POLITICAL BUSINESS CYCLES, DEMOCRATIZATION, AND ECONOMIC REFORM: THE CASE OF AFRICA

Steven A. Block
Fletcher School of Law and Diplomacy
Tufts University
Medford, MA
(sblock@tufts.edu)
617-627-2717

13 August 1999

Abstract

This paper presents cross-country evidence that political business cycles are alive and well in the nascent democracies of the developing world. Africa provides fertile ground for the study of political business cycles, which if manifested in reversals of fiscal and monetary policy reform, suggest a potential conflict between political and economic reform. This conflict may be relevant for Latin America and the emerging former Soviet states, as well. This paper uncovers systematic electorally-timed interventions in nine examples of fiscal and monetary policy in Africa. These findings are consistent with the predictions of rational opportunistic political business cycle theory.

JEL: E32, O23, N17, P16

I. Introduction

The existence of political business cycles has been debated, and often refuted, primarily in the context of industrialized democracies.[1] This paper presents cross-country evidence that political business cycles are alive and well in the developing world, and that nascent democracies are especially vulnerable. Sub-Saharan Africa[2] provides fertile ground for the study of political business cycles, not only because it is previously unexplored territory in this literature, but also because Africa, like other newly democratizing areas, is concurrently undergoing a prolonged process of economic reform. Political business cycles, if manifested in reversals of fiscal and monetary policy reform, suggest a potential conflict between political and economic reform. This conflict may be relevant for Latin America and the emerging states of the former Soviet Union, in addition to Africa.

The years from 1989 to 1995 represent a dramatic transition in African politics, marked in particular by increased political competition and leadership turnover. Although elections were held in Africa prior to 1989, Bratton and van de Walle [1997, p. 6] describe them as "...largely noncompetitive affairs in which, by forgone conclusion, a dominant ruling party won all available seats." However, from 1990-1994, Bratton and van de Walle report a quadrupling of the number of African countries holding competitive legislative elections (38 out of 47 countries), compared with 9 during the previous five years. Opposition parties won seats in 35 of these cases, and the share of legislative seats held by opposition parties in Africa more than tripled between 1989 and 1994. Further, note Bratton and van de Walle (p. 7) , "Of the elections held in 38 African countries from 1990 to 1994, 29 can be considered as founding elections in the sense that they paved a route away from the monopoly politics of authoritarian regimes." With regard to leadership turnover, Bratton and van de Walle note that prior to 1990, there was only one instance in which a sitting African ruler (Ramgoolam of Mauritius) was displaced by electoral means. In contrast, 11 such transitions occurred in Sub-Saharan Africa between 1990 and 1994, in addition to which 3 incumbent leaders chose not to run and were replaced by newly elected leaders.

Africa's recent "democratic experiments" have coincided with an ongoing process of economic reform. A central question is whether economic liberalization and political reform are friends or foes. At some point since the mid-1980s, nearly every country in Sub-Saharan Africa has entered into at least one adjustment lending agreement with the World Bank or the IMF.[3] The general economic stagnation of Sub-Saharan Africa during the period is well known and documented.[4] Efforts to restore growth in Africa have concentrated (though not exclusively) on macroeconomic reform, with particular emphasis on taming inflation and seignorage, reducing unsustainable budget and current account deficits, and liberalizing foreign exchange regimes and capital markets.

In many instances, these economic reforms impose painful restrictions on consumption, as well as significant redistributions of income. Economic reform is thus a highly political undertaking which may or may not be compatible with democratization.[5] As Bresser Pereira, Maravall, and Przeworski [1993, p. 1] note, "Since economic crises often coincide with transitions to democracy, many new democracies face a double challenge: how to resume growth and at the same time consolidate the nascent political institutions....the consolidation of democratic institutions can easily be undermined under such conditions." The present analysis extends this observation to demonstrate the potential cost to economic reform posed by elections if the latter motivate politicians to indulge in spending sprees and monetary expansions in an effort to retain office.

