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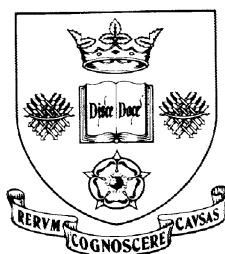
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The African political business cycle: varieties of experience

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Abstract: We seek to understand both the incidence and the impact of the African political business cycle in the light of a literature which has argued that, with major extensions of democracy since the 1990s, the cycle has both become more intense and has made African political systems more fragile. With the help of country-case studies, we argue, first, that the African political business cycle is not homogeneous, and is rarely encountered in so-called 'dominant-party systems' where a pre-election stimulus confers little political advantage. Secondly, we show that, in those countries where a political cycle does occur, it does not necessarily cause institutional damage. Whether it does or not depends not so much on whether there is an electoral cycle as on whether this calms or exacerbates fears of an unjust allocation of resources. In other words, the *composition* of the pre-election stimulus, in terms of its allocation between different categories of voter, is as important as its size.

The African political business cycle: varieties of experience

1.Introduction

For well over a century, the economies of industrialised countries have been subject to systematic economic fluctuations, often known as business cycles. No amount of macroeconomic management has been able to get rid of these cycles, and many have claimed that governments within a democratic system have an incentive to stimulate rather than restrain a pattern of 'stop-go' in their policies. It is tempting, for example, to buy popularity by boosting the economy before an election, for example through tax cuts or monetary expansion, knowing that the costs of doing this, for example, in terms of increased inflation, may not be foreseen by voters[2], and in any case do not have to be paid until after the election has been won. At that point, the government may well choose to deflate the economy, both in order to pay for the pre-election boost and possibly also to restrain wage claims by making the workforce fear for their jobs[3]. Thus, the political process may of itself tend to augment rather than restrain the business cycle – as observed in a number of Western industrialised countries and analysed by, for example, Kalecki (1943), Nordhaus (1975), one of the present authors (Mosley, 1978)[4], and Rogoff (1990). And the now firmly embedded global economic environment of open capital markets may, as many have discovered to their cost during the recent global recession, amplify the ease with which such shocks once administered can be passed on to other countries (Adrian and Shin, 2007).

Especially between the 1970s and the 1990s, the whole world became subject to pressures, both towards economic openness (in the developing world generally known as 'structural adjustment'), and in many cases also towards democracy, and studies from various parts of the developing world have examined the extent to which these pressures have translated into political business cycles. Particularly in parts of Latin America in the 1980s (Remmer, 1993)[5], and in Russia in the 1990s (Treisman and Gimpelson, 2001), analysts have found that the emergence of a more open politics was followed by the emergence of a political business cycle. In Africa also, where more than twenty developing countries are estimated to have held competitive legislative elections for the first time between 1990 and 1994 (Bratton and van de Walle, 1997), it might be expected that governments would take advantage of the new scope for setting policy instruments so as to win elections; and two studies using African data from the early

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[2] There is now a big theoretical literature on whether or not this is true (see for example chapter 7 of Drazen (2003)) and on whether or not partisanship, towards left or right, plays a role in activating the cycle. The approach taken here visualises that voters act rationally to maximise their utility but are ill-informed; and that, at any rate, the swing voters who determine the outcomes of elections are without partisanship and vote pragmatically for the party that will make them better off in the short term – formally, this is a *rational, opportunistic* approach to the cycle with imperfectly informed voters. But even with perfect information, cycles can still happen (Drazen, 2003: 250ff.) though the pre-election boost may be smaller if governments have large majorities and do not need to behave opportunistically(Schultz, 1995)

[3] This belief underlay one of the first expositions of the political business cycle – Kalecki's *Political Quarterly* paper of 1943 (Kalecki, 1943).

[4] Empirical studies often but not always confirm the presence of a political element in the business cycle. For a summary of findings, see Alesina et al (1997).

[5] Remmer's findings are ambiguous: she finds evidence of a political business cycle in Peru and Argentina, but not in Bolivia, Ecuador and Venezuela.

1980s and 1990s (Schuknecht, 1996; Block, 2002) have argued that there is indeed, averaging across African countries, a significant tendency for the government fiscal deficit to be higher in the years before elections, and to be reduced thereafter.

As some of the above studies have acknowledged, political business cycles in the developing and transitional world differ in several ways from the cycles found in industrialised countries. In the first place, they are often not encountered at all, as emphasised in particular by Remmer's study of Latin America (1993). In a number of developing countries, pre-election boosts are not administered, because they are not seen as necessary or helpful to the incumbent government. In African political systems, one particularly important reason for this is that the incumbent is a 'dominant party', so far ahead of rival parties in its share of the vote that pre-election boosts have little value from the point of view of winning elections (for example, Botswana, Nigeria, Uganda, South Africa). Thus it is important to make an initial distinction between the cases where a pre-election boost serves a useful political purpose and those where it does not[6].

Secondly, in those cases where a cycle does exist, the instruments used to activate the cycle may be different from those used in industrial countries. In many developing and transitional countries, for example, such as the case of Russia examined by Treisman and Gimpelson (2001), consumer debt is small and mortgage interest rates are not the important instrument of political persuasion that they are in high-income countries. In the Russian case, the instrument by which the economy was manipulated in pre-election periods was not interest rates or taxes, or even the government budget, but mainly the minimum wage - a gesture which could be expected to impact on the livelihoods of most voters (Treisman and Gimpelson, 2001: 239)[7]. And across Africa also, there is great inter-country variation between the instruments through which the pre-election boost is administered. As illustrated by Adam and O'Connell (2006), African governments have since the 1980s shifted from a pattern of 'fiscal dominance' in which fiscal policy, often in the grip of special interest groups, is the driving force and monetary policy accommodates these, to a situation in which central banks have much more power and independence and, as a consequence, the ability of governments to achieve discretionary adjustments in fiscal policy is greatly muted, with monetary policy much more significant. However, this evolution towards reduced fiscal dominance is highly variable across countries (Adam and O'Connell, 2006: Table 5.1). Adam and O'Connell distinguish between three groups, 'mature stabilisers' (e.g. Botswana, Tanzania, Uganda) in which the transition to monetary dominance is complete, 'pre-stabilisation cases' (e.g. Zimbabwe, DRC and Nigeria) in which it has not

[6] For an analysis which makes this distinction, emphasising that governments who are sure of being re-elected do not require a pre-election boost, see the paper by Schultz(1995).

[7] Thus, in the months prior to the presidential referendum of April 1993, the 'emergency' parliamentary election of December 1993 (which followed the storming of the Duma) and December 1995, and the presidential election of June 1996, there is a significant increase in the real minimum wage of between 0.16 and 2.18% and, except in the first case, an increase in the real minimum pension also, resulting in an immediate increase in the real average wage and a decline in real wage arrears (Treisman and Gimpelson 2001: Table 1) Treisman and Gimpelson explain very clearly why the minimum wage in Russia has such leverage:
' First, adjustments to the minimum wage occur through a very public political process, and thus constitute a political signal that is far more visible to most voters than change in, say, the average real wage. Secondly, all public sector wages are based on a uniform scale anchored to the minimum wage, and social allowances and family benefits are also calculated with reference to the official minimum wage. Therefore, any increase in the minimum wage is likely to have a broader social impact. (Treisman and Gimpelson 2001, p. 239).

begun, and an intermediate 'low institutional credibility' group (e.g. Mozambique, Ethiopia) in which the move away from fiscal dominance has begun but is contested, typically between reformers in the central bank, ministry of finance and aid donors, anxious to limit fiscal dominance, and spending departments often anxious to preserve a measure of such dominance. The outcome of this power struggle is clearly important for understanding variations in observed behaviours within the political business cycle.

