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# Fiscal policy cycles and public expenditure in developing countries *

LUDGER SCHUKNECHT
*WTO, Rue de Lausanne 154, CH-1206 Geneva, Switzerland; e-mail ludger.Schuknecht@wto.org*

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**Abstract.** The paper studies empirically the fiscal policy instruments by which governments try to influence election outcomes in 24 developing countries for the 1973–1992 period. The study finds that the main vehicle for expansionary fiscal policies around elections is increasing public expenditure rather than lowering taxes, and public investment cycles seem particularly prominent. Institutional mechanisms which constrain discretionary expenditure policies and which strengthen fiscal control are therefore worthwhile considering to prevent opportunistic policy making around elections.

## 1. Introduction

Numerous studies have analyzed whether democratic governments in industrial countries adjust their macroeconomic policy mix around the election data to enhance their re-election prospects. Very few studies, however, have examined the incidence of policy cycles in developing countries, or have looked in more detail at the fiscal policy instruments with which governments try to influence the election outcome.[1]

The purpose of this paper is to look in detail at the fiscal policy instruments used by developing country governments to enhance their prospects of re-election. The study is the first to look empirically at the choice of policy instruments for a relatively large sample of developing countries (i.e., 24 in total). It argues that public spending increases are the preferred vehicle for policy makers to boost their popularity before elections because they typically have a very direct and immediate impact on voters' welfare. The findings largely support this hypothesis, especially for public investment cycles.

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## 2. Fiscal policy cycles and public expenditure policies in the context of elections

### 2.1. *The underlying model and the literature*

The study applies the so-called Nordhaus-approach to analyze fiscal policies around elections. According to this approach, governments are assumed to stimulate their economies with expansionary fiscal or monetary policies before elections. Resulting employment gains or wealth transfers increase the governments' popularity. After the elections, governments stabilize the economy with restrictive policies again. The earlier literature initiated by Nordhaus (1975) assumed adaptive expectations. More recently, Persson and Tabelini (1990) showed that Nordhaus-type cycles can also emerge in models with rational expectations. Voters are assumed not to know the policy makers' competence (asymmetric information), and they have to infer it from observable economic data. The government then pursues expansionary monetary policies before elections to raise output and lower unemployment, which in turn signals to voters (who have no other source of information) that the government is very competent. Restrictive policies after the election then lead to a full cycle in economic activity.[2] Rogoff (1990) designs a model in which asymmetric information about the government's competence can lead to fiscal and monetary policy cycles.

The other main strand of the literature looks at so-called Partisan cycles which result from ideological differences in the preferences for inflation and unemployment between political parties (Hibbs, 1977). Left-wing parties assign greater value to low unemployment, while right-wing parties value low inflation more highly. As a result, these models predict that right-wing governments consistently generate lower inflation and higher unemployment than do leftist governments. In more recent models, cycles are caused by long-term labor contracts which prevent an immediate adjustment of real wages to an unanticipated monetary expansion or contraction due to a change in government after elections (Alesina, 1987).

Empirical studies in the 1970s until the early 1990s focussed almost exclusively on industrial countries, and there are by now numerous theoretical and empirical studies of both approaches.[3] More recently, however, interest has been extended also to developing countries. Schuknecht (1996) finds fiscal policy cycles of the "Nordhaus"-type for a panel of 35 developing countries where governments pursue expansionary policies before elections and fiscal austerity afterwards.

Regarding policy instruments, industrial country studies mainly look at transfer payments. In developing countries, by contrast, evidence is very scarce and largely anecdotal. Bates (1988) discusses public investment cycles

in Zambia in the 1960s and Krueger and Turan (1993) find such cycles in Turkey for the 1950 to 1980 period. Calvo (1995) looks at the Mexican crisis, and argues that this was triggered partly by a significant increase in the quasi-fiscal deficit associated with the extension of credit through development banks before the elections in late 1994.

Regarding the two main approaches discussed above, the Nordhaus-approach seems more suitable for developing countries. The distinction between political parties frequently do not exhibit the typical Western left-right pattern which is crucial for applying the Partisan-approach. The Nordhaus-approach is also supported by the above-mentioned studies by Bates, Calvo, Krueger and Turan, or Schuknecht.