In contrast to the industrial democracies (yet like Latin America and eastern Europe), the nascent democracies of Sub-Saharan Africa often have weaker institutions, impose fewer restrictions on government actions and accountability, and rarely have independent central banks (at least among the non-CFA countries). Africa is thus highly relevant to the study of political business cycles.

Section II provides the theoretical foundation for this analysis with a brief review of political business cycle theory. Section III describes the data set and the empirical strategy used

to test for political business cycles. Section IV presents the results of the cross-country analysis of political business cycles, and Section V concludes.

II. Political Business Cycle Theory

Political business cycle (PBC) theory, since the seminal papers of Nordhaus [1975], Lindbeck [1976], and Tufte [1978] has been debated by economists and political scientists almost exclusively in the context of industrialized democracies. Theoretical treatments have diverged across two divides, one pertaining to politicians' objective functions and the other to the nature of voting behavior.[6] Traditional PBC theory characterizes politicians as identical and opportunistic, meaning that their only preference is to remain in power. Voters are characterized as myopic and naive (e.g., as having adaptive expectations and thus voting retrospectively) and prone to vote for incumbents when times are good prior to the election.

The traditional model has been criticized for both of these characterizations. Hibbs [1977] first attacked the notion that politicians are purely opportunistic, to the exclusion of partisan preferences over policy outcomes. He argued that left-wing parties systematically prefer low unemployment at the expense of higher inflation, while right-wing parties have the opposite preferences. Hibbs, however, retained Nordhaus's characterization of voting behavior.

Other studies criticized the reliance on myopic voting with adaptive expectations. Within the opportunistic politician framework, Cukierman and Meltzer [1986], Rogoff and Sibert [1988], Rogoff [1990], Persson and Tabellini [1990], and later Stein and Streb [1998], and Lohmann [1998] revise the Nordhaus model to incorporate rational expectations among voters. These models rely on asymmetric information between voters and politicians as to the latters' competence. Politicians know their own level of competence, yet this is discovered by voters only with a lag (e.g., after the election). Voters are endowed with rational expectations, but those expectations are conditional on the information set available to them at any given time. Voters are thus forced to base their judgements on observed economic outcomes. This leads to "rational retrospective" voting in which opportunistic governments have the incentive to manipulate macroeconomic policy variables in an effort to appear competent prior to elections.

Alesina [1987] introduced rational voting to partisan PBC models. In this setting, neither politicians nor voters are identical to one another, differing in their preferences for inflation and unemployment. Alesina retains Hibbs's characterization of politicians, but imbues voters with both rationality and partisanship. Voters in that model choose the party that delivers the highest expected utility.

The empirical predictions of these various models differ. The interaction of opportunistic governments and naive voters leads to the prediction that governments will systematically intervene to create regular multi-year cycles in growth and unemployment in which growth is above normal and unemployment below normal prior to elections, followed by corrective contractions after elections. Traditional PBC theory further predicts that monetary and fiscal policies will be expansionary prior to elections and contractionary after elections. In addition, opportunistic PBC theory predicts that inflation may decrease prior to elections, but will increase after elections. The predictions of rational opportunistic models are broadly similar, though the focus is on the manipulation of policy tools rather than on changes in the real economy. Thus, tests of rational opportunistic PBC theory look for cycles in spending, deficits, money growth, and seignorage rather than directly in inflation, unemployment, and growth. Spending, deficits, and money supply are expected to increase prior to elections, while seignorage is expected to increase after elections as politicians act to finance pre-election expansions.

Partisan models, in contrast, yield predictions based on whether the incumbent is left-wing or right-wing. Rather than the cycles of pre-election expansion and post-election contraction implied in opportunistic theory, traditional partisan theory predicts the unemployment is permanently lower and inflation permanently higher during the tenure of left-wing governments as compared with right-wing governments. Rational partisan theory retains these general predictions, but suggests that the effects will be temporary post-election effects in either case, after which outcomes are the same regardless of party in power (though rational partisan theory also suggests that inflation is permanently higher during the tenure of left-wing governments).

