminate the country-specific effect, however, the bias caused by the inclusion of lagged dependent variables remains. The bias of the Fixed Effects (FE) estimator, which influences all variables, is a function of time T , and only when T approaches infinity will the FE estimator be consistent (Nickell, 1981; and Kiviet, 1995). Since the average number of observations across countries in our sample is 7, the bias of the FE estimator may be non-negligible.

In order to avoid these problems, I can adopt the GMM estimator developed for dynamic panel data by Arellano and Bond (1991), Arellano and Bover (1995), and Blundell and Bond (1998). The GMM estimator is a preferred method because it controls for the unobserved country-specific effects as well as the bias caused by the lagged dependent variables. However, due to small number of time periods comparing to number of cross-section (15) this method could not be used in the estimation for the whole sample of countries.

Thus, at first I start by estimating a model without the lagged dependent variable. I estimate this static model using OLS and within-groups estimators and compare the results to check the presence of country-specific effects. I should also admit that random effects model is not appropriate here, because it assumes random nature of country-specific effect. Here, the sample of countries to be studied was chosen non-randomly and, moreover, it consists only of 15 countries.

While estimating the pooled static model, to control for cross panel heteroscedasticity and within panel autocorrelation Beck and Katz (1995)

suggest to use *panel-corrected standard errors (PCSE)* that satisfy the following assumptions

- (1) Within units (panels), the error variance is constant; across units, however, it may be different (i.e., $E(u_{it}^2) = E(u_{is}^2) \quad \forall t \neq s$). So, all heteroscedasticity in the data is due to cross-unit differences.
- (2) Spatial correlation between units is only contemporaneous, and does not vary over time (i.e., $E(u_{it}, u_{js}) = \sigma_{ij} \quad \forall i \neq j$, and $E(u_{it}, u_{js}) = 0 \quad \forall i \neq j, t \neq s$).
- (3) Temporal dependence within units is constant over time, and may or may not be constant across units as well (i.e., $E(u_{it}, u_{js}) = \rho$ or ρ_{ij}).

The use of PCSE estimation presumes the Prais-Winsten transformation to clean the data of any serial correlation (within the panels)

Having obtained both pooled and within groups models, I compare these models by applying F-test. If both estimates are not significantly different, then I can estimate the model with the lagged dependent variable by OLS (without country-specific effects, of course).

If I find evidence of country-specific effects, the only way of estimating the model (1), is by taking a random effects approach.

The formulated above estimation strategy is sketched in figure below.

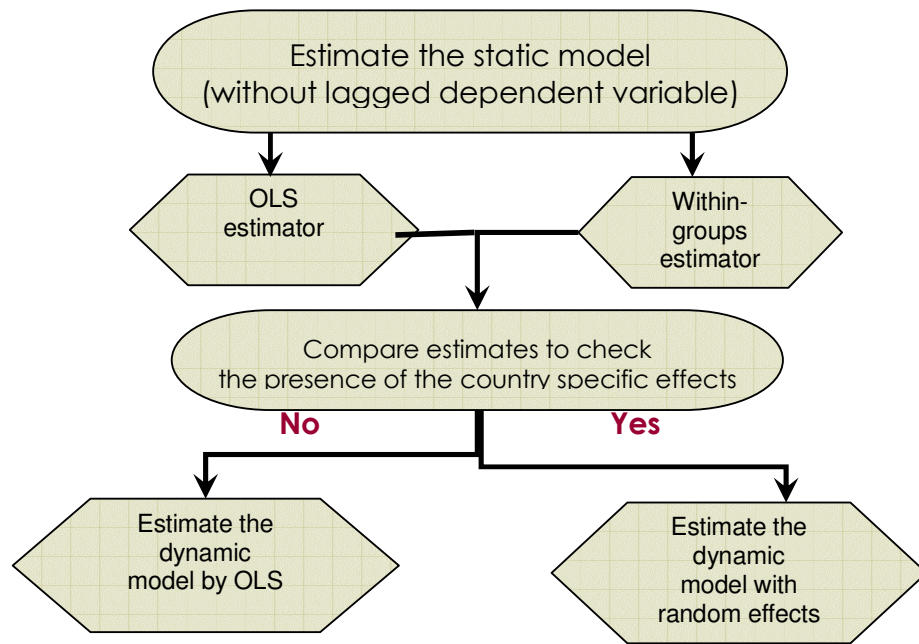


Figure 3. Estimation Strategy.

4.4. RESULTS AND DISCUSSION

As I mention before, in my empirical part my first step is to estimate the static model without lagged dependent variable.