### 2.2. *Hypotheses on fiscal policies and public expenditure*

Fiscal policies can be an effective means of influencing government popularity. Expansionary fiscal policies allow significant wealth transfers in order to gain votes. Increases in cash transfers to households, employment and profit opportunities from public investment projects, reductions in tax rates and the delayed collection of taxes are examples of such wealth transfers. They either increase public expenditure or reduce revenue. In both cases, we would expect an increase in the fiscal deficit before elections and fiscal consolidation thereafter. In addition, we would expect that much of the election-oriented policy making in developing countries affects the expenditure side:

*Hypothesis 1*. Elections are preceded by expenditure increases rather than lower revenues

Tufte (1978) argues that “[measures] must be easy to start up quickly and must yield clear and immediate economic benefits to a large number of voters”. In industrial countries with a broad tax base, tax cuts can significantly enhance the government’s popularity. They are highly visible and the benefits can accrue very quickly. This was the case, for example, in the United States during the Reagan era. In developing countries, however, the tax base, particularly for income taxes, is small, and tax cuts would therefore not enhance broad government support. In addition, the indirect effect of a tax cut on economic performance is not very direct, predictable, and immediate, which makes it difficult for the government to reap the political benefits from the resulting economic stimulation. Tax-related measures also result in long-term problems such as an eroded tax base, and tax morale may be difficult to reconstruct after elections against the resistance of special interests.

Expenditure policies can be an effective instrument for governments to increase their popularity, for example, through the distribution of free or subsidized food, or through temporary employment generation in public works programs. The effect of expenditure increases on employment can be easily observed and governments can claim direct credit for it. The same holds for increases in disposable incomes through cash or in-kind transfers. For these reasons, expenditure increases are likely to be more important in pre-election fiscal expansion than tax reductions. However, expenditure increases can also have important draw-backs for governments. Similar to tax-related measures, expenditure increases can be difficult to reverse if permanent civil service posts and entitlements rather than temporary public works or transfers are introduced.

*Hypothesis 2*. Election-oriented policies raise capital expenditures more strongly than current expenditure

The government can change not only the level of expenditures but also the composition. Increasing current expenditures, such as food subsidies or increased government employment is frequently reported to increase the welfare of voters and the popularity of governments before elections. Higher expenditure on capital projects, for example, through public works programs has the same effects. Therefore we expect spending on both expenditure categories to increase.

However, there is reason to argue that capital expenditure is likely to be more strongly affected. Public investment spending through, e.g., public works programs can be fine-tuned more easily to the government's re-election objectives. Public works programs (such as improving a road) are relatively easy to start up or accelerate before an election, and they can be set up in well-defined geographical areas and sectors. They are also easy to stop or slow-down after the election is over. Governments may therefore be reluctant to engage in commitments which are more difficult to reverse if alternative spending programs can be fine-tuned to its political objectives more easily. The studies by Bates or Krueger and Turan show that public investment cycles have indeed been very popular in a number of developing countries.

There may also be "statistical" reason why we may not observe the full increase in current expenditure before elections. The distribution of free food in urban areas or villages is often financed by extra-budgetary sources of the governing parties.

*Hypothesis 3*. The government wage bill is likely to increase before elections

The limited availability of data restricts the more detailed analyses of the policy instruments by which expansionary expenditure policies are transmitted. We would expect that expenditure on transfers are strongly affected by elections but a reasonable data set on this expenditure category is not available. The government wage bill is one detailed economic expenditure category on which most countries report to the IMF's Government Finance Statistics (1970–95). As mentioned, increasing government employment before elections is very visible and can have a direct effect on the wealth of many people as in many developing countries a large number of family members is typically supported through one civil service post.

Within the public sector work force, there are typically two types of employment. While governments will be happy to expand the number of temporary employees on short-term contracts before elections, they may be more reluctant to take on significant numbers of new (typically life-time) civil servants. Ideally, therefore, the government wage bill should be analyzed separately for these sub-categories, but such detailed data are not available. Although the relative importance of temporary *versus* permanent employees differs, the predominant share of the wage bill is on permanent civil servants, and we would expect only moderate election-cycles in the wage bill.

