

# Political cycles in income from privatization

## The case of Albania

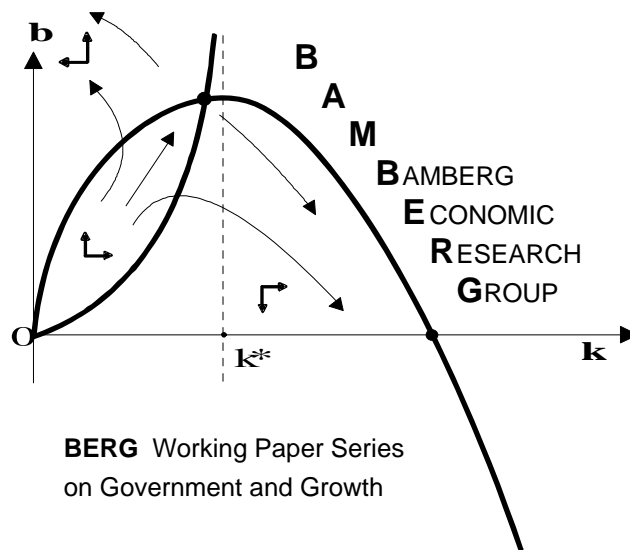
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# **POLITICAL CYCLES IN INCOME FROM PRIVATIZATION THE CASE OF ALBANIA**

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## **Abstract**

The phenomenon of manipulation of the economy by the incumbent for electoral purpose is called Political Business Cycles (PBC). Using policy control economic instruments, such as fiscal and monetary instruments, governments may manipulate the economy to gain electoral advantage by producing growth and decreasing unemployment before elections.

Earlier research on PBC in Albania found clear evidence of fiscal expansion before elections. In addition to increased income from taxes and borrowing, another source of financing the increased fiscal expansion in transition countries may be income from privatization, which is also the object of the analysis of this paper. In our analysis we apply standard econometric approach, used widely for research related to PBC. We test if income from privatization increases before elections.

We find statistically significant increase of income from privatization before general (parliamentary) elections, which may lead us to conclude that one of the reasons may be to finance increased expenditures before elections. Another motivation, behind this behavior of the incumbent, may be rent – seeking. These results are of particular interest, as it is for the first time that income from privatization is analyzed in conjunction with PBC.

**Keywords:** Albania, Political Business Cycle, Privatization

**JEL Classification:** E32, O23, H61



# Political Cycles in Income from Privatization

## The case of Albania

DRINI IMAMI, ENDRIT LAMI AND HOLGER KÄCHELEIN

### 1. Introduction

Sometimes it is called “Election years economics”: The long run interest of incumbents are largely dominated by the view on the next election, hence, they start to cycle around the question how to be reelected as a wolf does with the pray. There is a common sense that the economic performance before elections, determines, to a large extent the likelihood of reelection for the incumbent, and the other way around (Tibbits, 1931). Hence, economic factors influence political factors but also the political factors may influence economic ones – governments may use all means they possess, including economic policy instruments, to enhance the chances of reelections. Therefore governments may engage in expansionary economic policies prior elections, increasing output thereby trying to decreasing unemployment, in order to please the voters, creating this way Political Business Cycles (PBC).

Over the last decades, there has been plenty of research and publications on PBC, aiming for analyzing and explaining the use of fiscal and monetary instruments by the incumbent to stimulate economic performance before elections. The government may behave opportunistically and inefficiently prior to elections engaging in expansionary economic policies, to increase the output and decrease unemployment, in order to please the voters, however, creating Political Budget Cycles and maybe also Political Business Cycles. The PBC model of Nordhaus (1975) opened the way for many following empirical and theoretical studies and publications and remains a point of reference. While initially, the focus of PBC related empirical research was focused on Western Countries, over the last decade there is growing interest of research on PBC in developing and/or transition countries, whose institutions, economies and societies differ significantly from those of developed/western countries. As shown by Brender and Dazen (2005) and Shi and Svensson (2006), new democracies are particularly vulnerable for political budget

cycles. While Alt and Lassen (2006) show the relevance of transparency, Brender and Dazen (2005) also pronounce the lack of experience that voters have in new democracies regarding the existence of political fiscal cycles. Meanwhile, Shi and Svensson (2006) see beside the aspect of information asymmetry also the incumbents' rents out of staying in power as a relevant issue. Evidence of PBC was also found in several less developed and new democratic countries. Gimpelsen (2001) proved the existence of PBC in Russia, and Asutay (2004) provided evidence for the presence of PBC in Turkey. Meanwhile Hallenberg and Souza (2002) prove the existence of PBC of EU Accession Countries, in both forms, fiscal and monetary instruments (the later, was more common in countries with low level of independence of the Central Banks).

