

# Testing for the Existence of Politico-Economic Cycles in Ghana

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## Abstract

The abuse of incumbency during elections in order to retain power by ruling governments has become a contentious issue in political economics. This study was set to examine the effect elections and other macroeconomic variables on growth in Ghana. Data for the estimation was collected for the period, 1992-2010, during which Ghana has had an uninterrupted democratic elections. The results of the analysis show that political cycles do not exist in Ghana, which lends support to the views of (Ito and Park, 1999; Alesina et al, 1992, 1993; Brender and Drazen, 2005). Nonetheless, pre-election manipulations of some sort is a common phenomenon as its manifestation becomes glare as abuse of incumbency is noticed even though data do not suggest so. The implication is that abuse of incumbency may exist but not to the extent that creates political cycles.

**Keywords:** Political Cycles, opportunistic Models, Partisan Models, Contractionary Monetary Policies, Phillips Curve, Stationarity Test, Unit Root Test.

## 1.1 Introduction

The social and institutional processes through which, the allocation of resources and the direction and trend of public finance have become an area in economics which economists have begun researching into. To them these activities are often being influenced by certain social and political elites either exclusively for their own benefit or for the benefit of people or both.

Ghana, since independence have experienced military and civil rule interchangeably until in 1992 where it begun to experience constitutional and civil governance. The constitution is such that a particular government who wins an election governs the entire country for a period of four years after which fresh elections are conducted of which the ruling government would contest. Registered political parties may be eligible to contest in every general election period provided they satisfy the conditions laid by the Electoral Commission and that of the country. However the sitting president could be re-elected by its party to contest in the next general election but for not more than two consecutive terms (8 years). There has been remarkable achievement through political competition and leadership. Though the parties that have won elections often have majority representation in parliament, such representations do not exceed two-thirds of the total representation in parliament. Ghana's burgeoning democracy and elections have often been associated with economic reforms, policies and liberalization.

Efforts are often made to restore growth and have concentrated mostly on macroeconomic reforms and stability with particular emphasis on reducing inflation budget deficit, exchange rates, external debt and etc. in many instances these policies and reforms are often accompanied by restrictions on consumption and public sector employment, removal of subsidies. These reforms and policies often lead to promising results with increases in real growth. However these macroeconomic indicators as well as policies are often left to deteriorate during election periods.

Governments have allowed the structure of economic policy making to be influenced by electoral and partisan incentives. The directions of economic policies as well as expenditures are often distorted during election periods. Government and incumbents seeking re-election use all forms of incentives to entice voters in order to win elections. They have become aware that voters are not myopic but discerning and that they may evaluate candidates on their aggregate performance or recent experience and on party terms. These often results in expenditures and halting of policies that results in cycles of economic expansion and contraction that affect the economic wellbeing of the people. In an attempt to win government popularity the populist tendencies of incumbent government are brought to bear.

## 1.2 Statement of the problem

The effect of political influence on public policy decision has been a central issue in the "public choice" literature and the recent being macroeconomic issues. Incumbent government often responds to approaching elections by increasing real outlays. Increase in transfers, subsidies and other components of government are often due to the desire of politicians to expand output and generate political support in pre-election period. Governments tend to alter the composition of government budget so as to capture electoral gains, thus

government spending has been sensitive to the electoral cycle. These have often led to unfair distribution of resources and increase in public debts. The central question is whether economic reforms and political reforms are intertwined or oppositions. Political economists have been able to incorporate democratic policymakers' electoral and partisan motivation into theoretical models of the strength, nature and timing of economic policymaking but empirical research and evidence are very limited. This research therefore, seeks to test for the existence of politico economic cycles in Ghana and its effects on the economic wellbeing of the people. This research therefore, seeks to determine the effect of growth on pre-election probabilities and to find out whether politico-economic cycles exist in Ghana.

This research will enable politicians to realize the need to address policy issues rather than using money and incumbency to win votes as voters are becoming more discerning. It will enable governments to take a critical look at their expenditure patterns during election periods as it may affect the economic gains achieved. The findings and conclusions will serve as an empirical evidence for the case of Ghana as a developing country for researchers. It will add to the existing knowledge in the area of macroeconomics, development economics and political economics. It will also serve as a basis for further studies.

## 2.1 Theoretical Literature

There are two types of models that are often used to explain political business cycles; the "opportunistic models and the 'partisan models'.

