Where Does the Political Fiscal Cycle Really Come From?

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ABSTRACT: Whereas a political fiscal cycle was once thought to be a phenomenon of less developed economies, some recent studies find such a cycle in a large cross-section of both developed and developing countries. We re-examine these empirical results and show that they are not robust to the choice of countries and time periods. We show that the finding of a political fiscal cycle is driven by the experience of "new democracies", where fiscal manipulation may "work" because of lack of experience with electoral politics or lack of information that voters in more established democracies use. The strong fiscal cycle in those countries accounts for the finding of a fiscal cycle in larger samples that include these countries. Once these countries are removed from the larger sample, the political fiscal cycle disappears. Our findings also reconcile two contradictory views of pre-electoral manipulation, one arguing it is a useful instrument to gain voter support and a widespread empirical phenomenon, the other arguing that voters punish rather than reward fiscal manipulation.

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1. Introduction

The common perception is that incumbents often try to use expansionary economic policy before elections to increase their re-election chances. Most politicians and non-politicians alike would probably subscribe to this view, and the term "election-year economics" or its equivalent is common in many countries.[1]

In the political economy literature, this view is summarized as the "political business cycle", that is, the possibility of a macroeconomic cycle induced by the political cycle. One of the underlying tenets of models of the political business cycle is the finding that good macroeconomic conditions prior to the elections help an incumbent to get re-elected, a finding that has wide support in studies (conducted mainly in developed economies).[2] The strength of this finding was an important factor generating formal modeling of how opportunistic incumbents may manipulate economic policy to induce economic expansions before elections.

However, notwithstanding both common perceptions and the substantial evidence that a "strong economy" helps incumbents get re-elected, empirical studies – especially in developed economies – provide little evidence of a regular and statistically significant increase in economic activity before elections.[3] In short, voters care about the economy but this does not appear to translate into econometrically verifiable cycles in aggregate economic activity.

Given the lack of evidence for political cycles in economic outcomes, a literature examining possible cycles in policy instruments has developed. More specifically,

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[1] Tufte (1978, p.3) begins his famous book on the political business cycle with a quote from 1814, "A Government is not supported a hundredth part so much by the constant, uniform, quiet prosperity of the country as by those damned spurts which Pitt used to have just in the nick of time."

[2] The most influential work was probably that of Fair (1978) (updated in Fair [1982, 1988]), who found similar results for the U.S. In his original article, Fair looked at presidential elections from 1916 through 1976, and found that the change in real economic activity in the year of the election appears to have an important effect on votes for president. Specifically, a one percent increase in the growth rate increases the incumbent's vote total by about one percent. Numerous other articles find similar results on the importance of pre-election conditions on voting patterns in both the U.S. and other countries. Looking at voting or popularity functions, Lewis-Beck (1988) found that the sort of results that Fair reports for the U.S. hold in Britain, France, West Germany, Italy and Spain as well. Madsen (1980) reported similar results for Denmark, Norway, and Sweden.

[3] See Drazen (2000b), chapter 7, for a review of the empirical evidence on opportunistic political business cycles in economic activity.

attention has turned more to examining the existence of fiscal expansions in election years, which is supposed to generate the desired timely economic and hence electoral effects. The lack of evidence on a cycle in economic activity suggests two possible rationales. First, that fiscal policy may be targeted to specific groups of voters. That is, it is not macroeconomic expansion that politicians are after, but influence on specific constituencies. Fiscal expansions are thus a reflection of targeted expenditures and tax cuts used to draw support, rather than the result of an attempt to increase aggregate economic activity. Second, one may use a "revealed preference" argument. If politicians choose expansionary policies before elections, it is likely that they "get" something out of it, namely, they increase their chances for reelection, even though the econometrician is unable to observe any effects on the aggregate level.

The conventional wisdom is that the political fiscal cycle (PFC) indeed exists, reflecting the desire of incumbents to get re-elected. Until recently, the political fiscal cycle was thought to be a phenomenon primarily of developing rather than developed countries, where examples of a political cycle in aggregate fiscal variables were less common.[4]

A number of recent papers using large cross-country data sets have argued that the political cycle in fiscal aggregates is found in *both* developed and less developed countries. Shi and Svensson (2002) find evidence of significant pre-electoral increases in deficits in a panel of 91 developing and developed countries over the period 1975-95. Persson and Tabellini (2002, 2003, chapter 8), in a sample of 60 democracies over the period 1960-98 find no evidence of a pre-electoral increase in deficits, but do find evidence of statistically significant tax decreases before elections. The apparent strength of the results has fostered the view that the political fiscal cycle is in fact a widespread phenomenon.

There is however an alternative view, suggesting the need for skepticism about the existence of political fiscal cycles. The positive effect of a "strong economy" on an

[4] For example, Keech and Pak (1989) found a cycle for veteran benefits in the United States between 1961 and 1978. Alesina, Cohen, and Roubini (1992) find evidence of a political cycle in transfers relative to GNP in the U.S. over 1961 to 1985, which they argue disappears if one extends the sample either forward or backward. They find no statistically significant political cycle in other fiscal instruments. See Drazen (2000b).

incumbent's re-election prospects does not automatically imply that opportunistic politicians can successfully influence economic conditions before an election using expansionary economic policy. There are at least two reasons to question whether politicians will engage in pre-electoral monetary and fiscal expansion in order to manipulate aggregate economic activity. First, there is the technical question of whether it is possible to time the expansion accurately enough to happen just before the elections. Though high precision missiles may now dominate military conflict, the economic equivalent in electoral conflict is believed not to exist. It is impossible to fine-tune the aggregate economic effects of economic policy so that they can be turned on and off with any precision.

Even if it were technically possible to precisely time the aggregate effects of policy, there is another key reason why politicians may not do so. Policies that shift the timing of economic activity so that the economy expands before an election are considered harmful to the economy over time in terms of "unsmoothing" consumption, inducing investment cycles, *etc*. Clearly, if voters are rational they would not support such policies, so that pre-electoral manipulation would be punished rather than rewarded at the polls, as is argued by a number of studies such as Peltzman (1992), Alesina, Perotti and Tavares (1998), and Brender (2003). These studies present evidence that voters in developed economies are "fiscal conservatives" and often tend to remove deficit-producing incumbents from office. Brender – and others – also discuss the conditions under which voters would punish deficit producing politicians, pointing to the importance of the availability of information – including the existence of media that would deliver the information to voters. The more available information is, the more likely it is that voters would punish fiscal manipulation.

In short, an incumbent might be rewarded at the polls only if he can hide the manipulation and make the public believe that the good economic conditions reflect the success of his policy or his high ability. However, this assumption seems unreasonable in many countries because voters – *especially experienced ones* (who understand the incentives and the tools of electoral manipulation) – know that election years are particularly "suspect" for manipulation and therefore would interpret "surprises" in these years with special caution. Therefore, in economies in which the electorate has had a lot

of experience with elections, and where the collection and reporting of the relevant data to evaluate economic policy are common, voters would be unlikely to "fall" for the trick of making the economy look good right before elections. It is therefore perhaps not surprising that political cycles in aggregate activity are not as easy to find as one might initially think. This may be because politicians who try to influence economic activity are simply unsuccessful in doing so or because they realize that manipulation may be seen as such and therefore would not help their re-election chances.[5]

In this paper we re-examine recent empirical results on the existence of the political fiscal cycle in a cross-section of countries. We show that they are not robust to the choice of countries, controls, and time periods, and that the finding of a political fiscal cycle is driven by the experience of "new democracies" - where fiscal manipulation may "work" because voters are inexperienced with electoral politics or may simply lack the information that is produced in more established democracies. The strong fiscal cycle in those countries accounts for the finding of a fiscal cycle in larger samples including these countries. Once these countries are removed from the larger sample, any political fiscal cycle disappears. Our findings also reconcile two contradictory views of pre-electoral manipulation, one arguing that it is reasonable to expect politicians to engage in such manipulations and that empirically they are widespread, the other arguing that voters punish rather than reward fiscal manipulation.

The plan of the paper is as follows. In the next section we summarize the evidence for a political fiscal cycle. This includes earlier evidence for the political fiscal cycle, mostly from developing countries, as well as more recent papers arguing that a cycle is observed in both developing *and* developed countries. In section 3 we show that these recent findings are not robust with respect to choice of time period and data sample. In section 4, the heart of the paper, we demonstrate why this is so, showing that the PFC is a phenomenon of "new" democracies. In section 5, we suggest some conceptual bases

[5] Lewis-Beck (1988) argues that the absence of a significant opportunistic cycle either in outcomes or in instruments reflects how hard it is to time economic manipulation. Since monetary and fiscal policy can be used only with great imprecision, so that politicians cannot expect to time the stimulus to come right before an election, opportunistic politicians will try to provide for continual good economic news.

for the result that the political fiscal cycle is a phenomenon of new democracies. Section 6 concludes. A Data Appendix contains a detailed description of the data.

