Democracy, Elections and Allocation of Public Expenditure in Developing Countries

Clémence Vergne*

January 2006

Abstract

Several recent studies find evidence of electoral deficit cycles in a wide cross-section of countries. However, this empirical finding seems to reflect electoral cycles in a subset of countries that recently democratized. Thus, political budget cycles are a phenomenon of new democracies, and they decrease over time. This statement raises the following question: do fiscal distortions appear in different forms? This paper overcomes traditional political budget cycles models, focusing solely on the dynamics of aggregate government expenditure and deficits, in order to shed light on electoral composition changes in public spending. Using data on 42 developing countries from 1975 to 2001, we find evidence of electoral impacts on the allocation of public expenditure. Our results show that election-year public spending shifts towards more visible current expenditure, in particular wages and subsidies, and away from capital expenditure. Futhermore, our findings suggest that electoral impacts on the allocation of public spending are likely to endure, even though countries gain experience in electoral politics.

Keywords: Political budget cycles, public expenditure composition, developing countries.
JEL Classification: D72, E62, O10.

*CERDI-CNRS, UMR 6587, Université d'Auvergne, 65 boulevard François Mitterrand, 63000 Clermont-Ferrand, France.

E-mail: Clemence.Vergne@ecogestion.u-clermont1.fr

1 Introduction

In the course of the three last decades, many developing countries have conducted democratic political reforms. While democracy appears as an essentially multidimensional process, one of its most important feature is unambiguously the setting of free and regular elections. Between 1990 and 2000, the number of countries governed by officials elected in competitive elections rose from 60 to 100 (Beck and *alii*, 2001).

Democratic political institutions would provide those political incentive structures able to induce better policy choices. Elections prompt accountability in two ways. They provide political competition, and help governance to be more efficient by alleviating the moral hazard issue (Barro, 1973; Ferejohn, 1986) or mitigating the adverse selection phenomenon (Rogoff, 1990). By weeding out incompetent politicians and giving those in power an incentive to put in effort, elections are believed to provide suitable incentives for an efficient governance. However, governments have an additional motive. Indeed, they face now a new constraint: they have to renew their legitimacy in the periodical recurrence of elections. Therefore, electoral pressure may lead politicians to manipulate public policy in order to increase their chances of re-election.

Political business cycles theory provides a usefull analytical context.[1] Based on political markets imperfections, and most notably on information asymmetries, such a theory highlights the distortions induced by the recurrence of elections. Empirical studies in the 1970s until the early 1990s focused almost exclusively on industrialized countries, and generally do not find regular, statistically significant political budget cycles (see Alesina and *alii*, 1997; Drazen, 2001, for excellent reviews). In contrast, more recent studies (Remmer, 1993; Schuknecht, 1996; Shi and Svensson, 2002; Brender and Drazen, 2005a) have not only confirmed the existence of polically-driven budget cycles in developing countries, but have also shown the large magnitude of these cycles. Before elections, public spending increases, while revenues fall, thus leading to a large budget deficit in election years. In addition, in developing countries, much of the election-

[1]The political business cycles theory, initiated by Nordhaus (1975), studies the effects of elections on the real economy, such as GDP growth rate and unemployment. Most recent studies have changed their focus by shifting away from the real effects of elections, towards policy makers' instruments. Such a move is partly didacted by the lack of empirical evidence (Drazen, 2001), but also by the lack of direct governement control over real economic variables (Shi and Svensson, 2003). In this paper, we will focus on political budget cycles.

oriented policy making affects the expenditure side, because increases in public spending have a very direct and immediate impact on voters' welfare. Indeed, as the tax base is small in such countries, tax cuts would not significantly enhance the government support (Schuknecht, 2000; Chambas and *alii*, 2005).

However, political budget cycles theory seems highly inconsistent with the literature on fiscal preferences of voters. This line of works examines how fiscal policy affects the re-election probabilities of incumbents, and concludes that a government, which damages the financial position of the country, harms its chances of re-election. Thus, voters are fiscal conservatives, punishing high spending or deficits through polls. Indeed, following Peltzman's work on the United States (1992), recent studies have found evidence that voters punish rather than reward election-year deficit spending in Latin America (Kraemer, 1997), Israel (Brender, 2003) and Colombia (Drazen and Eslava, 2005). The strongest evidence suggesting that deficits do not help re-election prospects comes from Brender and Drazen (2005b) in a sample of 74 countries over the period 1960-2003. Indeed, they find no evidence that election-year deficits help re-election in any group of countries, including developed and less developed, and countries with different government or electoral systems. Brender and Drazen (2005a) reconcile those two contradictory views by showing that political budget cycles are a phenomenon of new democracies, in which voters lack the necessary information to assess economic policy, as well as the ability to properly process this information. They futher argue that political budget cycles decrease over time, as countries gain experience in competitive electoral processes.

The aim of this paper is to suggest a different approach of that also reconciles these apparently contradictory views. Indeed, very few studies have detailed fiscal policy instruments by which governments may try to influence their popularity around elections. Analyses that focus solely on the dynamics of the overall budget are at risk of misinterpreting the evidence, besides missing an important part of the action. In fact, politicians may change the composition of expenditure in an election year, without increasing the overall budget deficit. In the same vein, another contribution of this paper is to analyse the different effects of elections on the various components of overall public spending.

Such a test is particularly relevant in the context of developing countries. Weak institutional structures in these countries allow for greater political discretion over policy instruments. Therefore, it is reasonable to expect political budget cycles to be more apparent in developing countries. Futhermore, the implications may be particularly important for these countries insofar as politically-motivated policies may be at odds with economic reforms.

The remainder of this paper is organized as follows. Section 2 reviews the existing theories, along with previous empirical studies. Section 3 presents the econometric analysis. Section 4 concludes and suggests some directions for future research in this area.

2 Electoral Manipulation Via Expenditure Allocation: Theoretical Arguments

Two strands of literature aim at explaining distortions around elections. This study applies the opportunistic approach initially developed by Nordhaus (1975),[2] according to which policy-makers maximise their probability of re-election. Indeed, the partisan approach (Hibbs, 1977; Alesina, 1987)[3] is unelikely to be fruitful in studying electoral policy cycles in developing countries, where the differences in economic and ideological preferences among parties are much harder to pin down, and where the pattern frequently does not exhibit the typical Western left-right distinction.

While political business cycles theory has motivated numerous empirical tests, very few studies have directly tested political budget theory against changes in the composition of public spending, despite the theories' specificity in that regard. We propose a review of the relevant strands of the political budget cycles theory, in order to pinpoint which components of public spending are favoured by governments to enhance their prospects of re-election.

[2]Following Down's works (1957), Nordhaus developed some political business cycles models. The government is here conceived as a single actor, which aimes at maximizing its chances to keep or reach the power.

[3]According to this approach, politicians pursue some ideological goals. The uncertainty surrounding the policies conducted after the elections, depending on which party has gained the power, may engender some systematic economic fluctuations.

2.1 Manipulation of Current Expenditure

Rogoff (1990) designed a signaling model in which a political budget cycles arises due to information asymmetries[4] about the incumbent's competence in administering the production of public goods.