The set of variables included into the regression were determined relying primary on Chapter 3 arguments and by following the classical method of stepwise regression (evaluation of each variable on the basis of its significance level and accumulation of the model by including or excluding variables sequentially). However, due to the certain drawbacks of the latter procedure (Greene (2000), Draper and Smith (1980) and Maddala (1977a)) in the ultimate regression models I take into account also the adjusted R^2 , AIC, SC, and correlation between various event variables in the data. As can be seen from table 4A, there is a high correlation between several variables (e.g, between ELE and CLOSE, PARL, PRES) due to the nature of their measurement (they take nonzero values only in election year). Thus, trying to avoid multicollinearity in the model I do not include these variables together, instead I use their joint terms or, as in the example of PARL and PRES, include only one of the 2 factors as I am interested to see only relative effect of certain type of elections in the country.

Pooled least squares and within-groups (fixed effects) results are presented in the table 2 and 3 correspondingly (all estimations were performed in STATA 8.0).

Dependent variable	Prais-Winsten pooled regression, heteroskedastic panels corrected standard errors, panel-specific AR(1)		Within-groups (fixed effects) regression, robust standard errors	
	<i>coefficient</i>	<i>p-value</i>	<i>coefficient</i>	<i>t-ratio</i>
Lratio				
Ele*dem	.2104102	0.000	.2124959	0.043
Ele*dem2	-.0247051	0.005	-.0241364	0.110
Close*ele	-.2966789	0.098	-.4063842	0.046
Parl	.0723773	0.375	.1476948	0.287
Constant	1.517904	0.000	1.426221	0.000
Number of observations	111		111	
Number of groups	15		15	
F/Wald-statistic	$\chi^2(4) = 50.21 (0.000)$		$F(4, 92) = 7.34 (0.000)$	
R2	0.7608		0.7911 (adjusted R ² – 0.7307)	

Table 3. Static models.

As we can see from the table 3, both models provide almost identical estimates for coefficients for *ele*dem* and *ele*dem*². However, coefficient for *close* from pooled regression (table 3, column 2-3) is 25% smaller than the corresponding coefficient from the within model (table 3, column 4-5).

The figures below that trace the overall effect of elections conditional on democracy level, visualize these results.

$$\text{Elections effect} = \left. \frac{\partial LRATIO}{\partial ELE} \right|_{DEM, CLOSE}$$

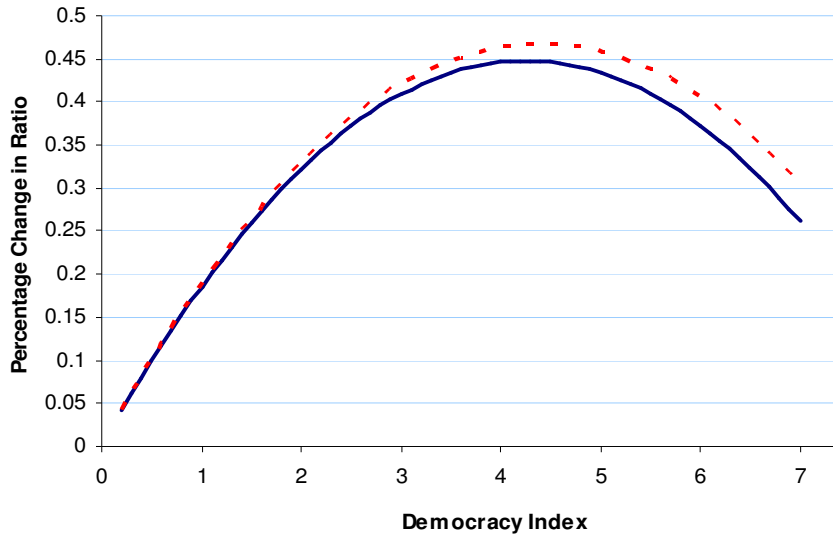


Figure 4. Marginal Change in Current Consumption/Capital Expenditures Ratio depending on Democracy level⁵

