ARE THERE POLITICAL FISCAL CYCLES IN ALBANIA?

(A EKZISTOJNË CIKLET POLITIKE FISKALE NË SHQIPËRI?)

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ABSTRACT

In our search for Political Business Cycles in Albania, we found clear evidence of the attempts made by the incumbent to manipulate the economy. There is a statistically significant increase of public expenditures before elections aiming at reducing unemployment and increasing output, in order to please the voters. These empirical findings support the hypothesis that the incumbent is engaged in Political Business Cycles, and more specifically in Political Fiscal Cycles in Albania.

Key words: Political Business Cycles, Political Fiscal Cycles.

1. INTRODUCTION

No previous research for Political Business Cycle (PBC) in Albania has been done before our reseach, to best of our knowledge. However, it is widely believed, in Albania, as elsewhere, that the governments may use all the means they possess, including economic policy instruments, to enhance the chances of reelection. The government (incumbent) may engage in expansionary economic policies prior elections, increasing output and decreasing unemployment, in order to please the voters, creating this way PBC.

The objective of our work is to search for the existence of PBC in Albania. The testing for PBC is done by investigating and analyzing the economic policy instruments. We statistically test the hypothesis that the government may follow expansionary fiscal policy, to reduce unemployment and increase output before/during elections.

During the analyzed period there took place two parliamentary elections and three local elections. The local elections were considered important also because they were seen as a test for the political forces and as a referendum for the central government.

2. PBC THEORY AND EMPIRICAL BACKGROUND

"It is pretty generally accepted that the popularity of political parties at election time is related to business conditions." (Tibbitts, 1931). It is obvious that the economic performance of a government determines to a large extant if it will be reelected, and therefore the economic factors influence political factors. There has been plenty of research and articles aiming at understanding and explaining the interrelation between economy and politics and the way the earlier affects the later. It is clear that an improved economic situation (whether it is a result of professional leadership or just a result of external factors) is

reflected into electoral support for the incumbent, and the other way around. Tibbitts (1931) found out that the party in power receives more votes in elections following business expansion than in elections during business depression. But the relation between economy and politics is wider and more complicated than just described by Tibbitts. There is a wide belief in Albania, and else were, that politicians would do almost any things to get into power and/or remain into power, including even starting wars. In this context, many would also believe that the incumbent would try to manipulate the economy (if possible) before elections to enhance chances of reelection.

The phenomena of (attempted) manipulation of the economy by the incumbent for electoral purpose, is called PBC, introduced by William Nordhaus (Nordhaus, 1975), which opened the way for many following empirical and theoretical studies and publications and remains a point of reference. According to Nordhaus theory, the incumbent will always attempt to generate PBC, for political reasons, for the goal of wining elections. Therefore, his model is based on rational assumptions, and supports an opportunistic approach. In his work he introduced a theoretical model based on the assumptions that there is a Phillips Curve economy (trade-off between inflation and unemployment), voters are backward-looking (retrospective) with adaptive expectations and myopic, politicians are opportunistic and control a policy instrument, and the timing of elections is exogenously fixed. The implications of the early Nordhaus model are higher economic growth before elections as incumbent makes use of the short run Philips Curve and increased inflation after elections because of the fiscal and/or monetary expansion. After elections, the aggregate demand decreases which, in turn reduces output and the rate of inflation.

2.1 Recent Empirical Research and Evidence for PBC

One of the most interesting PBC research works was done by Alberto Alesina and Nouriel Roubini which were analyzed data of three recent decades of 18 OECD countries analyzing investigating the relation between main macroeconomic variables and elections results (Alesina, Roubini, 1992). According to this study, there was evidence of Opportunistic PBC only in some countries. Evidence of PBC was found in transition and less developed countries. Vladimir Gimpelsen made a research on the existence of PBC in Russia (2001), finding evidence in support of it. In his study, Asutay (2004) provided clear evidence for the presence of PBC in Turkey. The incumbent in Turkey has used fiscal and monetary policy instruments to create PBC in order to improve the chances of being reelected.