The opportunistic political business cycles are explained by expansions in economic activities caused by an opportunistic incumbent government before an election which are meant to increase the chances of being re-elected. This model was developed by Nordhaus (1975) which suggest that voters have a distribution of preferences that depends on inflation and unemployment. According to Nordhaus (1975) unemployment and inflation fall smoothly in the period leading to election (since it is best to reduce these variables at the end of the cycle, so as to exert the maximum impacts on voters), and rises sharply after the electoral outcome.

Assuming that the unemployment rate is inversely related to the level of Aggregate demand, the prediction of the model is that the incumbent would increase government spending ( and therefore Aggregate demand ) and monetary expansion in the period leading to the election in order to exploit the short term Phillips curve (the inverse relationship between inflation and unemployment). A contraction in government spending will occur so as to reduce inflation, a policy which at the same time leads to recession and high unemployment.

The levels of monetary expansion and unemployment are those which maximize voter's satisfaction in the election period. In the next election cycle, the same behavior is repeated, with contractionary monetary policy to bring down inflation during the periods leading to elections and expansion in spending and money supply during election periods. Hence, the possibility of influencing the probability of re-election, combined with the structure of the economy yields a cycle in economic activity. The political cycle thus induces a cycle in economic activity and inflation (Allan Drazen). Though the incentive for opportunistic policy makers to manipulate policy and macro economic cycle may result a number of conceptual and empirical objections maybe raised.

First, voters are discerning and may realize that 'election-year economics' maybe used to influence their votes hence may be skeptical of an economic upturn in the months before an election. More formally, their expectations of inflation should take the possibility of an election year monetary expansion into accounts. An intermediate view is that, voters have less than perfect information about the causes of economic fluctuations and take good economic performance as indicating incumbent competence.

Secondly, incumbent governments running for elections may not have direct control on their central banks and hence control over monetary policy as in some countries. However there has been evidence that such independent central banks turn to accommodate pressures for monetary expansion during periods leading to elections in order to prevent sharp movement of interest rates (Wooldey, 1984).

In partisan models, political business cycles are induced by the differences among political parties and their ideology and economic goals. This model is due to Hibbs (1977), based on different preferences over inflation and unemployment across parties. Instead of the cycles of pre-elections expansions and post elections contractions as explained by the "opportunistic model, the partisan model predicts that unemployment be permanently lower and inflation permanently higher during the terms of left-wing government as compared with right-wing governments.

The partisan model however suggests that the effects will be temporary post-election effects in either case, after which outcomes are the same regardless of party in power (Allan Drazen). Given this characterization of the election describe above it is pertinent to indicate that such partisan model do not exist in Ghana and therefore our study on political business cycle theory for Ghana is the opportunistic.

## 2.2 Empirical Studies

The role of political factors in economic cycle in developing countries has been the focus of recent attention. Haggard (1991), Haggard and Kaufman (1990) have shown (before Pinochet) patterns of inflation and to be correlated with political events which erodes macroeconomic management. According to Dornbusch and de Pablo (1989) failure to stabilize in the face of endemic inflation in Argentina has gone hand in hand with continued political polarization and instability and the failure of any group to consolidate its power effectively. Roubini (1991) however, have indicated that budget deficits are rather the cause of political instability rather than the effects of elections. Whitehead (1990) has argued that central government's spending follows cyclical pattern - rising in the first budget of a new president, falling for the next couple of years and then rising again in the rush to complete projects before the term's end. Ames (1987) provides some evidence for the assumptions that governments tend to alter the composition of government spending so as to capture electoral gains. Karnik (1990) provides econometric results supporting the assumption that government spending in India has been sensitive to electoral cycle.

The evidence for political business cycle in outcomes is quite mixed with most studies finding little evidence of opportunities political cycles especially in developed countries (Alesina et al, 1993; Drazen 2000). Brender and Drazen (2005) confirm the insignificant effect of growth on re- election probabilities in developed countries in large cross- section study of a sample of 74 countries. OLS regressions in Ito and Park (1988) and Alesina, Cohen, and Roubini (1992) were not able to find evidence of a political monetary cycle in Japan whilst a panel regression in Alesina, Cohen, and Roubini (1993) also rejects a political cycle for OECD countries using monetary base.

### 3.1 The Theoretical Model

In developing the method for the estimation of the opportunistic political business cycle the following questions, which are key, are raised: Do voters respond to favorable macroeconomic indicators during election periods? Do election period leads to economic expansion?

Political business cycle models are tested by estimating the equation:

$$Y_t = \alpha + \beta X + \delta D_t + e_t$$

Where  $Y_t$ , is the cyclical variable,  $X$ , the control variables,  $D_t$ , the election variable (proximate by a dummy) and  $e_t$ , the error term. The election dummy is expected to mark the timing of the cycle. It is defined as "1" in the pre-election period and "0" in the post election period. This is in consonance with Nordhaus (1975), which seeks peaks (or trough) in the cycles at the time of election.