All agents' expected utility is determined by the comsumption of private and public goods. However, since the position of chief administrator is considered to be a great honor, leaders receive an additional "ego rents." These rents can take the form of non-monetary benefits due to the great honor of being chief executive and, more generally, misuse of public office for private gains.

The production of public goods requires taxes, as well as administrative competence. A competent government is able to provide a given level of public goods at a lower level of taxes, than an incompetent one. Competence is persistent, although it may change over time.[5] Indeed, skills might realistically be thought to vary through time, since leadership abilities may have appeared as well-suited to deal with one set of historical circumstances, but may become outmoded as the problems faced by the country change. Also, even if the same leader stays in power, they may be turnover among his key advisors.

This model is marked by two key features. First is the information asymmetry regarding the incumbent's level of competence. Citizens are initially uninformed about the type of incumbent, whereas the incumbent knows his own type. In other words, the incumbent has a temporary information advantage over voters, in the sense that he sees his competence shock contemporaneously. While usual in such models, this information structure is particularly plausible in the context of developing countries, where poor accounting practices, as well as underdeveloped media, prevent voters from evaluating a government's performance. In this way, Shi and Svens-

[4]In the most traditional models, voters are naive, not simply in the way they form their expectations, but also in the way they assess government performance. Recent models (Rogoff and Sibert, 1988; Persson and Tabellini, 1990) attempt to reconcile rational expectations on the part of voters with opportunistic policy manipulation by incumbent politicians. The driving assumption behind these rational opportunistic models is the existence of temporary information asymmetries.

[5]Competency follows a first-order moving average, so that competency persists, but only for one period.

son (2002a) argue that the strength of the cycles depend on the availability of information.[6] As voters become more informed, the magnitude of the cycles decreases. Second, a critical feature of the production function is that public investment decided in time t, an election period, only becomes visible and productive at time t+1. Voters observe taxes and current expenditure contemporaneously, and use this information to form inferences concerning investment spending and the incumbent's competence shock.[7] Such a production structure, combined with the informational asymmetry regarding competence, gives rise to a separating equilibrium,[8] in which the competent incumbent has an incentive to bias pre-election fiscal policy toward easily observed current expenditure, and away from capital expenditure.

This model throws light on the role of "visibility" in influencing government resource allocation around elections. According to Rogoff, "visibility" of public expenditure would be associated in particular with current, rather than capital, expenditure. His argument is not that current expenditure is intrinsically more visible, but rather that it is more immediately visible and hence of more direct political value in the pre-election period. In contrast, capital investments are often long-term projects and their completion may be difficult to coordinate with elections. Moreover, the high potential for having incomplete projects at election time could create political risks for incumbents, who may be seen as unable to deliver promised benefits (Block, 2002).

Block's findings (2002) are consistent with Rogoff's equilibrium budget cycle model. Based on a sample of 69 developing countries, he provides evidence that government spending shifts toward more visible, current expenditure and away from public investment. However, elections were not competitive in many countries during the 1975-1990 period. Moreover, Block limits his analysis to presidential systems, in order to address the potentially biaising effects

[6]These authors have created an index of the availability of information, which is the result of the number of radios per capita and of a binary variable indicating whether the country allows freedom of broadcasting.

[7]Economy is continually subject to shocks from various origins, such as economic crisis, union claims, or energy shocks.

[8]By excluding dominated strategies, it is possible to rule out all but one of the separating equilibria. By further refining the equilibrium concept, using the criterion of Cho and Kreps (1987), one can also rule out pooling equilibria (Rogoff, 1990).

of endogenously-timed elections. And such a strategy introduces an important selection bias.[9] Finally, and most importantly, some theoretical and empirical analyses highlight another allocation of public spending prior to elections. We consider this literature in section 2.2 below.

2.2 Targeted Investment Expenditure

Contrary to the specific literature on political budget cycles, a larger public choice literature points to the political importance of organized interest groups with the power to lobby politicians for policies favorable to them (Olson, 1965; Buchanan and Tullock, 1962; Bates, 1981; Krueger, 1993). More recently, Grossman and Helpman (1996, 2001) have linked the power of special intesrests to the process of electoral competition through a model of campaign finance and mobilization of votes. From this perspective, it seems us important to draw a link between the literature on political budget cycles and the one on special interest politics.

Drazen and Eslava (2004, 2005) propose the first formal model that integrate special interest groups into an intertemporal model of political cycle with rational voters.[10] An incumbent can target government spending to specific groups of voters, whose behaviour is seen as highly influenced by targeted fiscal policy, and at the expense of other expenditure. This views differs from other models of political budget cycles, insofar as voters care about the preferences of incumbents over different interest groups, rather than about his true competence.

Politicians have unobserved preferences over groups or types of expenditure. Voters are unaware both of their weight in the incumbent's objective function, and of how swing they are, meaning how sensitive to expenditure their group's voting behaviour is. Voters will prefer a candidate who assigns higher value to goods they like the most, but they only have imperfect information about the politicians' preferences over different voters groups. They therefore need

[9]Block considers that elections take place at regular time in presidential systems, which is not the case in parliamentary ones. Such a methodology may be criticized in two ways. First, presidential regimes also know some endogeneous elections, particularly in developing countries (Shi and Svensson, 2002b). Second, selected countries systematically present some characteristics that distinguish themselves from parliamentary regimes (Persson and Tabellini, 2003).

[10]Lindbeck and Weibull (1987) and Dixit and Londregan (1996) present formal models where, in order to gain votes, candidates make promises of balanced-budget targeting of voter groups. However, they assume that campaign promises are binding commitments to a post-electoral fiscal policy, so that there is no voter inference problem.

to extract such information about an incumbent's preference, from her fiscal actions. Since politicians' preferences over types of expenditure is regarded as displaying some persistence through time, high pre-election spending on one good is positively correlated with its provision after the election.

The strength of the political cycle depends on the distribution of preferences, as well as on the amount of information voters have about the political environment. In particular, the larger fraction of swing voters, the more targeted spending increase prior to elections. Moreover, the incumbent's ability to be engaged in electoral manipulation is increased by its access to privileged information about the political environment. In particular, his privileged information about the relative impact of targeting one group or another, gives him the ability to raise votes through spending, even though all voters are aware of the electoral incentives he faces. As a result, before elections, the composition of expenditure is titled towards goods that are favored by groups with greater electoral importance.

This model suggests the importance of distinguishing between targeted and non-targeted types of expenditure. Such a classification is not readily available, nor straightforward. However, it has been widely argued in the literature that the category of spending that is particularly "targetable" is that of capital spending for investment projects (Ferejohn, 1974; Bates, 1981; Tanzi and Davoodi, 1997, Keefer and Knack, 2002; Eslava, 2005).[11] Opportunistic targeted expenses, close to the so-called *pork barrel* spending, will most likely take the form of infrastructure projects, such as the construction of roads, schools, or water plants, since they are easier to target to particular constituencies because of geographic and sector specificity. Futhermore, infrastructure expenditure appears as a more convenient tool for political patronage of specific groups, since new construction contracts may be given selectively.[12] Finally, public investment projects usually run over several years. Hence, we may consider an incumbent wanting to influence voters by credibility promising them favored expenditure after an election. Such an incumbent may find it useful to target voters with the programs they prefer, and to

[11]This classification may take different forms in various countries, depending on the population heterogeneity and of the weight of the various sectors of the economy.