Thirdly, the ability of developing countries to finance a pre-election boost depends, much more than in industrialised countries, on their relationships with the international financial system and in particular, in the case of the small open economies of Africa, on their relationships with aid donors, who finance a large part of their development expenditure and much of their recurrent expenditure also[8]. In much of Africa, setting aside cases of atypical fiscal strength such as Botswana, Mauritius and South Africa, a political business cycle cannot occur unless the donors agree to finance it. It might be expected *a priori* that donor behaviour would correlate well with 'fiscal dominance', as discussed above, which donors are certainly keen to eliminate, as a symptom of the dominance of special political interests over the principle of fiscal responsibility. In fact, the relationship is much more complex: several countries in the category of 'pre-stabilisation cases' with high fiscal dominance, such as Ghana, in fact enjoy excellent relationships with aid donors[9]. The evidence indeed suggests that factors other than fiscal rectitude, including in particular willingness to initiate pro-poor programmes and to practise good governance, weigh more with donors in determining their ability to secure high and stable flows of budget support assistance (Mosley and Suleiman, 2006). What is clear, however, is that the behaviour of aid donors is often an important determinant of the intensity of political cycles, and needs to be factored into any analysis of them in poorer developing countries such as those of Africa.

In this paper, we examine the incidence of political business cycles in Africa in a manner which attempts to do justice to these inter-country variations in political and economic environment. We are interested in assessing the effects of cycles as well as their incidence, since it has been suggested by some commentators that specifically in developing countries with fragile states, there may be a price to pay for greater democracy, in the shape of weakened fiscal discipline and greater institutional vulnerability. For example, Block's analysis of the African political business cycle (2002), which uncovers strong evidence of a cycle across a panel of 44 countries between 1980-95, has warned that:

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[8] Across the 21 countries in our sample (listed in table 1 below) the ratio of aid to total government expenditure, averaged across the years 1980 to 2008, was 38.4 per cent, but the ratio of aid to *all* investment (not just government investment) was 85.4 per cent (data from World Bank, *World Development Indicators*). In other words, in a number of countries aid flows were financing a great deal more than the whole of the government capital budget.

[9] See Adam and O'Connell (2006), table 5.1.

Africa, along with many countries in Latin America and the former Soviet Union, is currently engaged in long-term processes of economic and political reform. Yet, Africa is unique in the intensity of these dual challenges, as well as in its relatively limited institutional development. It is, in short, a context not only particularly ripe for political business cycles, but also one in which such cycles may imply particularly acute problems for the compatibility of economic and political reform. The electorally motivated macroeconomic interventions found in this paper directly undermine ongoing economic reform programs, which are predicated on reducing deficits, restraining money growth and inflation, and liberalising foreign exchange regimes and capital markets. Are economic and political reform friends or foes? (Block, 2002: 224)

The evidence which we present in this paper suggests that they are usually friends, but that the impact of the political cycle depends, as discussed above, on the composition of public expenditure between different interest-groups. In the next section, section 2, we present the sample and illustrate some of the variations of experience within it by means of country case studies. In section 3 we examine the proposition that the political business cycle causes institutional damage, and in particular the idea that the impact of the cycle may depend on the composition of any pre-election boost in expenditure. Section 4 concludes and presents implications for policy.

2. Evidence of election-cycle effects in Africa

We wish first of all to understand whether an election-cycle mechanism is present in Africa, and if so where. Accordingly we begin by estimating the following single-equation model for a sample of 51 African countries (including the 21 summarised in Table 1 below:

$$I_{i,t} = \beta_{0i} + \beta_1 ELE_{i,t} + \beta_2 ELEPOST_{i,t} + \beta_3 AIDPC_{i,t} + \beta_4 DEMOC_{i,t} + \sum \beta_i I_{i,t-j} + \mu_{i,t} \quad (1)$$

where:

I_t = policy instrument subject to variation in an election year;

$ELE_{i,t,}$ = a dummy variable taking the value 1 in an election year and 0 in a non-election year;

$ELEPOST$ = a dummy variable taking the value 1 in a post-election year and 0 in a non-election year;

$AIDPC$ = the value of aid disbursements per capita;

$DEMOC$=measure of how democratic the system of governance is;[10]

j = length of lag applicable to pre-election stimulus;

μ = random error term.

Of the 51 countries, 12 have limited or no data on budget deficit, one of the dependent variables.

Equation (1) is a modified simplest version of the original Nordhaus 'opportunistic' political business cycle model, in which the incumbent government

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[10] From www.systemicpeace.org. We find this variable generally more plausible and complete than other indicators of democracy in the Quality of Government Dataset.

stimulates the economy before an election in order to maximise its share of the vote at election time, but is forced to cut back on expenditure after the election in order to re-establish fiscal balance and prevent a run on the reserves[11]. The policy instruments considered are the budget deficit (total government revenue less total government expenditure), and money supply as shares of GDP. Per capita aid is added into the model to reflect the dependence of expenditure on aid flows, as discussed above.

The sample against which this equation is estimated is described in Table 1, which also indicates the timing of elections in each country and whether or not there is a 'dominant party', in the sense indicated on page 3.

Table 1: The sample

Country	Population (millions, 2008)	Colonial status	Aid flows, mean value 1990-2008:		Dominant party? (2)	Elections(3)
			% GNI	$ per capita		
Botswana	2	British	1.6	50.4	yes	Oct.1984,89,1994,Oct.1999, Oct.2004, Oct.2009
Cameroon	17	Anglo-French	5.7	44.0	no	April 1980, Jan. 1984, Apr.1988, Oct.1992, Oct. 1997, Oct.2004
Cote d'Ivoire	18	French	6.1	39.9	no	Oct.1980, Oct. 1985, Oct.1990
DRC	59	Belgian	14.8	17.4	no	June 1984, July 2007
Ethiopia	73	Italian (1920s and 1930s only)	11.9	18.8	no	May-June1995,May-Aug. 2000, May – Aug. 2005
Ghana	23	British	10.6	40.9	no	Nov.1992,1996,Dec. 2000,Dec.2004, Dec.2008
Kenya	35	British	6.1	22.3	no	Sept.1983, March 1988, Dec. 1992, Dec.1997, Dec.2002, Dec. 2007
Madagascar	19	French	13.3	35.4	no	Nov.1982, March 1989, Feb. 1993, Dec.2001, Dec.2006
Malawi	13	British	24.4	44.4	no	May 1994, June 1999, May 2004, May 2009
Mauritania	3	French	17.8	100.2	no	Jan. 1992, Dec. 1997, Nov. 2003, March 2007, July 2009
Mauritius	1	Anglo-French	0.9	30.1	yes	Not included in this analysis
Mozambique	20	Portuguese	36.8	69.3	yes	Oct. 1994, Dec. 1999, Dec. 2004, Oct. 2009
Nigeria	145	British	1.5	9.5	yes	Aug. 1983, June 1993, Feb. 1999, April 2003, April 2007
Rwanda	9	Belgian	25.9	61.1	yes	December 1983, Dec 1988,2003
Senegal	12	French	8.2	65.0	yes	Feb. 1983, Feb. 1988, Feb. 1993, March 2000, Feb. 2007
South Africa	47	Anglo-Dutch	0.3	11.8	yes	April 1994, June 1999, April 2004, April 2009
Tanzania	39	British (German 1890-1918)	16.9	38.7	yes	Oct. 1980, Oct. 1985, Oct. 1990, Oct. 1995, Oct. 2000, Dec. 2005
Togo	6	French	7.8	25.6	yes	Dec.1986, Aug.1993, June 1998, June 2003, April 2005
Uganda	30	British	15.2	37.0	Yes	March 2001, February 2006
Zambia	12	British	22.8	88.1	No	Oct.1983, Oct. 1988, Oct. 1991,

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[11] See Drazen (2004) chapter 8. This is in essence the same model as that estimated by Block (2002), except that per capita aid flows are used in (1) as an independent variable in place of aid disbursements.