Single-period comparisons are typical in testing (Nordhaus, 1975; Ito and Park, 1998; Heckelman and Whaples 1996), but alternative specifications are also considered for early strategic behavior and lags from policy effect adjustments (Heckelman and Berument, 1998).

Most researches on political business cycles have relied on the assumption that the macroeconomic variables are generated by a co-variance stationary process that can be estimated by a finite autoregressive regression.

### 3.2 The Empirical Model

The general model to be estimated is as follows;

$$GDP_t = \alpha + \sum_{i=1}^p \beta X_{t-1} + \delta D_t + e_t$$

It must be noted that the controlled macroeconomic variables achieved stationarity at the first difference hence the specific model to be estimated is:

$$GDP_t = \beta_0 + \beta_1 infl_{t-1} + \beta_2 extdebt_{t-1} + \beta_3 govexp_{t-1} + \beta_4 mmss_{t-1} + \beta_5 elections + e_t$$

Where  $GDP_t$ , is the real GDP,  $infl_{t-1}$ , is the annual inflation,  $fdebt$ , is the foreign debt,  $mmss_{t-1}$ , is the money supply,  $gexp_{t-1}$ , being government expenditure, elections (proximate by a dummy), election period and  $e_t$ , being the error term.

Data was collected from the Ghana Statistical Service, the Ministry of Finance and Economic Planning and the Bank of Ghana, for the period 1992-2010 during which Ghana has had an uninterrupted democratic elections

## 4.1 Analysis and Presentation of Results

### Time Series Regression Analysis

Dependent Variable: GDP  
 Method: Least Squares  
 Date: 11/05/12 Time: 11:50  
 Sample: 1992 2010  
 Included observations: 19

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ELECTIONS	1791.919	1729.672	1.035988	0.3178
EXTDEBT	0.191712	0.042504	4.510473	0.0005
GOVTEXP	0.165555	0.229452	0.721522	0.4825
INFLATION	33.89121	77.18629	0.439083	0.6673
M1	0.641712	0.503253	1.275126	0.2230
R-squared	0.612875	Mean dependent var		16830.42
Adjusted R-squared	0.490839	S.D. dependent var		3099.092
S.E. of regression	3707.062	Akaike info criterion		19.49480
Sum squared resid	1.92E+08	Schwarz criterion		19.74334
Log likelihood	180.2006	Hannan-Quinn criter.		19.53686
Durbin-Watson stat	1.004179			

## 4.2 Conclusion and Recommendations

In countries where political systems produce single-party governance, election timing and activities has become an ideal weapon for enticing voters to vote in their favor. The opportunistic political business cycles suggest that incumbent governments often leave policies and programme to deteriorate with no party discipline during election periods leading to unfavorable political business cycles. Researchers of political cycles have found mixed conclusions to this assertion as some findings lend support to, whilst others have found political business cycles not to exist.

Our findings, based on 1992-2010 data suggest that political business cycles do not exist in Ghana. Our findings therefore support the views of (Ito and Park, 1999; Alesina et al, 1992, 1993; Brender and Drazen, 2005). Though political cycles do not exist in Ghana, politicians and political economists should however, recognize the opportunities to explore the electoral and partisan incentives for policy making so as to deepen democracy and increase economic growth and development in pre-election, election and election periods by smoothening and sustaining favorable economic policies.

Though political cycles do not exist nonetheless, pre-election manipulations of some sort is a common phenomenon as its manifestation becomes glare as abuse of incumbency is noticed though data do not suggest so. The implication is that abuse of incumbency may exist but not to the extent that creates political cycles

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**Table 1: Unit Root Test for External Debt**

Null Hypothesis: D(EXTDEBT) has a unit root  
 Exogenous: Constant  
 Lag Length: 0 (Automatic - based on SIC, maxlag=3)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-4.474731	0.0031
Test critical values:		
1% level	-3.886751	
5% level	-3.052169	
10% level	-2.666593	

\*MacKinnon (1996) one-sided p-values.