2. Evidence on Fiscal Cycles – A Summary

Until recently, conventional wisdom was that a political fiscal cycle was a phenomenon of developing, but not developed economies. In this section we review the empirical evidence.

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 decreased by 7.6% in the year after the election. 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 a comprehensive study of the political business cycle in 35 developing countries over the period 1970-92.[6] 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 fiscal policy. He suggests that in developing countries expenditure policies, such as distribution of free or subsidized goods or employment generation via public works programs, are probably more effective than tax cuts to affect voter behavior. He finds a clear significant effect of elections on the fiscal balance, but no significant effect on output. Individual country studies arguing for a significant political fiscal cycle include Ben-Porath (1975) for Israel over the period 1952-73, Krueger and Turan (1993) for Turkey over the period 1950-1980, and Gonzalez (1999b) for Mexico over the period 1958-1997, to name a few.

Recent research challenges the view that the political fiscal cycle is a phenomenon of developing countries and that evidence from developed economies is mixed at best. Shi and Svensson (2002) and Persson and Tabellini (2002, 2003) argue that there is a strong political fiscal cycle in developed economies as well. Shi and

[6] See also Block (2002) for a recent cross-section study.

Svensson find this for the deficit and its components – especially revenues - while Persson and Tabellini find no evidence for deficits, but do find them for revenues.[7]

Shi and Svensson (2002) consider a panel data set of 91 countries over the period 1975-95. They find that, in an election year, the government surplus falls significantly in both developing and developed countries. Both government spending rises and revenues fall, though the significance differs across the data sets and the estimation technique. The economic effect is significant for the sample as a whole, the fiscal surplus falling on average in their full sample by 1 percent in an election year.

Shi and Svensson's analysis, like most other cross-section studies of the political fiscal cycle, considers both democracies and non-democracies in the same sample. In our view, if the political fiscal cycle represents the manipulation of fiscal policy to improve an incumbent's re-election chances, then it only makes sense in countries in which elections are competitive. If elections are not competitive, the arguments raised in the literature for the existence of a PFC are no longer valid. Even if one finds a "political" fiscal cycle in countries that have no competitive elections (such as Romania before 1990, Indonesia between 1975 and 1995 or Syria, to name a few examples from this study), the explanation cannot be based on the desire to get reelected.[8] In fact, one might argue that finding that the political fiscal cycle exists in non-democratic countries **weakens** the support for the theory, rather than strengthening it. Hence, from either an empirical or conceptual perspective, one needs to separate democratic from non-democratic countries.[9]

Persson and Tabellini (2002) address the selection problem and consider a group of sixty democracies from 1960 to 1998. The significant difference in their approach is that unlike Shi and Svensson, Persson and Tabellini restrict the sample to countries with democratic political institutions and competitive elections. To select the sample they use the Polity IV data set covering nations with a population exceeding half a million people

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[7] This result is problematic, because it is not clear how a decrease in revenue is not accompanied by either a decline in the budget surplus or a decrease in expenditure.

[8] Alternative explanations would include multi-year economic plans which coincide with the term of governments or "end of term" budgeting effects.

[9] It is too simple to argue that including non-democratic countries in the sample simply lowers the probability of finding significant results. The model should be tested separately for democracies and other countries.

(or the Gastil scores from Freedom House, when the POLITY index is missing) taking only countries with positive values of POLITY. This gives them a sample of 60 countries in which they find a political cycle in revenues (that is, government revenues as a percent of GDP decrease before elections) , but no political cycle in expenditures, transfers, or the deficit across countries or political systems.[10] The last result is in contrast to the findings of Shi and Svensson.

3. How Robust is the Political Fiscal Cycle?

The work of Shi and Svensson and of Persson and Tabellini presents a serious challenge to the previous conventional wisdom that the political cycle is a phenomenon primarily of less-developed economies and not of developed economies. In this section, we begin by asking how robust are these results. We estimate similar equations, trying as much as possible to use the same data sets and variable definitions, and ask how they change when one changes variable definitions, the time period, or the set of countries included. Our main conclusion is that the results are not robust to changes in specification.

Our robustness tests proceed along two lines. The first can be thought of as simply statistical, where we consider alternative variable definitions, time periods, *et cetera*. The second is to divide the sample to "new" versus "old" democracies, as discussed below.

Our basic data set consists of 95 countries for which we collect data on the central government balance, total expenditure and total revenue and grants from the IFS database. (Further details are given in the Data Appendix and Tables A1 and A2.) The sample period is 1960-2001, although the data for many countries cover shorter periods. Except for equation 1 in Table 1, we apply to these data a filter for the level of democracy in each country in each year. This filter is taken from the POLITY IV project, conducted at the University of Maryland. Each country is assigned in this dataset a value

[10]Persson and Tabellini are especially interested in how the political fiscal cycle may differ across different political systems, such as presidential versus parliamentary systems, or proportional or majoritarian electoral systems. We present some results concerning these distinctions in Table 6 below.

that ranges from -10 (autocracy) to 10 (the highest level of democracy). We restrict our sample to democracies, by selecting only the countries that receive a score between 0 and 10 on this scale; this reduces our sample to 50 countries. These countries are divided to developed and developing according to the list in Table A1, which also provides a description of the available data for each country. Additionally we collected data for 13 transition economies in eastern Europe and the FSU for the period 1990-2001.

Election dates and institutional data on the election process are taken from the DPI dataset, provided by the World Bank (Beck et. al., 2001). It should be noted that this version of the dataset provides some corrections to its previous version which was used by Shi and Svensson (2002). These data were complemented, where needed, by other political datasets, such as the IDEA (Institute for Democracy and Electoral Assistance, "Voter Turnout Since 1945 to Date") and IFES (International Foundation for Electoral Systems, election guide).

Our control variables include those used by Shi and Svensson and by Persson and Tabellini (2002). In addition to fixed country and year effects the former include, the log of real GDP per capita (taken from the 2002 version of the World Bank's World development Indicators dataset (WDI)) and the growth rate of real GDP. The latter include real GDP per capita, the trade share, two demographic variables representing the share in the population of the age groups 15-64 and 65+ (also taken from WDI). We also include, like Persson and Tabellini the log difference between real GDP and its (country specific) trend (computed using the Hodrick-Prescott filter), as a measure of the output gap.

The form of regressions is the type that is standard in empirical work on the political business cycle. The economic variable of interest is regressed on its lagged values, a set of controls, and an electoral dummy. In the tables, we present only the coefficient of the electoral variable, indicating whether or not there is a statistically significant political cycle.

The first thing to notice is that the results in both papers are quite sensitive to the choice of time periods and electoral variables. In Table 1, we present regressions for the deficit, revenues and expenditures, all as a percentage of GDP, similar to those presented

by Shi and Svensson; that is, beginning with the same controls, variable definitions, and sample periods over a very similar set of countries in each case.

In equation set 1 in the table, we reproduce the basic Shi-Svensson regressions over the same time-period 1975-95 and using the same electoral variable, which we call ELECTWB. There is a highly significant political cycle for the deficit that mostly reflects a decline in revenue during election years.[11] In equation set 2, we consider the same regressions over the same time period, but where we restrict the sample to democracies by using the POLITY filter. The deficit cycle is still significant, but there is no longer a significant revenue cycle. However, the deficit cycle in the sample of democracies is not robust to the definition of the electoral variable. In equation set 3 we use the electoral variable ELECT2, which is defined differently. ELECTWB, which is meant to capture pre-electoral effects, equals 1 in an election year and 0 otherwise, no matter when during the year the election occurred, that is, even if it occurred very early in the year. ELECT2 equals one in the election year if the election occurred in the second half of the year (as in ELECTWB) but is equal to one in the *previous* year if the election occurred in the first half of the year. This change renders the electoral variable insignificant and eliminates the political deficit cycle.

In equation sets 4, 5 and 6, we use the specification with ELECTWB and a sample only of democracies, but change the sample period. We see that there is a significant deficit cycle when we take the period 1960-2001, but when we split the period into sub-periods 1960-1985 and 1985-2001 (each sub-sample having an almost identical number of observations), one finds a significant deficit cycle only in the second sub-period. (As with the time period 1975-1995, a significant deficit cycle no longer emerges if the alternative electoral variable ELECT2 is used instead of ELECTWB. Results available on request.). There is no political cycle in either revenues or expenditure.

