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Fuelling political fiscal cycles by opportunistic privatization in transition economies: The case of Albania☆

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ABSTRACT

This paper provides insight into the widely studied phenomenon of political business cycles by analyzing the impact of elections on the privatization of public assets in transition economies. The hypothesis of this article is that incumbents opportunistically schedule privatizations to take place close to the next elections in order to finance higher public expenditures, aiming to please voters and increase the chances of being re-elected, particularly when their ability to borrow is constrained by high public debt. We consider the case of Albania, which is a transition and small open economy with a relatively high public debt. We find significant increases of income from privatization before elections. Despite often being trumpeted in the context of structural reforms, the intentional privatization of public assets in times of election is most likely a sub-optimal choice for the public interest. Studying the impact of elections on the privatization of public assets could be of interest to other transition economies facing fiscal constraints.

1. Introduction

Sometimes it is called “Election year economics”: The long-run interests of incumbents are largely dominated by immediate re-election concerns. There is a common perception that the economic performance before elections to a large extent determines the likelihood of re-election for the incumbent and the other way around (Tibbitts, 1931). Hence, economic factors influence political factors, but political factors may also influence economic ones—governments may use all means at their disposal, including economic policy instruments, to enhance their chances of re-election.

Over the last decades, there has been plenty of research into the use of fiscal and monetary instruments controlled by incumbents to stimulate economic performance before elections. The government may behave opportunistically and inefficiently prior to elections, engaging in expansionary economic policies to increase output and decrease unemployment in order to please voters. This incumbents’ behavior often induces political budget cycles and maybe also political business

☆ *Disclaimer*: the views expressed herein are solely those of the authors and do not reflect the views of the Ministry of Finance in Albania.

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cycles (PBC). The PBC model of Nordhaus (1975) paved the way for many subsequent empirical and theoretical studies and publications and remains a point of reference. While initially the focus of PBC-related empirical research was on developed countries, over the last decade there has been a growing interest in research on PBC in developing and/or transition countries, whose institutions, economies and societies differ significantly from the developed ones. As shown by Brender and Drazen (2005) and Shi and Svensson (2006), new democracies are particularly vulnerable to political budget cycles. While Alt and Lassen (2006) show the relevance of transparency, Brender and Drazen (2005) also emphasize the lack of experience that voters in new democracies have regarding the existence of political fiscal cycles. Treisman and Gimpelson (2001) provided evidence on the existence of PBC in Russia, as did Asutay (2004) for the case of Turkey, while Lami and Imami (2014) found evidence of political fiscal cycles in Hungary, to name a few. Meanwhile, Hallenberg and Souza (2002) argue for the existence of PBC in EU accession countries related to both fiscal and monetary policies, with the latter being more common in countries with central banks with low levels of independence.

Recently, there has been a growing research interest in PBC and other related phenomena that could be typical for other transition economies in Albania. Imami and Lami (2006) found evidence of election-related influence on several fiscal policy instruments, with a clear expansion of some of the main items in the budget expenditures before elections (e.g. capital expenditures and compensation of employees). Sometimes incumbents use means other than instruments of economic policies. Kächelein et al. (2011) show how publicly supplied goods (the supply of electricity) in Albania has been opportunistically manipulated by incumbents for electoral gains. However, despite their opportunistic behavior, the incumbents might not be able to affect the final outcomes the way they intended. Lami et al. (2014) pick the case of Albania to argue why, particularly in new democracies, although incumbents try to engineer economic expansion before elections (higher output and lower unemployment), they might not succeed due to the expectation-related behavior of private economic agents, which offsets the transmission of opportunistic fiscal policies into macroeconomic outcomes.

One of the sources of financing the state budget in transition countries, characterized by a massive privatization process on the one hand and by limited market financing means on the other, may be income from privatization. The higher the budget expenditures and deficits, the higher the financing needs. 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 line with the political budget cycles theory and evidence. Hence, this paper focuses less on the existence of political budget cycles or political business cycles per se, but rather on incumbents' potential use of public assets to finance such election-related cycles through privatization. After some clear cases of completely inefficient privatizations in Albania – most notably the electricity distribution company and the oil refinery company, both with a strategic status as well as monopolistic power – the implications on public welfare are immense should this hypothesis hold, as privatizations are neither implemented according to what could be optimal nor to the maximum benefit of society.

In the next section, we provide an overview of the privatization process in Albania and explain the background of the hypothesis of this paper. Section three explains the methods, data and procedures. Section four presents the main findings and Section five concludes.

2. Election-related cycles in income from privatization

2.1. Overview of the privatization process in Albania

Albania began the transition from a planned to a free market economy in the early 1990s. All large and small enterprises as well as all land were owned by the state before transition. Therefore, private ownership, including land reform and state enterprise privatization, was a top priority for economic reform during early transition.

Large-scale privatization started in 1992 as part of a program guided by the IMF and the World Bank. The Ministry of Privatization and the National Agency of Privatization were responsible for supplying, projecting and implementing procedures for the documentation of enterprises and the organization of auctions. In the early 1990s, compensation bonds and privatization vouchers were issued, which were distributed to the whole adult population of Albania. These were used to buy shares in the commercial companies to be privatized. The Bank of Albania was responsible for issuing vouchers according to the requirements set by the Ministry of Finance. From their introduction, the value of the vouchers dropped continuously. During the social unrest of 1997 their real value went down to 1.6% of their face value, while there was very limited trade of such vouchers (Mema and Novrus, 2001). The use of vouchers was not successful—during the privatization process only a small share (21.25%) of the distributed vouchers was used (Mema and Sallaku, 2003).

Despite the weak use of the voucher system, privatization proceeded fast and the economy was largely in private hands by 1996.[1] While privatization halted during the unrest of 1997, it resumed again in the following years. Based on the EBRD index, small-scale privatization basically ended in 1995, though large-scale privatization persisted at a moderate level until the end of the last century.[2]

During the 2000s, the banking sector was privatized entirely (currently all secondary level banks are in private hands). The landline company, a monopoly at that time (Albtelecom), the Albanian electricity distributor (OSSH), and the only oil

[1] MIGA—Privatization in Albania, 2002 (MIGA, 2002).
[2] EBRD—Transition report 2004, p.92; 2005, p. 96 (EBRD, 2004, 2005).