[12]Wade (1991) illustrates, for example, how contracts for irrigation projects in India may be selectively provided in exchange for kickbacks and rents.

begun those programs before election, but to complete them only after the election.

Many studies find evidence consistent with this model. Khemani (2004) studies state legislative assembly elections in 14 major states of India, and shows that election years have a great positive impact on investment spending, particularly on the construction of roads, to the detriment of current expenditure. Based on Colombian municipalities data, Eslava (2005) also indicates pre-electoral shifts of resources away from current spending, and toward the development of infrastructure-related projects. Finally, Schuknecht (2000) concludes that capital expenditure, expressed as a share of GDP, is the preferred instrument to influence election outcomes in a group of 24 developing countries for the 1973-1992 period.[13]

2.3 Discussion

The predictions of the two types of models are highly sensitive to the assumptions about the different categories of public spending. Rogoff's model suggests that "visibility" of expenditure would be associated with current, rather than capital, expenditure. Thus, policy manipulations around elections times are undertaken to provide immediate economic benefits to large numbers of voters. Public expenditure targeting model, on the other hand, argues that capital expenditure is easy to target to specific constituencies and locations. From this perspective, cycles in targeted spending reflect greater incentives for politicians around elections to provide targeted benefits to small groups of pivotal voters, in exchange for campaign finance or mobilization of political support. To summarize, we interpret evidence of capital spending cycles as indicative of election-year targeting of special interests, while cycles in current spending are more likely to provide immediate benefits to the mass of voters.

However, the literature has totally ignored that certain components of current expenditure can also generate exclusive benefits that can be directed at specific constituencies. For instance, subsidies could be targeted to specific producer groups. From this perspective, we propose to probe deeper into the choice of policy instruments around elections and to focus on wages and

[13]However, many countries cannot be seen as democratic all over the said period. Moreover, Schuknecht uses Nordhaus' and Rogoff's models without proposing an alternate theoretical analysis justifying its econometric results.

subsidies. As these types of expenditure combine the two arguments of the theoretical models, we would expect that they are positively affected by elections.

Table 1 summarizes previous empirical studies and theoretical predictions. While it exists indisputable evidence of political budget cycles involving aggregate data, neither theory, nor empirical evidence provide a clear-cut answer to electoral effects on the allocation of public spending. In the next section, we will attempt to answer this question by empirically examining which components of public expenditure are privileged by governments in election time.

3 Econometric Analysis

3.1 The Data

Our sample includes annual data from 42 developing countries for the 1975-2001 period, thus creating a panel of 1134 country-year observations.[14] However, many countries may not be considered as democratic during the entire sample period. According to Brender and Drazen (2005a), and Block (2002, 2003), political budget cycles only make sense in countries in which elections are contested. When elections are not competitive, and incumbents face a near zero probability of loosing office, the ego rents are not at risk. Therefore, the incentive to distort is greatly diminished. In contrast, Shi and Svensson (2002) argue that the desire of dictators to eliminate signs of discontent, even before sham elections, may account for increases in spending and deficits in non-democracies. We consider this point in section 3.4 below.

Data on public expenditure come from the IMF International Financial Statistics (IFS) and Government Financial Statistics (GFS). We will focus on central, rather than general, government spending for two reasons. First, central data are more reliable and comparable across countries and time. Second, results with general spending would be difficult to interpret, as they involve several levels of government, which should respond to different types of elections and in different ways. The IMF classification of governement expenditure follows two main lines.

[14]The limited availability of data on the composition of public expenditure restricts the number of countries included in our sample. The characteristics of the political systems of these countries and the dates of elections are set in Table 2.

The economic classification divides total spending into current and capital expenditure. The former includes expenditure on goods and services, wages and salaries, subsidies and other current transfers, as well as interest payments. The later covers payments for the purchase or the production of new or existing durable goods. By contrast, the functional classification is based on the purpose toward which the expenditure is directed.[15] We will focus on transport and communication expenditure, which is used as a proxy for spending in economic infrastructure (Devarajan, Swaroop and Zoo, 1996).

Most important for our analysis, a dummy variable is introduced to reflect the impact of elections. Election dates and institutional data on the election process are taken from the Database on Political Institutions, provided by the World Bank (Beck and *alii*, 2001), IDEA (Institute for Democracy and Electoral Assistance, "Voter Turnout Since 1945 to Date") and IFES (International Foundation for Electoral Systems, election guide). For countries with parliamentary political systems, we include legislative elections, while for countries with presidential systems, we consider executive elections.[16]

In much of the literature, the election dummy is equal to one in the year of the election, no matter at what time of the year the election took place. If the election took place late in the year, then the dummy indeed captures mostly the period before election. However, if the election took place early in the year, then the dummy may capture primarily post-electoral effects. To address this issue, we define the dummy as equal to one in the year before the election, if the election took place in the first half of the year, and equal to one in the year of the election otherwise. The data set includes 213 pre-electoral periods.

[15]The functional classification breaks total expenditure into categories such as healthcare, education, social security and welfare, transport and communication, as well as defense, each of which includes both current and capital expenditure.

[16]In parliamentary countries, elections of the legislature coincide with those of the executive. In presidential countries, the executive is separately elected, but almost always the legislature is also elected in the same year. In our sample, there are only 24 mid-term elections, that take place between years of simultaneous presidential and legislative elections. Our results remain identical when the later are introduced. These findings are available from author upon request.

3.2 Specification

The basic specification takes the following form:

$$Y_{it} = \gamma Y_{it-1} + \alpha Elect_{it} + \beta X + a_i + \epsilon_{it} \quad (1)$$

where i = 1,...N and t = 1,...T_i.[17] Y_{it} stands for the share of the different components of expenditure in total governement spending, apart from debt interest payments. The main variable of interest is Elect, which captures the influence of elections. In addition, the a_i's denote a full set of country dummies,[18] and ϵ_{it} is an error term. Finally, X is a vector of controls. Among them, we include the level of development, measured by the log of real per capita income. According to Wagner's Law, public expenditure tends to increase as a society becomes wealthier. Moreover, claims for more public regulation and for social welfare system change the composition of public expenditure. We also control for the degree of urbanization. Most public capital spending concerns infrastructure, and rural areas need them more. Hence, we hypothesize that a larger degree of urbanization will lead to less demand for infrastructure (Sturm, 2001).[19] In addition, we control for the openness, measured by the ratio of imports plus exports to GDP. More open economies are often more vulnerable to foreign competition, and they compete for business by offering adequate infrastructure. In a similar vein, in order to attract foreign direct investment, a governement could increase public capital spending (Sturm, 2001).[20] Effects of changes in the terms of trade are also examinated. The output growth, resulting from improved terms of trade, may reduce the need for social assistance from government, which, in turn, should lower current expenditure. A decline in the terms of trade, on the other hand, could require

[17] We indicate the temporal dimension through T_i, since the panel is unbalanced. Insofar as the temporal dimension of series is important, we test their stationarity by administrating the Maddala-Wu test. The nil hypothesis of non-stationarity is always rejected in a significant manner, at the threshold of 1%.