						Nov.1996, Dec.2001, Sept. 2006,2008.
Zimbabwe	13	British	5.3	29.8	No	March 1990, March 1996, March 2002, March/June 2008

Source: World Bank, *World Development Indicators* CD-ROM, except election data which are from http://psephos. adam-carr.net/indexes/index_a.shtml. Data may be inspected at and downloaded from www. poverty.group. shef.ac.uk.
Notes.
(1)Estimation period is 1980-2009.
(2) Dominant parties are those which have held more than 60% of the vote in all elections since 1990, as classified by Salih (2003: Table 8.5).
(3) Dates of presidential elections only are included in the table.

In table 2, we report the results of equation (1) using a fixed effects estimator[12]. It may be argued that since the equation is dynamic, running a fixed effects model results in (large sample) bias in the coefficient of the lagged dependent variable (Baum, 2006). First, this does not affect our variable(s) of interest – election dummies; and second, this bias, of order 1/T, declines as the number of time periods increases (NIckell, 1981). Our T averages 22 observations per country. In addition, this problem can be corrected by differencing and then running and instrumental variable estimator. This approach will be applied to the more detailed comparative models in Section 3 where we apply system GMM estimators and show that our conclusions for the variables of interest do not change.

The equation is estimated separately for the sample as a whole and for countries without dominant parties – where, as discussed above, a pre-election stimulus is more necessary for the purposes of winning an election. A country is defined as having a dominant party if the largest party in legislature capture 60% or more of the votes. Across the sample as a whole, the expected pre-election stimulus is weakly significant (at the 5% but not at the 1% level) as a predictor of the budget deficit *only* in the 'no dominant party' group where we expect electoral competition to be more intense, but not across the sample as a whole. The post-election cutback expected by the Nordhaus model again does not materialise.

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[12] We have run a Hausman test to decide on the most appropriate estimator between the fixed effects and the random effects estimators, and chose the former.

Table 2: Preliminary evidence of election-cycle effects

	Full model		No dominant party model	
Dependent variable	Budget deficit	Money supply to GDP	Budget deficit	Money supply to GDP
Budget deficit 1st lag	0.401***		0.230***	
	(0.0513)		(0.0726)	
Budget deficit 2nd lag	0.088*		-0.262***	
	(0.0501)		(0.0653)	
Election year dummy	-0.712**	0.301	-1.512**	1.345***
	(0.344)	(0.198)	(0.612)	(0.417)
Post-election year dummy	1.052**	-0.484*	0.528	-0.523
	(0.416)	(0.248)	(0.472)	(0.602)
Aid per capita	0.002	-0.004	-0.016	0.019**
	(0.0107)	(0.00239)	(0.0203)	(0.00771)
Index of democracy	0.017	0.014	-0.186	0.256**
	(0.0620)	(0.0866)	(0.118)	(0.106)
Time variable	0.049	0.036	-0.012	0.056
	(0.0300)	(0.0285)	(0.0393)	(0.0559)
Money supply/GDP 1st lag		0.924***		0.824***
		(0.0861)		(0.101)
Money supply/GDP 2nd lag		-0.065		-0.041
		(0.0603)		(0.0816)
Constant	-4.285***	2.168	-1.648	0.440
	(1.456)	(1.841)	(2.200)	(2.221)
Observations	462	664	131	207
R^2	0.271	0.702	0.219	0.687
F Statistic	47.9	52.4	5.3	189.3
Standard errors in parentheses				

NB: we report only the lags that were statistically significant.
We can delete the second lag of money supply in the two equations because its not significant.

Notes: Figures in parentheses are Student's t-statistics. *** after a coefficient denotes significance at the 1% level, **denotes significance at the 5% level, and * denotes significance at 10% level. Period of estimation: 1980-2008. Estimation method|:OLS with fixed effects.

Sources: election timings from table 1; aid per capita from World Bank, *World Development Indicators* CD-ROM; fiscal dominance from Adam and McConnell (2006), Table 5 ; dominant party status from Salih (2003).

We interpret the weak, election-year coefficient in Table 2 – just significant at the 5% level and much weaker than that reported by Block, albeit his data relate to an earlier sample period[13] – as evidence that the African election cycle is variable across, and possibly even within, the country groups of Table 1, and now investigate the possible causes of this variance with the help of country case studies.

Our case-studies relate to Ghana, Zambia and Kenya, - all of them countries in which multi-party competition for the presidency has been active since the beginning of

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[13] Block (2002, tables 2 and 3) reported a significant coefficient of the election year dummy ELE (in OLS regressions for 1980-1995) on the nominal interest rate, government consumption, and net claims on government, and a significant coefficient of the post-election dummy ELEPOST on the fiscal deficit, the government consumption/GDP ratio, and inflation.

the 1990s, i.e. there is currently no 'dominant party', as per the criteria of Table 1[14]. The course of the political business cycle between 1980 and the present is that there is an active cycle in Ghana and Zambia – in the sense that in each election year there is a noticeable increase in the budget deficit, most of it triggered by variations in government spending rather than in the tax ratio. In Kenya, no cyclical increase in the budget deficit is observable, except in 2007. In seeking to understand this difference, it may be significant that, of the three countries, Kenya is the only one falling into Adam and O'Connell's category of 'mature stabilisers' (Adam and O'Connell 2006, Table 5.1) – in other words, countries in which an independent central bank imposes so much restraint on the budget that it can, only with difficulty, finance cyclical boosts in government expenditure. On this criterion, Zambia and Ghana both fall into the 'pre-stabilisation' category, with moderate inflation in the 15-25% range, and relatively high and unstable budget deficits.

However, there are some puzzles still embedded in these data, not the least of which is that Zambia and Kenya, which made strenuous attempts to rid themselves of their fiscal deficits over the period 1990-2008, experienced strained and unstable relationships with aid donors over the period[15], whereas Ghana, whose fiscal control was much looser and which lived with an inflation rate averaging over 20% over the entire period, enjoyed an excellent and stable relationship with aid donors over the same period, interrelated with its anti-poverty performance – indeed, Ghana halved its poverty level between 1991 and 2006 (Nuamah, Teal and Awoonor-Williams, 2010), a performance matched only by Uganda across the whole of Africa. We may be able to understand these puzzles if we bring into the story characteristics going beyond the formal observance of democratic and fiscal orthodoxy – in particular, the *quality* of governance and of the pre-election boost that was applied in each of these cases.

Ghana is perhaps the country which in the whole of Africa, since 1992, has made the most strenuous efforts to consolidate its advances in democratic practice, achieved *inter alia* through reforms in electoral practice, involvement of foreign observers in monitoring of elections and a drive to increase the electoral participation rate (Fridy, 2007; Branch and Cheeseman, 2008; Whitfield, 2009). Each of the five elections since 1992 has been tightly contested between the National Democratic Congress and the New Patriotic Party. At each of the five elections (won by the NDC in 1992 and in 1996, the NPP in 2000 and 2004, and by the NDC again in 2008) the incumbent parties, respectively rooted in the (Ewe-speaking) south-east and the (Ashanti) south-centre of the country, have aimed their pre-election boost outwards from these 'safe seats' towards regions and interest-groups in which they perceive themselves as having the biggest chances of picking up uncommitted votes – namely

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[14] The Movement for Multi-party Democracy (MMD) was often styled as a dominant party in Zambia during the 1990s (e.g. in the book by Salih (2003)).