2.2 Endogenous versus Exogenous Set Election Dates

Nordhaus (1975) does not make a distinction between endogenous and exogenous election timing. Nevertheless, the way the election date is set may have a decisive effect on the predictability of the model. In some countries, the election timing is imposed constitutionally (ie. in US, Presidential Elections every 4 years). In the case of Albania (parliamentary republic), the constitution does not set the fix date of (parliamentary) elections. Although it imposes elections every four years, allows the incumbent to call for early elections. During the short history of its fragile democracy and market economy, starting from 1992, there has been only one case that early parliamentary elections were called (1997 crises). Thus, we may assume exogenous election date.

3. Searching for PBC in Albania

3.1 Theoretic modeling

We assume an Opportunistic Political Business Cycle (OPBC) model for Albania. There is a wide consensus in Albania that political parties follow an opportunistic pattern instead of ideological one. There have been cases in the Albanian short democratic history the right-wing governments promote leftist reforms and vice versa.

Inspired by the Nordhaus model, we seek to empirically find if there is PBC in Albania caused by opportunistic behavior of incumbent governments. We analyze the instruments available o incumbents for political manipulation of the economy and macroeconomic outcomes. We explain the methodology employed and the results

that we have achieved. In this section we briefly present the assumptions and implications of Nordhaus (1975) theoretic.

The assumptions underlying Nordhaus "Political Business Cycle" are as follows:

• *The expectations of the voters are adaptive*

In Nordhaus (1975) model is assumed that the expectations of the voters are adaptive. That means that the expectations of the voters regarding the government performance and the prospect of the economy are formed adaptively, taking the past values and the most recent values of economic variables as an index for government performance. That is formally represented as:

$$\upsilon_t = \pi_{t-1} + \lambda(\upsilon_{t-1} - \pi_{t-1}) \qquad 0 < \lambda < 1$$

where υ is the rate of expected inflation and π is the actual inflation rate

• *The economy can be represented by a Phillips Curve*

There is a general agreement among economists that within an economy there is a trade-off between the levels of unemployment the rate of inflation (although that may not always be the case). Thus, Nordhaus (1975) assumes the economy can be modeled by a Philips Curve. Taking into account the first assumption, Nordhaus employs an expectations-augmented version of the Phillips Curve. Hence, the dynamic economic system upon which Nordhaus (1975) builds his opportunistic political cycle model can formally be expressed as:

$$\begin{cases} \pi_t = f(u_t) + \gamma\upsilon_t \\ \upsilon_t = \pi_{t-1} + \lambda(\upsilon_{t-1} - \pi_{t-1}) \end{cases}$$

where u is the rate of unemployment.

• *Voters are myopic*

The model assumes that voters judge the incumbent by evaluating positively low unemployment and low inflation, but Nordhaus (1975) introduces the possibility that voters do not take simple averages of economic variables over the last electoral period, but have a decaying "memory" of past events. On election day, the memory of recent events looms larger than that of old (bad) times. In this case, than the aggregate vote function can be described as:

$$V_\theta = \int_0^\theta g(u_t \pi_t) e^{\mu t} dt$$

where $g(u_t \pi_t)$ is the vote function used in the static case or it can be seen as the preference function of the electorate $U = g(u_t, \pi_t)$ which depends on the macroeconomic situation in a certain time, μ is the rate of decay of voters' memories, and θ is the length of electoral period.

• *Politicians control a policy instrument*

To be able to manipulate the economy for electoral purposes, the government should have (some) control of policy instruments, such as fiscal and/or monetary policies, which have direct impact on macroeconomic outcomes that affect the individuals (i.e. unemployment). This can take place when such policies alter aggregate demand.

• *The timing of elections is exogenously fixed*

Nordhaus model is based on exogenously determined election timing, but as we have already seen in the previous chapter, this may not always be the case.