In Table 2 we consider a similar exercise for the results of Persson and Tabellini (2002), who restrict the sample to democracies and use a broader set of control variables,

[11] The revenue cycle is not robust in a sample including non-democracies to change in time period or variable definitions. When we consider the sample period 1960-85 or 1985-2000 or use the electoral variable ELECT2 over 1975-95, the coefficient on the electoral dummy is no longer significant. The political revenue cycle is also not significant in a sample of *only* non-democratic countries over 1975-95. (Results available on request.)

as discussed above. In equation set 1 we present regressions similar to theirs using the same economic variables and controls, including ELECTWB, over the time period 1960-2001, analogous to their sample period. As above, we find a statistically significant deficit cycle, but no political cycle in revenues or expenditure. In equation set 2, we show that a redefinition of the electoral variable from ELECTWB to ELECT2 eliminates the political cycle. The time period matters as well. As before, we find that breaking the time period into subperiods 1960-85 and 1985-2001 reveals that there is *no* fiscal cycle in the first subperiod, but a significant deficit cycle in the second subperiod (equation sets 3 and 4). We return to this result and explain it in the next section. Similar lack of robustness results over the electoral variable (ELECTWB versus ELECT2) is found for the subperiods and subsamples, as is sensitivity of the results to which countries are included. (Results available on request.)

To summarize our results so far, regressions that find a political fiscal cycle over both developed and developing countries are not robust. If one simply runs regressions over a large panel, the existence of a political fiscal cycle appears only in the deficit and depends very much on the choice of time period, electoral variable, and even the choice of countries in the data set. Our first major caution is therefore that the political fiscal cycle is not as widespread as a simple model of opportunism may suggest, giving some support to those who question whether fiscal manipulation helps incumbents get re-elected. We believe that the significant results that are found are therefore probably driven by a subset of countries and electoral incidents.

So far, our results have been largely "negative", that is, demonstrating that previous findings are not robust. We now have a better sense of what *isn't* happening. But, what *is* happening? Can we find any regularities as far as the existence of political fiscal cycles? Can these regularities be explained by the conceptual explanations for the existence of a political cycle? We now turn to these questions.

4. The Empirical Importance of Being a New Democracy

A key message of the previous section, in addition to the results on lack of robustness of the results on deficit cycles, is that it is crucial to distinguish between democracies and non-democracies. Conceptually, it should matter whether or not

elections are competitive. Empirically, we found some evidence that it does in comparing results for a panel of only democracies to one that includes both types of countries.

Using a political filter to refine the data set brings out another interesting phenomenon – the number of countries in the sample is increasing over time in both the sample as a whole and in the subsamples of developed and less-developed countries. In the first subperiod 1960-85, there are 42 democracies in the sample as a whole – 21 among the developed countries and 21 among the less-developed countries.[12] In the second subperiod, 1985-2001, there are 50 democracies in the sample as a whole – 22 among the developed countries and 28 among the less-developed countries. Hence, when using the POLITY filter, the data set changes as the time period changes. This suggests that the difference in results over the two subsamples reported above may come from the change in the sample.

More specifically, *new* democracies are being added to each of the samples over time, even among the sample of developed economies. Hence, one is lead to ask whether it is the additional countries, where democratic elections are a new phenomenon, that are responsible for the political fiscal cycle found in the panels?

There are good ex-ante reasons to think so. Many models arguing that voters hold incumbents accountable for deficits and wasteful spending would predict that incumbents who value office would cut rather than increase spending, especially in developed economies, where government expenditure is high relative to GDP. (See Peltzman (1992) Besley and Case (1995), Alesina, Perotti and Tavares (1998), among others.) For this to be the case, one would require, however, that voters have both the necessary information to draw such inferences, as well as the ability to process that information correctly. These would reflect experience with an electoral system by voters, the establishment of the institutions that would collect and provide the relevant data, and experience by media in disseminating and analyzing this information. In the absence of this experience, it is more likely that fiscal manipulation would be rewarded rather than punished, so that incumbents would successfully engage in it. Rogoff (1990) presents the

[12] As mentioned above, some of the countries do not have data for the entire period.

leading model of political fiscal cycles driven by rational voters with imperfect information. Voters respond positively to pre-electoral fiscal expansions because they signal a characteristic valued by voters. We discuss these points in greater detail in section 5 below.

Another reason why the interpretation of economic data by voters may be more complicated in new democracies is the shift in economic structure that often goes along with the shift to democracy. This is perhaps most striking when one considers the formerly socialist economies in Eastern Europe and the former Soviet Union where the centrally planned economic system and the reporting mechanisms were abolished in a relatively short period. The collapse of old economic systems may also present a problem in the analysis of the political fiscal cycle in these countries: to the extent that high deficits associated with the economic transition occur simultaneously with the political transition, without either one causing the other, one would not classify this as a classic political fiscal cycle. On the other hand, politicians facing the new phenomenon of contested elections who are aware of the desire for rapid economic transition may respond especially strongly with deficit spending.[13]

To test this hypothesis, we separate new democracies from established democracies in our sample. Beginning with the POLITY filter, we separate those countries that had competitive elections during the entire sample period for which we have data from those that began having competitive elections only within the sample period. For the latter, we take observations for the first four competitive elections and define those observations as coming from a "new democracy". In the data Appendix, we list those observations characterized as new democracies in both the sample of developed and less developed countries.

We first present the results for developed countries. There are four new democracies in the sample period (not including formerly socialist economies) – Greece, Portugal, Spain, and Turkey. While there are not enough data points to test for a political

[13] This suggests that one needs to be careful in how one treats the transition economies in 1990-92, and in how one interprets the results of any study that simply lumps them together with other countries. To err on the safe side, we exclude these observations from our sample.

fiscal cycle in a sample of only new democracies in the latter subsample, we can estimate the equations both with and without these four countries. In Table 3a, we present results for the political fiscal cycle in developed economies using Persson and Tabellini's control variables. What we see quite clearly is that once the new democracies are removed from the sample, the deficit cycle found in the group of developed democracies as a whole disappears, both for the whole time period 1960-2001 and for the latter subperiod 1985-2001. In Table 3b we present analogous results for the same exercise using Shi and Svensson's control variables. The same result emerges clearly: the political deficit cycle for developed democracies found for the time period as a whole and for the later subperiod disappears once the new democracies are removed from the sample. Hence, one may conclude that the political fiscal cycle in these countries is driving the results for the sample of developed countries as a whole. Put another way, when we look at a constant panel of democracies among developed countries over the whole sample period, there is no statistically significant political fiscal cycle. This is consistent with the conventional wisdom prior to the work of Persson and Tabellini and Shi and Svensson, as well as with the literature that casts doubt on the existence of fiscal manipulation in countries with electoral experience.

We now consider the sample of both developed and developing countries as a whole, distinguishing new from established democracies (For a list of the "new democracies" see Table A2). In Table 4a we present results over only new democracies in the sample both including and excluding the new democracies in Eastern Europe, for the entire sample period (for these countries this means 1976-2001, as there are no "new democracies" in the sample period 1960-1975 in our data set.) We present regression results using both the Persson-Tabellini controls and the Shi-Svensson controls. A number of results stand out. First, we get significant results for the set of new democracies, whether or not the formerly socialist economies are included. The coefficients on the electoral variable are larger than in the sample of all democracies. We also find, in contrast to all other results presented so far, that there is a significant political expenditure cycle in the new democracies as suggested e.g., by Schuknecht (1996). Moreover, note that the coefficients on the deficit and on expenditures in the analogous equations are very similar, while the coefficient on revenues is very small in

absolute value and insignificantly different from zero. Hence, as one might conjecture, the political cycle is clearly an expenditure cycle, and this is what drives the deficit. In Table 4b we present similar results for the latter part of the sample (1985-2001). Note also that the results are robust to the choice of the election year variable: the deficit and expenditure cycles are significant when we use ELECT2 instead of ELECTWB.

To confirm that the cycle is indeed a phenomenon of new democracies, in Table 5 we present results on the existence of a deficit and expenditure cycle in the established or "old" democracies (that is, all countries which were in a sample of democracies using the POLITY filter, *excluding* the new democracies). As our hypothesis suggests, there is no statistically significant political cycle in this set of countries that is robust to choice of time period, control variables, or electoral variable.[14]

Persson and Tabellini suggested that the nature of the political cycle depended on the nature of electoral rules – whether a country had a parliamentary or presidential system and whether voting for the legislature was primarily via proportional or majoritarian rules. In Table 6 we show that after controlling for electoral rules, the political fiscal cycle is still a phenomenon of new democracies with presidential elections, and does not show up in established democracies.

The separation of new and established democracies is also a potential explanation for why many studies found a statistically significant fiscal cycle only for less developed countries. Since the proportion of new democracies is larger among less developed than developed countries (4 out of 22 among developed economies, 18 out of 28 among developing economies over the whole sample period), studies that test for the existence of a political cycle over *all* countries in one and the other group (or all democracies in one

[14] There are two ways one may exclude elections in new democracies in testing for a political cycle in "old" democracies. One is to exclude all elections (*i.e.*, all observations) that is, to exclude those countries that made the transition to democracy in the sample period entirely. The other is to exclude only those election observations which occurred when the democracy was in fact "new" (the first three or four elections after the transition to democracy in our definition), but to include all other observations for these countries in a sample of elections in established democracies. As we cannot be sure *a priori* how long the new democratic effect persists (we take four elections as a possible minimum), we prefer the first procedure and present results using that procedure. We ran the regressions using the second definition of "old" democracies and found the same results.

or the other group) are more likely to find a political cycle among the group of less developed countries.