[15] Between 1990 -2 and 2008, Zambia halved its budget deficit (the Easterly ea_gbds measure in the World Bank *World Development Indicators*) from 10.5 to 5.5 per cent, whereas Ghana's scarcely changed at all (declining only from 10.4% to 10.2%) . However, the aid donors' behaviour was not related to these improvements in budgetary discipline. Ghana is the only country of the three to have a Grade 1 CPIA (Country Policy and Institutional Assessment) rating from the World Bank, and Ghana was the only one of the three countries to achieve during the 2000s PRGF (Poverty Reduction and Growth Facility budget support credit) from the IMF and World Bank. Very likely as a consequence, Ghana's aid flows (table 3 below) were more stable than those of the other two countries..

towards the farmers of the poor Northern region in the case of the NDC, and towards wage-workers in Accra in the case of both parties (Fridy, 2007, especially maps on pp. 287 and 288). Each of these groups contains a high proportion of low-income people, and the fact that a high proportion of the pre-election expenditure increase in each of these years went to the health, education and social protection sectors, which have a high propensity to reach low-income groups (table 4 below) enabled the pre-election stimulus to be more effectively targeted both on 'floating voters' and uncommitted voters who in many cases had not previously voted (Fridy, 2007) – to the benefit of the incumbent party – and on low-income groups[16] – to the pleasure of the aid donors. Delighted both by the improvements in governance and by the rapid fall in poverty from 1991 onwards, the donors decided to condone Ghana's persistingly slack macro-economic performance[17] and throughout the subsequent twenty years have rewarded the Ghana government with high and stable aid flows, within the framework of the IMF's Poverty Reduction and Growth Facility (table 3).

The case of *Kenya* is in many ways opposite. No election-year budgetary boost by the incumbent party is perceptible in any year except 2007 (part of which is explained by the fact that the Central Bank of Kenya enjoys a high degree of independence, which has enabled it to keep the budget deficit consistently under control). Judged both on the quality of elections and on the level of corruption, Kenya's governance record was poor throughout the presidency of Daniel Arap Moi from 1978 to 2002; the gradual realisation of this by aid donors eventually motivated them to cool their previously warm relationships with the Kenyan administration. The 2002 election, won by the National Rainbow Coalition (NARC) under the former finance minister Mwai Kibaki, promised progress in terms of inter-ethnic fairness, electoral propriety and a diminution of corruption, but before any of these advances had been properly embedded, or accepted as such by donors, they were thrown into reverse[18], and a claim by the opposition that the December 2007 elections had been rigged led to widespread rioting between supporters of the two main parties in January and February 2008, with over 1000 deaths. As a result, a clear opportunity to create a Ghana-type situation of competition between two parties drawing their support from a national, rather than an ethnic or regional, base was thrown away. In face of the threat of state collapse, however, a power-sharing deal between PNU and ODM was brokered in April 2008, and this has so far held.

Zambia represents an intermediate case. During the early 2000s the ruling Movement for Multiparty Democracy (MMD) lost its dominant-party status in face of a determined challenge from, in particular, the Patriotic Front (PF) led by Michael Sata. During this period there was also an improvement in the quality of elections, and the

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[16] Ehrhart (2010, page 4) also identifies taxation, specifically reductions in excise duties on petroleum, as being a factor by which the votes of the uncommitted Ghanaian poor were sought just before the 2008 election.

[17] Ghana's macro-economic performance is classified by Adam and O'Connell within the 'pre-stabilisation' category, with inflation over 20% at the beginning of the 2000s (Adam and O'Connell 2006, table 5.1)

[18] One important factor causing deterioration of governance after 2002 was fragmentation of authority within the National Rainbow Coalition (now Party of National Unity or PNU) elite. Well before the catastrophic 2007 election, rival ministers within (PNU) were sponsoring vigilante gangs, two of them known as the 'Taliban' and the 'Baghdad Boys' with the objective of intimidating other factions within the party (Branch and Cheeseman, 2008: 15)

2006 and 2008 elections were substantially cleaner than those of the 1990s and early 2000s (Larmer and Fraser, 2007; Cheeseman and Hinfelaar, 2009: 69-70). As inter-party competition became more intense, so, as in Ghana, both parties found themselves seeking to transcend the existing ethnic base of their parties by competing for the support of uncommitted groups – the principal battleground, in Zambia, being urban workers on the Copperbelt. Within this zone, Sata's Patriotic Front made a particular pitch for the loyalty of a 'coalition of the dispossessed…putting the living conditions of the urban poor at the heart of political debates' (Cheeseman and Hinfelaar, 2009: 64). Especially during the run-up to the 2006 election (and within the pre-election boost of that year), the response of President Levy Mwanawasa's MMD was to seek to emulate Sata's populist appeal and in particular many of his more popular policies, including the idea of a windfall tax on copper, an increase in the royalty on mineral rights[19] and a series of tax cuts 'which Mwanawasa accepted were a direct response to "criticism over high taxes during the election campaign" '(Cheeseman and Hinfelaar, 2009: 65). However, the adoption of this quasi-Ghanaian approach to inter-party competition, focussed on the uncommitted urban poor, did not achieve anything like Ghana's degree of success in broad-based, poverty-reducing development. Although the data are disputed, there is as yet no firm evidence that even after several years of growth poverty levels have come down from their very high levels of the 1990s. Observing this, and apparently not yet completely convinced that good governance has come to stay, the trusting donor-recipient relationships that are apparent in Ghana have not yet arrived in Zambia, and aid flows are as a consequence lower and more unstable[20].

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[19] These increased taxes on natural resources were explicitly aimed at increasing investment in the social service sector (Cheeseman and Hinfelaar 2009: 65). This linking of export taxation and social services expenditure, explicitly framed as a gesture towards greater fiscal equity, is very reminiscent of similar 'neo-developmentalist' initiatives in Latin America during the 2000s – notably in Argentina, Bolivia, Uruguay and Venezuela – where export taxes have also been aimed at deriving a political dividend from a fairer reallocation of the country's natural resources (Grugel and Riggirozzi 2009: Chapter 1).

[20] See note 13 above.

Table 3 sums up our comparison between the factors underlying the electoral cycle in the three case-study countries.

Table 3: Election cycles in case-study countries and possible causes

	Ghana	**Zambia**	**Kenya**
Evidence for an election cycle	Yes – strengthening over time	Yes – constant	No (except in 2007)
Governance and institutions	Clean elections, low corruption, Generally good institutional performance e.g. rising tax ratios	Elections once dubious, clean in 2006 and 2008, corruption fairly severe, improving institutional performance?	Elections generally dubious (although 2002 cleaner)
Relations with aid donors	Excellent since 1980s. Average level of aid/GNP = 10.6% Coefficient of variation (CV) of aid flows = 37%	Probationary since early 1990s Average level of aid/GNP =22.8% CV of aid flows = 59%	Poor 1990-2002, improved 2002-8, probationary since disturbances of January 2008 Average level of aid/GNP =6.1% CV of aid flows = 55%
Focus for inter-party competition	Urban workers in Accra; also low-income rural areas e.g. Upper Region	Urban poor	Urban poor and small-scale farm households
Content of pre-election stimulus: pro-poor expenditure (PPE) ratio	8.0	6.0	5.6
Poverty trend 1990 to date	Halved in 15 years (from 51% to 27%)	No change (constant at 68% 1990-2005)	No change overall. Available data suggest increase during 1990s, possible decline thereafter.

Source: World Bank, *World Development Indicators* CD-ROM. 'Pro-poor expenditure (PPE) ratio is defined as (public expenditure)* expenditure share, where expenditure share=(education+health+social protection- military)/total expenditure.

The main message which we derive from this discussion is that under African conditions the character of inter-party competition, and in consequence the impact of the political business cycle, are not at all homogeneous, but rather are determined by three inter-related factors. Firstly the quality of governance and institutions, and second, the composition of public expenditure in general and the pre-election stimulus in particular, both impact on a third key causal factor, interrelationships with aid donors. We thus have the beginnings of an explanation of how the possible negative institutional impacts of the business cycle, about which Block and others have expressed concerns, may vary across cases. In the next section, we attempt a formal test of these ideas.