[18] Years effects were generally insignificant and were dropped from the regressions. The qualitative results in all regressions do not significantly change when we include them.

[19] Demographic variables, indicating the age structure of the population, were tested, but were found to have no significant impact on the allocation of public spending.

[20] Rodrik (1998) argues that an increased trade openness correlates with greater expenditure on social protection. However, our study does not focus on this type of expenditure.

higher current expenditure if social assistance needs to rise (Schuknecht, 2000). We also control for the influence of foreign aid, with an expected positive sign of the coefficient for capital expenditure (Sturm, 2001).[21] Finally, any analysis of fiscal policy in developing countries has to take into account programs with the International Monetary Fund (IMF). The IMF usually provides access to more international financing, and imposes conditionality stressing economic stabilization, including fiscal consolidation. Programs supported by the IMF should, therefore, harden the government's budget constraint and result in lower public expenditure. More importantly, these programs may affect the composition of public spending insofar as *"cuts in public investment are less visible and politically costly than cuts in other spending"* during fiscal adjustments (Alesina, Perotti and Tavares, 1998). We include an IMF dummy, which takes the value of one when a program is in force, and equals zero otherwise.[22]

Fixed effects regressions control for omitted time-invariant country characteristics. However, all estimations include a lagged dependent variable, with an expected positive coefficient. Government administrations are constrained by budgets, and current budget largely determines the next period's appropriations (Niskanen, 1971). Such an inertia provides some stability and predetermines fiscal spending (Shuknecht, 2000). The use of fixed effects estimators in a regression with lagged dependent variable introduces a potential bias. Indeed, the lagged dependent variable Y_{it-1} is correlated with the error term. Since the order of the bias is $1/T$ (Nickell, 1981; Kiviet, 1995), we expect a small bias.[23] However, to address this issue, we also consider the Generalised-Method-of-Moments (GMM) estimator developed for dynamic models of panel data. Arellano and Bond's (1991) estimation strategy is to first-difference the equations to eliminate fixed effects and to fix the resulting inconsistency by applying instrumental variables consisting of appropriately lagged levels of the variables. However, Arellano and Bover (1995), as well as Blundell and Bond (1998), show that these estimations have poor precision in finite samples. Indeed, when the explanatory variables are persistent over time, lagged levels of these

[21] Foreign aid is critical in financing expenditure in developing countries. A finding that the allocation of public spending changes during election years could thus not be claimed as evidence of political manipulation if it were the result of election-year fluctuations in aid receipts. Controlling directly for foreign aid eliminates this explanation.

[22] See Table 3 for detailed data sources and descriptive statistics.

[23] The lengh of our sample is 27 years, but some countries do not have data for the entire period.

variables are only weakly correlated with differences of these variables in the differenced regression equation. In order to increase the precision of the estimates, they propose to combine the differenced regression with the original regression in levels. The instruments for the regression in differences are those described above, while the instruments for the regression in levels are the lagged differences on the dependent variables. The system GMM estimator controls for unobserved country-specific effects as well as potential endogeneity of the explanatory variables. In the following, we report the results from fixed-effects and GMM estimations.

3.3 Results

3.3.1 Preliminary Evidence

Results are displayed in Table 4. We consider the three spending variables defined in Section 3.1, namely current expenditure, capital expenditure and expenditure in infrastructure, expressed as a share of total public spending. It appears that the composition of public spending changes before elections. More specifically, three regularities stand out. First, the estimated coefficient of elections on current expenditure share is greater than one in FE and GMM estimations, and it is statistically significant (columns 1 and 4). Thus, on average, current expenditure share is expanded by more than one percentage point in election time. Second, capital expenditure share is cut prior to elections (columns 2 and 5). Third, elections do not have a significant nor a systematic effect on the share of infrastructure spending (columns 3 and 6).

These findings strongly confirm the predictions of Rogoff's signaling model. Election-year public expenditure shifts towards more visible, current expenditure, and away from capital expenditure. Contrary to the predictions of public expenditure targeting models, there is no electoral effect on infrastructure spending. However, these basic results need to be examinated in more detail, insofar as some components of current spending, such as subsidies and wages, could be particularly targeted.

3.3.2 Interpretation of Results

Table 5 reports election year effects on wages and subsidies. As predicted, the pre-electoral increase in current expenditure share seems to be largely caused by an increase in subsidies, and civil servants and government employees' salaries (columns 1, 2, 4 and 5). Since these components of public spending are targetable and immediately visible, it is difficult to distinguish between the two theoretical arguments. However, we argue that our findings are more suggestive of broad-based policies that provide immediate economic benefits to the mass of voters. Indeed, subsidies and wages are generally regarded as more populist categories of spending that need to be substantially increased in order to affect large numbers of voters (Khemani, 2004). Moreover, when we add all potentially targetable expenditure, namely capital expenditure, subsidies and wages, we find no evidence for significant electoral cycles (columns 3 and 6).

3.4 Alternative Specifications

3.4.1 Potential Endogeneity of Election Timing

The purpose of this paper is to identify the effect of the timing of elections on the composition of public expenditure. Following much of the literature, we have initially considered that the election variable is exogenous relative to the fiscal variables. However, the scheduling of elections does not usually follow a strict, constitutionally-established pattern in developing countries. This cast doubt on the identification assumption. More exactly, two potential issues arise.

First, the coefficients on the election cycle may be subject to omitted variable bias, if both the timing of elections and the fiscal policies are affected by a common set of unobserved variables, such as crises or social unrest, which are not included in our regression (Shi and Svensson, 2002b). In such a case, our coefficient estimate will be biased. In particular, if the omitted variables correlate positively with election timing and negatively with fiscal policy outcomes, there will be a downward bias. For instance, if crises lead to a lower government fiscal balance, as well as early elections, omitting this variable will induce a downward bias in the coefficient estimate on the election variable.

Second, the timing of elections may be strategically chosen by the incumbent politicians. Indeed, Berument and Heckelman (1998) pointed out that opportunistic cycles may also occur as a result of setting election date when economic conditions are particularly favorable. This may pose a reverse causality problem if politicians condition the timing of elections on fiscal policy outcomes. In this case, our coefficient estimate does not correspond to the notion of political budget cycles.

Following Brender and Drazen (2005a), we separate out those elections whose timing is predetermined.[24] To this purpose, we look at the constitutionally-determined election interval and we take as predetermined those elections which are held during the expected year of the constitutionally-fixed term.[25] Among the 213 election periods, 149 are classified to be predetermined. Table 6 reports the results. The contrast between the effect of scheduled and potentially endogenous elections confirms that we need to distinguish between both, in order to properly identify a causal effect of elections on the composition of public spending. As only the coefficients on predetermined elections are statistically significant, our results effectively reflect the effects of elections on the allocation of public spending.[26]

3.4.2 Competitive Elections

Initiated in developed countries, the political budget cycles theory assumes the existence of some institutional structures that are typical of advanced economies, such as multi-party electoral competition. Indeed, uncertainty as to the outcome of elections is critical in motivating incumbents to engage in pre-electoral economic policy distortions in order to preserve their rents. However, electoral competitiveness is not to be taken for granted in developing countries.