An alternative hypothesis is that it is not the length of time a country has been a democracy, but the level of democracy that matters for the existence of a political fiscal cycle. That is, the political fiscal cycle may be a phenomenon of countries where democracy is relatively weaker. (See, for example, Gonzalez [1999].) In Table 7a we show that indeed the political fiscal cycle is stronger in countries with lower level ("quality") of democracy. The deficit cycle is significant in those countries where the POLITY index of democracy is between 0 and 9, while it is much smaller – and not robust to the specification – in the countries with a POLITY index of 10. However, once we separate "old" democracies from the "new" democracies we find that the apparent effect of the level of democracy is entirely due to the "new" democracies. In Table 7b we show that for "new" democracies, the deficit and expenditure cycles are significant, and with a similar magnitude, regardless of the level of democracy. In Table 7c we show that for "old" democracies there is no political fiscal cycle, whatever their level of democracy is. The reason that in aggregate data we find stronger evidence for political fiscal cycles in countries with a lower level of democracy is that the proportion of new democracies in this group is higher: 44 percent of the data points in the group of countries with a low level of democracy are "new" democracies, compared to 7 percent among the countries with a high level. The findings in Tables 7a-7c also rule out the explanation that the results for "new" democracies actually reflect their lower level of democracy, rather than their being "new".

To summarize, our empirical results are quite clear. In terms of a *group* of countries, the political fiscal cycle is a phenomenon of new democracies. It is not a widespread phenomenon of democracies as a whole, as some recent research has argued. The finding that the political cycle is a widespread phenomenon across a larger group of countries comes from failing to distinguish new democracies from other countries, namely established democracies and non-democracies. Of course, there may be incidents of aggregate fiscal cycles in other countries. There may also be fiscal manipulation that is not observable in the aggregate fiscal data (for example, transfers to one group offset

by a reduction in transfers to other groups of voters). But, in terms of a group of countries, it is the new democracies where the political fiscal cycle is really occurring.

5. The New Democracy Effect – Some Conceptual Observations

Why are new democracies more susceptible to election-year economics? It is beyond the scope of this paper to investigate this question in any depth, though we hope to do so in the future. Here we do three things. First, we suggest reasons why it may be the case that new democracies are more likely to display political fiscal cycles. Second, we briefly discuss how this may be modeled. Third, we point out how our findings help to reconcile the logic behind the political fiscal cycle (that is, expansionary fiscal policy may be used to try to increase electoral prospects) with the view that argues that pre-electoral expansions are punished rather than rewarded.

Why might electoral cycles be more likely in new democracies? We argued above that for voters to hold incumbents accountable for deficits (and hence for deficits to be punished rather than rewarded at the polls) they need both the necessary information to draw such inferences, as well as the ability to process that information correctly. These would reflect experience with an electoral system, the availability of data, and the experience of the media in finding, disseminating and analyzing the relevant data. In many new democracies, even basics like the collection of data and reporting it to the public are not well established. (The demand for data may in fact be driven in part by the possibility of holding office-holders accountable through elections.) We want to stress that the ability to draw inferences about incumbent performance from pre-electoral economic variables is not meant simply to represent the experience of voters, but of experience and interactions of all actors with the electoral system. Put another way, it is not that new democracies are characterized an unsophisticated or naïve voting population, but that in countries with less of an electoral history, and hence less exposure to pre-electoral fiscal manipulations, a political cycle is more likely to occur. Our results suggest that learning about pre-electoral fiscal manipulations is a local learning process that is probably not easily transferable across countries.

How might one model the process of gaining experience with fiscal manipulation in order to gain insight into the new democracy phenomenon? This is still work to be

done. The observations about the inference problem in the previous paragraph suggest using some sort of a signaling model of candidate characteristics under imperfect information, as in Rogoff (1990). A key difference would be that we would want the signal content of fiscal actions to *change* over time as voters became more experienced over time with electoral fiscal manipulation and were provided with more economic and fiscal information in order to draw inferences.[15] A key feature of such a learning process would be that any positive effect of deficit spending on an incumbent's electoral prospects would not only diminish over time, but would likely change sign as a country has more experience with a competitive electoral process.

This last point brings us back to the relation between the theory of the opportunistic political business cycle, predicated on the view voters may reward deficit spending at the polls, and the view that voters are "fiscal conservatives", who punish deficit spending at the polls. Our results for new democracies are consistent with the first view, while the findings for established democracies are consistent with the second. Proponents of the latter view, such as Peltzman (1992) or Alesina, Perotti, and Tavares (1998) looked at established democracies, and it is not surprising that they do not find support for an electoral benefit of deficit spending. Our new democracy result, and the view that there is a learning process which leads to the empirical disappearance of a political fiscal cycle can reconcile and make consistent these two approaches. The results of Brender (2003), showing how the electoral response to deficit spending in local Israeli elections changed dramatically over time, are especially enlightening in this regard. In that study it was shown that when direct elections for mayors were introduced in Israel, voters were indifferent to deficits and local fiscal management for 15 years. However, after that period, when accounting and reporting standards were enforced on the local authorities, and when the local media expanded, deficit spending was "punished" at the polls.

[15] Gonzalez (1999a) and Shi and Svensson (2000) extend the Rogoff model to consider the importance of transparency (or more exactly, the lack of transparency) in creating the conditions for political cycles.

6. Conclusions

In this paper, we considered the empirical evidence for the existence of a political fiscal cycle. The question of *whether* such a cycle exists on the macroeconomic level across countries is really a question of *where* it exists, that is, in which types of countries. The answer to that question is not only empirically relevant, but theoretically important as well, since it sheds light on what factors lie behind the existence of a cycle.

It was once thought that the political fiscal was a phenomenon of less developed economies, suggesting that it might reflect low levels of democracy or of economic development. This was consistent with research that argued that experienced voters punish electoral fiscal manipulation. Some recent research finds such a cycle in both developed and developing countries, calling into question this conceptual interpretation of the existence of a political fiscal cycle.

Our empirical results indicate quite clearly that the political fiscal cycle is a phenomenon of new democracies. The strong fiscal cycle in those countries accounts for the finding of a fiscal cycle in larger samples including these countries. Once these countries are removed from the larger sample, any political fiscal cycle in larger samples disappears.

This finding suggests that fiscal manipulation may “work” because of lack of experience with electoral politics or lack of information that is "produced" in established democracies and that more experienced voters use. As models that view rational voters as “fiscal conservatives” suggest, once a country becomes experienced in electoral politics, a political fiscal cycle should not appear at the macro level.

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Data Appendix

Sample

We use IFS data for all countries with available central government data on the *Deficit, Total Expenditure* and *Total Revenue* (including *Grants*).

To restrict our sample only to democracies, we include only the observations with a non-negative score in the *POLITY IV* level of democracy index, which is produced by the University of Maryland. Hence, only data points with a score of 0 and above are left in the sample.

In the former socialist economies in Eastern Europe and the former Soviet Union we exclude the observations for 1990-1992, as they may represent the simultaneous effect of the shift to democracy and the collapse of central planning, rather than political manipulation of fiscal variables.

Fiscal policy variables

The dependent variables are the following: ***Deficit***- calculated as the difference between *Total Revenue & Grants* and *Total Expenditure*. ***Total Expenditure-*** taken from the IFS dataset. ***Total Revenue & Grants-*** calculated as *Revenue* plus *Grants* from the IFS dataset.

All these variables are presented as a percentage of GDP, the latter also taken from the IFS dataset.

Election variables

The data on election years and dates, are mainly from the **I**nstitute for **D**emocracy and **E**lectoral **A**ssistance (*IDEA*) , "Voter Turnout Since 1945 to Date" (www.idea.int/voter_turnout.com). The **I**nternational **F**oundation for **E**lectoral **S**ystems (*IFES*- www.electionguide.org), The **D**atabase of **P**olitical **I**nstitutions (*DPI*) Version 3.0, (a project conducted by the World Bank, available on the World Bank website) and are complemented by other political data sources.

We use two alternative election year variables:

ElectWB- a dummy variable that receives the value 1 in the election year and 0 otherwise.

Elect2- a dummy variable that receives the value 1 in the election year, if the elections take place during the second half of the year, or in the year before the elections, if the elections take place in the first half of the year, and 0 otherwise.

All our estimations contains fixed country effects , as well as two lags of the dependent variable. Fixed year effects were tested and removed where they were not statistically significant.

Persson & Tabellini economic control variables

Trade- the trade share, as a percentage of GDP, taken from the **W**orld **D**evelopment **I**ndicators (WDI) 2002 publication of the World Bank.

Lgdp_pc- The log of real per capita income. The data for 1975-2001 are taken directly from the WDI dataset (mentioned above). The data for the years 1960-1975 are computed using the WDI "GDP per capita in constant 1995 US$" series.

Pop1564, Pop65- Two demographic variables measuring the share of a country's population, ranging between 15 through 64, and above 65, respectively.