Recently, there has been growing interest for research on PBC in Albania, also looking into phenomena typical for transition economies (Imami and Lami, 2006; Imami and Lami 2008; Lami, Imami and Kächelein 2008; Kächelein, Imami and Lami 2008). According to this previous research, there is clear evidence of Political Budget Cycles, namely increased public investments before elections (Imami and Lami, 2006). One of the sources of financing the state budget in transition countries, characterized by a massive privatization process, may be income from privatization. That can also be the case if expenditures increase in conjunction with elections. In this context, our hypothesis is that the incumbent may engage more intensively in privatizations before elections, aiming at increasing public revenues to sustain increased expenditures, in the context of Political Budget Cycles. Hence, this paper focuses less on the existence of Political Budget Cycles or Political Business Cycles per se, but rather on incumbents potentially use of public assets through privatization to finance such election related cycles.

In the upcoming chapter we will provide a short overview of the privatization process in Albania as a background of the hypothesis. Chapter three provides an overview about the method and data used while chapter four presents the main findings and chapter five concludes the paper.

## **2. Searching for cycles in income from privatization**

### **2.1 Background of the hypothesis**

In Albania, the privatization process started in the early 1990', in the context of the transition from planned economy to market economy. Large-scale privatization started in 1992, as part of a privatization program guided by the IMF and the World Bank, whose result was that the economy was largely in private hands by 1996 (MIGA, 2002) . The privatization process was put in halt during the unrest of 1997, but resumed again in the following years. Based on the EBRD index, small scale privatization can be seen as finalized since 1995; meanwhile large scale privatization persisted on a moderate level until end of the last century (EBRD 2004: p.92, 2005: p. 96).

During 2000', there were privatized the banking sector (currently all secondary level banks are in private hands), Albtelecom (the landline monopoly company), OSSH (the Albanian electricity distributor), while the government is committed to sell its remaining share in Albtelecom and OSSH, and also intends to privatize INSIG a leading insurance company (Prifti 2010). Again based on the EBRD index, large scale privatization improved mainly in the last years as 2008-2010. (EBRD 2009: p.134, 2010: p. 4)

Privatization processes and agencies are perceived as highly corrupted in Albania (Muço, 2000). There are indications, that privatization is often used in Albania (but also in other transition countries) to finance increased expenditures, also in conjunction to elections. Some of the decisions on (partial or full) privatizations of key publicly owned company, as telecommunications and energy, were taken months before elections. This phenomenon has taken place under different governments, and often such decisions were deemed by the opposition, media and economists as related to the elections.<sup>1</sup>

In this paper, we test, for the hypothesis, that the incumbent engages more intensively in privatizations before elections, aiming at increasing public revenues to finance increased public expenditures before elections. Raising revenues as a motivation for privatization is widely discussed in the related literature of privatization. Vickers and Yarrow (1991, p.118-19) pronounce the motivation of less developed countries to privatize for revenue purposes as they

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<sup>1</sup> As a tentative background information see for example Alsat (2009), Gazeta Shqiptare (2008), Mitrovicapress (2008) and VoA (2005).

may be restraint on the bond market due to inflation risks. Nevertheless, this argument focuses mainly on the question of market access to bonds. Politicians are also constraint in other ways as public perception and restraints placed by other lenders (e.g. IMF).

### 3. Method and Data

#### 3.1 Specifications of Variables, Data and empirical tests

The time series of income from privatization is monthly, spanning from M1-1999 to M10-2009 (from January 1999 to October 2009), adding up to 130 observations. There are three parliamentary elections taking place in this period, namely June 24, 2001, July 3, 2005 and June 28, 2009.