[24]This classification is based on www.electionworld.org data that indicate the frequency of elections country by country.

[25]The perfect way to deal with this reverse causality issue is to find two instrumental variables, that are correlated with the timing of elections, but not with the error term. However, to our knowledge, no study has found such an instrument concerning a cross-country sample. Note that even though our strategy does not eliminate the potential bias, it reduces it. Indeed, all unexpected early elections are coded as 0 in the predetermined elections dummy.

[26]Rogoff's model (1990) suggests that pre-election fiscal policy distortions are likely to be less severe for opportunistic early elections than for end-of-term elections. The basic reason is that the call for early elections may serve as an additional signal. Incompetent incumbents prefer to wait for end-of-term elections, in order to enjoy a certain extra period of ego rents. As a result, competent incumbents do not need to distort fiscal policy as much to separate themselves when calling for an early election.

The DPI (Beck and *alii*, 2001) has two variables to capture the competitiveness of elections: the *Executive and Legislative Indices of Electoral Competitiveness (EIEC and LIEC)*.[27] To test the hypothesis that political budget cycles are more prevalent in multi-party electoral systems, we reestimate our baseline regression after dropping non-competitive elections. The data set includes 166 competitive elections. The results are displayed in Table 7. As predicted, the electoral effects on the allocation of public spending are larger than those in Table 4.

3.4.3 Evolution of the Political Budget Cycles

Political budget cycles are dynamic processes by their very nature. Yet virtually none empirical studies have examined temporal effects across elections. Brender and Drazen (2005a) analyse the evolution of political deficit cycles, including separate dummy variables for each of the first five competitive elections. Their results suggest that electoral fiscal effects become less strong as there is more experience with elections. Indeed, once we concentrate on the later elections, no statistically significant political deficit cycles are found.[28] We follow the same methodology in order to determine if a similar statement may be established concerning the pre-electoral distortions in terms of public spending allocation.

The results are displayed in Table 8. Two main findings stand out. First, founding competitive elections exhibit large public expenditure distortions. In transition elections, incumbent politicians have a greater discretion in manipulating pre-electoral economic policies, and have an incentive to deter the entry of future challengers. Indeed, incumbents may attempt to scare off potential challengers and to solidify their bases of support before the opposition gains any influence on the policy-making process (Block and *alii*, 2003). Second, electoral impacts on the allocation of public spending do not disappear. These forms of pre-electoral distortions are more subtle and are likely to endure.

[27] These indicators are scored from one, no elections, to seven, elections in which there are multiple candidates running for office and no candidate obtains more than 75 percent of the vote. In the empirical work below, EIEC and LIEC are dichotomized: they are set equal to one, if they equal 6 or 7 (where 6 indicates that multiple candidates could and did run for office, but the winner received more than 75 percent of the vote), and 0 otherwise.

[28] Note that, for the countries included in our sample, we find similar results. These findings are available from author upon request.

4 Conclusion

This paper offers a comprehensive view of electoral cycles in developing countries, studying the composition of government spending. We provide evidence of systematic distortions in the allocation of public expenditure as a function of elections. Indeed, our empirical analysis indicates that politicians shift the composition of pre-election spending towards current expenditure and away from capital expenditure. Thus, politicians prefer to use broad-based rather than targeted spending at election times. Moreover, while political deficit cycles disappear as there is more experience with elections, our dynamic analysis suggests that electoral impacts on the allocation of public spending endure.

Taken as a whole, our findings reconcile two contradictory views of pre-electoral manipulation, one that it is a useful instrument to gain voter support and a widespread empirical phenomenon, the other that voters punish rather than reward spending deficit. As countries gain experience in electoral politics, politicians prefer to change the allocation of expenditure in election years, without increasing the overall budget deficit.

Two interesting issues remain open. First, an explanation of the difference between our results and other studies (Khemani, 2004; Eslava, 2005) could arise from comparing national political cycles to sub-national cycles. Further research on the contrast of election strategies in national versus local elections would provide insights to the question of political accountability at different levels of government. Second, the composition of political budget cycles may depend on political, institutional and economic features of the country. More works along these lines are likely to be fruitful.

Table 1: Electoral Effects on the Composition of Public Spending: Theoretical Predictions and Previous Empirical Studies.

Theoretical Predictions

Authors	Models	Variables	Electoral Impacts
Rogoff (1990)	Competence signaling	Current expenditure (% total expenditure)	Positive
		Capital expenditure(% total expenditure)	Negative
Drazen and Eslava (2005)	Pork barrel cycles	Current expenditure (% total expenditure)	Negative
		Capital expenditure(% total expenditure)	Positive
		Infrastructure expenditure(% total expenditure)	Positive

Empirical Studies

Authors	Sample	Variables Tested	General Findings
Block (2002)	69 developing countries	Current expenditure (% total expenditure)	Positive
	1975-1990	Capital expenditure (% total expenditure)	Negative
Schuknecht (2000)	24 developing countries	Current expenditure (% GDP)	Positive (not significant)
	1973-1992	Capital expenditure (% GDP)	Positive
Khemani (2004)	India	Current expenditure (% total expenditure)	Negative
	1960-1992	Capital expenditure (% total expenditure)	Positive
		Public service delivery (road construction)	Positive
Eslava (2005)	Colombia	Current expenditure (% total expenditure)	Negative
	1987-2000	Capital expenditure (% total expenditure)	Positive