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Table 1
The largest privatizations in Albania.

Public company/asset privatised	Sold shares	Selling value	Date of transaction	Succeeding Elections
Albanian Mobile Communication (AMC) p.l.c.	85%	86 million USD	August, 2000	June, 2001
Albanian Savings Bank	100%	126 million USD	December, 2004	July, 2005
Albtelecom p.l.c	76%	120 million Euro	September, 2007	June, 2009
Oil Refinery (ARMO) p.l.c	85%	128 million Euro	January, 2009	June, 2009
Electricity Distribution (OSSH) p.l.c	76%	102 million Euro	April, 2009	June, 2009
Albanian Mobile Communication (AMC) p.l.c.	15%	48 million Euro	June, 2009	June, 2009
Hydropower HEC Bistrica 1 & 2 p.l.c	100%	52 million Euro	May, 2013	June, 2013
Hydropower HEC Ulez-Shkopet p.l.c	100%	58 million Euro	May, 2013	June, 2013

Source: Ministry of Economy.

refinery in the country (ARMO) were also among the large-scale privatizations that occurred during this period. In 2013, three medium-size hydropower plants (HEC Bistrica 1, 2 and HEC Ulëz Shkotep) were privatized and there were unsuccessful attempts to privatize the largest extracting oil company in the country, Albpetrol, in the end of 2012 and the beginning of 2013. The government is actually planning to sell its remaining share in Albtelecom and ARMO, respectively 17% and 15%, and also intends to privatize INSIG, a leading insurance company.[3] Indeed, according to the EBRD index, large-scale privatization has improved in recent years.[4] However, in 2014 the electricity distribution company (OSSH) was re-nationalized. This was mainly due to bad management from the private owner, who took advantage of unclear contractual obligations in the privatization, and the inability of the government to audit its performance, which eventually led to a series of disputes between the government and the private owner.

The privatization process and the agencies implementing it in Albania are perceived as highly corrupt.[5] There are indications that privatization in Albania, as well as in other transitional countries, is often used to finance increased expenditures in conjunction with elections. Decisions to partially or fully privatize some of Albania's key state-owned enterprises, such as telecommunications and energy, were made just months before elections. This phenomenon has taken place under different governments, and often such decisions were deemed to be related to the elections by the opposition, media and economists.[6] Table 1 lists the largest privatizations in Albania during transition, their selling value and the month when the money was cashed into the state budget. It also lists the parliamentary elections following each of these large privatizations in order to give a first flavor of our hypothesis, which is discussed in the next sub-section.

2.2. Background of the hypothesis

Raising revenues as a motivation for privatization is widely discussed in the literature on privatization. Vickers and Yarrow (1991, p. 118–19) emphasise the motivation of less developed countries to privatize for revenue purposes as they may be constrained on the bond market due to inflation risks. This argument focuses mainly on the question of market access to bonds. Politicians are constrained by public perception and lender restraints. The latter especially holds for Albania, as the country requested financial support from the IMF since the early stages of transition. The introduction of strict financial discipline, including a remarkable reduction in public debt, was part of the prerequisites.[7]

As discussed by Mackenzie (1998), under normal conditions proceeds from privatizations that are used for additional investments have an expansionary impact in the short run. Hence, privatization as a financial means for pre-election expansionary policies should not necessarily be counterproductive in the sense of government policies. In budgetary terms, privatizations generate additional income for the government to finance increased public expenditure before elections. There is clear evidence of political budget cycles, namely increased public expenditures before elections (Imami and Lami, 2006), and it is rational to expect that privatization may be used in this context.

As stated at the beginning, incumbents try to reduce unemployment. Hence, we also have to take into account the impact of privatization on employment. Only if there is no significant negative correlation between privatizations and employment could privatization be an adequate means for the politicians to reach their re-election objective. Indeed, empirical results showed a negative impact of privatization on current unemployment rates (Barnett, 2000; Katsoulakos and Likoyanni, 2002; Arin and Ulubaşoğlu, 2009). Katsoulakos and Likoyanni (2002) distinguished the effects of privatization announcements, which lead to an increase in unemployment before privatization due to restructuring. Meanwhile, when privatization takes place, additional activities such as investments are associated with an increase in labour demand. Hence, if the privatization takes place close to the election, while it is announced at an earlier stage, it could be an instrument to reach the incumbents'

[3] Council of Ministers of Albania—Decision No. 71, January 2015, National Economic Reform Program of Albania 2015, p.56 (Council of Ministers of Albania, 2015).
[4] EBRD Transition report 2009, p.134, 2010, p. 4 (EBRD, 2009, 2010).
[5] See Muço (2000).
[6] See, for example, Alsat (2009),Gazeta Shqiptare (2008), Mitrovicapress (2008) and VOA (2005).
[7] For a more detailed overview of the restraints on the public deficit over the relevant years, see the Letters of Memorandum in IMF (2011).

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objectives of re-election, and not only a means to finance an expansionary policy. However, this additional aspect has to be treated with caution, as Mickiewicz et al. (2005) did not find a significant effect on employment in the first three years after privatization.[8]

The hypothesis of this article is that incumbents opportunistically schedule privatizations to take place close to the next elections in order to finance higher public expenditures, aiming to please voters and increase the chances of being re-elected, particularly when their ability to borrow is constrained by high public debt. We consider the case of Albania, which is a transition and small open economy with a relatively high public debt. Despite often being trumpeted in the context of structural reforms and, indeed, ultimately being a means of reducing corruption in transition economies (Kaufmann and Siegelbaum, 1997), the intentional privatization of public assets in times of election could be a sub-optimal choice for the public interest.