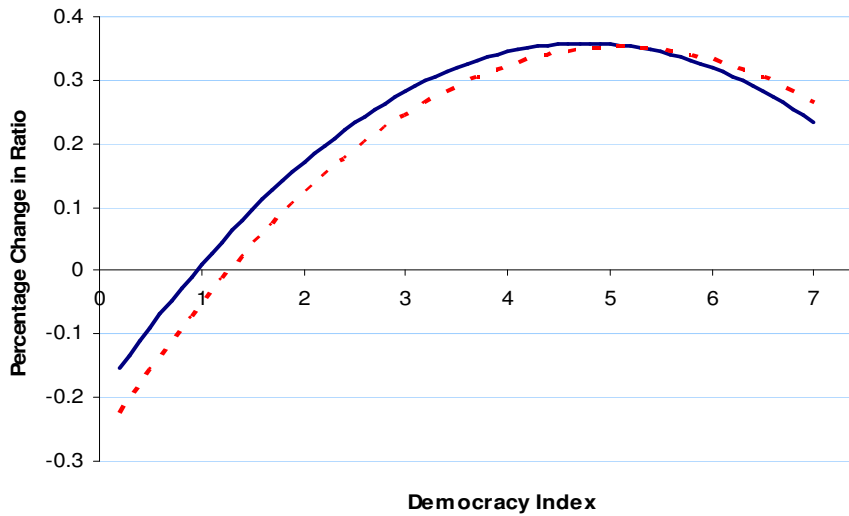


Figure 5. Marginal Change in Current Consumption/Capital Expenditures Ratio depending on Democracy level (corrected for closeness of elections)⁶

As it can be seen from figures 4 and 5 pooled (solid line) and within-group (dashed line) models give very close prediction. However, the pooled model returns slightly smoother prediction compared to the within-group model

⁵ Here I traced $\frac{\partial LRATIO}{\partial ELE} = \gamma_1 + \gamma_3 * DEM + \gamma_4 * DEM^2$

⁶ In this figure I account also for closeness of elections, i.e. I trace $\frac{\partial LRATIO}{\partial ELE} = \gamma_1 + \gamma_3 * DEM + \gamma_4 * DEM^2 + \gamma_5 * CLOSE$

(figure 4): it gives lower distortions in the least and the most democratic countries.

The effect of parliamentary elections appears to be positive in both static models, but it is marginally significant even at so called “small sample” 30% significance level.

To test formally the significance of country-specific effects I use an F test. Under the null hypothesis, the efficient estimator is pooled least squares. The F statistic for testing the joint significance of the country effects is

$$F(14;99) = \frac{(0.7911 - 0.7608)/(15 - 1)}{(1 - 0.6711)/(111 - 15 - 4)} = 0.79775$$

The p-value for F-statistics with 14 and 92 df is 0.67, so the evidence of the country-specific effects is weak in the data.

Thus, I can estimate the pooled model with the lagged dependent variable (Lratio) (table 4).

Dependent variable- Log(ratio)	Prais-Winsten pooled regression, heteroskedastic panels corrected standard errors, panel-specific AR(1)			
	<i>coefficient</i>	<i>p-value</i>	<i>95% confidence interval</i>	
Lratio(-1)	.5154072	0.000	.3925144	.6383
Ele*dem	.2101308	0.000	.0950219	.3252396
Ele*dem2	-.0272752	0.004	-.0426667	-.0078836
Close*ele	-.4038561	0.022	-.7498327	-.0578795
Parl	.1787385	0.047	.0021995	.3552775
Constant	.6964976	0.000	.4877614	.9052338
<i>Number of observations</i>	111			
<i>Number of groups</i>	15			
<i>Wald- statistic</i>	$\chi^2(4) = 111.96 (0.000)$			
R^2	0.8975			

Table 4. Dynamic model.

Table 5 presents the marginal effects of the variables (evaluated in the means of the explanatory variables) in the ultimate regression (table 4).

	<i>Marginal effect, %</i>					
	Non democratic		Partially Democratic		Democratic	
	<i>Short-run</i>	<i>Long-run</i> ⁷	<i>Short-run</i>	<i>Long-run</i> ⁷	<i>Short-run</i>	<i>Long-run</i> ⁷
<i>Effect of elections</i>	5	9	31	58	21	28
<i>Effect of democracy</i>	12	26	0	-4	-15	-30
<i>Closeness of elections for incumbent*</i>	-40		-40		-40	
<i>Parliamentary elections</i>	18	37	18	37	18	37

* - takes value from 0 to 1.

Note: for non democratic countries- $\overline{DEM} = 1.61$, $\overline{CLOSE} = 0.56$
for partially democratic countries - $\overline{DEM} = 4.22$, $\overline{CLOSE} = 0.32$
for democratic countries – $\overline{DEM} = 6.6$, $\overline{CLOSE} = 0.18$ in the sample.

Table 5. Marginal effects.

The results of the table 5 confirm the predictions of the political budget cycles theory; in particular it suggests that in election year ratio of government current expenditure to government capital expenditures increases by 5% in non-democratic countries, 31% in partially democratic countries, and 21% in democratic countries. The calculated long-run distortions are higher reflecting a distributed lag effect that intensifies the short-run distortions. However, the time horizon used in the estimation is, obviously, insufficient to make any long-run predictions, so I will not

⁷ Calculated according to equation (4) p.24 with $\gamma_2=0$.

concentrate here on these long run-effects. In the case of closeness of elections its long run effect even make no sense, because incumbent takes only current estimation of his/her reelection chances to make decision about the composition of current and capital expenditures.