Given the characterization of the elections described above, it seems clear that the more relevant branch of PBC theory for Africa is the opportunistic. The clear left/right ideological divide apparent in most industrial democracies is not clearly apparent in most African countries, where elections are more often referenda on specific rulers and recent economic conditions. As Ka and van de Walle [1994, p. 290] note, "...state elites in Africa are rarely motivated by specific policies. Rather, they seek to maximize their chances of political survival and therefore base their policy decisions on perceptions of political risk."

Empirical testing of these competing models has relied almost exclusively on data from the industrial democracies, where results have been mixed. To date, there have been few tests of PBC theory in developing countries, and none with cross-sectional African representation. Each of the empirical papers with a developing country focus is based on opportunistic PBC theory. Here, too, results are mixed. Schuknecht [1996] examines fiscal policies in a sample of 35 developing countries (with virtually no African representation) from 1970 to 1992. He finds that while there is no election effect on real output, there are election-related expansions and reductions of the fiscal deficit by almost 0.7 percent of GDP. This result, however, is limited to countries in which the trade share of GDP exceeds 50 percent. Schuknecht [1999a] finds for a more limited sample of non-African developing countries, that governments resort to expansionary fiscal policies to improve their chances of re-election, but that this is true only for countries with fixed exchange rates. In individual time series regressions for eight Latin American countries from 1982-1991, Remmer [1993] finds virtually no support for traditional PBC theory. Remmer does, however, find mixed evidence of a post-election acceleration of inflation and exchange rate depreciation. In contrast, Ames [1987] does find evidence of increased public spending during election years in Latin America. The only test of PBC theory with an African focus is Magloire [1997], which concentrates solely on Cameroon. Magloire specifically investigates the existence of election cycles in monetary growth, for which he finds positive evidence despite Cameroon's membership in the CFA zone.

III. Data and Empirical Strategy

The data set used here to test for the existence of political business cycles consists of annual observations (1980-1995) for 44 Sub-Saharan African countries. This constitutes a panel data set with 704 country-year observations. Macroeconomic data are drawn from the IMF's *International Financial Statistics*. Table I presents descriptive statistics for the macroeconomic variables used in the analysis. Note that African countries have been characterized by a large presence of government in economic affairs, as reflected in high GDP shares of both government consumption and public expenditures. Fiscal deficits average nearly 4 percent of GDP, and nominal exchange rates show considerable instability. Net claims on the central government are also substantial, averaging nearly 4 percent of GDP. The descriptive statistics reported in Table I provide the context in which to assess the magnitudes of the econometric results.

The macroeconomic data are merged with less common information on the timing of elections, drawn primarily from Bratton and van de Walle [1996].[7] Table II summarizes the occurrence of presidential elections among the sample countries for the period 1980-95. As noted above, Africa's presidential elections have been more concentrated in the 1990s. The data set includes 67 presidential elections. Of the 44 countries in the sample, only 7 held no presidential elections, 19 held only one, and the remaining 18 held multiple presidential elections between 1980 and 1995. In addition to the listed presidential elections, there were 107 legislative elections in the sample countries during 1980-95. I limit the present analysis to include only presidential elections based on the notion that they pose a more direct threat to power and are more relevant in a political context characterized by Bratton and van de Walle [1997, p. 63] as featuring "...the systematic concentration of political power in the hands of one individual, who resists delegating all but the most trivial decision-making tasks."

For each macroeconomic intervention tested, the specification for estimation takes the form

where ELE is a dummy variable indicating an election, and *y* represents a given monetary or fiscal policy variable. In the specifications that test for election year effects, ELE is equal to one if a presidential election occurs in country *i* during year *t* and zero otherwise. In the

specifications that test for post-election policy changes, ELE is equal to one in the year following a presidential election, and zero otherwise.[8]

The dependent variable in each specification is a particular macroeconomic policy intervention to be tested for evidence of political cycles. This test is implemented for four fiscal policy variables (fiscal deficits, expenditures, government consumption, and net claims on government) and five monetary policy variables (money growth, interest rates, inflation, seignorage, and exchange rates). The appropriate number of lags (k) on the dependent variable were determined in each case by the Schwarz Information Criterion. As discussed below, variations on this specification were tested in specific cases. The reported results, however, all derive from regression of the dependent policy variable solely on lags of the dependent variable and the election dummy variable.[9] In all cases, these results proved robust to inclusion of terms of trade shocks and lagged income growth.