Brada and Ma (2007) argue that policies to privatize public assets are rarely now or never propositions; in most cases, it is feasible to delay action and wait for new information. They claim that there may be costs to delaying privatization, but there may also be benefits, especially as new information on surges in the market's enthusiasm for the sectors in which SOEs are located becomes available. In contrast, as is clearly shown in this paper, the timing of privatizations in Albania has largely been systematically concentrated within a narrow time frame preceding elections and no cost-benefit analyses were undertaken concerning the optimal timing of when to privatize certain public assets, particularly large ones. Furthermore, most of the pre-election periods in Albania, where most of the privatizations occurred, coincided with serious negative developments in international markets and investor mood, such as the "dot-com" bubble in March 2000, the global economic slowdown in the second half of 2004, the great recession from the end of 2007 until mid 2009, and the Greek sovereign debt crisis in March 2012. These known facts strengthen the grounds of our hypothesis.

The hypothesis of this study that incumbents intend to use privatization revenues to finance opportunistic expansionary public expenditure before elections is in line with broader findings by Goel and Budak (2006) that, generally speaking, in transition countries higher budget deficits seem to induce large-scale privatizations. Furthermore, many state-owned companies that were privatized in Albania during the transition were not operational or were run inefficiently with low employment and financial remuneration capacities. Thus, there was no strong resentment against privatization in general in the population, and therefore privatizations taking place before elections have not been perceived as a major negative election event by the average voters.

As shown by Bortolotti et al. (2003), privatization revenues are strongly shaped by electoral cycles. However, their analysis explicitly excludes the case of Eastern Europe as a "unique phenomenon" in the privatization process. Furthermore, it remains unclear which concepts of politics are prevalent in transition countries. Previous research has associated privatization with partisan politics; for example, Biais and Perotti (2002) develop a partisan model of privatization and Arin and Ulubaşoğlu (2009) and Potrafke (2010) provide empirical support for the theory that privatization is systematically driven by right-wing parties in office. However, turning to Central and Eastern European Countries, the partisan model is only supported for the first years of transition, as shown by Bjørnskov and Potrafke (2011). Furthermore, they conclude that after the initial phase left- and right-wing politics converged. Hence, opportunistic politics may better reflect the circumstances in South-Eastern Europe.

An example for such an absence of partisan politics is the case of Albania, where ideological differences can hardly be observed between the two main political parties – the Socialist Party (SP – the so-called leftist) and the Democratic Party (DP – the so-called right wing). Instead, Albanian post-communist political and governmental history has been characterized by opportunism. The left-wing SP often embraced typical right-wing reforms and continued to follow the same pattern of neoliberal economic reforms and the same approach towards privatization as the right-wing DP (Kajsiu, 2008), while the economically vulnerable social categories (i.e. rural population, pensioners) have often been the main focus of the DP.

3. Data and method

We statistically test the hypothesis that the revenues from privatizing public assets increase significantly before parliamentary elections in Albania. Monthly time series data on privatization receipts of the Albanian general government budget, which were sourced from the Ministry of Finance of Albania, were employed to test this hypothesis. In addition to providing more robust statistical results due to a higher number of observations (compared to the analysis of annual data), using monthly data most importantly allows for the inclusion of any inter-annual election effects. Empirical analysis based on annual data has been one serious drawback of many empirical studies analyzing several aspects of PBC both in developed and developing countries. Streb et al. (2012) argue that the failure of many studies to show econometrically significant opportunistic PBC is due to their reliance on annual data. They conduct econometric analyses on both quarterly and annual panel data for a group of Latin American and OECD countries and conclude that the annual data strongly underestimates the presence of political budgetary cycles, particularly when pre-electoral expansion is followed by post-electoral contraction. Akhmedov and Zhuravskaya (2004) are even more critical of time series with inter-annual frequency. In their monthly panel data study investigating opportunistic PBC in a set of regions in Russia, they argue that even analyses based on quarterly data tend to underestimate PBC. In the case of Russia, they find that it is only possible to correctly estimate the magnitude and

[8] For an overview of the empirical literature concerning the economic effects of privatization, see Estrin et al. (2009).

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timing of the generally short-lived but sizable election-related cycles with monthly frequency data. However, one of the potential problems associated with monthly time series (or generally with any inter-annual frequency data) is the possible existence of seasonality patterns, which could distort the results if not addressed. We adequately addressed this potential drawback, as explained below.

The available time series of revenues from privatizations comprises 246 observations from January 1995 to June 2015. There are no monthly data available before January 1995. The data are denominated in millions of Albanian Lek (ALL).[9] In order to factor out exchange rate effects, we deflated the original time series by a constant base nominal exchange rate index, since the selling transactions for most of the privatizations in Albania, particularly the largest ones, were made in foreign currencies. We constructed an index for the nominal exchange rate, setting December 2011 as the constant base of the index. Since the physical introduction of the Euro in January 2002, all privatizations of large public assets have been made in Euro. Therefore, the index was based on the Lek/USD rate until January 2002 and on the Lek/Euro exchange rate from February 2002 until September 2014. The time series on the nominal exchange rate were sourced from the Bank of Albania.

Six parliamentary elections were held during this period. Their expected effect on privatization receipts is statistically captured by some deliberately constructed dummy variables, as explained below. Parliamentary elections were held on 25th of May 1996; 29th of June 1997 (early elections); 24th of June 2001; 3rd of July 2005; 8th of June 2009; and 23rd of June 2013. The next parliamentary elections are scheduled to take place around June 2017.

We test the hypothesis of this paper by utilizing intervention analysis, which is based on the methodology of Box and Tiao (1975). A similar econometric approach has been applied in several similar works on PBC.[10] Basically, the test proceeds by modeling the variable of interest (privatization receipts) through an appropriate autoregressive moving average model *(ARMA)* and an intervention term. The intervention term models the time distance to Election Day and captures any potential effects of elections on the variable of interest. The intervention term which models "the event" – the approaching elections in this case – could be considered as an explanatory variable of the dynamics of the dependent variable, in addition to its "natural" pattern, which is modeled by an appropriate *ARMA(p,q)* specification. The intervention terms employed in this analysis consist of several dummy variables modeling different periods of time prior to and after elections. We call these variables "political dummies" or, acronymically, *PD*. Therefore, if the estimated parameter of a particular *PD* variable would both prove statistically significant and have the anticipated sign, this is considered to be empirical evidence in support of the hypothesis of this paper.