## 3. Empirical study

### 3.1. *Methodology*

#### 3.1.1. *Technique*

Regressions with annual panel data for the period 1973–1992 are run on a 24-country sample with a fixed-effects model. Unit root tests were conducted on all independent variables and the occurrence of cointegration can be rejected at the 95% level for almost all variables. The following panel regression is tested:

$$\mathrm{FisVar}_{it} = \alpha \mathrm{Const}_{it} + \beta \mathrm{Elect}_{it} + \gamma_{jit} \mathrm{Var}_{jit} + \varepsilon_{i}$$

where "$\mathrm{FisVar}_{it}$" stands for various dependent variables for i countries and t periods, "Elect" represents the variable capturing the influence of elections, and "$\mathrm{Var}_{j}$" stands for the impact of other factors such as terms of trade changes, the trade-orientedness of a country, the real effective exchange rate, the exchange regime, catastrophes or IMF-supported programs.

3.1.2. *Dependent variables*

In a first estimation, the overall fiscal balance of central government, expressed as a share of GDP, serves as dependent variable for the analysis of overall fiscal policies around elections as it reflects the combined effect of expenditure and revenue measures.[4] In a second step, the hypotheses on public revenue and expenditure are tested with the help of total revenue and expenditure as a share of GDP as dependent variables. Finally, the hypotheses on the behavior of certain expenditure policy variables are examined with the help of current and capital expenditure as a share of GDP and the public sector wage bill as a share of total expenditures as dependent variables.

3.1.3. *Election variable*

Most important for our analysis, a dummy variable is introduced to reflect the effect of elections. As mentioned, we only consider country-wide general, legislative or presidential elections, depending on the political system of the sample countries, as indicating in the Europa World Yearbook (1995). The election variable takes the value of one in the period when expansionary policies are expected and minus one when we anticipate the post election contraction. In all other periods it is set as zero.

In many countries the fiscal year and the calendar year do not coincide. Therefore, the variable value is set relative to its position during the fiscal year to be consistent with the other fiscal variables it supposedly influences. Elections sometimes take place at the beginning, during or at the end of the fiscal or calendar year. Therefore, the period during which we expect expansionary policies and during which a contraction is expected must be defined, taking into account the fact that most stimuli affect the economy and thereby popularity only with a short lag.

The specification is based on the following argumentation: in years when the election is during the first two months of the fiscal year, expansionary policies are expected for the fiscal year preceding the election. Because the elections are very early in the fiscal year, the contraction starts already later during the election year; hence, the variable takes the value of one for the pre-election fiscal year, and minus one for the election year.

If the election is in the third or fourth month of the fiscal year, expansionary policies are expected to start during the fiscal year preceding the election. They will continue in the election year, but more or less at the same level. Consequently, the election variable takes the value of one for the pre-election fiscal year and zero for the fiscal year with the election. Contractionary measures are only introduced in the fiscal year after the election, for which the variable takes the value of minus one. This specification takes into account the fact that governments after elections have to reward their “supporters”.

If the election takes place during or after the fifth month of the fiscal year, all expansionary policies are expected to take place during the election year. There is also some time left after the election to reward "friends". Fiscal consolidation then starts with the post-election fiscal year.

The coefficient of this variable is expected to have a negative sign in estimations of the fiscal balance, and fiscal revenue and a positive sign in all estimations of expenditure variables, because elections shall lead to a worsening of the fiscal balance, lower revenue and higher public expenditure.

3.1.4. *Other independent variables*

3.1.4.1. *Lagged dependent variable.* All estimations include a lagged dependent variable with an expected positive coefficient. Government administrations are constrained by budgets and the current budget largely determines the next period's appropriations (Niskanen, 1971). This "inertia" provides stability and predetermines fiscal revenue, spending, and deficit patterns.