Gdp_rhp- A measure of the output gap, calculated as the difference between real GDP and its (country specific) trend. The trend was computed using the Hodrick-Prescott filter on the change in real GDP. Real GDP data were extracted from the WDI dataset in constant 1995 US$.

Shi & Svensson control variables

Lgdp_pc- The log of real per capita income – as elaborated above.

Gdp_r- The change in real GDP. Taken also from the WDI dataset.

Presidential Vs. Parliamentary election rules

The *DPI* database provides information whether the chief executive responsible for economic policy, in each country and in each election year, is elected directly by public or by parliament. In the former case we define the electoral rule as Presidential and in the latter as Parliamentary, as in Persson and Tabellini (2002). Based on this distinction between the electoral rules we computed the following variables:

Pres- receive the value 1 in a Presidential electoral system, and 0 otherwise.

Parl- receive the value 1 in a Parliamentary electoral system, and 0 otherwise.

Wb_pres- an interaction between *Pres* and *ElectWB*= (*Pres*)*(*ElectWb*).

Wb_parl- an interaction between *Parl* and *ElectWB*= (*Parl*)*(*ElectWb*).

When estimating the Presidential Vs. Parliamentary equation, we use both *Wb_pres* and *Wb_parl* variables, together with either Persson & Tabellini, or Shi & Svensson economic control variables, and two lags of the dependent variable.

Level of democracy

The analysis regarding the level of democracy was based on the score of each country in the *POLITY IV* dataset. We split the sample between these countries with a score of 0 to 9 and those with a score of 10, because more than 50 percent of the data points represent countries with a score of 10.

Table 1: The Political Fiscal Cycle Using Shi-Svensson's Control Variables.

	Shi & Svensson's estimation period - without a democracy filter[4]			Shi & Svensson's estimation period - with a democracy filter			Equation (2) with an alternative election year variable			Shi & Svensson's estimation for an extended period - with a democracy filter			Equation (4) estimated for the early part of the sample period			Equation (4) estimated for the later part of the sample period		
	(1)			(2)			(3)			(4)			(5)			(6)		
Estimation period	1975-1995			1975-1995			1975-1995			1960-2001			1960-1985			1985-2001		
Dependent variable[1]	deficit	texp	trg	deficit	texp	trg	deficit	texp	trg	deficit	texp	trg	def_f	texp_f	trg_f	def_f	texp_f	trg_f
Electwb[2]	-0.632***	0.128	-0.455***	-0.597**	0.245	-0.320				-0.409**	0.110	-0.260	-0.239	0.272	0.011	-0.629***	0.001	-0.602
	(0.237)	(0.523)	(0.171)	(0.239)	(0.238)	(0.199)				(0.177)	(0.259)	(0.232)	(0.244)	(0.245)	(0.210)	(0.237)	(0.438)	(0.408)
Elect2[3]							-0.222	-0.024	-0.280									
							(0.240)	(0.238)	(0.199)									
Adjusted R^2	0.693	0.915	0.950	0.710	0.941	0.957	0.708	0.941	0.957	0.719	0.886	0.899	0.783	0.950	0.953	0.711	0.832	0.862
F- Statistic	36.989	192.318	333	36.521	234.255	324.730	36.147	233.889	324.446	59.888	184.353	211.585	50.593	268.595	289.643	30.506	60.644	77.005
DW Statistic	1.992	2.010	2.017	1.950	2.022	1.977	1.962	2.027	1.979	1.902	1.537	1.492	1.882	2.021	2.014	2.022	1.457	1.412
No. of countries	79	79	80	49	49	50	49	49	50	50	50	50	42	42	42	50	50	50
No. of obs.	1440	1458	1461	767	767	777	767	767	777	1242	1263	1274	631	648	652	646	650	657

[1]Variable definitions (all in percent of GDP): **Deficit**-central government deficit; **texp**-total expenditure by the central government; **trg**-total revenue and grants of the central government

[2]Electwb - a dummy variable with the value 1 in the election year and 0 otherwise.

[3]Elect2 - a dummy variable with the value 1 in the election year, if the elections take place during the second half of the year, or in the year before the elections, if the elections take place in the first half of the year

[4]The covariates include two laggs of the dependent variable, the log of per-capita GDP, and the change in real GDP during the year

*-Significant at the 10 percent level; **-Significant at the 5 percent level; ***-Significant at the 1 percent level;

Table 2: The Political Fiscal Cycle Using Persson-Tabllini's Control Variables.

	Persson-Tabellini's control variables[4] for the entire sample period			Equation (1) with an alternative election year variable			Equation (1) estimated for the early part of the sample period			Equation (1) estimated for the later part of the sample period		
	(1)			(2)			(3)			(4)		
Estimation period	1960-2001			1960-2001			1960-1985			1985-2001		
Dependent variable[1]	**deficit**	**texp**	**trg**	**deficit**	**texp**	**trg**	**deficit**	**texp**	**trg**	**deficit**	**texp**	**trg**
Electwb[2]	-0.396**	0.112	-0.247				-0.239	0.264	-0.004	-0.553**	0.026	-0.534
	(0.179)	(0.261)	(0.234)				(0.246)	(0.250)	(0.213)	(0.236)	(0.439)	(0.404)
Elect2[3]				-0.202	0.337	0.172						
				(0.179)	(0.257)	(0.234)						
Adjusted R^2	0.718	0.887	0.900	0.717	0.886	0.900	0.787	0.949	0.953	0.719	0.834	0.866
F- Statistic	55.829	174.013	199.762	55.594	183.304	200.344	47.984	247.715	270.251	29.685	57.896	75.186
DW Statistic	1.880	1.543	1.485	1.886	1.513	1.488	1.899	2.021	2.014	2.005	1.480	1.427
No. of countries	50	50	50	50	50	50	43	42	42	50	50	50
No. of obs.	1225	1312	1257	1225	1312	1258	621	638	642	640	644	651

[1]Variable definitions (all in percent of GDP): **Deficit**-central government deficit; **texp**-total expenditure by the central government; **trg**-total revenue and grants of the central government.

[2]Electwb - a dummy variable with the value 1 in the election year and 0 otherwise.

[3]Elect2 - a dummy variable with the value 1 in the election year, if the elections take place during the second half of the year, or in the year before the elections, if the elections take place in the first half of the year.

[4]The covariates include two laggs of the dependent variable, the log of per-capita GDP, the share of international trade in GDP, the share of people over the age of 65 in the population, the share of people in age group 15-64 in the population, and the log difference between real GDP and its (country specific) trend, estimated using a Hodrick-Prescott filter.

*-Significant at the 10 percent level; **-Significant at the 5 percent level; ***-Significant at the 1 percent level;

Table 3a: The Political Fiscal Cycle in Developed Economies using Persson and Tabellini's control variables

	Developed economies, using Persson-Tabellini's controls[3]			Equation (1), excluding new democracies[4]			Equation (1), estimated for the later part of the sample period			Equation (3), excluding new democracies[4]			Equation (4), estimated for the early part of the sample period		
	(1)			(2)			(3)			(4)			(5)		
Estimation period	1960-2001			1960-2001			1985-2001			1985-2001			1960-1985		
Dependent variable[1]	deficit	texp	trg	deficit	texp	trg	deficit	texp	trg	deficit	texp	trg	deficit	texp	trg
Electwb[2]	-0.302**	0.161	-0.197*	-0.089	-0.045	-0.200*	-0.572***	0.319	-0.269*	-0.156	0.013	-0.184	-0.027	-0.070	-0.176
	(0.127)	(0.128)	(0.101)	(0.128)	(0.129)	(0.105)	(0.203)	(0.208)	(0.156)	(0.202)	(0.208)	(0.165)	(0.155)	(0.152)	(0.132)
Adjusted R^2	0.883	0.974	0.981	0.878	0.977	0.980	0.866	0.959	0.980	0.856	0.966	0.978	0.902	0.982	0.981
F- Statistic	177.535	903.888	1241.137	171.796	1053.828	1207.751	70.468	251.466	528.693	61.694	296.293	466.131	133.498	854.813	777.726
DW Statistic	2.012	2.045	1.991	2.049	2.052	1.992	2.083	2.020	2.024	2.212	2.137	2.028	2.015	2.121	2.032
No. of countries	22	22	22	18	18	18	22	22	22	18	18	18	18	18	18
No. of obs.	675	692	687	594	611	606	311	311	311	255	255	255	357	374	369

[1]Variable definitions (all in percent of GDP): **Deficit**-central government deficit; **texp**-total expenditure by the central government; **trg**-total revenue and grants of the central government

[2]Electwb - a dummy variable with the value 1 in the election year and 0 otherwise.

[3]For a list of the covariates in Persson-Tabellini's specification see Table 2.

[4] The new democracies among the developed economies are Spain, Portugal, Greece and Turkey

*-Significant at the 10 percent level; **-Significant at the 5 percent level; ***-Significant at the 1 percent level.