Four main sets of *PD* variables were defined and employed in the analysis, namely (i) discrete quarterly – $\text{Pdquart}_{(\pm j,t)}$; (ii) discrete semi-annual – $\text{Pdsemann}_{(\pm j,t)}$; (iii) discrete annual – $\text{PDannual}_{(\pm j,t)}$; and (iv) cumulative – $\text{Pdcumul}_{(\pm j,t)}$. Although the time series data were available at a monthly frequency, we presume that it does not make much sense to consider short periods of only one month when analyzing privatization revenues. The *PDs* employed in the analysis are formally defined as follows:

$$PDquart_{(\pm j,t)} = \begin{cases} 1: for\ each\ \pm j^{th}\ discrete\ quarter\ before\ or\ after\ elections \\ 0: otherwise \end{cases}, \ j \in [1; 8]$$

$$PDsemann_{(\pm j,t)} = \begin{cases} 1: for\ each\ \pm j^{th}\ discrete\ "6\ months period"\ before\ or\ after\ elections \\ 0: otherwise \end{cases}, \ j \in [1; 4]$$

$$PDannual_{(\pm j,t)} = \begin{cases} 1: for\ each\ \pm j^{th}\ discrete\ "12\ months period"\ before\ or\ after\ elections \\ 0: otherwise \end{cases}, \ j \in [1; 2]$$

$$PDcumul_{(\pm j,t)} = \begin{cases} 1: for\ all\ months\ up\ to\ and\ including\ the\ \pm j^{th}\ quarter \\ \quad before\ or\ after\ elections \\ 0: otherwise \end{cases}, \ j \in [1; 8]$$

We additionally took into account any possible ideologically related effect of the incumbent parties on privatization receipts, and hence any possible presence of so-called partisan cycles in the dynamics of privatization receipts.[11] After the collapse of the communist regime in the beginning of the '90s, a two-party system was installed in Albania. The left-wing Socialist Party (SP), which initially was more a reformation of the old communist Labor Party, and the newly founded right-wing Democratic Party (DP) are the two main parties which have led all elected governments during democracy. In addition, several other small parties have been active since then, filling different positions in the political spectrum, with most of them having been in government coalitions with either one or the other of the two main parties, and a few of them with both.

[9] 120 ALL (Albanian Lek) equals approximately 1 US$.
[10] See, for example, McCallum (1978), Hibbs (1977), Alesina and Sachs (1988), Alesina and Roubini (1992), Mills (1991).
[11] See Alesina et al. (1997) for a comprehensive review of theory and evidence of the partisan political cycle.

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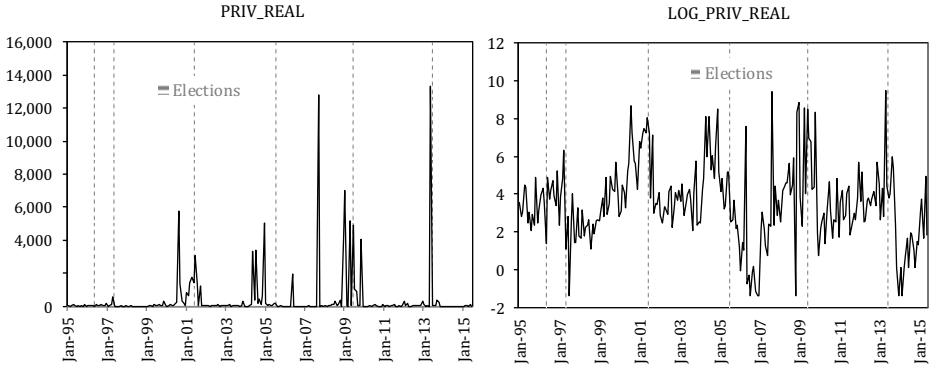

Fig. 1. Monthly budget receipts from the privatization of public assets in Albania.
Sources: Ministry of Finance of Albania (2015), authors' calculations.

However, the governing coalitions were largely dominated by one of the two large parties (SP or PD) in all cases. Therefore, another dummy variable, *Ideo_dum*, was defined to control for any partisan cycle component, formally expressed as follows:

$$Ideo_dum_t = \begin{cases} 1: \ if\ left-wing\ Socialist\ Party\ whas\ in\ office \\ 0: \ if\ right-wing\ Democratic\ Party\ whas\ in\ office \end{cases}$$

Thus, a simple formal representation of the intervention analysis in the case of discrete quarterly periods of time before or after elections would be[12]: $y_t = a_0 + \sum_{i=1}^{p} a_i y_{t-1} + \sum_{i=0}^{q} \beta_i \varepsilon_{t-i} + \sum_{j=\pm 1}^{\pm 8} \omega_j PDquart_{(j,t)} + \gamma Ideo_d um_t$,

where y_t denotes the monthly privatization budget receipts; a_0; a_i and β_i are, respectively, the autoregressive *(AR)* and moving average *(MA)* parameters of the *ARMA(p,q)* model, which represents the "natural" dynamics of privatization receipts; ω_j is a parameter which captures any opportunistic effect of approaching elections on the variable of interest, privatization receipts; and the parameter γ captures any partisan cycle effect on the dependent variable. Therefore, the parameter ω_j measures the effect of intervention (event) and is estimated along with the *ARMA* model components and the ideological dummy. The estimation procedure provides estimates of ω_j and γ as well as a confidence interval for the parameters. The probabilistic distributions of these estimators (ω_j and γ) are of *t-distribution*, allowing for straightforward testing of our hypothesis.