Table 2: Sample Characteristics

No	Country	Birth of Democracy[1]	Forms of Government[2]	Electoral Rules	Elections Dates[3]
1	Argentina	1983	Presidential	Proportional	83, **89, 95, 99**
2	Bolivia	1982	Presidential	Proportional	78, 79, 85, **89, 93, 97**
3	Bostwana	1966	Parliamentary	Majoritarian	**79, 84, 89, 94, 99**
4	Brazil	1985	Presidential	Proportional	**85, 89, 94, 98**
5	Burundi		Presidential	Proportional	84, 93
6	Cameroon		Presidential	Majoritarian	75, 80, 84, 88, 92, **98**
7	Chile	1989	Presidential	Majoritarian	89, **93, 2000**
8	Colombia	1957	Presidential	Proportional	**78, 82, 86, 90, 94, 99**
9	Costa Rica	1841	Presidential	Proportional	**78, 82, 86, 90, 94, 98**
10	Dominican Republic	1978	Presidential	Proportional	**78, 82, 86, 90, 94, 99**
11	Egypt		Parliamentary	Majoritarian	76, 81, **87, 90, 95, 2000**
12	El Salvador	1984	Presidential	Proportional	**77**, 84, **89, 94, 99**
13	Ethiopia		Parliamentary(96)	Majoritarian	**96**
14	Fiji	1990	Parliamentary	Proportional	**77, 82**, 92, **99**
15	Guatemala	1986	Presidential	Proportional	78, 82, 85, **90, 95, 99**
16	India	1950	Parliamentary	Majoritarian	**77, 80, 84, 91, 96, 98**
17	Indonesia		Parliamentary	Proportional	**77, 82, 87, 92, 97, 99, 2000**
18	Kenya		Presidential	Majoritarian	79, 83, 87, 92, **97**
19	Korea	1988	Presidential	Proportional	**92, 97**
20	Lesotho		Parliamentary(94)	Majoritarian	93, **98**
21	Madagascar	1992	Presidential	Proportional	77, 82, **89, 93, 96, 2001**
22	Malaysia	1957	Parliamentary	Majoritarian	**78, 82, 86, 90, 95, 99**
23	Marocco		Presidential	Majoritarian	77, 84, 93, 97
24	Mauritius	1968	Parliamentary	Majoritarian	**76, 82, 87, 91, 94, 2000**
25	Mexico	1994	Presidential	Proportional	**76, 82, 88, 94, 2000**
26	Nepal	1990	Parliamentary(81)	Majoritarian	81, 86, 91, **95, 97, 99**
27	Nicaragua	1990	Presidential	Proportional	84, **90, 96, 2001**
28	Pakistan	1988	Parliamentary(89)	Majoritarian	77, 85, 88, **91, 94, 97**
29	Panama	1989	Presidential(85)	Proportional	84, **89, 94, 99**
30	Papua New Guinea	1975	Parliamentary	Majoritarian	**77, 82, 87, 92, 97**
31	Paraguay	1989	Presidential	Proportional	**78, 83, 88, 89, 93, 98**
32	Peru	1980	Presidential	Proportional	80, **85, 90, 95, 2000**
33	Philippines	1987	Presidential	Proportional	78, 81, 84, 87, **92, 95, 98**
34	Sri Lanka	1948	Presidential	Proportional	**77, 82, 88, 94, 99**
35	Thailand	1992	Parliamentary(79)	Majoritarian	75, 79 **83, 87, 92, 95, 96**
36	Trinidad&Tobago	1962	Parliamentary	Majoritarian	**76, 81, 86, 91, 95, 2000**
37	Tunisia		Presidential	Majoritarian	89, 94, 99
38	Turkey	1983	Parliamentary	Proportional	77, 83, **87, 91, 95, 99**
39	Uruguay	1985	Presidential	Proportional	84, **89, 94, 99**
40	Venezuela	1958	Presidential	Proportional	**78, 83, 88, 93, 98**
41	Zambia	1991	Presidential	Majoritarian	78, 83, 88, 91, **96**
42	Zimbabwe	1989	Parliamentary	Majoritarian	80, 85, **90, 96, 2000**

[1] The birth of democracy in a particular country corresponds to the first year of a string with uninterrupted positive POLITY values. POLITY index assigns to each country and year an interger score ranking from -10 to +10, with higher values associated with better democracies. This index is based on the competitiveness and openness in selecting the executive, on the political participation, and on the constraints on the chief executive.

[2] The classification of the forms of government, based on Beck and *alii* (2001), and Persson and Tabellini (2003), distinguishes two prototypes, which have to main features. Presidential regimes have a directly elected president, fully in charge of the executive, with the executive not being accountable to the legislature for its survival, and with a clear separation of powers. On the other hand, in parliamentary regimes, the executive is not directly elected, but formed out of the majority of the legislature. Thus, it needs the continued confidence of a majority in the Parliament to maintain its powers throughout the entire election period. Futhermore, there is not a clear separation of powers. Years within brackets identify significant reforms, that have changed the country's classification.

[3] In parliamentary systems, we consider legislative elections, while for presidential regimes, we include executive elections. Highlighted dates correspond to competitive elections, as defined by Beck and *alii* (2001).

Table 3: Descriptive Statistics

Variables	Mean	Std. Dev.	No. Obs.
Capital expenditure	20,6*	11,6	978
Elect = 1	20,0	11,9	192
Elect = 0	20,7	11,6	786
Current expenditure	79,4**	12,0	978
Elect = 1	80,1	12,3	192
Elect = 0	79,3	11,9	786
Expenditure in infractructure	7,5	4,7	823
Elect = 1	7,4	4,6	159
Elect = 0	7,5	4,7	664
Wages	26,9*	9,4	834
Elect = 1	27,1	9,6	160
Elect = 0	26,7	9,3	674
Subsidies	24,2*	14,2	884
Elect = 1	25,0	14,0	170
Elect = 0	24,1	14,2	714
Openness	60,6	31,9	1101
Urban population	45,2	22,3	1093
Aid	4,3	6,7	1120
GDP per capita	1997,2	1875,5	1120
Fund-supported program	0,4	0,5	1132

**(*) indicates that the difference is statistically significant at 5(10) percent level.

Sources of data:

Data on public expenditure come from the IMF Government Financial Statistics (GFS). The different components of expenditure are expressed in percentage of total public spending, apart from debt interest payments.

Openness is measured by the ratio of imports plus exports to GDP (World Bank Indicators, 2003).

Urban Population is expressed in percentage of the total population (WDI, 2003).

Foreign aid is expressed in percentage of GDP (WDI, 2003).

GDP per capita is expressed in constant US dollars (WDI, 2003).

Data on Fund-supported programs come from various issues of the Annual Report published by the IMF.

Table 4: Electoral Effects on the Allocation of Public Expenditure

	FE estimates			GMM		
Dependent variables	Current expenditure	Capital expenditure	Infrastructure expenditure	Current expenditure	Capital expenditure	Infrastructure expenditure
Elections	1.127	-1.000	-0.110	1.210	-0.887	-0.197
	(2.66)***	(2.55)**	(0.51)	(2.42)**	(1.94)*	(0.65)
Y_{t-1}	0.651	0.695	0.629	0.880	0.858	0.773
	(25.78)***	(29.02)***	(20.57)***	(7.03)***	(8.35)***	(6.49)***
(log)GDP per capita	-0.001	0.001	0.001	-0.001	0.001	0.001
	(3.20)***	(3.22)***	(3.44)***	(1.18)	(1.18)	(0.81)
Openness	-0.043	0.038	-0.003	-0.026	0.026	0.019
	(2.83)***	(2.75)***	(0.34)	(0.82)	(0.85)	(1.24)
Urban population	0.250	-0.229	0.250	0.152	-0.170	-0.094
	(5.03)***	(4.96)***	(5.03)***	(1.05)	(1.15)	(1.24)
Terms of trade	-0.015	0.020	0.010	-0.005	0.010	0.002
	(0.08)	(0.09)	(0.73)	(0.33)	(0.35)	(0.47)
Aid	-0.135	0.123	-0.004	-0.106	0.099	0.049
	(3.51)***	(3.44)***	(0.22)	(1.38)	(1.24)	(1.20)
IMF-supported program	0.609	-0.481	0.089	0.744	-0.267	-0.386
	(1.39)	(1.19)	(0.40)	(1.47)	(0.60)	(1.07)
Constant	21.168	12.234	9.182	5.878	7.082	4.099
	(8.96)***	(5.98)***	(7.58)***	(0.80)	(0.84)	(1.13)
R^2	0.54	0.59	0.58			
F-test	3.24	2.83	2.17			
	(0.0000)	(0.0000)	(0.0001)			
Sargan test				17.12	16.80	16.33
				(0.250)	(0.267)	(0.293)
2^{nd} order test				1.24	0.11	-0.14
				(0.216)	(0.909)	(0.889)
No. of countries	42	42	42	42	42	42
No. of obs.	878	878	711	878	878	711

Robust standard errors reported in brackets.*significant at 5%, **significant at 10%, ***significant at 1%.
The instruments used in the GMM regressions are lagged levels (two periods and more) of the dependent variable and GDP per capita for the differenced equation, and lagged difference (one period) for the level equation.
F-test is a F test of the null hypothesis that all country-specific effects in the FE-specification are equal.
Sargan is a test of the over-identifying restrictions, asymptotically distributed as χ^2 under the null of instrument validity.
2^{nd} order test is a test for second-order serail correlation in the first-difference residuals, asymptotically distributed as N(0,1) under the null of no serial correlation.
P-values for rejecting the null hypothesis are reported in brackets.