The presence of lagged dependent variables with panel data complicates estimation. OLS is not biased by the lagged dependent variable but fails to control for country-specific unobserved effects, while standard fixed effects (within-groups) estimates are potentially biased.[10] Arellano and Bond [1991] resolve these problems with a generalized methods of moments (GMM) estimator.[11] The results presented in the following section employ GMM estimators along with OLS and fixed effects. Reasonable agreement across all three estimators is taken as strong evidence of a finding.

IV. Results

The cross-country analysis reveals clear patterns of electorally-timed interventions in key fiscal and monetary policy variables, including fiscal deficits, expenditures, government consumption, and net claims on government as shares of GDP, as well as money growth, interest rates, inflation, seignorage, and nominal exchange rate changes. These patterns consistently confirm the predictions of rational opportunistic business cycle theory. The results presented in Tables III and IV economize on space by providing only the coefficients for ELE.[12] On the

left-hand side of each table, ELE is defined as the election year; on the right-hand side ELE indicates the post-election year.

Table III, panel A, presents the results for fiscal policy variables. The fiscal deficit as a share of GDP (where deficit is a negative number) becomes significantly more negative (e.g., the deficit share grows) during election years by 1-2.6 percent of GDP. This result is significant at the .05-level or greater in the WG and GMM estimators, and at the .10-level in OLS.[13] The post-election results clearly demonstrate that the deficit cycle is completed in the year following the election, when fiscal deficits are smaller than "normal" by approximately 1.5 percent of GDP. This result is significant at the .05-level with all three estimators. The cyclical swing in fiscal deficits around elections is as much as 4 percent of GDP. This is a substantial swing in a sample where the mean deficit is 3.9 percent of GDP with a standard deviation of 6.0.

This finding is consistent with representative country experience. Ghana maintained strict fiscal discipline throughout the 1980s and had a *surplus* of 1.5 percent of GDP in 1991, the year before Rawlings's first election. In the election year of 1992, Ghana's fiscal deficit soared to nearly 5 percent of GDP. Zambia's first multi-party presidential election in 1991 presents a more extreme case, where the fiscal deficit quintupled from 4 percent of GDP prior to the election to 21 percent of GDP during the election year. In both cases, deficits in the post-election year were substantially reduced.

Public expenditure is revealed in Table III, panel B, in the WG and GMM estimators to increase significantly during elections years, by an average of as much as 3.6 percentage points of GDP. In this case as well, the post-election correction is clear: all three estimators reveal that post-election spending is approximately 2 percentage points lower than normal (a fall on the order of 5 percentage points from the election-year extravagances). In Nigeria, for example, 1993 saw the first presidential election in 14 years. The expenditure share of GDP increased that year from 17 to 33 percent, and fell back to 22 percent in the post-election year.

It is noteworthy in this context that tax revenue as a share of GDP is not statistically significantly related to elections in either the election year or the post-election year. Thus, the

electoral swings in fiscal deficits reflect a preference of African governments to manipulate expenditures over taxation. This finding is confirmed for a broader set of (non-African) developing countries by Schuknecht [1999b].

Government consumption is clearly an important component of fiscal deficits and public expenditure. Here, too, the evidence in Table III, panel C, indicates a statistically significant increase of 1.1-1.4 percent of GDP during election years (also significant with all three estimators). The post-election results indicate a return to normal levels of government consumption. (In this case, the signs on the post-election year dummy are consistent with a retrenchment beyond a return to normal levels in government consumption, though this result is significant only with OLS, which may be biased by the omission of country effects.) While much of political business cycle theory revolves around patterns in which the government indulges prior to the election and undertakes corrective action after the election, the evidence on government consumption (as well as in several of the monetary policy instruments reviewed below) suggests that the election-year indulgences are not always followed by post-election corrections (in excess of a return to the non-election year norms). Such partial cycles are also apparent with respect to net claims on the central government.