We followed the Box-Jenkins methodology (Box and Jenkins, 1976) to identify and estimate the most appropriate *ARMA (p,q)* model for the time series of privatization revenues.[13] First, we checked for the stationarity of each time series by utilizing several statistical tests for the presence of unit roots.[14] The series of privatization receipts deflated by the exchange rate proved stationary according to all tests we employed. However, the level series contained a few observations with exceptionally high values (large one-off privatizations) relative to most other observations (small frequent privatizations), which rendered the whole series a kind of white noise process difficult to construct with any *ARMA* model. Therefore, we opted to utilize its logarithmic transformation, which was a much smoother version of the variable of interest and could be more reasonably modeled through *ARMA*.

To check the robustness of our empirical conclusions, we ran the whole analysis on the level series as well. The results we obtained led to the same conclusions as in the case of log-level series. For reasons of space, we discuss and report only the results obtained for the log-level series here.[15] There are seven zero-value observations in the level series for which we made a technical transformation of the form $(y_t^* = y_t + 0.25)$ before transforming them into their natural logarithms. Fig. 1 presents both the level and log-level series. In both graphs the election dates are depicted by the dashed vertical lines. *"Priv_real"* is the coding we used for the level of privatization revenues deflated by the exchange rate index, whereas its log transformed series was coded *"log_priv_real"*. The measurement unit of *"Priv_real"* is ALL million. The measurement unit for *"log_priv_real"* is the natural logarithm of *"Priv_real"*.

The graphical depiction in Fig. 1 already visualizes strong spikes of privatization receipts before and reductions after elections. Fig. 2 shows some descriptive averages of privatization receipts for different time intervals within the government term. The thick black arrows represent the monthly average of privatization receipts during each different time interval

[12] This is the same representation as in the case of other *PDs*, except $PDcumul_{(j,t)}$, which due to their cumulative feature, as by definition, are introduced into the equation one at a time and therefore there is no summation: $y_t = a_0 + \sum_{i=1}^{p} a_i y_{t-1} + \sum_{i=0}^{q} \beta_i \varepsilon_{t-i} + \omega_j PDcumul_{(j,t)} + \gamma Ideo_d um_t$, $j \in [-8;-1]\ or\ [1;8]$
[13] For a comprehensive and practical explanation of the Box-Jenkins methodology and intervention analysis, see Enders (2010) or Mills (1991).
[14] We tested the null of a unit root, which was rejected by both tests employed: namely, the *Augmented Dickey-Fuller* test ($p = 0.000$) and the *Philips-Perron* test ($p = 0.000$). We also tested the null of stationarity by the *Kwiatkowski-Phillips-Schmidt-Shin* test, which was not rejected even at the 10% level of significance (the asymptotic critical value for the 10% level of significance is 0.34, while the test value was 0.27).
[15] The other results are available upon request.

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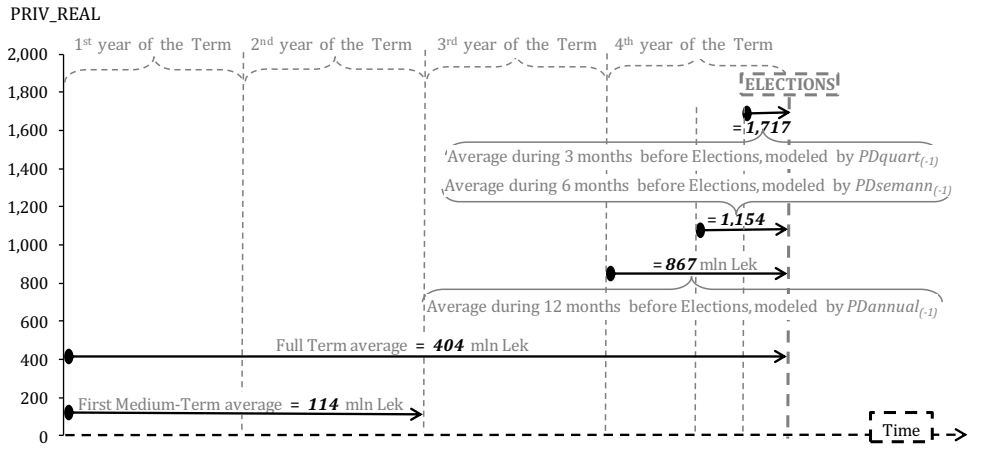

Fig. 2. Monthly average of privatization receipts during incumbents' term.
Sources: Ministry of Finance of Albania (2015), authors' calculations.

within a completed incumbent term, which is accounted for as an average of all full governments' terms subsumed in the time span of our data. In this graph it is obvious that the closer the elections, the higher the average monthly revenues from privatizations of public assets those governments have cashed into the budget since the beginning of '95. The average monthly privatization receipts for the entire tenure are about ALL 404 million. For the first two years of the tenure, it is nearly only a quarter the amount of the whole tenure at about AL 114 million on average each month. The real money from privatizations starts to flow in the last year of the tenure, meaning one year before the next elections, which is exactly the time period modeled by the annual political dummy $PDannual_{(-1,t)}$, as defined earlier. With a monthly average of ALL 867 million, the privatization receipts that enter the government budget one year before elections are more than double compared to the average for the full tenure and more than quadruple compared to the first two years of the government tenure. Note that the first two years of the tenure is the same period of time as that of two years after elections, captured by $PDcum_{(8,t)}$, as defined above. The money from privatizations gets even higher in the period starting six months before elections (modeled by $PDsemann_{(-1,t)}$) and peaks three months before elections (modeled by $PDquart_{(-1,t)}$), reaching ALL 1,154 and 1,717 million on average per month, respectively.