Table 3b: The Political Fiscal Cycle in Developed Economies using Shi and Svensson's control variables

	Developed economies, using Shi-Svensson's controls[3]			Equation (1), excluding new democracies[4]			Equation (1), estimated for the later part of the sample period			Equation (3), excluding new democracies[4]			Equation (4), estimated for the early part of the sample period		
	(1)			(2)			(3)			(4)			(5)		
Estimation period	1960-2001			1960-2001			1985-2001			1985-2001			1960-1985		
Dependent variable[1]	deficit	texp	trg	deficit	texp	trg	deficit	texp	trg	deficit	texp	trg	deficit	texp	trg
Electwb[2]	-0.351***	0.241**	-0.162	-0.159	0.082	-0.142	-0.605***	0.365*	-0.255*	-0.252	0.161	-0.120	-0.081	0.037	-0.114
	(0.122)	(0.119)	(0.101)	(0.122)	(0.119)	(0.105)	(0.194)	(0.192)	(0.154)	(0.187)	(0.181)	(0.161)	(0.152)	(0.144)	(0.130)
Adjusted R^2	0.888	0.976	0.980	0.884	0.980	0.979	0.875	0.964	0.980	0.872	0.974	0.979	0.902	0.983	0.981
F- Statistic	211.344	1148.077	1382.529	213.051	1398.878	1352.538	86.002	329.077	594.965	81.367	449.629	554.837	154.449	1070.719	898.580
DW Statistic	2.075	2.045	1.939	2.098	2.032	1.932	2.162	2.053	2.019	2.291	2.198	2.003	2.001	2.038	1.924
No. of countries	22	22	22	18	18	18	22	22	22	18	18	18	18	18	18
No. of obs.	689	706	701	608	625	620	315	315	315	259	259	259	367	384	379

[1]Variable definitions (all in percent of GDP): **Deficit**-central government deficit; **texp**-total expenditure by the central government; **trg**-total revenue and grants of the central government.

[2]Electwb - a dummy variable with the value 1 in the election year and 0 otherwise.

[3]For a list of the covariates in Shi-Svensson's specification see Table 1.

[4] The new democracies among the developed economies are Spain, Portugal, Greece and Turkey.

*-Significant at the 10 percent level; **-Significant at the 5 percent level; ***-Significant at the 1 percent level.

Table 4a: The Political Fiscal Cycle in "New Democracies".

	All the "new democracies", using Persson-Tabellini's controls[3]			**All the "new democracies", using Shi-Svensson's controls[4]**			**Equation (1) excluding "transition" economies[5]**			**Equation (2) excluding "transition" economies[5]**		
	(1)			(2)			(3)			(4)		
Estimation period	**1960-2001**			**1960-2001**			**1960-2001**			**1960-2001**		
Dependent variable[1]	**deficit**	**texp**	**trg**	**deficit**	**texp**	**trg**	**deficit**	**texp**	**trg**	**deficit**	**texp**	**trg**
Electwb[2]	-1.198**	1.148**	0.156	-1.224***	1.153**	0.174	-0.986*	0.877*	0.095	-1.082*	0.880*	0.070
	(0.477)	(0.458)	(0.289)	(0.471)	(0.459)	(0.289)	(0.537)	(0.474)	(0.299)	(0.567)	(0.498)	(0.316)
Adjusted R^2	0.410	0.901	0.952	0.423	0.900	0.952	0.463	0.868	0.925	0.455	0.862	0.921
F- Statistic	5.992	66.480	149.925	6.677	70.853	160.633	7.891	53.696	104.794	8.282	55.447	108.438
DW Statistic	1.898	2.067	1.992	1.891	2.038	1.978	1.795	1.919	1.878	1.802	1.919	1.890
No. of countries	35	35	35	35	35	35	23	23	23	22	22	22
No. of obs.	302	302	313	302	302	313	240	240	251	227	227	238

[1]Variable definitions (all in percent of GDP): **Deficit**-central government deficit; **texp**-total expenditure by the central government; **trg**-total revenue and grants of the central government

[2]Electwb - a dummy variable with the value 1 in the election year and 0 otherwise.

[3]For a list of the covariates in Persson-Tabellini's specification see Table 2.

[4]For a list of the covariates in Shi-Svensson's specification see Table 1.

[5]The "new democracies" among the transition economies are listed in Table A1.

*-Significant at the 10 percent level; **-Significant at the 5 percent level; ***-Significant at the 1 percent level.

Table 4b: The Political Fiscal Cycle in "New Democracies" 1985-2001.

	All the "new democracies", using Persson-Tabellini's controls[4]			Equation (1) with an alternative election year variable			Equation (1) excluding "transition" economies[6]			Equation (3) with an alternative election year variable			All the "new democracies", using Shi-Svensson's controls[5]			Equation (5) with an alternative election year variable		
	(1)			(2)			(3)			(4)			(5)			(6)		
Estimation period	1985-2001			1985-2001			1985-2001			1985-2001			1985-2001			1985-2001		
Dependent variable[1]	deficit	texp	trg	deficit	texp	trg	deficit	texp	trg	deficit	texp	trg	deficit	texp	trg	deficit	texp	trg
Electwb[2]	-1.364***	1.261***	0.132				-1.251**	0.926*	-0.029				-1.394***	1.246***	0.152			
	(0.464)	(0.470)	(0.308)				(0.555)	(0.506)	(0.333)				(0.454)	(0.469)	(0.307)			
Elect2[3]				-0.921**	1.076**	0.038				-0.936*	0.903*	-0.168				-1.020**	1.161**	0.064
				(0.467)	(0.470)	(0.307)				(0.544)	(0.502)	(0.330)				(0.453)	(0.466)	(0.305)
Adjusted R^2	0.384	0.921	0.959	0.373	0.906	0.952	0.432	0.863	0.920	0.425	0.863	0.920	0.407	0.906	0.951	0.397	0.906	0.951
F- Statistic	5.099	64.661	135.531	4.900	64.089	135.436	6.253	44.516	84.715	6.025	44.485	84.840	5.856	69.234	145.325	5.644	68.973	145.201
DW Statistic	2.285	2.324	1.998	2.299	2.359	2.000	2.250	2.284	1.930	2.271	2.309	1.922	2.284	2.271	1.982	2.293	2.306	1.986
No. of countries	35	35	35	35	35	35	22	22	22	22	22	22	35	35	35	35	35	35
No. of obs.	276	276	287	276	276	287	201	201	212	201	201	212	276	276	287	276	276	287

[1]Variable definitions (all in percent of GDP): **Deficit**-central government deficit; **texp**-total expenditure by the central government; **trg**-total revenue and grants of the central government.

[2]Electwb - a dummy variable with the value 1 in the election year and 0 otherwise.

[3]Elect2 - a dummy variable with the value 1 in the election year, if the elections take place during the second half of the year, or in the year before the elections, if the elections take place in the first half of the year.

[4]For a list of the covariates in Persson-Tabellini's specification see Table 2.

[5]For a list of the covariates in Shi-Svensson's specification see Table 1.

[6]The "new democracies" among the transition economies are listed in Table A 1.

*-Significant at the 10 percent level; **-Significant at the 5 percent level; ***-Significant at the 1 percent level.

Table 5: The Political Fiscal Cycle in "Old Democracies".

	All the "old democracies", using Persson-Tabellini's controls[4]			Equation (1) with an alternative election year variable			Equation (1) estimated for the later part of the sample period			All the "old democracies", using Shi-Svenssons controls[5]			Equation (4) with an alternative election year variable		
	(1)			(2)			(3)			(4)			(5)		
Estimation period	1960-2001			1960-2001			1985-2001			1960-2001			1960-2001		
Dependent variable[1]	deficit	texp	trg	deficit	texp	trg	deficit	texp	trg	deficit	texp	trg	deficit	texp	trg
Electwb[2]	-0.234	-0.021	-0.263				-0.248	-0.173	-0.455	-0.277	0.032	-0.250			
	(0.179)	(0.191)	(0.183)				(0.241)	(0.265)	(0.299)	(0.176)	(0.186)	(0.182)			
Elect2[3]				-0.048	-0.204	-0.173							-0.110	-0.127	-0.147
				(0.179)	(0.191)	(0.184)							(0.177)	(0.186)	(0.183)
Adjusted R^2	0.799	0.950	0.948	0.798	0.950	0.948	0.822	0.948	0.942	0.800	0.951	0.948	0.799	0.951	0.948
F- Statistic	102.170	500.842	483.992	101.929	501.524	483.316	53.529	209.758	186.544	114.285	571.306	532.726	113.948	571.320	531.947
DW Statistic	1.955	1.985	1.976	1.956	1.986	1.978	1.820	1.999	1.961	1.988	1.983	2.009	1.989	1.985	2.010
No. of countries	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28
No. of obs.	891	909	912	891	909	912	397	398	397	907	925	928	907	925	928

[1]Variable definitions (all in percent of GDP): **Deficit**-central government deficit; **texp**-total expenditure by the central government; **trg**-total revenue and grants of the central government

[2]Electwb - a dummy variable with the value 1 in the election year and 0 otherwise.