• *Politicians are opportunistic*

The assumption is that the main or only purpose of the government is re-election, and they use the means they have, including economic policy instruments, to be re-elected. Formally the behavior of opportunistic politicians trying to maximize the votes can be expressed as:

$$\max_{\{u_t, \pi_t\}} V_\theta(u_t, \pi_t) = \int_0^\theta g(u_t \pi_t) e^{\mu t} dt$$

subject to the economic constrains:

$$\begin{cases} \pi_t = f(u_t) + \gamma\upsilon_t \\ \upsilon_t = \pi_{t-1} + \lambda(\upsilon_{t-1} - \pi_{t-1}) \end{cases}$$

where $V_\theta(u_t, \pi_t)$ is the aggregate voting of the electorate expressed as a function of the macroeconomic situation. The system of constrains is the augmented Philips curve by which the economy is modeled.

Under these assumptions the implications of the Nordhaus model are as following:

1. All governments follow the same policy. They stimulate economic growth before the elections to make use of short run Philips Curve

2. Inflation will increase during and after election time because of economic expansion. Later, the inflation is reduced through contractionary policies.

In our paper, we provide empirical tests we made to the above mentioned assumption of the OPBC Nordhaus theoretic in the case of Albania.

3.2 VARIABLES AND DATA SPECIFICATIONS

Within the opportunistic PBC model framework we expect that the government may follow expansionary fiscal to reduce unemployment and increase output before/during elections, and as a result of this expansionary economic policy, the inflation may increase during/after elections. Naturally, we will investigate and analyze the economic policy instruments - literally fiscal instruments. We will statistically test for PBC in fiscal instruments. The set of all these variables (policy instruments and economic indicators) we study in this paper are as followong:

Fiscal instruments:
- Public investment expenditure
- Government expenditures on compensation of employers
- Unemployment insurance benefits
- Subsidies
- Social assistance
- Social insurance outlays

The data for the variables mentioned above are monthly time series beginning from January, 1998 to March, 2007, including 111 observations. The data were collected from the Ministry of Finance, (Central) Bank of Albania and Institute of Statistics (INSTAT).

The period before 1998 was not taken into consideration primary for two reasons. First, there is a lack of data and/or the quality is not reliable. Second, elections, economic, political and institutional framework followed a chaotic and abnormal pattern during those years and including the extreme year of 1997, might affect the nature of time series analyze. Also parliamentary elections taking place in 1996 where characterized by undemocratic practices and manipulation[1] – it was possible (easier) to win the elections by (police) force during those years, and therefore there was little (if at all) incentive for the incumbent to use macroeconomic polices to win elections. Thus we

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1. http://www.iri.org/europe/albania/pdfs/Albania%27s % 201996%20Parliamentary%20Elections.pdf

may conclude that the incumbent had less incentive to engage in PBC, while direct manipulation of elections was feasible.

During the analyzed period there took place two parliamentary elections, namely *June 24, 2001* and *July 3, 2005* and three local elections, namely *1 October 2000, 12 October 2003 18 February 2007*. The local elections were considered significant also because they were seen as a test for the participating political forces and as a referendum for the central government.

3.3 SPECIFICATIONS OF EMPIRICAL TESTS

Following the standard approach in this area we will apply the Intervention Analysis based on Box & Tiao methodology (1975). Basically the test proceeds by subjecting the quarterly seasonally adjusted time series of these variables to a Box-Tiao intervention analysis using the most appropriate autoregressive-moving average (ARIMA) for the social process and an intervention term; here the intervention term models the time distance to the election day.

A simple formal representation of the intervention analysis is:

$$z_t = \mu + I_t + N_t$$

where μ denotes the mean level, the term I_t denotes the intervention effect and N_t denotes the noise of the time series which is modeled using a suitable ARMA(p,q) model,

$$N_t = \phi_1 N_{t-1} + \ldots + \phi_p N_{t-p} + E_t - \theta_1 E_{t-1} + \ldots + \theta_p E_{t-q}$$

where E_t denotes an independent error sequence.