How do governments finance these election year fiscal expansions? Table III, panel D, shows that part of the financing comes from raiding the candy store. Net claims on the central government record the balance of central government transactions with the domestic banking system.[14] An increase indicates that government is withdrawing in excess of its deposits -- a relatively easy and opaque tactic for short-term financing of expenditures. The evidence demonstrates that net claims on the central government (as a share of GDP) increase during election years on the order of 2 percent of GDP (a substantial increase relative to the non-election year average of 8.6 percent of GDP). In this case, the GMM estimate alone is not statistically significant (though the sign is consistent with the OLS and WG results). The post-election evidence indicates that the net claims against government return to normal, which is to say that governments do not compensate the central bank in the post-election year for its

election-year generosity. The Zambian election of 1991, for instance, coincided with an increase in the net claims share on government from 55 percent of GDP in 1990 to 73 percent. Yet, the average for the four years following the election was approximately the same share as during the four years prior to the election.

In general, the results for fiscal policy conform to the predictions of the rational opportunistic political models of Rogoff and Sibert [1988] and Rogoff [1990]. The results clearly depict pre-election manipulations of fiscal policies, followed in many cases by post-election retrenchments. The primary distinction between the predictions of rational versus naive opportunistic business cycle theories is that the former pertain explicitly to the manipulation of policy instruments rather than direct macroeconomic outcomes. Limits on the availability of African data for variables such as unemployment make it difficult to distinguish empirically between the rational and naive voter models, but the results broadly and strongly support the predictions of opportunistic business cycle theory in general. Indeed, GDP growth rates in Sub-Saharan Africa are not statistically related to election cycles. The lack of election-related growth effects in Africa can be explained in the rational expectations framework by voters' anticipation of the policy intervention (or more simply by the difficulty for governments to create real growth despite policy interventions).

Table IV presents evidence of political business cycles in monetary policy. Panel A presents evidence of increased growth of 5-9 percentage points per year in the real money supply prior to elections. In this case, the evidence is more suggestive, as OLS is insignificant and GMM significant only at the .10-level. Monetary growth returns to normal following the election (though the signs of the post-election dummies are plausibly negative but insignificant).[15] The Ghanaian experience conforms well to these findings. Real money supply in Ghana fell during each of the two years prior to Rawlings's 1992 election. Real money supply growth increased during the election year from -3 percent to 39 percent, falling back to 2 percent in the post-election year.

African governments have also used interest rate policy to stimulate economic activity prior to elections. Throughout this period, financial repression was common in Sub-Saharan Africa, resulting in credit rationing [World Bank, 1994]. Nominal lending rates for targeted subsidies on capital would thus be a potentially powerful instrument for attracting the votes of influential rent-seeking constituent groups. Table IV, panel B, demonstrates statistically significant reductions in nominal lending rates during election years on the order of 1.5 percentage points.[16] While this result is statistically significant with all three estimators, its magnitude is rather small compared to the sample mean interest rate of 17 percent. The GMM estimator further indicates that interest rates increased again in the post-election year -- a pattern consistent with the predictions of political business cycle theory, though one supported in OLS and WG by the sign but not the significance of the estimates.[17]

Rational opportunistic theories also predict that politicians hoping to appear competent, will minimize inflation in the pre-election period, only to see it increase in the post-election phase. Stein and Streb [1998] present a model in which countries experience stop-go inflation episodes around elections as inflation is lowered in the short-run through foreign debt accumulation. The African evidence in Table IV, panel C, strongly supports these theoretical predictions. Election-year inflation falls by 3-4 percentage points. The cycle is more striking, however, in the post-election case, where inflation in the year following the election increases by approximately 4-7 percentage points. The resulting cyclical swing in inflation rates surrounding elections is thus on the order of 7-11 percentage points, which is considerable relative to the mean inflation rate of 19 percent. This result is directly in keeping with predictions of the Nordhaus model, as well as with historical experience. Zambia's 1991 election was accompanied by a drop in inflation from 107 percent to 98 percent; however, inflation in the post-election year increased to 166 percent. Similarly, Ghana's inflation in the 1992 election year fell to 10 percent from 18 the prior year and increased to 25 in the post-election year.