The most appropriate *ARMA (p,q)* model tentatively found for the variable of interest *(log_priv_real)* was an *ARMA(1,1)*. We reached this econometric conclusion following the Box-Jenkins methodology, which consists of an iterative three stage process of: *(i)* model identification; *(ii)* parameter estimation; and *(iii)* assessing the model's diagnostics. Several conventional criteria and diagnostic tests were employed throughout this iterative procedure.[16] The "second-best" competitive model was an *ARMA (2, 0)*, which we also employed in our analysis in order to check for the robustness of the final results and conclusions. The empirical results remained practically unchanged when the competing "second best" *ARMA(2,0)* model was considered.[17]

All types of the political dummy variables *(PDs)* as well as the ideology dummy *(Ideo_dum)* were incorporated into the "best" *ARMA (1,1)* model and all parameters of each final model were re-estimated. The discrete-time interval *PDs* for each set were incorporated simultaneously into the model, while the cumulative-time interval dummy variables were introduced separately.[18] If the respective *PDs*' estimated parameters had the correct sign (in line with our hypothesis), then the statistical significance of the political dummy variables, tested through a *t-test*, reveals whether there is indeed any supposed impact of elections on the revenue from the privatization of public assets. To illustrate this, the final estimated model when

[16] The selection between the competing *ARMA* models fitting each time series was based on three formal criteria: the *Akaike Information Criterion (AIC)*, the *Bayesian Information Criterion (BIC)*, and the *Hannan-Quinn Information Criterion (HQC)*. We did not encounter any case of conflicting selection guidance among these criteria. Several diagnostic formal tests and means of judgment were used throughout the Box-Jenkins iterative procedure to determine the "best" *ARMA* model and diagnose its residual properties, such as the *Durbin-Watson test*, the *Jarque-Bera test*, the *Q-test*, the *Breusch-Godfrey test*, the *Breusch-Pagan-Godfrey test*, and the *Harvey test*, as well as the pattern of autocorrelation functions *(ACF)*, partial autocorrelation functions *(PACF)* and residual plots. Although the null of homoscedastic SE was not rejected by any of the tests employed, we ran the regressions with robust SEs and obtained similar results.

[17] The detailed results are available upon request.

[18] It is intuitive to introduce the cumulative *PDs* separately, one at a time, as by definition the time interval that each of these *PDs* models overlaps with the preceding cumulative *PD*.

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Table 2
The impact of elections to privatization receipts in Albania (Discrete PDs) (Dependent variable: natural log of privatization receipts).

Estimated ARMA(1,1) models incorporating different sub-sets of discrete PDs	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6	
	$PDquart_{(j,t)}$				$PDsemann_{(j,t)}$				$PDannual_{(j,t)}$			
j = -8, −7, . . . , −1, 1, 2, . . . , 8	Coeff.	Prob.	Coeff.	Prob.	Coeff.	Prob.	Coeff.	Prob.	Coeff.	Prob.	Coeff.	Prob.
j = -1	2.172**	0.000			1.850**	0.000			1.763**	0.000		
j = -2	1.504**	0.020			2.003**	0.000			1.333**	0.004		
j = -3	1.943**	0.001			1.777**	0.003						
j = -4	1.980**	0.002			1.022**	0.030						
j = -5	2.059**	0.005										
j = -6	1.189**	0.036										
j = -7	0.796*	0.053										
j = -8	0.946	0.154										
j = 1			−0.787	0.152			−1.265**	0.008			−1.663**	0.000
j = 2			−1.976**	0.000			−2.775**	0.000			−1.572**	0.001
j = 3			−3.356**	0.000			−2.578**	0.000				
j = 4			−2.471**	0.000			−1.325**	0.002				
j = 5			−2.552**	0.000								
j = 6			−2.595**	0.000								
j = 7			−1.251**	0.011								
j = 8			−1.403**	0.003								
Ideo_dum$_t$	0.519	0.295	0.356	0.475	0.512	0.293	0.386	0.419	0.475	0.330	0.423	0.385
Intercept	2.453**	0.000	4.395**	0.000	2.424**	0.000	4.343**	0.000	2.501**	0.000	4.133**	0.000
AR(1)	0.869**	0.000	0.908**	0.000	0.856**	0.000	0.896**	0.000	0.860**	0.000	0.857**	0.000
MA(1)	−0.646**	0.000	−0.729**	0.000	−0.625**	0.000	−0.712**	0.000	−0.627**	0.000	−0.612**	0.000
Main diagnostic tests												
Adjusted R-squared	0.340		0.376		0.342		0.371		0.343		0.344	
F-statistic	12.428		14.353		19.146		21.562		26.515		26.632	
Prob(F-statistic)	0.000		0.000		0.000		0.000		0.000		0.000	
Mean dependent var	3.527		3.527		3.527		3.527		3.527		3.527	
S.D. dependent var	2.126		2.126		2.126		2.126		2.126		2.126	
Akaike info criterion	3.979		3.923		3.960		3.915		3.950		3.949	
Schwarz criterion	4.150		4.094		4.074		4.029		4.036		4.034	
Durbin-Watson stat	1.995		2.022		2.002		2.020		2.007		2.029	

(**) significant at 5% level; (*) significant at 10% level.

considering the first sub-set of defined dummy variables, "$PDquart_{(-j,t)}$ before elections", was:

$$LOG_PRIV_REAL = 2.45 + 0.87 * AR(1) - 0.65 * MA(1) + 2.17 * PDquart_{(-1,t)} + 1.5 * PDquart_{(-2,t)} + 1.94 * PDquart_{(-3,t)} + 1.98 * PDquart_{(-4,t)} + 2.06 * PDquart_{(-5,t)} + 1.19 * PDquart_{(-6,t)} + 0.8 * PDquart_{(-7,t)} + 0.95 * PDquart_{(-8,t)} + 0.52 * Ideo_dum_t$$

We estimated twenty-two *ARMA (1,1)* models in all, each including a different sub-set of the defined *PDs* or one specific *PD* in the case of cumulative *PDs*.[19] The obtained results are discussed in the following section.

4. Empirical results

The empirical analysis revealed clear evidence of election-related cycles in privatization receipts. The estimated parameters of all types of political dummy variables employed in the analyses strongly indicate that there is a statistically significant increase in the revenue from privatizations at different time-intervals before elections, followed by contractions afterwards, supporting the hypothesis of this article. Interestingly, there is no evidence of ideological differences between the two main incumbent parties when it comes to privatization. The estimated parameter of the ideological dummy variable *(Ideo_dum)* is insignificant in all models, implying that in spite of the differences in the political ideology (left and right), both incumbent parties behave pretty much the same regarding the privatization of public assets. Tables 2 and 3 present the econometric results for each estimated model. In Table 2 we show the models with discrete *PDs* while those with cumulative *PDs* are presented in Table 3.