3.1.4.2. *Trade-orientation.* A variable which reflects a country's trade-orientation is defined as the ratio of the sum of imports and exports over GDP. It is expected to be correlated with an improved fiscal balance. Expansionary fiscal policies in trade-oriented economies lead to more leakage of demand abroad than in less trade-oriented economies. The higher import demand, in turn, can either result in external payment difficulties in countries with fixed exchange regimes or in an exchange rate devaluation and imported inflation in countries with flexible exchange regimes. Both outcomes – balance of payment problems or inflation – could be very damaging for government popularity before elections. The higher likelihood of such outcomes in more trade-oriented countries make expansionary policies and high fiscal deficits before elections less attractive (Lindbeck, 1976).

3.1.4.3. *Terms of trade.* Effects of changes in the terms of trade are also examined. If the external shock is positive (i.e., countries experience an increase in the relative price of exportables), output is likely to increase which should raise fiscal revenue and improve the fiscal balance. Declines in the terms of trade, on the other hand, should lower revenue and worsen the fiscal balance. This translates into an expected positive sign of the coefficient for the fiscal balance and government revenue.

The effect of changes in the terms of trade on public expenditure is not quite as unambiguous. Improving terms of trade and the resulting relative decline in the price of inputs leads to lower public expenditure, especially if imports are a large share of expenditure. This is probably the case in many developing countries. The output growth resulting from improved terms of trade may also 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 higher current expenditure is, for example, public enterprises are not allowed to adjust their pricing policies to changes in export and import prices and require more support, or if social assistance needs rise. These arguments suggest lower spending and deficits are correlated with positive terms of trade developments.

However, the growth in revenue from a positive shock may also soften the government's budget constraint and allow the government to increase public spending, especially if the shock is of considerable magnitude and duration. In fact, Bevan, Collier, and Gunning (1990) and Schuknecht (1997) report that the coffee and cocoa boom initially reduced fiscal deficits in several Latin American and African countries in the late 1970s. Over time, however, and well before the end of the boom, expenditure obligations started to increase – often more rapidly than revenue – in many of the examined countries. In summary, therefore, the terms-of-trade variable is likely to have a significant positive effect on revenue and a negative effect on current expenditure, but the aggregate effect on expenditure and the fiscal balance is more uncertain.

3.1.4.4. *Real effective exchange rate.* The real effective exchange rate is an indicator of a country's competitiveness.[5] When the real effective exchange rate depreciates and the economy's competitiveness improves, government revenues from profits and export taxes rise. A negative sign of this variable can, therefore, be expected for revenues.

3.1.4.5. *Exchange regime.* An exchange regime variable is derived from the International Financial Statistics (IFS) (IMF, 1970–95). A dummy variable takes the value of one for a relatively fixed exchange regime and 0 otherwise. Fixed exchange rates frequently result in periods of overvaluation of the domestic currency which, in turn, depresses domestic economic activity and the competitiveness of producers. Governments may respond in many ways, but from a fiscal perspective, the effect of an overvalued exchange rate on the government wage bill is likely to be most important. Governments are frequently expected to mop up unemployment which results from the recessionary effect of an overvalued exchange rate. Fixed exchange rate regimes then are likely to result in higher public sector wage bills, and a positive sign of the coefficient can be expected in the estimation of the wage bill.

The aggregate effect on overall expenditure (and the fiscal balance) is less obvious as fixed and overvalued exchange rates may raise wage costs but lower the costs of imported products.

3.1.4.6. *Catastrophes.* Shocks are incorporated as dummy variables taking the value of one during periods of major catastrophes, such as floods,

earthquakes, or the eruption of volcanos, as indicated in the Europa World Yearbook (1995).[6] If the government contributes to catastrophe-relief or reconstruction measures through the budget, government expenditure should rise which worsens the fiscal balance. The variable is expected to have a negative coefficient in estimations of the fiscal balance and a positive sign for expenditure.