Warning: Probabilities and critical values calculated for 20 observations  
 and may not be accurate for a sample size of 17

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(EXTDEBT,2)  
 Method: Least Squares  
 Date: 11/05/12 Time: 11:33  
 Sample (adjusted): 1994 2010  
 Included observations: 17 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(EXTDEBT(-1))	-1.165545	0.260473	-4.474731	0.0004
C	1088.971	3220.547	0.338132	0.7399
R-squared	0.571713	Mean dependent var		426.9412
Adjusted R-squared	0.543160	S.D. dependent var		19625.17
S.E. of regression	13264.64	Akaike info criterion		21.93372
Sum squared resid	2.64E+09	Schwarz criterion		22.03175
Log likelihood	-184.4366	Hannan-Quinn criter.		21.94347
F-statistic	20.02322	Durbin-Watson stat		1.894679
Prob(F-statistic)	0.000445			

**Table 2: Unit Root Test for Government Expenditure**

Null Hypothesis: D(GOVTEXP,2) has a unit root  
 Exogenous: Constant  
 Lag Length: 0 (Automatic - based on SIC, maxlag=3)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-7.079958	0.0000
Test critical values:		
1% level	-3.920350	
5% level	-3.065585	
10% level	-2.673459	

\*MacKinnon (1996) one-sided p-values.

Warning: Probabilities and critical values calculated for 20 observations  
 and may not be accurate for a sample size of 16

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(GOVTEXP,3)  
 Method: Least Squares  
 Date: 11/05/12 Time: 11:39  
 Sample (adjusted): 1995 2010  
 Included observations: 16 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(GOVTEXP(-1),2)	-1.966204	0.277714	-7.079958	0.0000
C	2196.702	1889.476	1.162598	0.2644
R-squared	0.781679	Mean dependent var		1787.388
Adjusted R-squared	0.766085	S.D. dependent var		15619.56
S.E. of regression	7554.366	Akaike info criterion		20.81411
Sum squared resid	7.99E+08	Schwarz criterion		20.91068
Log likelihood	-164.5129	Hannan-Quinn criter.		20.81905
F-statistic	50.12581	Durbin-Watson stat		2.243000
Prob(F-statistic)	0.000006			

**Table 3: Unit Root Test for Inflation**

Null Hypothesis: D(INFLATION) has a unit root  
 Exogenous: Constant  
 Lag Length: 3 (Automatic - based on SIC, maxlag=3)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-5.779273	0.0005
Test critical values:		
1% level	-4.004425	
5% level	-3.098896	
10% level	-2.690439	

\*MacKinnon (1996) one-sided p-values.

Warning: Probabilities and critical values calculated for 20 observations  
 and may not be accurate for a sample size of 14

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(INFLATION,2)  
 Method: Least Squares  
 Date: 11/05/12 Time: 11:41  
 Sample (adjusted): 1997 2010  
 Included observations: 14 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(INFLATION(-1))	-2.832094	0.490043	-5.779273	0.0003
D(INFLATION(-1),2)	1.264971	0.334540	3.781219	0.0043
D(INFLATION(-2),2)	0.879820	0.256410	3.431302	0.0075
D(INFLATION(-3),2)	0.473678	0.154513	3.065624	0.0134
C	-4.867959	2.234601	-2.178446	0.0573
R-squared	0.840679	Mean dependent var		0.100000
Adjusted R-squared	0.769870	S.D. dependent var		16.39667
S.E. of regression	7.865795	Akaike info criterion		7.235377
Sum squared resid	556.8366	Schwarz criterion		7.463612
Log likelihood	-45.64764	Hannan-Quinn criter.		7.214250
F-statistic	11.87243	Durbin-Watson stat		2.505857
Prob(F-statistic)	0.001230			



**Table 4: Unit Root Test for Money Supply**

Null Hypothesis:  $D(M1,2)$  has a unit root  
 Exogenous: Constant  
 Lag Length: 0 (Automatic - based on SIC, maxlag=3)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-3.480868	0.0231
Test critical values:		
1% level	-3.920350	
5% level	-3.065585	
10% level	-2.673459	

\*MacKinnon (1996) one-sided p-values.

Warning: Probabilities and critical values calculated for 20 observations  
 and may not be accurate for a sample size of 16

Augmented Dickey-Fuller Test Equation

Dependent Variable:  $D(M1,3)$

Method: Least Squares

Date: 11/05/12 Time: 11:43

Sample (adjusted): 1995 2010

Included observations: 16 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
$D(M1(-1),2)$	-0.942111	0.270654	-3.480868	0.0037
C	409.0784	319.5157	1.280308	0.2212
R-squared	0.463939	Mean dependent var		-26.55137
Adjusted R-squared	0.425649	S.D. dependent var		1551.665
S.E. of regression	1175.944	Akaike info criterion		17.09400
Sum squared resid	19359826	Schwarz criterion		17.19057
Log likelihood	-134.7520	Hannan-Quinn criter.		17.09894
F-statistic	12.11644	Durbin-Watson stat		1.937602
Prob(F-statistic)	0.003672			