The short-run election effect conditional on closeness of elections for incumbent and democracy status is depicted in Figure 6. Small triangles in the same figure are the actual observations of percentage change in RATIO in the election years. As can be seen, the ultimate model (table 4) fits the data quite well and reflects the major tendencies and dependencies in the data.

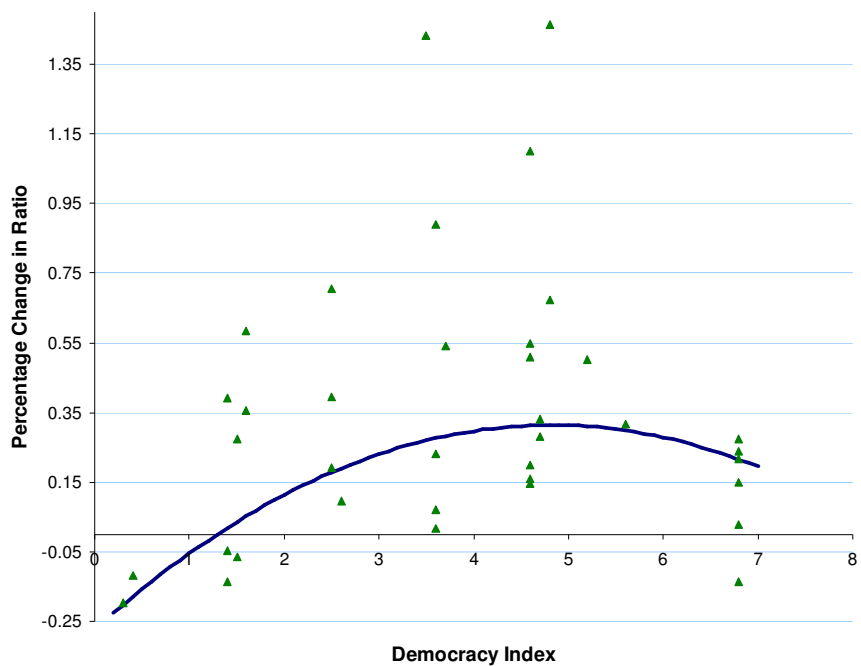


Figure 6. Comparison of the Estimated Short-run Marginal Elections Effect with the Actual Data

The democracy effect is positive in non-democratic countries meaning that each decimal point improvement in democracy state increases ratio of government current expenditures to its capital spending on average by

1.2% in elections year (as well as in non-elections). For democratic countries we can observe the reverse situation – democracy effect is almost the same in absolute value and is 1.5% per each decimal point deterioration in democracy status. In partially democratic countries democracy effect is nil.

The expected effect of the closeness of elections coincides in sign with its actual effect: each 10% increase in expected probability of winning the election for the incumbent decreases ratio of government consumption to government capital expenditures by nearly 4%: that is quite reasonable.

Surprisingly, significantly positive coefficient for parliamentary elections means that parliamentary elections induces deeper budgetary distortions (18% higher), contrarily to *ex ante* expectations (see Chapter 3 arguments).

4.5. ROBUSTNESS TESTING

At first, robustness of my estimates is confirmed by the fact that coefficients for $ele*dem$ and $ele*dem^2$ are almost the same in both static and dynamic models. Inclusion of lagged dependent variable changed only estimates for the effect of closeness of elections and effect of parliamentary elections. Thus, the short-run effect of elections calculated from both static and dynamic models are almost the same.

To test further the robustness of the obtained above results I performed a number of additional regressions.

There are a small number of outlying observations in the data set for which computed percentage change in ratio of current consumption to capital spending exceeds 100% (see figure 2). These observations may seem to be slightly unrealistic and may arise due to some measurement errors. However, deleting these observations is not justified theoretically. Still, one can question whether the results obtained before were significantly influenced by them. To examine this possibility I dropped observations with absolute value of the dependent variable higher than 100% change as compared to previous period, a total of 4 observations. Reestimating the model with the outliers dropped (case 1) yields result very similar to those gained from my ultimate model (compare marginal effects calculated in table 7, column 2-3 with marginal effects from table 6).

Further, I estimated my model using only partially democratic and democratic countries (case 2) and partially democratic and non-democratic countries (case 3). The obtained results are summarized in table 7 with corresponding calculated marginal effects of elections.