3. Institutional impact of the political business cycle

Several commentators on Africa, as we saw[21], have worried that the political business cycle might impose breaking strains on institutional capacity and possibilities for sustained reform. In particular, they have worried that pre-election surges in spending might prove difficult to reverse, thereby presenting African governments with an unpleasant choice between surrendering to the cycle and thereby wrecking fiscal discipline, or alternatively re-imposing that discipline so drastically that the state collapses into anarchy (which was the outcome of the political business cycle process, for example, in Sierra Leone in the 1980s)[22]. Africa has, of course, a very high density of fragile states[23], suggesting that the risk of increased state vulnerability from this cause is real; and of course, well short of state collapse, there is a good deal of evidence suggesting that increased volatility has welfare costs (Ramey and Ramey, 1995: Hudson and Mosley, 2008). Thus, if an amplified political business cycle increases overall volatility within a fragile economic system, and if increased overall volatility damages institutions, then there is cause for worry.

Do these worries apply in practice? Our case-study evidence suggests that it all depends on the quality of economic management around election time. In particular, it has argued that, in those cases where an election cycle prevails, its impact on governance would be determined by three things: aid flows, quality of governance (in particular, the quality of election management) and the composition, in the sense of allocation between interest-groups, of the pre-election boost. In Ghana, a progressive orientation of public expenditure and a proactive determination to consolidate democratic electoral processes motivated donors to provide aid on terms which prevented the very active political business cycle in the *budget deficit* from turning into a cycle in *personal disposable income*[24]; in Zambia, these trends also became apparent but much later in the day, in the mid 2000s, leaving donors agnostic about whether true improvements in governance were under way, so that the cycle in the budget deficit was mirrored in a cycle in personal disposable income; in Kenya, there is generally very little evidence of any cycle, and donors at most times had a poor relationship with the government, so that on the one occasion that a cycle did threaten institutional damage, in 2007, the donors were in no mood to put a protective safety-net around the economy, and the result was violence which took the Kenyan state to the edge of breakdown.

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[21] See page 4 above; see also Chua (2004) who 'goes as far as to suggest that elections in most African countries should be postponed until a suitable socio-economic context can be developed'. Branch and Cheeseman (2008:22).
[22] For the detail of the Sierra Leone case, see the book by Weeks (1991)
[23] On the Polity IV map, which provides a measure of 'state fragility', 19 out of 22 countries classified by Polity IV as having 'high' or 'extreme' levels of fragility are in Africa. The index is displayed at http://www.systemicpeace.org/polity/polity4.htm.
[24] Ghana was a relatively rare case of donors achieving a countercyclical pattern of aid flows. Empirically it has been common for donors to provide aid in a manner which amplifies rather than damping the cycle (Bulir and Hamann 2003, 2008, Mosley and Hudson 2008)

On this view, the sequence of actions around the time of an election is important in determining the consequences of the cycle. Governments, we argue, send through their public expenditure allocations, *signals* to internal and external interest-groups (including aid donors) concerning the interest-groups which they identify with and concerning the principles by which they intend to arbitrate between conflicting claims (Hudson, Lenton and Mosley, 2011). These signals can be conveyed by shifts in expenditure around election time from budgets which are not easy to target on swing voters to those which are[25], and amongst those which are targetable we identify, as a group both politically uncommitted and important for political stability, the urban poor. Those African governments which have reoriented their public expenditure patterns and in particular their pre-election stimulus in a pro-poor direction, as Ghana and Zambia did in our illustrations, may be interpreted as sending a signal that they are attempting, in their expenditure allocations, to go beyond the ethnic and regional loyalties of their 'heartlands'[26], and to allocate expenditure on broader principles of equity. Such behaviour is of course consistent with the Millennium Development Goals, and likely to be supported by the donors in the context of a long-term dialogue on institutional improvement. In such a case, it is improbable that institutional reform will be imperilled by the ups and downs (or rather, ups – we cannot, as shown in table 3, find significant evidence in Africa of post-election correction) of the political business cycle.

Similar considerations apply to electoral processes. Where government is engaged in a process of insulating electoral institutions from ruling-party pressure and reinforcing the transparency of the electoral process (as was conspicuously the case in Ghana throughout 1992-2008, and lately has applied in Zambia also), this will also be welcomed by donors, and strengthen the recipient's case for inclusion in arrangements such as the IMF's Poverty Reduction and Growth Facility (PRGF), an arrangement which provides stable long-term budget support, and thereby also mitigates any institutional damage which may be caused by the cycle.

Our hypothesis is, therefore, that in those cases where an election cycle is visible, its impact on the economy depends on the context of government behaviour around the election. Specifically, we expect that negative impacts on institutions will be insignificant in those cases where the pre-election stimulus is 'progressive', in the sense of being directed in a manner that is generally pro-poor in intention rather than being aimed at the well-being of a specific ethnic or regional group, and where it is 'clean', in

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[25] Many thanks to Vera Troeger for emphasising this point to us. For a model which also argues that compositional effects may be important in determining the effectiveness of the pre-election boost, see Drazen and Eslava (2010). Our own approach was conceived independently of the Drazen-Eslava model and uses a different measure of 'favoured composition of government expenditure' from theirs. In our model, the 'politically sensitive expenditures' which are prioritised ahead of an election are pro-poor expenditures; in theirs, infrastructure expenditures are prioritised (Drazen and Eslava 2010: (14)).

[26] That is, in Ghana, the Ewe provided the traditional heartland of the NDC and the Ashanti of the NPP), and in Zambia, varied ethnic groups of the Copperbelt region provide the heartland of the MMD and the Bemba the heartland of the Patriotic Party.

the sense of being unaccompanied by ballot-rigging. But they may be serious in those cases where a pre-election boost is perceived as aggravating rather than easing existing inter-personal and inter-ethnic unfairnesses in the distribution of power and assets.

In Table 4, we examine this hypothesis in relation to an enlarged case-study group including the case-study countries of the previous section – Ghana, Zambia and Kenya, and also in relation to the 21-country sample as a whole. The size of any pre-election boost is measured in the extreme left-hand column of the table. We wish to test the hypothesis that this will be influenced firstly by institutional quality, and secondly by the context in which elections are conducted. The dependent variables measuring 'institutional quality', in columns 4 to 6 of the table, are three:

(1) A 'state fragility index'. This is conceived as a measure of exposure to conflict in relation to the capacity of state institutions to manage that conflict. Exposure to conflict is transcribed from the PRIO ucdp_loc index on the scale 3=war, 2= intermediate conflict, 1= minor conflict, 0 = no significant civil conflict. The capacity of state institutions to manage and anticipate conflict is taken from the POLITY IV index[27] and measured on a seven-point scale, where 7 denotes 'extreme incapacity/fragility'' and 0 denotes 'high institutional capacity/little or no fragility' on that index of state capacity. Adding the exposure index to the state capacity index thus produces a 10-point 'composite fragility scale', with 10 the upper extreme and 0 the lower extreme, which is the measure reported in Table 4.

(2) Tax capacity, measured in terms of the tax/GDP ratio. This measure of institutional capacity has been widely used in quantitative studies (e.g. Brautigam and Knack 2004). It has the merit of distinguishing those cases in which governments are deterred by fear of political opposition or incapacity of tax-collecting institutions from broadening the tax base from those cases in which these obstacles can be overcome.

(3) The 'pro-poor institutions index'. This is a measure of the capacity of economic institutions not only to function effectively but also to develop, and in particular to enable low-income people to access key markets, including labour, capital and infrastructure. It is constructed (Mosley 2012, Table 6.1) as the average of the following indices: (i) access to microfinance as a proportion of the population; (ii) participation in rural labour markets as a proportion of the population; (iii) access to rural infrastructure as a proportion of the population; (iv) the Leftwich-Sen-te Velde 'state-business relations index' (Leftwich et al. 2008), conceived as a quantitative measure of the extent to which the state is supportive of private economic institutions.

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[27] The Polity IV index is displayed at http://www.systemicpeace.org/polity/polity4.htm.