Table IV, panel D, returns to the question of how African governments have financed their election year extravagances. The answer is seignorage.[18] Rogoff and Sibert suggest that

governments, intending to signal competence, may increase spending on public goods (without raising taxes) during the election year, and fall back on the relatively opaque tactic of seignorage to finance the resulting deficits in the post-election year. The evidence in Table IV confirms this prediction, indicating increased rates of seignorage in the post-election year on the order of 0.5-1.0 percent of GDP.[19] This result, too, is significant at the .05-level with all three estimators. This represents a substantial increase in seignorage relative to the non-election year average (for the non-CFA countries) of 1.8 percent of GDP. Here, again, the case of Ghana is illustrative: pre-election (1991) seignorage in Ghana, 0.92 percent of GDP, fell to 0.82 during the election year and doubled during the post-election year.

A final test of PBC theory pertains to nominal exchange rates, which were fixed in most African countries during the period in question. In many instances, African governments maintained over-valued exchange rates. World Bank [1994] reports an average parallel market premium of nearly 300 percent during the early 1980s, implying pressure to devalue. The final panel of Table IV presents suggestive evidence of election-year *re*valuations. In this case only GMM is statistically significant, suggesting pre-election revaluations of 19 percent. The post-election results are more robust. The results for post-election devaluations, though statistically significant in all three estimators, are most plausible in the GMM case, which shows a nearly 14 percent rate of devaluation beyond the 16.5 percent rate of devaluation in an average year.[20] African governments (in the non-CFA countries) clearly delayed devaluations until after elections, nearly doubling the average rate of change in exchange rates.[21]

V. Conclusions

This paper presents evidence of opportunistic political business cycles in newly democratizing countries. The case of Sub-Saharan Africa is telling. The findings are consistent, in particular, with the predictions of rational opportunistic PBC theory, exemplified by Rogoff and Sibert [1988] and Rogoff [1990], in which politicians interested primarily in re-election manipulate fiscal and monetary policy instruments to win the support of rational retrospective voters. With regard to fiscal policies, this paper demonstrates that during election years in Africa

fiscal deficits, government consumption, public spending, and net claims on the government increase as a share of GDP. Post-election retrenchments are statistically clear only in the cases of fiscal deficits and public expenditures, suggesting, for example, that governments's election-year raids on their central banks are not compensated in the post-election year.

The findings with regard to monetary policy instruments demonstrate a similar pattern of electorally-timed interventions. Election years typically see faster monetary expansions, lower nominal interest rates, and lower inflation. Money growth and interest rates return to normal rates in the post-election year. However, there is strong evidence of increased inflation and seignorage in the post-election year, as politicians seek some means of financing their election-year extravagances. There is also evidence of post-election exchange rate devaluations in Sub-Saharan Africa (and weakly suggestive evidence of election-year revaluations).

The broader implication of these findings extends beyond political business cycle theory. Many nascent democracies are concurrently undertaking long-term economic reform programs. This is true of countries in Latin America, the newly independent states of the former Soviet Union, in addition to Sub-Saharan Africa. The electorally-motivated macroeconomic interventions found in this paper directly undermine on-going economic reform programs, which are predicated on reducing deficits, restraining money growth and inflation, and liberalizing foreign exchange regimes and capital markets. Are economic and political reform friends or foes? The potential occurrence of opportunistic political business cycles as a by-product of elections suggests that democratization, however desirable in its own right, represents a formidable challenge to the sustainability of economic reform.