[3]Elect2 - a dummy variable with the value 1 in the election year, if the elections take place during the second half of the year, or in the year before the elections, if the elections take place in the first half of the year

[4]For a list of the covariates in Persson-Tabellini's specification see Table 2.

[5]For a list of the covariates in Shi-Svensson's specification see Table 1.

*-Significant at the 10 percent level; **-Significant at the 5 percent level; ***-Significant at the 1 percent level.

Table 6: The Effect of the Type of Electoral System on the Political Fiscal Cycle

	"New democracies", excluding the "transistion" economies[5], using Persson-Tabellini's controls[4]			Equation (1) estimated for the later part of the sample period			"Old democracies" using Persson-Tabellini's controls[4]			Equation (3) estimated for the later part of the sample period			"New democracies", including the "transistion" economies[5], using Persson-Tabellini's controls[4]			Equation (5) estimated for the later part of the sample period		
	(1)			(2)			(3)			(4)			(5)			(6)		
Estimation period	1960-2001			1985-2001			1960-2001			1985-2001			1960-2001			1985-2001		
Dependent variable[1]	deficit	texp	trg	deficit	texp	trg	deficit	texp	trg	deficit	texp	trg	deficit	texp	trg	deficit	texp	trg
Wb_pres[2] (two lags)	-1.114*	0.691	0.051	-1.401**	0.833	-0.025	-0.005	-0.012	0.019	-0.139	0.028	-0.134	-1.392**	1.166**	0.159	-1.584***	1.348**	0.170
	(0.654)	(0.579)	(0.357)	(0.638)	(0.584)	(0.378)	(0.435)	(0.456)	(0.436)	(0.517)	(0.567)	(0.639)	(0.562)	(0.540)	(0.337)	(0.545)	(0.552)	(0.358)
Wb_parl[3] (two lags)	-0.772	1.211	-0.032	-0.780	1.221	-0.045	-0.280	-0.023	0.019	-0.277	-0.229	-0.543	-0.706	1.101	0.147	-0.784	1.029	0.022
	(1.116)	(0.995)	(0.633)	(1.130)	(1.039)	(0.697)	(0.196)	(0.456)	(0.436)	(0.272)	(0.299)	(0.337)	(0.893)	(0.863)	(0.551)	(0.880)	(0.897)	(0.597)
Adjusted R^2	0.458	0.861	0.923	0.429	0.862	0.919	0.798	0.950	0.948	0.922	0.948	0.942	0.409	0.900	0.952	0.383	0.906	0.951
F- Statistic	7.371	47.887	95.995	6.024	42.811	81.441	99.264	486.372	470.299	51.907	203.464	181.030	5.85	64.684	145.896	4.985	62.912	131.865
DW Statistic	1.786	1.915	1.893	2.247	2.287	1.930	1.956	1.985	1.978	1.821	1.997	1.962	1.895	2.067	1.992	2.281	2.321	1.997
No. of countries	22	22	22	22	22	22	28	28	28	28	28	28	35	35	35	35	35	35
No. of obs.	227	227	238	201	201	212	891	909	912	397	398	397	302	302	313	276	276	287

[1]Variable definitions (all in percent of GDP): **Deficit**-central government deficit; **texp**-total expenditure by the central government; **trg**-total revenue and grants of the central government

[2]WB_pres - a dummy variable with the value 1 in the election year, if the regime is presidential, and 0 otherwise.

[3]WB_parl - a dummy variable with the value 1 in the election year, if the regime is parliamentary, and 0 otherwise.

[4]For a list of the covariates in Persson-Tabellini's specification see Table 2.

[5]The "new democracies" among the transition economies are listed in Table A1.

*-Significant at the 10 percent level; **-Significant at the 5 percent level; ***-Significant at the 1 percent level.

Table 7a: The Effect of the "Level of Democracy" on the Political Fiscal Cycle - All Contries

	All countries, including "transition" economies[5], with level of democracy between 0 to 9, using Persson-Tabellini's controls[3]			All countries, including "transition" economies[5], with level of democracy between 0 to 9, using Shi-Svensson's controls[4]			All countries, including "transition" economies[5], with level of democracy of 10, using Persson-Tabellini's controls[3]			All countries, including "transition" economies[5], with level of democracy of 10, using Shi-Svensson's controls[4]		
	(1)			(2)			(3)			(4)		
Estimation period	1960-2001			1960-2001			1960-2001			1960-2001		
Dependent variable[1]	deficit	texp	trg	deficit	texp	trg	deficit	texp	trg	deficit	texp	trg
Electwb[2]	-0.840**	0.550	-0.208	-0.844**	0.578	-0.189	-0.238	0.012	-0.235	-0.297**	0.064	-0.229
	(0.377)	(0.370)	(0.300)	(0.377)	(0.374)	(0.302)	(0.148)	(0.349)	(0.325)	(0.143)	(0.341)	(0.320)
Adjusted R^2	0.590	0.934	0.950	0.594	0.932	0.950	0.845	0.816	0.792	0.849	0.818	0.790
F- Statistic	17.954	168.047	240.717	19.464	176.432	256.202	110.468	92.621	76.962	126.147	104.259	84.695
DW Statistic	1.964	2.051	2.072	1.971	2.050	2.113	1.921	1.368	1.310	1.972	1.345	1.290
No. of countries	39	39	39	39	39	39	30	30	30	30	30	30
No. of obs.	542	542	576	543	543	577	741	762	739	756	777	754

[1]Variable definitions(all in percent of GDP): **Deficit**-central government deficit;**texp**-total expenditure by the central government;**trg**-total revenue and grants of the central government

[2]Electwb - a dummy variable with the value1 in the election year and0 otherwise.

[3]For a list of the covariates in Persson-Tabellini's specification see Table2.

[4]For a list of the covariates in Shi-Svensson's specification see Table1.

[5]The "new democracies" among the transition economies are listed in Table A1.

*-Significant at the 10 percent level; **-Significant at the 5 percent level; ***-Significant at the 1 percent level.

Table 7b: The Effect of the "Level of Democracy" on the Political Fiscal Cycle - "New Democracies"

	"New democracies", including "transition" economies[5], with level of democracy between 0 to 9, using Persson-Tabellini's controls[3]			"New democracies", including "transition" economies[5], with level of democracy between 0 to 9, using Shi-Svensson's controls[4]			"New democracies", including "transition" economies[5], with level of democracy of 10, using Persson-Tabellini's controls[3]			"New democracies", including "transition" economies[5], with level of democracy of 10, using Shi-Svensson's controls[4]		
	(1)			(2)			(3)			(4)		
Estimation period	1960-2001			1960-2001			1960-2001			1960-2001		
Dependent variable[1]	deficit	texp	trg	deficit	texp	trg	deficit	texp	trg	deficit	texp	trg
Electwb[2]	-1.249**	1.089*	0.135	-1.278**	1.088*	0.152	-1.025**	1.594**	0.450	-1.115**	1.661**	0.410
	(0.611)	(0.568)	(0.351)	(0.601)	(0.566)	(0.665)	(0.437)	(0.656)	(0.518)	(0.440)	(0.670)	(0.522)
Adjusted R^2	0.338	0.860	0.934	0.354	0.859	0.934	0.835	0.950	0.964	0.833	0.949	0.964
F- Statistic	4.176	39.187	93.992	4.699	42.418	100.873	18.323	66.668	93.047	22.240	80.296	116.888
DW Statistic	1.921	2.085	2.011	1.922	2.062	1.999	2.522	2.207	2.370	2.614	2.171	2.332
No. of countries	31	31	31	31	31	31	8	8	8	8	8	8
No. of obs.	237	237	248	237	237	248	52	52	52	52	52	52

[1]Variable definitions(all in percent of GDP): **Deficit**-central government deficit;**texp**-total expenditure by the central government;**trg**-total revenue and grants of the central government

[2]Electwb - a dummy variable with the value 1 in the election year and 0 otherwise.

[3]For a list of the covariates in Persson-Tabellini's specification see Table 2.

[4]For a list of the covariates in Shi-Svensson's specification see Table 1.

[5]The "new democracies" among the transition economies are listed in Table A1.

*-Significant at the 10 percent level; **-Significant at the 5 percent level; ***-Significant at the 1 percent level.