Following the standard approach in this area,<sup>2</sup> we will apply the Intervention Analysis based on Box and Tiao (1975), a methodology for constructing a statistical model in our study. In this paper we test the hypothesis of the existence of changes in the income from privatization before elections. Basically the test proceeds by subjecting the monthly seasonally adjusted time series of this variable 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:

$$z_t = \sum_{i=1}^s a_i z_{t-i} + b_0 + \omega_t PD_t + \varepsilon_t$$

where  $z$  denotes the revenues out of privatization, modelled using a suitable ARMA(p,q) model and  $PD_t$  a political dummy variable specified later on. The parameter  $\omega_0$  measures the change caused by the intervention as modelled by the political dummy variable and is estimated along with the ARIMA time series component. The estimation procedure provides an estimate of  $\omega_0$  and a confidence interval for the parameter. We have created two kinds of political dummy variables to capture the impact of the elections on privatization revenues, namely cumulative dummy and discrete dummy.

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<sup>2</sup> See for example McCallum (1978), Hibbs (1977), Alesina and Sachs (1988), Alesina and Roubini (1992). Hibbs (1987) offers a good introduction to the Box-Tiao technique.



We have 12 cumulative  $t = -8, -7, \dots, -1, 1, 2, \dots, 4$  election political dummies ( $PD_t$ ) and each of them is defined as:

$$PD_t = \begin{cases} 1 - \text{for the } -t \text{ quarters prior to election} \\ 0 - \text{otherwise} \end{cases}, t \in [-8; -1]$$

$$PD_t = \begin{cases} 1 - \text{for the } t \text{ quarters after election} \\ 0 - \text{otherwise} \end{cases}, t \in [1; 4]$$

In the same manner we defined eight discrete elections dummy variables, covering only the quarterly and not the cumulative effect of the two years before the election and the same for four discrete post election dummy variables. As in case of the first and the last event, the election day was at the end of the quarter, the quarter was counted as prior, while in case of the second it is take as after election.

### 3.2 Estimation of the empirical model

In the first stage, we have followed precisely the Box-Jenkins (BJ) Methodology (1970). In the beginning of the process, 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. The original time series of privatization receipts results stationary based on the conventional tests (ACF, PACF correlogram and Augmented Dickey Fuller test). 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 household 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 analyzed 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<sup>3</sup>. The most appropriate model tentatively found was the one with just only one moving average term with a lag four.

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<sup>3</sup> Gujarati (2003) makes a simple and clear explanation of the Box – Jenkins Methodology.

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  $PD_t$  aiming at capturing the possible impact of elections on retail sales 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 analyzed 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 income from privatization increase before elections.

#### 4. Results and Discussions

Following the Box Jenkins methodology, the original series of the privatization receipts behaves almost as a white noise with ACF and PACF correlograms indicating for serial autocorrelations only at seasonal lags of 16. After testing and comparing several models the one with just a monthly seasonal term MA(16) seems to be the most appropriate model. The residuals of this model behave randomly and the model manifests an acceptable fit. The estimated equations of privatization are presented below:

$$PRIREC = 683.5 + 0.544*MA(16)$$

$$PRIRECAVIND = 107.1 + 0.544*MA(16)$$

In addition to the original dependant variable, privatization receipts in millions of Lek<sup>4</sup> (PRIREC), we define another one. In order to interpret our results in relative terms and to have a better measurement of the amplitude of the changes in the variable of interest before the elections, we apply also a monthly index for the privatization receipts with the monthly average serving as a base (PRIRECAVEIND). The same econometrical techniques and analysis are used for both the variables of interest and the same ARIMA model fits best in both cases.

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<sup>4</sup> 100 ALL (Albanian Lek) equals approximately 1 US\$.

**Table 1. Empirical Results: Cumulative Dummy Variables**

$PD_t$	Privatization receipts (absolute) <i>PRIREC</i>	Privatization receipts (relative) <i>PRIRECAVEIND</i>
-8	791.015 ***	124.000 ***
-7	700.781 ***	109.855 ***
-6	820.235 ***	128.581 ***
-5	1027.702 ***	161.104 ***
-4	1214.730 ***	190.423 ***
-3	1144.846 ***	179.468 ***
-2	1158.374 ***	181.587 ***
-1	1609.617 ***	252.327 ***
1	119.889	18.792
2	-384.630	-60.294
3	-430.096	-67.421
4	-573.419 *	-89.889 *

\* implies that the result is significant at a 10%, \*\* at a 5 % level and \*\*\* at 1 % percent level.