Table 5: Wages and Subsidies

	FE estimates			GMM		
Dependent variables	Wages	Subsidies	All targeted expenditure	Wages	Subsidies	All targeted expenditure
Elections	0.243	0.503	0.035	0.267	0.603	0.273
	(1.80)*	(1.75)*	(0.08)	(1.82)*	(1.87)*	(0.73)
R^2	0.59	0.62	0.64			
F-test	2.57	2.67	1.92			
	(0.0000)	(0.0000)	(0.0007)			
Sargan test				8.00	12.86	8.55
				(0.889)	(0.538)	(0.859)
2^{nd} order test				0.72	0.54	-1.33
				(0.474)	(0.592)	(0.185)
No. of countries	41	41	41	41	41	41
No. of obs.	741	794	739	741	794	739

Robust standard errors reported in brackets. *significant at 5%, **significant at 10%, ***significant at 1%. The covariates are similar to those in Table 3.

Table 6: Predetermined Versus Endogenous Election Dates

	FE estimates			GMM		
Dependent variables	Current expenditure	Capital expenditure	Infrastructure expenditure	Current expenditure	Capital expenditure	Infrastructure expenditure
Predetermined elections	1.562	-1.422	-0.261	1.788	-1.449	-0.367
	(3.15)***	(3.09)***	(1.00)	(2.71)***	(2.34)***	(1.26)
Potentially endogenous elections	0.164	-0.334	0.046	0.347	-0.639	0.161
	(0.22)	(0.48)	(0.12)	(0.49)	(0.85)	(0.35)
R^2	0.54	0.59	0.58			
F-test	3.23	2.81	2.16			
	(0.0000)	(0.0000)	(0.0001)			
Sargan test				17.47	16.76	16.27
				(0.232)	(0.269)	(0.297)
2^{nd} order test				1.11	-0.03	-0.15
				(0.265)	(0.975)	(0.884)
No. of countries	42	42	42	42	42	42
No. of obs.	878	878	711	878	878	711

Robust standard errors reported in brackets. *significant at 5%, **significant at 10%, ***significant at 1%. The covariates are similar to those in Table 3.

Table 7: Competitive Elections

	FE estimates			GMM		
Dependent variables	Current expenditure	Capital expenditure	Infrastructure expenditure	Current expenditure	Capital expenditure	Infrastructure expenditure
Competitive elections	1.238	-1.135	-0.046	1.294	-0.968	-0.430
	(2.69)***	(2.67)***	(0.20)	(2.49)**	(2.30)**	(0.16)
R^2	0.54	0.58	0.53			
F-test	2.55	2.31	2.45			
	(0.0000)	(0.0000)	(0.0000)			
Sargan test				21.70	18.26	13.23
				(0.185)	(0.195)	(0.509)
2^{nd} order test				1.05	0.09	-0.31
				(0.296)	(0.932)	(0.759)
No. of countries	40	40	40	40	40	40
No. of obs.	687	687	534	687	687	534

Robust standard errors reported in brackets. *significant at 5%, **significant at 10%, ***significant at 1%.
The covariates are similar to those in Table 3.

Table 8: The Evolution of the Political Budget Cycles Over Time

	FE estimates			GMM		
Dependent variables	Current expenditure	Capital expenditure	Infrastructure expenditure	Current expenditure	Capital expenditure	Infrastructure expenditure
1^{rst}election	1.944	-1.709	0.453	1.536	-1.283	0.409
	(1.95)*	(1.85)*	(0.86)	(1.76)*	(1.78)*	(0.49)
2^{nd}election	2.170	-1.415	0.177	2.467	-1.719	0.090
	(2.57)**	(1.81)*	(0.42)	(2.45)**	(1.99)*	(0.17)
3^{rd}election	0.391	-0.285	-0.305	0.652	-0.245	-0.436
	(1.40)	(1.32)	(0.56)	(1.30)	(1.20)	(0.97)
4^{th}election	0.420	-0.520	-0.792	0.520	-0.367	-0.531
	(1.76)*	(1.78)*	(1.41)	(1.56)	(1.62)	(1.12)
5^{th}election	3.569	-3.409	-0.897	3.095	-3.061	-0.942
	(2.43)**	(2.50)**	(1.28)	(1.95)*	(1.87)*	(3.52)***
R^2	0.54	0.58	0.53			
F-test	2.66	2.40	2.41			
	(0.0000)	(0.0000)	(0.0000)			
Sargan test				20.47	17.19	11.71
				(0.216)	(0.246)	(0.629)
2^{nd} order test				1.16	0.90	-0.28
				(0.247)	(0.920)	(0.777)
No. of countries	40	40	40	40	40	40
No. of obs.	687	687	534	687	687	534

Robust standard errors reported in brackets. *significant at 5%, **significant at 10%, ***significant at 1%.
The covariates are similar to those in Table 3.
Dummy variables take the value of 1 in the first, second, third, fourth and later elections, respectively, and 0 otherwise.

References

Alesina, A. (1987): "Macroeconomics Policy in a Two-Party System as a Repeated Game," *Quarterly Journal of Economics*, 102(3), 651-678.

Alesina, A., Roubini, N. and G.D. Cohen (1997): *Political Cycles and the Macroeconomy*, MIT Press, Cambridge and London.

Alesina, A., Perotti, R. and J. Tavares (1998): "The Political Economy of Fiscal Adjustments," *Brookings Papers on Economic Activity*, 1, 197-266.

Arellano, M. and S. Bond (1991): "Some Tests of Specification for Panel Data: Monte Carlo Evidence and an Application to Employment Equations," *Review of Economic Studies*, 58(2), 277-297.

Bates, R. (1981): *Markets and States in Tropical Africa: The Political Basis of Agricultural Policies*, University of California Press, Berkeley.

Barro, R. (1973): "The Control of Politicians: An Economic Model," *Public Choice*, 14, 19-42.

Beck, T., Clarke, G., Groff, A., Keefer, P. and P. Walsh (2001): "New Tools in Comparative Political Economy: The Database of Political Institutions," *World Bank Economic Review*, 15(1), 165-176.