The simplest, which corresponds to the *t*-test in a non-time series setting, is the Intervention term/variable, which in this case takes the form of a Pulse Intervention, meaning an abrupt jump in the series and then a gradual decline at the normal level of the series. Formally the pulse intervention term can be expressed as:

$$I_t = \omega_0 \, P_t^{(T)} \text{ where } P_t^{(T)} \text{ is a pulse function,}$$

$$P_t^{(T)} = \begin{cases} 0 & t \neq T \\ 1 & t = T \end{cases}$$

The parameter ω_0 measures the change caused by the intervention and is estimated along with the ARIMA time series component. The estimation procedure provides an estimate of ω_0 and a

confidence interval for the parameter. The intervention variable I_t is expressed as a binary variable (dummy variable) indicating a specific time prior to election, as shown below. And the noise component of each specific dependent variable, N_t, is modeled by an appropriate ARIMA (p,d,q) found by following Box-Jenkins (BJ) Methodology (1970) as explained in more detail below.

We have created six political variables (I_t) to capture the impact of the election on fiscal. The first four political variables tent to capture the manipulation of the economic by expansion of fiscal policy instruments. The fifth and sixth political variables intent to catch the contraction of the fiscal policy instruments after elections.

Note: For convenience we have denote $P_t^{(I)}$ with PD standing for Political Dummy

$$PD\ 1 = \begin{cases} 1 - \text{for the three months prior to election} \\ 0 - \text{otherwise} \end{cases}$$

$$PD\ 2 = \begin{cases} 1 - \text{for the six months prior to election} \\ 0 - \text{otherwise} \end{cases}$$

$$PD\ 3 = \begin{cases} 1 - \text{for the nine months prior to election} \\ 0 - \text{otherwise} \end{cases}$$

$$PD\ 4 = \begin{cases} 1 - \text{for the twelve months prior to election} \\ 0 - \text{otherwise} \end{cases}$$

$$PD\ 5 = \begin{cases} 1 - \text{for the three months after the election} \\ 0 - \text{otherwise} \end{cases}$$

$$PD\ 6 = \begin{cases} 1 - \text{for the six months after the election} \\ 0 - \text{otherwise} \end{cases}$$

3.4 ESTIMATION OF THE EMPIRICAL MODEL

In the first stage, we have followed precisely the Box-Jenkins (BJ) Methodology (1970). The first step was removing the seasonal patterns form the time series. Next we carefully investigate on the stationary of the time series, as a necessity in further steps, by formally applying the Augmented Dickey-Fuller unit root test and also visually judging on the autocorrelation and partial autocorrelation function correlograms. To transform it in a stationary time series we tried the approach of an *n* order difference transformation on the original seasonal adjusted series. The time series obtained after the first order difference resulted to be stationary.

Based on Box-Tiao's (1975) intervention analysis, after ensuring for the stationarity, the time-series is modeled as *ARMA (Auto-Regressive Moving Averages)*. By modeling through ARMA it is possible to prove if elections can explain the changes taking place in public expenditures, in addition to the past history of the variable and the random error term. Hence, it is necessary the identification of ARMA (p,q) benchmark model. To find the "best" ARMA model for each time series we are straightforwardly based on Box-Jenkins methodology (1970). Hence, in order to model the fiscal variable time series as an ARMA we went thought an iterative process of identification, estimation and diagnostic checking of several ARMA models until we found the most plausible one, deemed as the "best" for each series. In the second stage we individually incorporated each of the political dummy variables in the ARMA model tentatively found in the first stage and re-estimated the whole model now with an additional incorporated *PDi* aiming at capturing the possible impact of elections on public expenditures and other fiscal instruments/variables and test whether elections has any impact on the econometric time-series utilized by this study in addition to variable's past value and its respective error term. Thus, the impact of elections is considered to be an intervention or shock in the determination of the value of the variable by forcing the value of the variable to shift during the intervention or shock periods. The statistical significance of the political dummy variables is tested using *t*-test. Consequently, if the coefficient of the political dummy variable is statistically significant and has the expected positive sign we can conclude that public expenditures increase before elections.