3.1.4.7. *IMF-supported programs.* An analysis of fiscal policy in developing countries also needs to take into consideration programs with international financial institutions like the International Monetary Fund (IMF). These institutions usually provide access to more international financing and contain conditionality which stresses economic stabilization, including fiscal consolidation. Programs supported by the IMF should, therefore, "harden" the governments' budget constraint and result in smaller fiscal deficits, higher revenue and lower public expenditure.[7]

The estimations therefore also include three types of programs supported by the IMF. Dummy variables stand for structural adjustment programs (SAF/ESAF), stand-by (SB) arrangements, and extended fund facility (EFF) arrangements. The variables take the value of one when the respective program is in force for at least six months of the respective fiscal year. It becomes one half when the particular program covers at least a full quarter of the fiscal year. SAF/ESAF arrangements are assumed to have a lagged effect on the fiscal balance, because structural measures take some time to be effective and may initially even result in net costs for the budget which is then financed with additional donor assistance. For these countries with SAF/ESAF arrangements it is in fact tested whether the fiscal situation improves in the second year of the program. A "general program" dummy variable reflects all periods when a country had any kind of these three arrangements with the IMF. For all IMF-program variables, the expected effect on the fiscal balance, and revenues is positive while spending on the various categories is expected to decline.

## 3.2. *Results*

The results largely confirm the hypotheses on the fiscal policy instruments by which governments try to influence their popularity around elections, and evidence is strongest in support of public investment cycles. The results also indicate that a number of other domestic and external factors show the predicted effect on fiscal policies. However, for some variables – for which the aggregate effects were sometimes complex and difficult to predict in the first place – we could only find weak if any support.

Hypothesis 1 on the relative importance of revenue *versus* expenditure measures to enhance popularity before elections can not be rejected. Column 1 in Table 1 indicates that most governments use fiscal policies to enhance their popularity before elections. Columns 2 and 3 suggest that, on balance, expenditure measures are more important for achieving this objective. Two thirds of the increase in fiscal deficits of about 0.7% of GDP around elections is explained by an increase in public expenditure. The fact that the coefficient is only marginally significant at the 10% level, however, suggests that there is considerable variation in the expenditure policies of the sample countries. Furthermore, some governments may also have used revenue policies at times, but the coefficient of the election variable in the estimation of total revenue is smaller than in the expenditure estimation and it is not statistically significant.

The results for other independent variables are also worthwhile reviewing. The role of the lagged dependent variable as reflecting budgetary inertia is confirmed. The effect of catastrophes and trade-orientedness on the overall deficit is more significant than on its components, i.e., revenue and expenditure. The estimation results also suggest that improvements in the fiscal balance through positive developments of the terms of trade arise from revenue increases. Loss of competitiveness by producers, as measured by the real effective exchange rate, has a significant adverse effect on total revenue. Amongst IMF-supported programs, EFF programs are shown to have a significant constraining effect on public expenditure.

Regarding the second hypothesis on the relative development of current and capital expenditure around elections, the estimation results support the claim of public investment cycles (Table 2). Governments expand capital spending before elections, e.g., on public works programs to enhance their political support. The coefficients of the two estimations in columns 1 and 2 show that current and capital expenditure account for an approximately equal share of the overall expenditure increase but the significance level is only satisfactory for capital expenditure. As predicted by the third hypothesis, the increase in current expenditure seems to be at least partly due to an increase in the wage bill but the significance of the coefficient of the wage bill variable is not very satisfactory.

Other findings include that natural catastrophes affect current expenditure significantly, probably through expenditure on emergency relief. Improvements in the terms of trade correlates with lower current expenditure, as social assistance expenditure and costs of imports decline. The same variable, however, does not show a significant effect on capital expenditure and overall expenditure, probably as higher revenue and “softer” budget constraints allow governments to take on new expenditure commitments. As projected, the