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Table I. Descriptive Statistics for Macroeconomic Variables (1980-95) for 44 Sub-Saharan African Countries[a]

Variable	Mean	Std. Dev.	N[b]
Real GDP Growth	2.6	6.3	635
Devaluation Rate (nominal)	12.3	21.2	608
Devaluation (non-CFA zone)[c]	16.5	21.3	417
Expenditures Share of GDP	25.3	10.2	329
Fiscal Deficit Share of GDP	- 3.9	6.0	319
Govt. Cons. Share of GDP	16.5	7.2	628
Inflation (excluding Zaire)[d]	19.3	28.4	536
Nom. Interest (Lending) Rate	17.0	10.4	377
Real Money Growth Rate	1.6	24.1	452
Real Money Growth Rate (non-CFA zone)	2.2	27.7	290
Net Claims on Govt. Share of GDP	8.9	15.9	512
Seignorage Share of GDP	1.2	2.6	469
Seignorage Share of GDP (non-CFA zone)	1.8	3.1	311
Tax Revenue Share of GDP	17.8	8.2	318

Source: IMF *International Financial Statistics*
Notes:
a) Countries included in the data set: Angola, Benin, Botswana, Burkina Faso, Cameroon, Cape Verde, Central African Republic, Congo, Côte d'Ivoire, Chad, Djibuti, Equitorial Guinea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea Bissau, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mauritius, Mozambique, Namibia, Niger, Nigeria, Rwanda, Senegal, Sierra Leone, Somalia, South Africa, Sudan, Swaziland, Tanzania, Togo, Uganda, Zaire, Zambia, Zimbabwe.
b) N indicates the maximum number of country-year observations available.
c) Note that the CFA franc was devalued by 100% in domestic currency terms in January, 1994. It was fixed before and after that date.
d) Zaire (People's Rep. Of Congo) is excluded from this average (and the relevant regressions) as an outlier due to its hyper-inflation during 1991-94. Including Zaire increases the mean to 91.3 percent.

Table II. Presidential Elections in Africa (1980-1995)

Country	Presidential Election Dates
Angola	none
Benin	24 March 1991
Botswana	none
Burkina Faso	1 December 1991
Burundi	1 June 1993

Cameroon	4 April 1980; 14 January 1984; 24 April 1988; 11 October 1992
Cape Verde	17 February 1991
Central African Republic	15 March 1981; 21 November 1986; 22 August 1993
Chad	10 December 1989
Congo	17 August 1990
Côte d'Ivoire	12 October 1980; 27 October 1985; 28 October 1990
Djibuti	12 June 1981; 24 April 1987; May 1993
Equitorial Guinea	15 August 1982; 25 June 1989
Ethiopia	none
Gabon	9 November 1986; 5 December 1993
Gambia	4 May 1982; 11 March 1987; April 1992
Ghana	3 November 1992
Guinea	9 May 1982; 19 December 1993
Guinea-Bissau	7 August 1994
Kenya	29 December 1992
Lesotho	none
Liberia	15 October 1985
Madagascar	7 November 1982; 12 March 1989; 10 February 1993
Malawi	17 May 1994
Mali	9 June 1985; 26 April 1992
Mauritania	24 January 1992
Mauritius	none
Mozambique	27 October 1994
Namibia	2 January 1990; December 1994
Niger	10 December 1989; 27 March 1993
Nigeria	6 August 1983
Rwanda	19 December 1983; 19 December 1988
Senegal	27 February 1983; 28 February 1988; February 1993
Sierra Leone	1 October 1985
Somalia	23 December 1986
South Africa	26 April 1994
Sudan	14 April 1983
Swaziland	none
Tanzania	26 October 1980; 27 October 1985; October 1995
Togo	21 December 1986; August 1993
Uganda	none
Zaire (P.R. Congo)	28 July 1984
Zambia	27 October 1983; 26 October 1988; 31 October 1991
Zimbabwe	March 1990; April 1995

Source: Bratton and van de Walle (1996)