Table 7c: The Effect of the "Level of Democracy" on the Political Fiscal Cycle - "Old Democracies"

	"Old democracies", with level of democracy between 0 to 9, using Persson-Tabellini's controls[3]			"Old democracies", with level of democracy between 0 to 9, using Shi-Svensson's controls[4]			"Old democracies", with level of democracy of 10, using Persson-Tabellini's controls[3]			"Old democracies", with level of democracy of 10, using Shi-Svensson's controls[4]		
	(1)			(2)			(3)			(4)		
Estimation period	1960-2001			1960-2001			1960-2001			1960-2001		
Dependent variable[1]	deficit	texp	trg	deficit	texp	trg	deficit	texp	trg	deficit	texp	trg
Electwb[2]	-0.504	-0.119	-0.653	-0.609	-0.020	-0.698	-0.144	-0.0154	-0.154	-0.201	0.0857	-0.103
	(0.589)	(0.522)	(0.554)	(0.588)	(0.531)	(0.556)	(0.150)	(0.192)	(0.161)	(0.145)	(0.182)	(0.157)
Adjusted R^2	0.735	0.960	0.951	0.737	0.958	0.951	0.853	0.943	0.945	0.857	0.947	0.946
F- Statistic	41.713	353.644	318.176	52.827	424.623	396.058	134.615	393.356	399.451	158.259	483.481	458.060
DW Statistic	2.047	2.043	2.017	2.046	2.031	2.095	1.891	1.953	1.944	1.941	1.963	1.911
No. of countries	8	8	8	8	8	8	22	22	22	22	22	22
No. of obs.	221	221	244	22	222	245	664	682	662	679	679	677

[1]Variable definitions(all in percent of GDP): **Deficit**-central government deficit;**texp**-total expenditure by the central government;**trg**-total revenue and grants of the central government

[2]Electwb - a dummy variable with the value1 in the election year and0 otherwise.

[3]For a list of the covariates in Persson-Tabellini's specification see Table2.

[4]For a list of the covariates in Shi-Svensson's specification see Table1.

*-Significant at the 10 percent level; **-Significant at the 5 percent level; ***-Significant at the 1 percent level.

Table A1: Sample Charectaristics

Developed Economies

No.	Country	ND[1]	Latest POLITY Level[2]	Number of elections in the sample	Years With Available data		
					Total Expenditure	Total Revenue and Grants	DEFICIT
1	Australia		10	16	60-97	60-97	60-97
2	Austria		10	12	60-98	60-98	60-98
3	Belgium		10	13	60-69, 71-98		
4	Canada		10	13	60-2000	60-2000	60-2000
5	Denmark		10	17	60-99	60-99	60-99
6	Finland		10	11	60-98	60-98	60-98
7	France		9	10	72-97	60-97	72-97
8	Germany		10	11	60-98	60-98	60-98
9	Greece	+	10	10	60-99	60-96	60-96
10	Iceland		10	10	60-64, 72-2001	72-2001	72-2001
11	Ireland		10	11	60-99	60-99	60-99
12	Italy		10	11	60-98	60-98	60-98
13	Luxembourg		10	8	73-97	73-97	73-97
14	Netherlands		10	12	60-98	60-98	60-98
15	New Zealand		10	14	60-88, 90-2000	60-88, 90-2000	60-88, 90-2000
16	Norway		10	11	60-98	60-98	60-98
17	Portugal	+	10	8	70-98	70-98	70-98
18	Spain	+	10	8	62-99	62-99	62-99
19	Sweden		10	13	60-2000	60-2000	60-2000
20	Turkey	+	7	7	87-2000	87-2000	87-2000
21	United Kindom		10	10	60-99	60-99	60-99
22	United States		10	10	60-2001	68-2001	68-2001

Less Developed Economies

No.	Country	ND[1]	Latest POLITY Level[2]	Number of elections in the sample	Years With Available data		
					Total Expenditure	Total Revenue and Grants	DEFICIT
1	Argentina	+	8	6	95-2000	84-2000	95-2000
2	Bolivia	+	9	8	74-2001	74-2001	74-2001
3	Bostwana		9	8	71-2000	71-2000	71-2000
4	Brazil	+	8	4	85-94, 97	85-94, 97	85-94, 97
5	Chile	+	9	5	67-2000	67-2000	67-2000
6	Colombia		7	10	71-2001	60-2001	71-2001
7	Costa-Rica		10	10	70-2001	72-2001	72-2001
8	Cyprus		10	6	66-2000	66-2000	66-2000
9	Dominican Republic	+	8	10	60-2000	68-2000	68-2000
10	El Salvador	+	7	8	60-2000	60-2000	60-2000
11	Fiji	+	-88	7	70-98	70-98	70-98
12	Guatemala	+	8	10	60-83, 85-2001	60-83, 85-2001	60-83, 85-2001
13	Israel		10	12	60-2001	60-2001	60-2001
14	Korea	+	8	3	60-97	60-97	60-97
15	Madagascar	+	7	6	65-70, 72-74, 88-2000	78-80, 65-70, 72-74, 88-2000	65-70, 72-74, 88-2000
16	Mauritius		10	7	66-2000	66-2000	66-2000
17	Mexico	+	8	7	80-2001	80-2001	80-2001
18	Nicaragua	+	8	7	88-2000	88-2000	88-2000
19	Papua new Guinie		10	9	75-99	75-99	75-99
20	Paraguay	+	7	9	89-99	89-99	89-99
21	Peru	+	-88	7	84-2000	84-2000	84-2000
22	Philipines	+	8	7	60-2001	60-2001	60-2001
23	South Africa		9	9	60-2001	60-2001	60-2001
24	Sri Lanka		5	8	60-2001	60-2001	60-2001
25	Thailand	+	9	10	60-2001	60-2001	60-2001
26	Trinidad & Tobago		10	7	60-72, 76-89, 93-95	60-72, 76-89, 93-95	60-72, 76-89, 93-95
27	Uruguay	+	10	7	65-2000	65-2000	65-2000
28	Zambia	+	1	8	64-97	64-97	64-97

"Transition" Economies

No.	Country	ND[1]	Latest POLITY Level[2]	Number of elections in the sample	Years With Available data		
					Total Expenditure	Total Revenue and Grants	DEFICIT
1	Belarus	+	-7	2	92-2001	92-2001	92-2001
2	Bulgaria	+	8	2	88-2001	88-2001	88-2001
3	Croatia	+	7	2	94-2001	94-2001	94-2001
4	Czech Republic	+	10	3	93-2001	93-2001	93-2001
5	Estonia	+	6	3	91-2001	91-2001	91-2001
6	Hungary	+	10	2	81-2001	81-2001	81-2001
7	Latvia	+	8	3	95-2001	95-2001	95-2001
8	Lithuania	+	10	2	91, 93-2001	91, 93-2001	91, 93-2001
9	Poland	+	9	2	84-88, 94-2000	84-88, 94-2000	84-88, 94-2000
10	Romania	+	8	2	70-99	70-99	70-99
11	Russia	+	7	2	95-2001	95-2001	95-2001
12	Slovak Republic	+	9	2	96-2001	96-2001	96-2001
13	Slovenia	+	10	2	93-2001	93-2001	93-2001

[1] Inducates whether the country is a "New Democracy" during any part of the sample period.

[2] The latest available value of the "level of democracy" indicator from the POLITY IV dataset produced by the University of Maryland.

Table A2: The "New Democracies"

No.	Country	Year of Becoming a Democracy	Number of Elections as a Democracy	Elections Included as a "New Democracy"
1	**Argentina**	1983	2	95, 99
2	**Belarus**	1991	2	94, 01
3	**Bolivia**	1982	4	85, 89, 93, 97
4	**Brazil**	1985	2	89, 94
5	**Bulgaria**	1990	2	96, 01
6	**Chile**	1989	4	89, 93, 00
7	**Croatia**	1991	2	97, 00
8	**Czech Republic**	1990	2	96, 98
9	**Dominican Republic**	1978	6	78, 82, 86, 90
10	**El Salvador**	1984	5	84, 89, 94, 99
11	**Estonia**	1991	3	92, 95, 99
12	**Fiji**	1990	1	92
13	**Greece**	1975	7	77, 81, 85, 89
14	**Guatemala**	1986	5	90, 95, 99
15	**Hungary**	1990	2	94, 98
16	**Korea**	1988	3	92, 97
17	**Latvia**	1991	2	95, 98
18	**Lithuania**	1991	2	93, 97
19	**Madagascar**	1992	2	93, 96
20	**Mexico**	1988	3	88, 94, 00
21	**Nicaragua**	1990	2	90, 96
22	**Paraguay**	1989	3	89, 93, 98
23	**Peru**	1980	3	80, 85, 90, 95
24	**Philipines**	1987	5	92, 95, 98
25	**Poland**	1989	2	95, 00
26	**Portugal**	1976	7	76, 80, 83, 85
27	**Romania**	1990	2	96, 00
28	**Russia**	1992	2	96, 00
29	**Slovak Republic**	1993	1	98
30	**Slovenia**	1991	1	97
31	**Spain**	1978	6	79, 82, 86, 89
32	**Thailand**	1992	8	92, 95, 96, 00
33	**Turkey**	1983	4	83, 87, 91, 95
34	**Uruguay**	1985	4	89, 94, 99
35	**Zambia**	1991	3	91, 96

Source: Calculations based on the POLITY IV dataset, produced by the University of Maryland, and the World Bank Database on Political Institutions.