*Table 1.* Estimation results, 1973–1992 period

| Dependent variables | Overall fiscal balance | Total revenue | Total expenditure |
|---|---|---|---|
| *Independent variables*[a] | | | |
| Elections | –0.66 | –0.23 | 0.39 |
| | (–2.85)** | (–1.15) | (1.78) |
| *Other influences* | | | |
| Lagged dependent variable | 0.76 | 0.70 | 0.64 |
| | (24.1)** | (16.4)** | (15.4)** |
| Natural catastrophes | –7.19 | –0.95 | 2.41 |
| | (–4.74)** | (–0.85) | (1.51) |
| Terms of trade | 0.015 | 0.02 | 0.01 |
| | (2.00)* | (3.33)** | (1.12) |
| Terms of trade (one period lag) | –0.006 | | |
| | (–0.68) | | |
| Terms of trade (two periods lag) | –0.009 | | |
| | (–1.34) | | |
| Trade-orientedness[b] | 0.639 | 1.65 | 1.96 |
| | (1.74) | (1.09) | (1.50) |
| Real effective exchange rate | | –0.13 | |
| | | (–1.73) | |
| SAF/ESAF arrangement (one period lag)[b] | 4.86 | 0.69 | –0.02 |
| | (1.99) | (0.37) | (–1.12) |
| EFF arrangement | 0.68 | 0.28 | –1.08 |
| | (1.25) | (0.72) | (–1.95) |
| Stand-by arrangement | 0.31 | 0.16 | |
| | (0.88) | (0.33) | |
| Number of observations | 376 | 246 | 379 |
| $R^2$ adjusted | 0.62 | 0.96 | 0.91 |

*Source of data*
IMF: Government Finance Statistics (1970–95), Transactions of the Fund (1995), International Financial Statistics (1970–95), Directions of Trade Statistics (1995); Worldbank, World Tables; Europa World Yearbook (1995).

* = significant at 5% level; ** = significant at 1% level.

[a]Individual country intercepts not presented.
[b]Dickey-Fuller-test statistics just below critical value of 95% significance.

*Table 2.* Estimation results, 1973–1992 period

| Dependent variable | Current expenditure | Capital expenditure | Wage bill |
|---|---|---|---|
| *Independent variables*[a] | | | |
| Elections | 0.24 | 0.25 | 0.56 |
| | (1.49) | (2.44)* | (1.54) |
| *Other influences* | | | |
| Lagged dependent variable | 0.72 | 0.61 | 0.83 |
| | (18.7)** | (14.0)* | (28.2)** |
| Natural catastrophes | 2.74 | –0.92 | |
| | (2.02)* | (–1.07) | |
| Terms of trade | –0.01 | 0.04 | |
| | (–2.46)* | (1.51) | |
| Trade-orientedness[b] | 0.50 | 0.59 | |
| | (0.52) | (0.98) | |
| Exchange arrangements | | | 2.24 |
| | | | (2.70)** |
| Fund-supported program | –0.78 | –0.20 | –0.40 |
| | (–0.28) | (–1.18) | (–0.66) |
| Number of observations | 350 | 379 | 359 |
| $R^2$ adjusted | 0.92 | 0.81 | 0.90 |

*Source of data*
IMF: Government Finance Statistics (1970–95), Transactions of the Fund (1995), International Financial Statistics (1970–95), Directions of Trade Statistics (1995); Worldbank, World Tables; Europa World Yearbook (1995).

* = significant at 5% level; ** = significant at 1% level.

[a]Individual country intercepts not presented.
[b]Dickey-Fuller-test statistics just below critical value of 95% significance.

coefficient of the exchange arrangement variable shows that fixed exchange regimes contribute to a rising public sector wage bill.

These results raise a number of questions for further research which could also lead to interesting policy implications. A number of authors (Buchanan in many of his writings, and, more recently Von Hagen and Harden, 1994; Alesina, Hausmann, Hommes, and Stein, 1995, Campos and Pradhan, 1996; or Tanzi and Schuknecht, 1997) have argued that the institutional framework

is key to maintaining fiscal discipline in many industrial and Latin American countries which have featured weak fiscal institutions in the past. Emphasis on macroeconomic discipline in the budget formulation stage, for example, through a strong Ministry of Finance can help to contain fiscal expansion. Constraints on the legislature in introducing new spending proposals in the budget approval stage are a second important element for maintaining fiscal discipline. Third, strict implementation of the budget is required to eliminate opportunities for overspending at this stage, which could be abused, for example, for election-oriented spending. Fiscal rules such as constitutional or legislative deficit limits can complement the other fiscal institutions.