4.5 EMPIRICAL RESULTS OF PBC ANALYSES IN ALBANIA

We investigate the possible existence of PBC pattern in economic fiscal instruments.

In the context of specifications explained above, we model the monthly public expenditures by cat-

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2. The same general procedure is followed in all the other time series considered in this study. Further on we briefly report the results of this procedure referring as "the characteristics" of the time series.

egory, undertaken by the governments for 1998M1 - 2007M3 including the effect of the 2001 and 2005 parliamentary elections, and 2000, 2003, 2007 local elections. We aim at estimating the significance of the political variables so that we can explain the changes taking place in public expenditures prior to elections.

– Public investment expenditure in parliamentary (general) and local election

Since the time series of this instrument obviously showed a seasonal pattern, first we seasonally adjusted this time series. Then we investigated the stationarity of the series employing all the relevant tests (Augmented Dickey-Fuller unit root test, ACF, PACF). The seasonally adjusted figures of public investments are not differenced at any order as from all the tests it resulted to be a stationary time-series. Then we tentatively found "the best" ARMA model for this time series which is an ARMA(0,1) or a pure moving average with a lag one, MA(1)[2].

The *p*-values of the political dummy variables indicate the significance level of these variables. After we went through all the steps of the methodology as explained above, we had the following results. The estimated coefficients before preparliamentary election variables, PD1, PD2, PD3 and PD4 have a positive sign as a priory expected. PD1 is significant at 5 % strongly implying that the government do increase this instrument near-

Political dummy variable	Estimate	SE	t	Sig.
PD1**	1100.974	513.583	2.144	0.034
PD2	661.915	410.642	1.612	0.110
PD3	560.079	353.518	1.584	0.116
PD4*	574.314	318.535	1.803	0.074
PD5**	-399.683	172.636	-2.315	0.023
PD6**	-248.250	98.404	-2.523	0.013

* significant at 10 % level of confidence
** significant at 5 % level of confidence

Table 1: Public investment in parliamentary elections

Political dummy variable	Estimate	SE	t	Sig.
PD1	425.369	428.390	0.993	0.323
PD2**	795.179	334.050	2.380	0.019
PD3	481.406	300.553	1.602	0.112
PD4*	527.785	278.578	1.895	0.061
PD5	-685.113	466.679	-1.468	0.145
PD6	-390.292	392.728	-0.994	0.323

Table 2: Public investment in local elections

ly prior the general parliamentary elections. On the other hand, the post-election variables, PD5 and PD6, are significantly negative at 5 % level, implying that the government investment expenditure in the post-election period decrease to compensate for the increased spending of the pre-election period, as theory predicts.

The public investments in local elections follow a similar picture as in parliamentary ones. All the PD variables prior to elections have coefficients with a positive sign, as expected, with PD2 significant at 5% and PD4 at 10 %. The post-election variables, PD5 and PD6, have negative signs although not significant.

Public investment, in addition to the direct benefits to the potential voters, can be utilized to make dazzling campaigns from the incumbent (it is common to see ministers and mayors before elections inaugurating new roads, schools, etc.).

– Expenditure on compensation of employees in parliamentary and local election (Wages + Social insurance contributions)

The characteristics: Seasonally adjusted, first-order difference, best model ARMA(0,1).

Regarding the parliamentary elections all the pre-elections variable coefficients result with the expected (positive) sign and PD2, PD3, PD4 coefficients are statistically significant at 5% level.