In addition, we hypothesise that the impact of the pre-election boost will be determined by the political context of elections, for which we provide measures in columns (2) and (3) of Table 4. Column (2) specifies the 'pro-poor expenditure ratio', defined as the ratio of health, plus education, plus social expenditure, less military expenditure, to total expenditure. The first three expenditures in this ratio are typically intensive in the labour of low-income workers, and in addition have many low-income consumers (especially in the case of primary health and education); military expenditure by contrast is capital-intensive and its level is associated with an increase in the probability of conflict[28] (Nafziger and Auvinen 2000: Tables A 3.1 to A3.4). We therefore reason that a large pre-election boost which *increases* the ratio of pro-poor expenditure to total expenditure will be treated as a signal of commitment by incumbent governments to allocate public money in a manner that is broadly equitable rather than reflective of existing ethnic and regional partisanship (which will strengthen loyalty to public institutions), whereas a pre-election boost which *decreases* the ratio of pro-poor expenditure to total expenditure will do the opposite. Our other measure of electoral context, in column (3), is a subjective measure of whether the elections for our selected countries were 'clean' or 'dirty'. A 'dirty' election is characterised by electoral irregularities and rigging.

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[28] The index which Nafziger and Auvinen use to assess the risk of civil war combines the ratio of military expenditure to GNP, as defined above, with a dummy variable for military government into a measure which they call 'military centrality'; this, in their dataset, is positively and significantly associated with the likelihood of conflict.

Table 4: Election cycles and their institutional consequences

	Election-cycle characteristics			Dimensions of state fragility, 1990 to 2008			(7)Average aid/ gross national income ratio 1990-2008 (IMF adjustment facilities in parentheses)	(8)Poverty headcount,1990 to 2008(8)
	(1)Election-year deficit as % of mean budget deficit	(2)'Pro-poor' content of expenditure in election year	(3)Dirty/ clean elections	(4)State fragility index	(5) Tax GDP ratio	(6)Pro-poor institutions index		
Ghana	156.4	8.0	Clean since 1992	7 → 5	11 → 22	106 → 185	Average 9.1% (on falling trend) Two PRGFs	51 → 27
Zambia	185.0	6.0	Dubious until 2001, clean thereafter	7 → 5	19 → 17	..	Average 19.5% (on falling trend)	68 → 68
Kenya	77.6	5.6	Dirty except in 2002	7 → 7	18 → 18	100 → 128	Average 7.0% (on falling trend)	42 → 52
Botswana	183.3	13.2	Clean	4 → 2	..	..	Average 3.8% (on falling trend)	No data
South Africa	79.5	6.9	Fairly clean since 1994	7 → 2	21	..	Average 0.3% (on falling trend)	32 → 49
Ethiopia	152.0	1.8	Mixed;notably dirty in 2005	10 → 7	7	..	Average 9.8% (on rising trend)	55 → 54
Nigeria	127.3	0.4	Generally dirty	4 → 6	11	..	Average 1.1%(on rising trend)	37 → 34
Uganda	88.8	3.5	Moderately clean	6 → 6	5	100 → 164	Average 12.1% (on falling trend) Two PRGFs	56 → 33
Sample average (n=21 countries)	131.6	5.2		6.7 → 5.2	10.6	..	7.8%	..

Sources and notes.

(1) Election-year budget deficit as % of mean deficit. From Easterly's ea_gbds measure of the budget deficit, in University of Gothenburg Quality of Government dataset, www.qog.gu.se.

(2) Pro-poor content of expenditure in election years: from IMF, *Government Expenditure Statistics Yearbook* (election years are as given in Table 1 above). 'Pro-poor expenditure' is defined as the ratio of (education expenditure + health expenditure + social protection expenditure, *less* military expenditure) to total expenditure.

(3) Quality of electoral process: a subjective indication derived from the following accounts of electoral processes:Ghana from Fridy(2007); Zambia from Cheeseman and Hinfelaar(2009); Kenya from Branch and Cheeseman(2008); Ethiopia from Abbink (2005) Nigeria from Rawlence and Albin-Lackey(2007) Cross-reference to POLITY index?

(4) State fragility index: This is conceived as a measure of exposure to conflict and the capacity of state institutions to manage that conflict. Exposure to conflict is transcribed from the PRIO ucdp_loc index on the scale 3=war, 2= intermediate conflict, 1= minor conflict, 0 = no significant civil conflict. The capacity of state institutions to manage and anticipate conflict is taken from the

POLITY IV index[29] and measured on a seven-point scale, where 7 denotes 'extreme incapacity/fragility'' and 0 denotes 'high institutional capacity/little or no fragility' on that index of state capacity. Adding the exposure index to the state capacity index thus produces a 10-point 'composite fragility scale', with 10 the upper extreme and 0 the lower extreme, which is the measure reported in the table.

(5) Ratio of tax revenue to GDP, from World Bank, *World Development Indicators* CD-ROM.
(6) Pro-poor institutions ratio: is constructed (Mosley et al 2009: Chapter 6, table 6.1) as the average of the following indices: (i) access to microfinance as a proportion of the population; (ii) participation in rural labour markets as a proportion of the population; (iii) access to rural infrastructure as a proportion of the population; (iv) the Leftwich-Sen-te Velde 'state-business relations index' (Leftwich et al. 2008), conceived as a quantitative measure of the extent to which the state is supportive of private economic institutions.
(7) Aid flow: from World Bank, *World Development Indicators* CD-ROM.
(8) Poverty headcount: from World Bank, *World Development Indicators* CD-ROM.

As will be recalled, the political business cycle mechanism is only found in some countries, which are shaded in the first column of Table 4. The main inference which we derive from examining these countries is that *the political business cycle will damage institutional development if and only if government policy is perceived as aggravating existing inequities.* In Ghana, Zambia and Botswana, where the pre-election stimulus is strong , pro-poor expenditure in election years is high and elections (in Zambia since 2001) are 'clean', state fragility *decreases* and institutional development *improves* over the measurement period. In Nigeria, where the pre-election stimulus is strong and the pro-poor expenditure ratio very low, state fragility and institutional development as a whole worsen over the measurement period[30]. In the four cases mentioned above, this argument applies to both the 'state fragility' and the 'tax capacity' measures of institutional development. Indeed, a casual inspection of the scattergrams linking pro-poor expenditure (PPE) with the two measures of institutional capacity suggests that they are both linearly related, with positive changes in PPE tending to be negatively associated with increases in state fragility and positively associated with the tax ratio. However, although this trend is formally statistically significant, it is rather loose. Among the more interesting outliers, Ethiopia is associated over the entire 1990-2008 period with deteriorating pro-poor ratios and improving institutional performance. However, there are many ups and downs around the trend during this period, and various occurrences not picked up by the data: for example, the violence surrounding the 2005 election and the restrictions on personal freedom prevailing since that time do not translate into an 'institutional deterioration' in terms of the indices used in Table 4, even though it was widely perceived as such by many Ethiopians.

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[29] The Polity IV index is displayed at http://www.systemicpeace.org/polity/polity4.htm.
[30] For a discussion of the 2007 Nigerian election in this context, see the paper by Rawlence and Albin-Lackey (2007).

Empirical tests

We now test these propositions more formally. The core of the story which we wish to test is the proposition informally illustrated in Table 4, that institutional capacity will not be damaged by the election cycle if the election does not excessively stir up perceptions of unfairness – either in the sense of electoral malpractice, or in the sense of excessive increases in perceived interpersonal inequity. Aid donors in Africa, as discussed in Section 2 above, are much involved in determining both these variables, as they can be expected to reward good governance and actions which raise the pro-poor expenditure ratio, and their funding decisions in turn, as illustrated in Table 2, can shelter recipient governments against having to reverse a pre-election expenditure boost during the months after the election.