A number of the sample countries of this study belong to the group of countries with relatively weak fiscal institutions studied by the above-mentioned authors but for many of the countries, the quality of fiscal institutions has not yet been established. As weak institutions may have facilitated election-oriented fiscal policy making, it would be interesting to see whether fiscal cycles are correlated with the quality of fiscal institutions. From a normative perspective, institutional mechanisms which are adapted to each country's institutional framework and which constrain discretionary government policies, might be worthwhile considering if expansionary policy making around elections is perceived to be undesirable.[8]

## 4. Conclusion

The study of fiscal policy cycles in 24 developing countries for the 1973–92 period supports the claim that election-oriented fiscal policy making in developing countries mainly affects public expenditure. Empirical evidence strongly suggests the prevalence of public investment cycles.

The weak institutional structures in many developing countries may facilitate election-oriented fiscal policies. It is possible for this reason that the empirical studies on industrial countries (where political discretion is much lower than in developing countries) tend to show less significant results for Nordhaus-type cycles than the studies of developing countries. The strengthening of fiscal rules and institutions could be a key element towards reducing policy volatility, for example, around elections.

## Notes

1. For surveys of the political business cycles literature see, for example, Alesina (1988), Nordhaus (1989), Willet (1989), Gaertner (1993, 1994), or Frey (1996). Schuknecht (1996) analyses fiscal policy cycles and their effect on deficits in developing countries.

Empirical studies of the choice of policy instruments are limited to industrialized countries (e.g., Tufte, 1978; or Frey and Schneider, 1978); Bates (1988) or Krueger and Turan (1993) provide case studies of public investment cycles in Zambia and Turkey, respectively. There is also a considerable literature on the political economy of developing countries which discuss the importance of the policy regime (e.g., Krueger, 1992), micro- and macroeconomic policy failures (e.g., Krueger, 1993), domestic institutional factors (e.g., Borner, Brunetti, and Weder, 1996) or international influences (Frey and Eichenberger, 1994).

2. While the "traditional" Nordhaus-approach is often criticized for its reliance on adaptive expectations, the Persson/Tabellini model hinges crucially on the assumption that voters can be influenced repeatedly, i.e., that do not learn from past experiences and do not adjust their behavior over subsequent business cycles.
3. For details, see the above-mentioned surveys. The most detailed and institutionally rich study on political cycles in the United States and in other democracies is Tufte (1978). A combination of the two principal approaches is analyzed by Frey and Schneider (1978).
4. This estimation in fact reiterates the findings by Schuknecht (1996) on overall fiscal deficits. The data does not include spending by regions or local governments, since the study analyses election-oriented policies at the national level, and the government only controls directly the central government budget. The definition of the fiscal balance excludes grants, i.e., foreign aid transfers from abroad, thereby excluding "noise" from fluctuations in grants and reflecting more clearly changes in the fiscal position arising from domestic policy choices only.
5. The real effective exchange rate represents the ratio of the average exchange rate of the country in question to a weighted geometric average of exchange rates for the currencies of selected other countries, adjusted for differences in the relative inflation between these countries. There could be correlation between the terms of trade variable and the real effective exchange rate variable as terms of trade developments are to some extent correlated with inflation or exchange rate changes. Here, the correlation coefficient for these two variables of 0.23, however, is rather small.
6. There are no sample countries which experienced major wars over the observation period, except maybe for Guatemala which experienced prolonged unrest.
7. It has been argued that programs with the international financial institutions relieve industrial country governments of the unpleasant task to impose policy conditionality on developing countries which might be unpopular with their domestic electorate (Vaubel, 1986). Developing country governments, by the same token, can attribute the negative effect of austerity measures to the international financial institutions and protect their political support (Frey and Eichenberger, 1994). The importance of revenue and expenditure measures in IMF-supported program has been assessed in IMF (1997).
8. The above-mentioned studies provide some evidence that institutional problems are on average more severe in developing than in industrial countries. While developing countries can not always copy institutions which have evolved in different contexts, they can strengthen their institutions if they follow the above-mentioned principles in their reform efforts.

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