Berument, H. and J. Heckelman (1998): "Political Business Cycles and Endogenous Elections," *Southern Economic Journal*, 64(4), 987-1000.

Block, S. (2002): "Elections, Electoral Competitiveness, and Political Budget Cycles in Developing Countries," Harvard University CID Working Paper, 78.

Block, S., Ferree K. and S. Singh (2003): "Multiparty Competition, Founding Elections and Political Business Cycles in Africa," *Journal of African Economies*, 12(3), 444-468.

Blundell, R. and S. Bond (1998): "Initial Conditions and Moment Restrictions in Dynamic Panel Data Models," *Journal of Econometrics*, 87(1), 115-143.

Brender, A. (2003): "The Effect of Fiscal Performance on Local Government Elections Results in Israel: 1989-1998," *Journal of Public Economics*, 87(9-10), 2187-2205.

Brender, A. and A. Drazen (2005a): "Political Budget Cycles in New versus Established Democracies," *Journal of Monetary Economics*, 52(7), 1271-1295.

Brender, A. and A. Drazen (2005b): "How Do Budget Deficits and Economic Growth Affect Reelection Prospects? Evidence from a Large Cross-Section of Countries," Working Paper.

Buchanan, J. and G. Tullock (1962): *The Calculus of Consent*, University of Michigan Press, Ann Arbor.

Chambas, G. Laporte, B. Liotet S. and D. Ribaut (2005): *Afrique au Sud du Sahara: Mobiliser des ressources fiscales pour le développement*, G. Chambas(dir), Economica.

Cho, I. and D. Kreps (1987): "Signaling Games and Stable Equilibria," *Quarterly Journal of Economics*, 102(2), 179-221.

Devarajan, S. Swaroop, V. and H. Zou (1996): "The Composition of Public Expenditure and Economic Growth," *Journal of Monetary Economics*, 37(2-3), 313-344.

Dixit, A. and J. Londregan (1996): "The Determinants of Success of Special Interests in Redistributive Politics," *Journal of Politics*, 58, 1132-1155.

Downs, A. (1957): *An Economic Theory of Democracy*, Harper and Row, New-York.

Drazen, A. (2001): "The Political Business Cycles After 25 Years," in B. Bernanke and K. Rogoff, eds. *NBER Macroeconomics Annual*, MIT Press, 75-117.

Drazen, A. and M. Eslava (2004): "Political Budget Cycles Without Deficits: How to play the Favorites," *Mimeo*, University of Maryland.

Drazen, A. and M. Eslava (2005): "Electoral Manipulation Via Expenditure Composition: Theory and Evidence," *NBER Working Paper* 11085.

Eslava, M. (2005): "Political Budget Cycles or Voters As Fiscal Conservatives? Evidence From Colombia," *Mimeo*, Universidad de Los Andes.

Ferejohn, J. (1974): *Pork Barrel Politics: Rivers and Harbors Legislation, 1947-1968*, Stanford Univ. Press, Stanford.

Ferejohn, J. (1986): "Incumbent Performance and Electoral Control," *Public Choice*, 50, 5-25.

Grossman, G. and E. Helpman (1996): "Electorate Competitition and Special Interest Politics," *Review of Economic Studies*, 63(2), 265-286.

Grossman, G. and E. Helpman (2001): *Special Interest Politics*, MIT Press, Cambridge and London.

Hibbs, D. (1977): "Political Parties and Macroeconomic Policy," *American Political Science Review*, 71, 146-187.

Keefer, P. and S. Knack (2002): "Boondoggles and Expropriation: Rent-Seeking and Policy Distortion When Property Rights Are Insecure," *World Bank Policy Research Working Paper 2910*.

Khemani, S. (2004): "Political Cycles in a Developing Economy: Effect of Elections in the Indian States," *Journal of Development Economics*, 73(1), 125-154.

Kiviet, I. (1995): "On Bias, Inconsistency, and Efficiency of Various Estimators in Dynamic Panel Data Models," *Journal of Econometrics*, 68(1), 53-78.

Kraemer, M. (1997): "Electoral Budget Cycles in Latin America and the Caribbean: Incidence, Causes and Political Futility," *Inter-American development Bank Working Paper*, Washington. D.C.

Krueger, A. (1993): *Political Economy of Policy Reform in Developing Countries*, MIT Press, Cambridge.

Lindbeck, A. and J. Weibull (1987): "Balanced Budget Redistribution as the Outcome of Political Competition," *Public Choice*, 52, 272-297.

Nickell, S. (1981): "Biases in Dynamic Models with Fixed Effects," *Econometrica*, 49(6), 1417-1426.

NISKANEN, W. (1971): *Bureaucracy in Representative Government*, Chicago: Rand McNelly.

NORDHAUS, W. (1975): "The Political Business Cycle," *Review of Economic Studies*, 42, 169-190.

OLSON, M. (1965): *The Logic of Collective Action: Public Goods and the Theory of Groups*, Harvard University Press, Cambridge.

PELTZMAN, S. (1992): "Voters as Fiscal Conservatives," *Quarterly Journal of Economics*, 107(2), 327-361.

PERSSON, T. and G. TABELLINI (1990): *Macroeconomic Policy, Credibility and Politics*, Harwood Academic Publishers, New York.

PERSSON, T. and G. TABELLINI (2003): *The Economic Effects of Constitutions*, MIT Press, Cambridge.

REMMER, K. (1993): "The Political Economy of elections in Latin America," *American Political Science Review*, 87(2), 393-407.

RODRIK, D. (1998): "Why Do More Open Economies Have Bigger Governments?," *Journal of Political Economy*, 106(5), 997-1032.

ROGOFF, K. and A. SIBERT (1988): "Elections and Macroeconomic Policy Cycles," *Review of Economic Studies*, 55(1), 1-16.

ROGOFF, K. (1990): "Equilibrium Political Budget Cycles," *American Economic Review*, 80(1), 21-36.

SCHUKNECHT, L. (1996): "Political Business Cycles and Fiscal Policies in Developing Countries," *kyklos*, 49(2), 155-170.

SCHUKNECHT, L. (2000): "Fiscal Policy Cycles and Public Expenditure in Developing Countries," *Public Choice*, 102(1-2), 115-130.

SHI, M. and J. SVENSSON (2002a): "Conditional Political Budget Cycles," *CEPR Discussion Paper 3352*.

SHI, M. and J. SVENSSON (2002b): "Political Budger Cycles in Developed and Developing Countries," Working Paper, IIES, Stockholm University.

SHI, M. and J. SVENSSON (2003): "Political Budget Cycles: A Review of Recent Developments," *Nordic Journal of Political Economy*, 67-76.

STURM, J. (2001): "Determinants of Public Capital Spending in Less-Developed Countries," CCSO Working Papers 200107, University of Groningen, CCSO Center for Economic Research.

TANZI, V. and H. DAVOODI (1997): "Corruption, Public Investment and Growth," *IMF Working Paper*.

WADE, R. (1991): "Money-go-round," *Economist*, 4 May.

WAGNER, A. (1883): *Grundlegung der Politischen Oekonomie*, Foundation of Political Economy, 3rd ed. Leipzig, Germany.