We thus have a three-equation model, two representing pre-election policy variable change, and one estimating the effect of the decisions of voters and aid donors on institutional capability. We can add a fourth, specifying the determinants of aid flows. In their simplest form, the functional forms of these three relationships can be represented as follows:

Policy instruments (i.e. budget deficit and ratio of money supply to GDP)

$$I_{i,t} = \beta_{0i} + \beta_1 ELE_{i,t} + \beta_2 ELEPOST_{i,t} + \sum \beta_j X_{i,t} + \sum \beta_i I_{i,t-k} + \mu_{i,t} \quad (2)$$

where:

I_t = policy instruments specified;
$ELE_{i,t,}$ = a dummy variable taking the value 1 in an election year and 0 in a non-election year;
ELEPOST = a dummy variable taking the value 1 in a post-election year and 0 in a post-election year;
X = vector of control variables including AIDPC, DEMOC and a trend variable;
j=3, 4, …. n
k= length of lag applying to the pre-election stimulus.

This incorporates the functional form presented as (1) on page 5 above, and estimated by a fixed-effects estimator in Table 2. The process of adjustment of the policy variable over time depends, among other factors, on the difference between current and the equilibrium levels, thus introducing lags into the model. As mentioned earlier, the introduction of lags biases the coefficient(s) of the lagged variable(s). We address this problem by applying system GMM estimators which exploit all the information in the sample (Arellano and Bond, 1991) to produce more efficient estimates.

Institutional quality

$$IC_{i,t} = \alpha_0 + \alpha_1 PPE_{i,t} + \alpha_2 D_{i,t} + \alpha I_{i,t} + e_{i,t} \quad (3)$$

where

> IC = measure of institutional quality (defined here as state fragility, tax ratio, quality of governance indicator, or pro-poor institutions index, as discussed on page 16 above. We prefer the tax ratio indicator because it performs better than the other measures, and it offers higher degrees of freedom);
> I_t = policy measure which may be used as an instrument of the political business cycle, as in equation (1) above (here – budget deficit or money supply);
> PPE = pro-poor expenditure coefficient, as discussed in Table 4 above;
> D_t = measure of 'cleanness' or 'dirtiness' of elections. This is represented by a measure of democracy, meaning more democratic systems have cleaner elections.

This is the proposition informally examined in Table 4 above. It suggests that institutional quality is not expected to be influenced by the mere fact of whether or not a political business cycle prevails. Whether institutional damage (a reduction in IC) occurs, rather, is likely to be determined by factors influencing the climate of the election, amongst which we have identified the extent to which the pre-election boost promotes a feeling of equity ($PPE_{i,t}$) and whether the election is seen as clean or dirty (D_t), and these things, we have argued can be influenced by aid flows:

Aid flows

$$AIDPC_{i,t} = \phi_{0,i} + \phi_1 PPE_{i,t} + \phi_2 AIDPC_{i,t-1} + \phi_3 IC_{i,t} + \phi_{x+1} y_{i,t} + v_{i,t} \qquad (4)$$

where PPE and IC are, respectively, measures of pro-poor expenditure and of institutional quality as defined in relation to (3) above, and y is a vector of other control variables.

Aid flows, as argued in Section 3, do not only determine the feasibility of the pre-election boost for African countries, but are endogenous to the behaviour of African policy authorities. In particular, donors are anxious to reward good performance both in the sense of coherent strategies to reduce poverty and in the sense of a commitment to make the bureaucracy and electoral procedures transparent and open. To establish whether aid flows are not only associated with but are caused by PPE and institutional capacity, we lag aid by one period in the estimations.

The introduction of lagged dependent variables as regressors makes the models dynamic and introduces dynamic panel bias. This complicates the estimation strategy, so we implement dynamic System GMM (General Method of Moments) techniques. Such estimation techniques make fewer assumptions about the data generating process, and are good at isolating useful information. They also allow for some endogeneity, heteroscedasticity and serial correlation among the variables, problems which are present in our dataset[31] . In Table 5, we report the results from estimation of equation (2) with the budget deficit as the dependent variable, using OLS, fixed effects, and system GMM estimators. The exogenous variables are deeper lags of the pre-election stimulus, election year dummy, aid per capita, an index of democracy, and a

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[31] Some of the data were collected from the World Bank Development indicators. WDI data for Africa are sometimes changed significantly when updated, thereby causing measurement errors when the updated data are introduced into a regression.

trend variable. In Table 6 we report the results from the estimation of equations (2) (with money supply as the dependent variable, using OLS, fixed effects and system GMM estimators), (3) and (4). Additional independent variables are infant mortality, GDP growth, state fragility measure, and pro-poor expenditure. As a check of the quality of theoretically superior estimators, Bond (2002) and Roodman (2006) suggested that a good parameter estimate of the dependent variable should fall between the OLS and fixed effects parameter estimates. Therefore, we apply the OLS, Fixed Effects, and System GMM estimators to our policy instrument equations.

We allow for fixed individual effects so that the dependent variable may change faster for some units than others. Since the number of time periods is relatively large for some countries, a shock to the fixed effects, with lagged dependent variables, causes further endogeneity problems. We instrument for the lagged variables and other endogenous variables by drawing instruments from the dataset. Unlike with two stage least squares, deeper lags provide good instruments, and can be included without losing many degrees of freedom. To address instrument validity issues, and as suggested by Blundell and Bond (1998), we include lagged levels as well as lagged differences as instruments. This is premised on the assumption that the first differences are not correlated with the fixed effects. In addition, our specified policy equations are over-identified because if they were just-identified, it would be impossible to detect invalid instruments. Although too many instruments weaken the Hansen-Sargan identification test, Roodman (2006) suggests a number of other ways of testing and controlling instrument validity which we apply. We also rely on the more robust Arellano-Bond test for autocorrelation over the Hansen-Sargan tests in detecting the validity of lagged instruments.

We apply orthogonal deviations transformation of the data as a way of avoiding magnifying gaps in unbalanced data. This approach, as opposed to first-difference transformation, preserves degrees of freedom in panels with gaps, like ours. It also offers finer control of the instruments matrix (Roodman, 2006). It is assumed that the deviations of instrumental variables are uncorrelated with the fixed effects (Arellano and Bover, 1995), and we allow for Windmeijer finite-sample correction to the reported standard errors (Windmeijer, 2005; Roodman, 2006) to reduce bias.

Since the effective number of time periods is relatively large, we know that dynamic panel data bias is insignificant (Roodman, 2006), and a more straight-forward fixed effects estimator could work perfectly, and we compare these results with system GMM results.

Table 5: Estimation of equation 2 with fiscal deficit as the dependent variable, 1980-2008

Dependent variable	Budget deficit	Budget deficit	Budget deficit
	OLS	FE	System GMM
Budget deficit lagged	0.732***	0.458***	0.639***
	(0.0450)	(0.0515)	(0.229)
Election year dummy	-0.370	-0.602*	-0.575
	(0.341)	(0.332)	(0.632)
Post-election year dummy	1.505***	1.093**	1.240**
	(0.363)	(0.407)	(0.574)
Aid per capita	0.010	0.008	0.039**
	(0.0127)	(0.0120)	(0.0153)
Aid per capita lagged	-0.009	-0.009	-0.040***
	(0.0123)	(0.0105)	(0.0142)
Index of democracy	-0.001	0.015	0.005
	(0.0480)	(0.0570)	(0.0824)
Time variable	0.033*	0.053	0.051
	(0.0198)	(0.0326)	(0.0757)
Constant	-2.747***	-4.508***	-3.696
	(0.991)	(1.436)	(4.182)
Observations	471	471	471
Chi2			134.336 ***
Hansen test of over-identifying restrictions			18.281
Sargan test of over-identifying restrictions			40.543

The results confirm what we got after estimating equation 1, except that the election year dummy is now weakly significant (using the fixed effects estimator). They confirm that the fiscal deficit worsens in the election year. Also, there will be significant attempt to balance the books after the election year. Using the system GMM estimator, it emerges that an increase in aid is significantly and positively associated with an increase in the fiscal deficit, after controlling for all other variables.