[19] We estimate all equations using the *EViews-7* statistical package. We employed the default options of *EViews*, which include the nonlinear least squares *(NLS)* estimation method and the Marquad optimization algorithm for the iterative estimation procedure. The coefficient starting values are generated from preliminary ordinary least squares *(OLS)* estimations. Convergence was achieved in all cases and the parameter estimates remain basically unchanged when different starting values were imposed.

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Table 3
The impact of elections on privatization receipts in Albania (Cumulative PDs) (Dependent variable: natural log of privatization receipts).

Estimated ARMA(1,1) models incorporating a single different cumulative PD		Estimated parameters										Main diagnostic tests			
		$Pdcum_{(j,t)}$		$Ideo\_dum_t$		Intercept		AR(1)		MA(1)		Adj. R^2	Prob (F-stat)	AIC	DW stat.
		Coeff.	Prob.	Coeff.	Prob.	Coeff.	Prob.	Coeff.	Prob.	Coeff.	Prob.				
Model 7	$PDcumul_{(-1,t)}$	1.115**	0.011	0.052	0.929	3.401**	0.000	0.904**	0.000	−0.618**	0.000	0.326	0.000	3.972	2.041
Model 8	$PDcumul_{(-2,t)}$	0.629	0.136	0.019	0.976	3.408**	0.000	0.902**	0.000	−0.619**	0.000	0.317	0.000	3.986	2.036
Model 9	$PDcumul_{(-3,t)}$	0.800**	0.023	0.108	0.854	3.279**	0.000	0.895**	0.000	−0.618**	0.000	0.321	0.000	3.980	2.021
Model 10	$PDcumul_{(-4,t)}$	1.026**	0.010	0.213	0.699	3.102**	0.000	0.891**	0.000	−0.632**	0.000	0.326	0.000	3.972	2.031
Model 11	$PDcumul_{(-5,t)}$	1.505**	0.000	0.381	0.456	2.799**	0.000	0.881**	0.000	−0.641**	0.000	0.344	0.000	3.945	2.016
Model 12	$PDcumul_{(-6,t)}$	1.484**	0.000	0.387	0.442	2.748**	0.000	0.862**	0.000	−0.615**	0.000	0.340	0.000	3.952	2.006
Model 13	$PDcumul_{(-7,t)}$	1.346**	0.002	0.355	0.489	2.751**	0.000	0.863**	0.000	−0.615**	0.000	0.334	0.000	3.961	2.021
Model 14	$PDcumul_{(-8,t)}$	1.561**	0.000	0.420	0.394	2.546**	0.000	0.860**	0.000	−0.616**	0.000	0.344	0.000	3.945	2.010
Model 15	$PDcumul_{(1,t)}$	0.245	0.652	−0.179	0.822	3.591**	0.000	0.906**	0.000	−0.612**	0.000	0.312	0.000	3.993	2.040
Model 16	$PDcumul_{(2,t)}$	0.017	0.975	−0.143	0.849	3.586**	0.000	0.904**	0.000	−0.607**	0.000	0.311	0.000	3.994	2.043
Model 17	$PDcumul_{(3,t)}$	−1.017**	0.018	0.070	0.902	3.665**	0.000	0.901**	0.000	−0.601**	0.000	0.326	0.000	3.973	2.046
Model 18	$PDcumul_{(4,t)}$	−0.875**	0.034	0.061	0.914	3.698**	0.000	0.900**	0.000	−0.615**	0.000	0.322	0.000	3.978	2.036
Model 19	$PDcumul_{(5,t)}$	−0.999**	0.013	0.110	0.840	3.766**	0.000	0.898**	0.000	−0.628**	0.000	0.326	0.000	3.972	2.018
Model 20	$PDcumul_{(6,t)}$	−1.484**	0.000	0.243	0.630	3.943**	0.000	0.896**	0.000	−0.653**	0.000	0.345	0.000	3.943	2.027
Model 21	$PDcumul_{(7,t)}$	−1.183**	0.003	0.221	0.668	3.923**	0.000	0.887**	0.000	−0.644**	0.000	0.331	0.000	3.965	2.009
Model 22	$PDcumul_{(8,t)}$	−1.623**	0.000	0.423	0.383	4.136**	0.000	0.855**	0.000	−0.611**	0.000	0.347	0.000	3.941	2.030

(**) significant at 5% level; (*) significant at 10% level.

The estimated coefficients for most discrete *PDs* in all the respective models (models 1, 3, and 5) clearly indicate a significant increase of privatization receipts before parliamentary elections. This evidence is scrutinized for different discrete time intervals before elections as modeled by different respective political dummy variables. The first seven quarterly PDs ($PDquart_{-1,t;-2,t;-3,t;-4,t;-5,t;-6,t;-7,t}$) out of the eight incorporated into the first estimated model had significantly positive

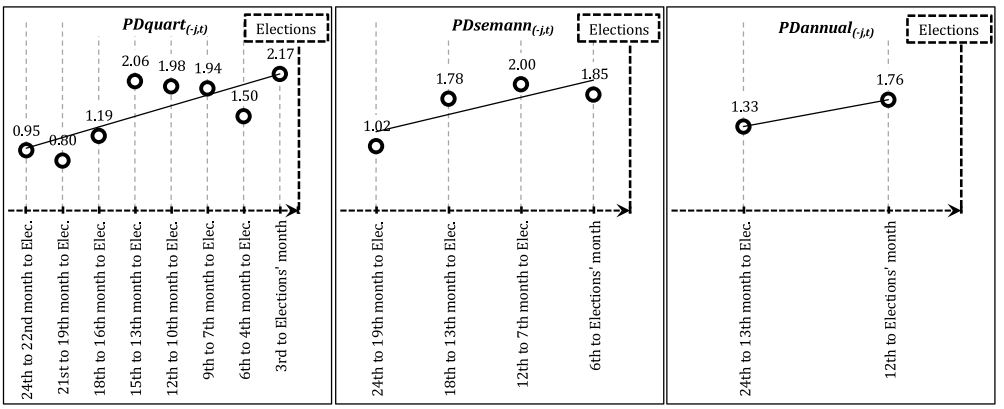

Fig. 3. Pattern of the magnitude of discrete political dummies before elections.
Note: The straight line is the fitted linear regression line