Table III. Political Business Cycle Results (1980-1995) -- Fiscal Policy

	Dependent Variable	Election Year Dummy[a]			Post-Election Year Dummy		
		OLS	WG[d]	GMM[e]	OLS	WG	GMM
A.	Fiscal Deficit/GDP	- 0.026**	- 0.024*	- 0.012*	0.017*	0.017*	0.014*
		(0.151)	(0.012)	(0.002)	(0.006)	(0.008)	(0.003)
		0.74	0.82		0.74	0.82	
	n	193	193	66	193	193	66
	Sargan Test[f]			P = 0.36			P=0.44
B.	Expenditure/GDP	0.011	0.021*	0.036*	- 0.021*	- 0.022*	- 0.019*
		(0.011)	(0.012)	(0.001)	(0.009)	(0.010)	(0.002)
		0.84	0.87		0.84	0.87	
	n	199	199	70	199	199	70
	Sargan test			P=0.45			P=0.35

		OLS	WG	GMM	OLS	WG	GMM
C.	Govt. Cons./GDP	1.11** (0.62)	1.36* (0.57)	1.39* (0.558)	- 1.05* (0.42)	- 0.56 (0.43)	- 0.516[g] (0.472)
		0.80	0.84		0.80	0.83	
	n	540	540	325	540	540	325
	Sargan Test			P=0.45			P=0.11
D.	Net Claims on Govt./GDP	2.76* (1.07)	2.04* (1.03)	0.706[g] (0.467)	0.08 (1.06)	- 0.44 (1.00)	0.420 (0.377
		0.85	0.89		0.85	0.89	
	n	360	360	220	360	360	220
	Sargan Test			P=0.32			P=0.32

a) coefficients on lagged dependent variable omitted.
b) heteroskedastic-consistent (White) standard errors in parentheses.
c) * = significant at .05 level; ** = significant at .10 level.
d) WG = within-groups (fixed effects) estimator.
e) GMM estimator from Arellano and Bond (1991), unless otherwise indicated.
f) Sargan Test of over-identifying restrictions (P-value reported for null hypothesis of acceptable instruments).
g) GMM estimator from Arellano and Bover (1995).
h) GMM estimator from Blundell and Bond (1998).

Table IV. Political Business Cycle Results (1980-1995) -- Monetary Policy

	Dependent Variable	Election Year Dummy[a]			Post-Election Year Dummy		
		OLS	WG[d]	GMM[e]	OLS	WG	GMM
A.	Money Growth	0.090 (0.057)[b]	0.087*[c] (0.039)	0.043** (0.024)	- 0.028 (0.027)	- 0.011 (0.027)	- 0.025[g] (0.048)
		0.08	0.29		0.07	0.28	
	n	411	411	273	411	411	273
	Sargan Test[f]			P = 0.51			P = 0.96
B.	Nom. Interest Rt.	- 1.46** (0.82)	- 1.55** (0.87)	- 1.25* (0.345)	0.940 (0.69)	0.775 (0.78)	0.807* (0.12)
		0.82	0.85		0.82	0.85	
	n	291	291	156	291	291	156
	Sargan Test			P = 0.39			P = 0.32
C.	Inflation (excl. Zaire)	- 2.93 (1.91)	- 3.50* (1.76)	- 3.96* (1.92)	7.68* (1.46)	6.64* (2.76)	4.29*[h] (2.06)
		0.60	0.66		0.60	0.66	
	n	376	376	220	376	376	220
	Sargan Test			P = 0.24			P=0.23
D.	Seignorage (non-CFA zone only)	0.445 (0.250)	0.549 (0.335)	- 0.157* (0.64)	0.964* (0.432)	0.994* (0.442)	0.412*[g] (0.162)
		0.64	0.67		0.64	0.68	
	n	205	205	110	205	205	100
	Sargan Test			P = 0.37			P = 0.47
E.	Nominal Exchange Rt.	- 26.2 (29.6)	- 26.7 (49.6)	- 19.1* (6.68)	46.5** (27.4)	49.9* (23.0)	13.8*[h] (6.31)
		0.25	0.34		0.25	0.34	
	n	330	330	297	330	330	297
	Sargan Test			P=0.26			P=0.094*

a) - h) See notes for Table III