Dependent variable- Lratio	No outliers (case 1)		Sample of non- democratic and partially democratic countries (case 2)		Sample of partially democratic and democratic countries (case 3)		
	<i>coefficient</i>	<i>p-value</i>	<i>coefficient</i>	<i>t-ratio</i>	<i>coefficient</i>	<i>t-ratio</i>	
Lratio(-1)	.543	0.000	.464	0.000	.632	0.000	
Ele*dem	.158	0.017	.102	0.000	.195	0.046	
Ele*dem2	-.018	0.064			-.024	0.064	
Close*ele	-.282	0.128	-.297	0.080	-.364	0.399	
Parl	.116	1.21	.153	0.127	.235	0.097	
Constant	.658	0.000	.787	0.000	.489	0.000	
<i>Number of observations</i>	107		111		111		
<i>Number of groups</i>	15		15		15		
<i>Wald- statistic</i>	$\chi^2 (5) = 103.7$ (0.000)		$\chi^2 (4) = 75.41$ (0.000)		$\chi^2 (5) = 152.31$ (0.000)		
R^2	0.9054		0.8441		0.9012		
<i>Short-run marginal effect of elections, %</i>	<i>ND</i>	5.5		0.25		5 (out of sample prediction)	
	<i>PD</i>	27		34		28	
	<i>D</i>	22		62(out of sample prediction)		17	

Table 6. Robustness testing (Prais-Winsten pooled regression, heteroskedastic panels corrected standard errors, panel-specific AR(1)).

In case 2 it appeared that quadratic interaction term $ele*dem^2$ is insignificant suggesting linear relation between elections year budgetary distortions and democracy state. Naturally, such model predicts purely marginal elections distortions for democratic countries (compare 62% predictions with 21% obtained from the ultimate model), however the within sample marginal effect is quite comparable with the ultimate results

(0.25% for non-democratic countries compared to 5% in the ultimate model; 34% vs. 31% for partially democratic countries, correspondingly).

In case 3 calculated short-run marginal effects of elections for countries with different state of democracy is even more close to the ultimate ones; even its out of sample prediction for non-democratic countries is the same as in the ultimate model.

Hence, relying upon the estimations done it appears that the ultimate results obtained in section 4.4. are robust to several statistical problems.

CONCLUSIONS

The contribution of this research can be summarized in the following ways. To start, I provide the first empirical analysis of political budget cycles in former Soviet Union countries. I find that political budget cycles are generally significant in these countries, a result that is consistent with the previous empirical findings based on other data sets. On average, in the elections years the ratio of government current spending to government capital expenditures increases by 5% in non-democratic countries, 31% in partially democratic countries, and 21% in democratic countries.

Further, I show that political budget cycles are of much greater magnitude in the countries in the middle of the Freedom House Democracy Index scale with lower budget distortions in the least and the most democratic states.

Next, I demonstrate that the degree of budget manipulations depends heavily on the incumbent's expected probability of winning the elections: a 10% increase in this probability decreases the ratio of government consumption to government capital expenditures by nearly 4%.

My findings corresponds to the previous empirical results: Ames (1987) conducted the panel study of 17 Latin American countries over the period 1947-1982 and found that government current expenditures increased by 6.3% and government capital spending decreased by 7.6% in the pre-election year. So, we can calculate the change in ratio as $(1+0.063)/(1-0.076)=1.15$ or 15% increase in elections years. As long as in that time the level of democracy for sample countries was approximately 2.5, my findings corresponds to Ames's.

Finally, the results obtained are robust to several statistical problems.