Table 6 shows the results when the policy variable is money supply.

Table 6: Estimation of equations 2 (with money supply as the dependent variable), 3 and 4, 1980-2008

Dependent variable	MS/GDP	MS/GDP	MS/GDP	Aid equation	State fragility equation
	OLS	FE	System GMM	System GMM	System GMM
Money supply to GDP lagged	0.996***	0.872***	0.933***		
	(0.00876)	(0.0516)	(0.0501)		
Money supply to GDP					0.004
					(0.0108)
Election year dummy	0.063	0.121	0.086		-1.451**
	(0.220)	(0.203)	(0.207)		(0.648)
Post-election year dummy	-0.470*	-0.473*	-0.426*		-0.878*
	(0.257)	(0.236)	(0.226)		(0.489)
Aid per capita	-0.001	-0.002	0.0001		
	(0.00270)	(0.00266)	(0.00812)		
Aid per capita lagged	0.000	-0.001	0.006	0.910***	
	(0.00251)	(0.00228)	(0.00706)	(0.0269)	
GDP growth	-0.112***	-0.120***	-0.124***		
	(0.0231)	(0.0246)	(0.0277)		
Index of democracy	0.071**	0.037	0.008		
	(0.0302)	(0.0845)	(0.236)		
Time variable	0.049***	0.046*	0.123		

	(0.0180)	(0.0259)	(0.0978)		
Net pro-poor expenditure				-0.024	0.054
				(0.205)	(0.0416)
Budget deficit				0.061	-0.027
				(0.192)	(0.0509)
Infant mortality				0.022	
				(0.0589)	
Measure of state fragility				-0.019	
				(0.665)	
Lagged state fragility measure					0.946***
					(0.0583)
Constant	-1.752*	1.672	-3.998	1.985	0.796
	(0.950)	(1.731)	(3.692)	(4.910)	(0.846)
Observations	662	662	662	337	266
Chi2			1978.802***	2776.809***	1973.971***
Hansen test of over-identifying restrictions			31.326	19.638	13.293
Sargan test of over-identifying restrictions			21.610	53.023	16.923

Notes and sources:
(1)Pre-election stimulus: 1 in election years, 0 in non-election years: data from table 1 above.
(2) Post-election stimulus: 1 in post-election years, 0 in other years: data from table 1 above.
(3)'Pro-poor expenditure ratio' = (public expenditure)* expenditure share, where expenditure share=(education+health+social protection- military)/total expenditure.
(4) 'Dirtiness' of election: subjective index; see case-study data in table 4 above.
(5) Aid per capita: from World Bank, *World Development Indicators* CD-ROM.
(6) State fragility index = This is conceived as a measure of exposure to conflict and the capacity of state institutions to manage that conflict. Exposure to conflict is transcribed from the PRIO ucdp_loc index on the scale 3=war, 2= intermediate conflict, 1= minor conflict, 0 = no significant civil conflict. The capacity of state institutions to manage and anticipate conflict is taken from the POLITY IV index[32] and measured on a seven-point scale, where 7 denotes 'extreme incapacity/fragility'' and 0 denotes 'high institutional capacity/little or no fragility' on that index of state capacity. Adding the exposure index to the state capacity index thus produces a 10-point 'composite fragility scale', with 10 the upper extreme and 0 the lower extreme, which is the measure reported in the table.
(7) Infant mortality: from World Bank, *World Development Indicators* CD-ROM.
(8) Country size (population): from World Bank, *World Development Indicators* CD-ROM.
(9) Index of democracy (democ in equation 1): from www.systemicpeace.org

The results show that although there is a positive but insignificant relationship between the policy variable and the election year dummy, there is significant disinflation in the year following elections, even after controlling for economic growth. In addition, state fragility increases following elections, possibly because of competition among different players and in some cases, oppression of opposition forces. This could also be a result of narrowing democratic space, and government choice to reduce tax collection effort as a way of buying votes.

From these regressions the following conclusions emerge. In the first place, the election cycle with fiscal deficit as the policy variable is enhanced when we control for country fixed effects. The pre-election boost is less significant in the full model (including all countries) than when we consider only countries with no dominant political parties (Table 2). However, when the pre-election boost is money supply growth, as in Table 2,

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[32] The Polity IV index is displayed at http://www.systemicpeace.org/polity/polity4.htm.

the election year dummy is statistically insignificant for the full model, but there is a significant cut in the budget in post-election years.

Second, there is no evidence of any significant overall negative impact of the election cycle on institutions. The coefficients of the pre-election stimuli have the expected impact on institutional capacity (the state fragility measure), but the impacts are statistically insignificant. We thus have reasonable confidence in our claim that pre-election boosts in the budget deficit do not make the state more fragile.

Third, aid flows are positively correlated with fiscal deficits, but only with money supply when we use system GMM estimation. Aid flows are also insignificantly and negatively correlated with state fragility. As described in our case studies, donors like to reward behaviour which helps to create a strong state and to deliver on the Millennium Development Goals. It also appears from our case-studies, although the econometric evidence on this point is unclear, that measures to make elections more transparent and more clean have the same effect of insulating the political business cycle from its potential negative consequences.

4. Conclusions

The African political business cycle emerges from this analysis as country-specific, and not universal. In some countries, under dominant-party systems, there is no need for it, since the incumbent can reasonably expect to be able to win elections without it; and in others, where the central bank is able to impose binding constraints on budgetary expansion, it is not feasible. Averaged across all African countries, a pre-election stimulus, we find, is still a feature of the political landscape. But there are wide variations around this central tendency, which it has been the main purpose of this paper to investigate.

In the context of fragile economic systems, which most African countries are, the fear has been expressed that the extension of democracy, specifically by means of the political business cycle, might damage institutional development and make the state more fragile still. Across the sample as a whole, we find that this fear is unfounded. There are individual cases, such as Nigeria, where the qualitative evidence suggests that a negative relationship between pre-election stimulus and measures of institutional development is apparent, but across the sample as a whole, no significant relationship is perceptible between the pre-election stimulus and institutional quality, whatever specification of institutional quality is used.

In Africa at least, the course of the political business cycle appears to be intimately connected with the perceived fairness according to which the political game is conducted, and also with the perceived equity with which state expenditures are allocated. Donors have the power, through their aid allocations, to influence both of these. We predict that where the composition of the pre-election stimulus is pro-poor, institutional damage from a pre-election stimulus is unlikely to result. In terms of our measures of institutional quality, this prediction is fulfilled.

In those cases where, with the help of reforms in electoral procedure, elections have become more transparent and the allocation of state resources has become more pro-poor (Botswana and Mauritius in the 1970s and 80s; more recently, with donor support, Ghana, Rwanda, Mozambique and Zambia) the surges in expenditure which occurred prior to elections can be seen as an institutional asset rather than a liability, as they have been mainly pro-poor expenditures, which have then (Table 2), become embedded in the budget thanks to donors bestowing their blessing, and not had to be cut back in the post-election years . Indeed, in several poorer LDCs where the right chemistry forms between donors and recipients, a virtuous circle can be observed in which aid donors, favourably impressed both by improvements in anti-poverty performance and in governance, help to counter-balance the political business cycle by establishing stable long-term aid contracts, of the Poverty Reduction and Growth Facility (PRGF) type.

In Africa, as the literature has stressed, the political business cycle has the potential to impose additional strains on already vulnerable institutions. This represents a distinctive threat to institutional capacity, not often encountered in industrial countries. Yet, in many African countries, we find that these risks have not materialised. Rather those countries have been able, often in synergy with aid donors, to improvise institutional buffers against those risks. One of those buffers – the design of pro-poor

expenditure patterns which send a 'distributional signal' to interest-groups – is an innovation which, potentially, may also have relevance outside Africa.

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