Table 1 summarizes the main findings concerning the cumulative dummy variables. Prior to elections, the estimated coefficients of all cumulative political dummy variables are of positive sign and significant at least at 5 percent level. This implies for a “manipulative” behavior of the incumbent to have higher privatizations receipts before the election day. The estimated coefficient for all the cumulative dummy variables, ( $PD_{-1}, PD_{-2}, \dots, PD_{-8}$ ) show a statistically significant average increase from 700 to 1,600 million Lek per each month before the elections (PRIREC), or speaking in relative terms, an average increase from 10% to 2.5 times more (PRIRECAVEIND) than the global time series average. The coefficient is higher for  $PD_{-1}$  and follows a decreasing trend toward the level of the eighth dummy variable ( $PD_{-8}$ ) implying for a stronger “manipulative” behavior of the incumbent as the elections come closer.

**Table 2. Empirical Results: Discrete Dummy Variables**

$PD_t d$	Privatization receipts (absolute) <i>PRIREC</i>	Privatization receipts (relative) <i>PRIECAVEIND</i>
-8	375.765	58.902
-7	-573.717	-89.941
-6	-718.089	-112.569
-5	150.348	23.569
-4	1135.981 **	178.076 **
-3	949.114 *	148.785 *
-2	610.479	95.698
-1	1609.617 ***	252.327 ***
1	119.889	18.7927
2	-944.026	-147.984
3	-489.259	-76.697
4	-940.798	-147.479

\* implies that the result is significant at a 10%, \*\* at a 5 % level and \*\*\* at 1 % percent level.

We try to test more directly the intensification of this behavior by using the discrete dummy variables  $PD_t d$  (Table 2). As a matter of fact, it results that the privatizations receipts are significantly higher during one year before the elections, ranging from 1 to 2.5 times more than the mean of the whole time span and not significant for the period of more than one year before the elections. That drives to the implication that the incumbent does its best to have much more receipts from privatization during the last year to elections which is fully consistent with the opportunist theory of Nordhaus (1975). There is evidence of an intensifying pattern within the last year to election as  $PD_{-1}d$  is evidently higher than  $PD_{-3}d$  and  $PD_{-4}d$ , although the value does not increase monotonically for all the  $PD_t d$ <sup>5</sup>.

The econometrical results show that the huge increase in the privatizations receipts during one year prior to election is immediately vanished after the elections (table 1 and 2), strengthening the argument for an opportunistic behavior of the incumbent. Almost all of the coefficients of the dummy variables capturing the time after the election day are not statistically significant. The coefficient of  $PD_4$ , which captures one year after the elections, is significant at 10% level and has a negative sign for both of the variables used, strengthening the argument.

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<sup>5</sup>  $PD_{-3}d$  is lower than  $PD_{-4}d$  and  $PD_{-2}d$  is not statistically significant in the conventional levels.

The missing of a clear pattern after the election may also result out of the impossibility of perfect timing in revenues out of privatization. Although the government may try to increase the revenues before the elections, payments may be done with a certain unexpected delay, implying a less clear path after the elections.

## **5. CONCLUSIONS**

Transition countries are characterized by massive privatizations during the first decade(s) of the transition. Privatization, in addition of enabling the improvement of efficiency of different formerly publicly owned economic units, may serve as a source of income for the economy. Thus, it may be assumed that when income is needed by the incumbent, to finance certain public expenditures, than there is a stronger incentive to engage in privatization. Typical case when public investments and other types of public expenditures increase is elections. As predicted by PBC theory, incumbent may engage in fiscal expansion before elections, to increase likelihood of reelections, which has been found true for Albania in our previous research. We find statistically significant increase of income from privatization before elections, which leads us to conclude that one of the reasons is to finance increased expenditures before elections. Other reasons, such as corruption, may be behind such behavior, but is difficult or impossible to measure and control for the “true” motivations. These results are of particular interest, as it is for the first time that income from privatization is analyzed in conjunction with PBC, and therefore its implications and interest in the context of the PBC related research agenda goes beyond the case of Albania.

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