BIBLIOGRAPHY

- Alesina A, Cohen G, Roubini N. (1992) Macroeconomic policies and elections in OECD democracies. *Econ. Polit.* 4(1):1—30
- Alesina A, Cohen G, Roubini N. (1993) Electoral business cycles in industrial democracies. *Eur. J. Polit. Econ.* 23:1—25.
- Alesina A, Rosenthal H. (1995) *Partisan Politics, Divided Government, and the Economy*. Cambridge, UK: Cambridge Univ. Press
- Alesina A, Roubini N. (1992) Political cycles in OECD economies. *Rev. Econ. Stud.* 59:663–88.
- Alesina A, Sachs J. (1988) Political parties and business cycle in the United States. *J. Money Credit Bank.* 20:63—82
- Alesina, A. (1988), “Macroeconomics and Politics,” NBER Macroeconomics Annual, Cambridge MA: MIT Press.
- Alesina, A. (1993), “Electoral Business Cycles in Industrial Democracies” *European Journal of Political Economy* 23, 1-25.
- Alesina, A. and N. Roubini, (1990) “Political Cycles in OECD Economies,” *Review of Economic Studies* 59.
- Alt J. (1985) Political parties, world demand, and unemployment: domestic and international sources of economic activity. *Am. Polit. Sci. Rev.* 79(4):1016—40
- Alt, J. and A. Chrystal (1983), *Political Economy*, Berkeley CA: Berkeley University Press.
- Alvarez R., Garrett G., and Lange P. (1991) Government partisanship, labor organization, and macroeconomic performance. *Am. Polit. Sci. Rev.* 85:539--56
- Ames B. (1987) *Political Survival*. Berkeley: Univ. Calif. Press
- Arellano, S. and Bond, M. (1991). “Some tests for specification of panel data: Monte Carlo evidence and an application to employment equations,” *Review of Economic Studies* 58, 277-97.
- Arellano, S. and O. Bover (1995) “Another look at the instrumental variables estimation of error component models,” *Journal of Econometrics* 68, 29-5.
- Baltagi, Badi H. (2001) *Econometric analysis of panel data*. – 2nd ed.
- Bartolini S, Caramani D, Hug S. 1998. *Parties and Party Systems: A Bibliographic Guide to the Literature on Parties and Party Systems in*

- Europe since 1945 (CD-ROM). London, UK: Sage.
- Beck, N. and Katz, J.N. (1995) "What do (and not to do) with time series cross-section data," *American Political Science Review* 89: 634-647.
- Ben-Porath Y. 1975. The years of plenty and the years of famine--a political business. *Kyklos* 28(2):400--3
- Block, S. (2000) "Political Business Cycles, Democratization, and Economic Reform: The Case of Africa," *Journal of Development Economics*.
- Cukierman A, Meltzer A. (1986) "A Positive Theory of Discretionary Policy, the Cost of Democratic Government, and the Benefits of a Constitution", *Econ. Inq.* 24:367--88
- Cullis, J. and Jones P. (1998) *Public Finance and Public Choice*. 2nd ed. Oxford: Oxford University Press.
- de Haan Jakob, Sturm Jan-Egbert (1997), "Political and economic determinants of OECD budget deficits and government expenditures: A reinvestigation", *Eur. J. Political Economy* (13)4.
- Dhami S. (2001) *The Political Economy of Redistribution Under Asymmetric Information* <http://www.staff.ncl.ac.uk/sanjit.dhami/taxred.pdf>
- Downs, A.(1957) *An Economic Theory of Democracy*. Harper and Row: New York.
- Draper, N., and H.Smith. *Applied regression Analysis*. New York: John Willey and Sons, 1980.
- Drazen, A. (2000a), *Political Economy in Macroeconomics*, Princeton, NJ: Princeton University Press.
- Drazen, A. (2001) "The Political Business Cycles After 25 years", *American Journal of political Science*.
- Franzese R. (2002) "Electoral and Partisan Cycles in Economic Policies and Outcomes," *Annu. Rev. Polit. Sci.* 5:X—X.
- Gardner, R. (1995) *Games for Business and Economics*. John Willey & Sons, Inc.: N.-Y.
- Gonzalez, MdlA. (1999a) On elections, democracy, and macroeconomic policy cycles. Work. Pap., Dept. Econ., Princeton Univ.
- Gonzalez, MdlA. (1999b) Political budget cycles and democracy: a multi-country analysis. Work. Pap., Dept. Econ., Princeton Univ.
- Greene, W.H. (2000) *Econometric Analysis*. 4th edition. Upper Saddle River, NJ: Prentice-Hall.
- Hibbs D. (1977) Political parties and macroeconomic policy. *Am. Polit. Sci. Rev.* 71(4):1467- 87.