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coefficients, six of which were significant at the 5% level and the other one at 10%. All four semi-annual dummy variables *(PDsemann$_{-1,t;-2,t;-3,t;-4,t}$)* were positively significant at the 5% level and both annual *PDs* were likewise positively significant at conventional levels of significance. This empirical evidence in support of our hypothesis was also endorsed by the cumulative dummies. Almost all eight *PDcumul$_{(-j,t)}$* capturing the impact on privatization revenues during different cumulative time intervals before elections (from one quarter to two years before elections) had the hypothesized positive sign and all were statistically significant at conventional levels (see Table 3, models 7–14).

The magnitude of the *PDs*' estimated coefficients are interpreted as an approximate percentage increase in the level of privatization revenues during each respective time interval before elections, as the depended variable is in logs.[20] For example, referring to the effect of *PDannual$_{(-j,t)}$*, estimated in model 3, there was an average increase of 176% in the level of privatization revenues during the 12 months ahead of parliamentary elections as compared to the "natural" level modeled by *ARMA* dynamics.

Referring to the magnitude of the estimated discrete *PDs*, we noticed some other interesting evidence strengthening our hypothesis. There was a generally increasing tendency in the magnitude of those discrete *PDs* that model time intervals closer to elections compared to those modeling earlier time intervals: the *PDannual$_{(-1,t)}$* coefficient is greater than the *PDannual$_{(-2,t)}$* coefficient; *PDsemann$_{(-3,t)}$* is greater than *PDsemann$_{(-4,t)}$*; and *PDsemann$_{(-2,t)}$* and *PDsemann$_{(-1,t)}$* are greater than *PDsemann$_{(-3,t)}$*. This increasing relation is not so regular in the case of *PDquart$_{(-j,t)}$*, but there is still a tendency even here and *PDquart$_{(-1,t)}$* is greater than all the other quarterly dummy variables. Fig. 3 graphically shows how the magnitude of the estimated parameters of the discrete political dummies before elections reveals an increasing trend as the Election Day approaches. Each of the three graphs depicts the magnitude of the coefficients for one of three discrete political dummy variables, respectively *PDquart$_{(-j,t)}$*, *PDsemann$_{(-j,t)}$* and *PDannual$_{(-j,t)}$*.

The increasing trend in the magnitude of the discrete *PDs* implies that the incumbents really do plan the timing of privatizations of public assets carefully in order to have the proceeds as close to elections as possible. Conversely, it seems that they really don't care about choosing the optimal time to conduct the privatization of public assets from a purely economic and social point of view. Furthermore, it seems there is no ideological difference between the two main left and right incumbent parties (or coalitions) in this regard, as implied by the consistent insignificance of the respective dummy variable *(Ideo_dum)* across all models.

The empirical results indicate that a significant boost to privatization receipts before elections is reflected by a significant contraction immediately after elections. Most of the estimated parameters of discrete *PDs* capturing different time intervals after elections in models 2, 4 and 6 as well as the cumulative *PDs* in models 15 to 22 were negative and significant at conventional levels. None of the dummy variables modeling the periods after elections are significantly positive at conventional levels. This is supplementary evidence supporting the conjecture that the privatization of public assets might be mostly driven by the political interest of incumbents, as patterns of election cyclicality are clearly embedded in the dynamics of these receipts. The incumbents use privatization proceeds to fuel political fiscal cycles rather than privatizing public assets in accordance with an economic rationale purely serving the general public interest.

5. Conclusions

Transition countries are characterized by massive privatizations during the first decade(s) of transition. Privatization, in addition to improving the efficiency of formerly publicly owned economic units, may serve as a source of income for the economy. Therefore it may be assumed that when an elected official needs funds to finance certain public expenditures, there is a stronger incentive to engage in privatization. Elections are a typical example of a time in which public investments and other types of public expenditures increase. As predicted by the political business cycles theory, a political incumbent may engage in fiscal expansion before elections in order to increase the likelihood of re-election. This was found to be true for Albania in previous research.

In this study, we found a statistically significant increase in income from privatization before elections, providing the incumbents with funds to finance the increased expenditures before elections. The empirical evidence unambiguously indicates that the privatization of public assets in Albania systematically shifts close to parliamentary elections. Namely, privatization receipts increase significantly before elections and drop significantly immediately afterwards.

The privatization of public assets is an important part of a country's structural reforms, especially in those transition countries that had centralized economies and are moving toward free market economies. However, while transition countries do not necessarily have to privatize all kinds of public assets, they should make very careful assessments of what is really worth privatizing and, most importantly, seek the "best" deal for each public asset it chooses to privatize.

The common intuition is that generally the optimal time to privatize an important public asset would probably be in the first half of an incumbent's political tenure and the worst time to do so would be at the end of a political cycle. However, quite contrary to this intuition, due to opportunistic incumbents in transition countries, who typically engage in PBC, the privatization of public assets might be systematically and intentionally shifted towards the end of a political cycle in order to capitalize on the privatization proceeds for electoral purposes. The empirical evidence clearly shows that this has been the

[20] As we are dealing with autoregressive time processes (ARMA), the estimated coefficients most exactly represent the shift in the dynamics of the process as a whole and not the shift in the level of the dependent variable. However, we approximate it as such for ease of interpretation.

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case in Albania during the transition period. Engaging in major privatizations before elections is often seen as not transparent, corrupt and unacceptable by the opposition, and there have been cases where opposition leaders declared that they will not recognize such privatizations in case they come to power. This is another argument for avoiding such (major) privatizations in the period preceding elections.

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