The first post-elections variable's coefficient, PD5 is not negative, contrary to our expectations; however it marks an evident decrease in comparison to PD4. The second post-elections variable's coefficient PD6 is negative, as expected but not significant. These results imply that governments do manipulate compensation of employees' expenditure prior to parliamentary elections increasing them and they do cut them short after elections although for the second statement we are not statistically sure.

All the pre-local elections variables' coefficients result in opposite signs as expected. Furthermore three of them are significant. Consequently, we can conclude that the governments do not attempt to manipulate this instrument at local elections maybe because the incumbent does not consider the local elections as important as the parliamentary elections, or because they may focus more on

other instruments, which may be more efficient for local elections, such as public investment (i.e. constructing roads) in the targeted municipalities. Hence the behavior of incumbents in this case may be such that "they take some money from the compensation of employee's pool and put them to the public investment's pool".

– *Subsidies in parliamentary and local elections*

The characteristics: Seasonally adjusted, first-order difference, best model ARMA(0,1).

Most pre-elections variables' coefficients in both parliamentary and local have a positive sign however they are statistically insignificant implying that subsidies have not been used as a "tool of government" prior to both types of elections.

– *Unemployment insurance benefits in parliamentary and local elections*

The characteristics: Seasonally adjusted, first-order difference, best model ARMA(0,1).

Regarding parliamentary elections almost all the pre and post-elections coefficients have the expected sign but only PD6 is significant at 10%. Consequently, we can not say anything with certainty regarding the opportunistic manipulation of this instrument.

Whereas in local elections appears another view regarding the unemployment insurance benefits. The pre-elections coefficients here are with the expected sign and significant. Two of them, PD2 and PD4 are significant at 5% level. The post-elections variable coefficients, PD5 and PD6, are contrary to theoretic expectations; since they are positive (PD5 is significant at 5%). We can conclude that the governments do increase this kind of expenditures prior to local elections in order to attract the voters, and naturally may find it difficult/impossible to reduce them back to the previous levels.

– *Social assistance in parliamentary and local elections*

The characteristics: Seasonally adjusted, first-order difference, best model: ARMA(0,1).

The econometric analyses of the social assistance variable in both types of elections follow a similar pattern with the unemployment insurance benefits variable. There is no statistically significant increase in parliamentary elections while there is statistically significant increase in local ones. The post-elections variables coefficients, PD5 and PD6, appear with the negative sign as predicted by theory, however significant. So we can conclude the variables of "Social assistance" have been used from governments as a tool of electorate manipulation, as in the case of "Unemployment insurance benefits".

– *Deficit in parliamentary and local elections*

The characteristics: Seasonally adjusted, first-order difference, best model: ARMA(0,1)

In parliamentary elections, the pre-elections variable coefficients are with a positive sign, as expected, but statistically insignificant. In local elections, these variable coefficients are with a negative sign, opposite to what was expected. This makes us conclude that governments do not engage significantly in higher deficits prior to general or local elections. One explanation for this attitude may be the restrictions posed by the IMF. Therefore we may conclude, that although the governments significantly increase some of the expenditure items in elections time, they are discrete regarding deficit. Or, the increased expenditures may be covered by higher revenues (i.e. tax collections) before elections. An interesting result that needs explanations is the fact that PD5 and PD6 result to be with a positive sign and significant at 5% after the general elections.

5. CONCLUSIONS

In our search for PBC in Albania, we found convincing evidence that the incumbent manipulates the economy for electoral purposes. There is a statistically significant increase of public expenditures before elections, in an attempt to improve the overall economic situation, through public investments, and directly please the voters through increased transfers to the population, such as unemployment and social insurance benefits. There is a wide consensus that PBC lead to inefficient outcomes, and therefore should be avoided. Therefore, conducting research on PBC in Albania, and publishing the results, can contribute to raising the awareness of the PBC existence, related disadvantages and importance of avoiding this phenomenon, while drawing attention for further

research in this field.

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