- Hibbs D. (1987a) *The American Political Economy: Macroeconomics and Electoral Politics*. Cambridge, MA: Harvard Univ. Press.
- Hibbs D. (1987b) *The Political Economy of Industrial Democracies*. Cambridge, MA: Harvard Univ. Press
- Ito, T. (1990) "The Timing of Elections and Political Business Cycles in Japan," *Journal of Asian Economics* 1, 135-56.
- Kandogan, Y. (2000), "Political economy of eastern enlargement of the European Union: Budgetary costs and reforms in voting rules", *European Journal Of Political Economy* (16)4.
- Keech W, Pak K. (1989) Electoral cycles and budgetary growth in veterans' benefits programs. *Am. J. Polit. Sci.* 33:901—11.
- Kiviet, J., (1995) "On Bias, Inconsistency, and Efficiency of Various estimators in Dynamic Panal data models," *Journal of Econometrics* 68, 53-78.
- Lewis-Beck, M. (1988) *Economics and Elections*, Ann Arbor: University of Michigan Press.
- Lindbeck, A. (1976), "Stabilization Policy in Open Economies with Endogenous Politicians," *American Economic Review Papers and Proceedings* 66, 1-19.
- Maddala, G. (1977a) *Econometrics*. New York: McGraw-Hill.
- McCallum, B. (1978), "The Political Business Cycle: An Empirical Test," *Southern Economic Journal* 42, 504-15.
- Mikesell J. (1989) *Fiscal Administration Analysis and Applications for the Public Sector*. 2nd ed. (Brooks/Cole Publishing Company).
- Newell, T. and Stuart A. (1999) *Is Political Business Cycle Theory Relevant to Ireland?* <http://econserv2.bess.tcd.ie/SER/1998/Essay3.htm>
- Nickell, S., (1981) "Biases in dynamic Models with Fixed Effects," *Econometrica* 49, 1417-1426.
- Nordhaus, W. (1975) "The Political Business Cycle," *Review of Economic Studies* 42:169-90.
- Nordhaus, W. (1989) *Alternative Approaches to Political Business Cycle*, Brookings Papers on Economic Activity.
- Paldam M. (1979) Is there an electoral cycle? A comparative study of national accounts. *Scand. J. Econ.* 81(2):323—42
- Paldam M. (1989) *Politics matters after all: testing Hibbs' theory of partisan cycles*. Aarhus Univ. Work. Pap. <http://ideas.uqam.ca/ideas/data/Papers/aahaarhec1989-8.html>.

- Persson T, Tabellini G. (1990) *Macroeconomic Policy, Credibility and Politics*. New York: Harwood Academic
- Persson T. and Tabellini G. (2002) "Do electoral cycles differ across political systems?"
- Pettersson-Lidbom P. (2001) "A Test of the Rational Electoral-Cycle Hypothesis"
- Remmer, K. "The Political Economy of Elections in Latin America," *American Political Science Review*, (1993) Vol. 87, No. 2: 393-407.
- Rogoff, K. (1990), "Equilibrium Political Budget Cycles," *American Economic Review* 80:21-36.
- Rogoff, K. and A. Sibert (1988), "Elections and Macroeconomic Policy Cycles," *Review of Economic Studies* 55, 1-16.
- Roland, G. (2000) *Transition and Economics Politics, Markets, and Firms* (Massachusetts: The MIT Press).
- Schuknecht, L., (1996) "Political Business Cycles and Fiscal Policies in Developing Countries," *Kyklos* Vol. 49, No. 2:155-70.
- Schuknecht, L., (1999a) "Fiscal Policy Cycles and Public Expenditure in Developing Countries," *Public Choice*.
- Schuknecht, L., (1999b) "Fiscal Policy Cycles and the Exchange Rate Regime in Developing Countries," *European Journal of Political Economy*, forthcoming.
- Schultz, K., (1995) "The politics of the Political Business Cycle," *British Journal of Political Science* 25, 79-99.
- Schumpeter, J. (1942) *Capitalism, Socialism and Democracy*. Harper & Brothers: New York.
- Sheffrin, S., (1989) "Evaluating Rational Partisan Business Cycles Theory," *Economics and Politics* 1, 239-59.
- Shi M., Svensson J. (2000) *The Political Budget Cycles: Do They Differ Between Developed and Developing Countries?*
<http://www.econ.iastate.edu/calendar/papers/shi.pdf>
- Streb J.M. (2002) "Signaling in political budget cycles. How far are you willing to go?"
- Tufte, E. (1978) *Political Control of the Economy*, (Princeton: Princeton University Press).

Appendices

Table A1. List of Countries Included in the Sample

<i>Abbreviation</i>	<i>Country</i>
ARM	Armenia
AZE	Azerbaijan
BLR	Belarus
EST	Estonia
GEO	Georgia
KAZ	Kazakhstan
KGZ	Kyrgyz Republic
LVA	Latvia
LTU	Lithuania
MDA	Moldova
RUS	Russian Federation
TJK	Tajikistan
TKM	Turkmenistan
UKR	Ukraine
UZB	Uzbekistan

Table A2. Empirical Tests of Political Budget Cycle Theory

Author	Variable tested	Country Coverage	General Finding
<u>Developed countries sample</u>			
Tufte (1978)	transfers	U.S.	Positive
Alesina (1988)	transfers	U.S.	Weak Positive
Keech and Pak (1989)	veterans' benefits	U.S.	Weak Positive
<u>Developing countries</u>			
Ben-Porath (1975)	taxes	Israel	Positive
Brender (1999)	fiscal policy	Israel	Positive
Krueger and Turan (1993)	fiscal aggregates	Turkey	Positive
Gonzales (1999)	total government expenditures	Mexico	Positive
Ames (1987)	total government expenditures	Latin America (17)	Positive
Schuknecht (1996, 1999a, 1999b)	fiscal deficit	LDCs (35)	Positive
Moyo (1999)	public savings	mixed developed and developing countries	Positive
Khemani (2000)	commodity taxes, capital spending, road construction	India	Positive
Shi and Svensson (2000)	government consumption, fiscal surplus, tax revenue	mixed developed and developing countries	Positive
Block (2000)	fiscal aggregates	Sub-Saharan Africa	Positive

Table A3.

Descriptive statistics.

Variable	Obs	Mean	Std. Dev.	Min	Max
dem	120	3.261667	2.063821	0.3	6.8
ele	120	0.333333	0.473381	0	1
ratio	111	6.522967	7.504057	.7298983	47.76781
close	120	0.125266	0.233379	0	1
parl	120	0.233333	0.424726	0	1
pres	120	0.158333	0.366584	0	1

Table A4.

Correlation matrix.

	ele	dem	close	parl	pres	type
ele	1.0000					
dem	0.1147	1.0000				
close	0.7397	-0.1553	1.0000			
parl	0.7384	0.0899	0.4418	1.0000		
pres	0.6134	0.0103	0.5544	0.1385	1.0000	
type	-0.0933	-0.6861	0.1529	-0.1129	0.0551	1.0000

Appendix B. Freedom House Democracy Index Checklists.

Political Rights Checklist

1. Is the head of state and/or head of government or other chief authority elected through free and fair elections?
2. Are the legislative representatives elected through free and fair elections?
3. Are there fair electoral laws, equal campaigning opportunities, fair polling, and honest tabulation of ballots?
4. Are the voters able to endow their freely elected representatives with real power?
5. Do the people have the right to organize in different political parties or other competitive political groupings of their choice, and is the system open to the rise and fall of these competing parties or groupings?
6. Is there a significant opposition vote, de facto opposition power, and a realistic possibility for the opposition to increase its support or gain power through elections?
7. Are the people free from domination by the military, foreign powers, totalitarian parties, religious hierarchies, economic oligarchies, or any other powerful group?
8. Do cultural, ethnic, religious, and other minority groups have reasonable self-determination, self-government, autonomy, or participation through informal consensus in the decision-making process?

Additional discretionary Political Rights questions:

- A. For traditional monarchies that have no parties or electoral process, does the system provide for consultation with the people, encourage discussion of policy, and allow the right to petition the ruler?
- B. Is the government or occupying power deliberately changing the ethnic composition of a country or territory so as to destroy a culture or tip the political balance in favor of another group?

The Civil Liberties Checklist

A. Freedom of Expression and Belief

1. Are there free and independent media and other forms of cultural expression? (Note: in cases where the media are state-controlled but offer pluralistic points of view, the Survey gives the system credit.)
2. Are there free religious institutions and is there free private and public religious expression?

B. Association and Organizational Rights

1. Is there freedom of assembly, demonstration, and open public discussion?
2. Is there freedom of political or quasi-political organization? (Note: this includes political parties, civic organizations, ad hoc issue groups, etc.)
3. Are there free trade unions and peasant organizations or equivalents, and is there effective collective bargaining? Are there free professional and other private organizations?

C. Rule of Law and Human Rights

1. Is there an independent judiciary?
2. Does the rule of law prevail in civil and criminal matters? Is the population treated equally under the law? Are police under direct civilian control?
3. Is there protection from political terror, unjustified imprisonment, exile, or torture, whether by groups that support or oppose the system? Is there freedom from war and insurgencies? (Note: freedom from war and insurgencies enhances the liberties in a free society, but the absence of wars and insurgencies does not in and of itself make a not free society free.)
4. Is there freedom from extreme government indifference and corruption?

D. Personal Autonomy and Economic Rights

1. Is there open and free private discussion?
2. Is there personal autonomy? Does the state control travel, choice of residence, or choice of employment? Is there freedom from indoctrination and excessive dependency on the state?
3. Are property rights secure? Do citizens have the right to establish private businesses? Is private business activity unduly influenced by government officials, the security forces, or organized crime?
4. Are there personal social freedoms, including gender equality, choice of marriage partners, and size of family?
5. Is there equality of opportunity, including freedom from exploitation by or dependency on landlords, employers, union leaders, bureaucrats, or other types of obstacles to a share of legitimate economic gains?