Econometric Evidences of Political Business Cycles in Romania during the socialist regime and after

Nicoleta Jula[1], Nicolae-Marius Jula[2][*]

[1]The Faculty of Economic Sciences, Nicolae Titulescu University from Bucharest, ROMANIA, nicoletajula@yahoo.com
[2]The Faculty of Economic Sciences, Nicolae Titulescu University from Bucharest, ROMANIA, mariusjula@univnt.ro

Abstract

In this paper we analyse the link between politics and economics in Romania under the socialist regime and during the first years of democracy. To investigate this relationship, we focus on how the electoral moments (election's dates for Great National Assembly) or political events (years of Communist Party Congresses) are related to the change of economic performance between 1960 and 1989. For the situation after the Revolution in 1989, we analyse the regional evidences.

Keywords: Political Business Cycles, Vote Popularity Function, Partisan Behaviour, Regional Unemployment

1. Introduction

The political business cycle (PBC) can be seen as a business cycle that results (a) from the manipulation of policy tools (fiscal policy, monetary policy) by incumbent politicians in hope to stimulate the economy just prior to an election and thereby greatly improve their own and their party's re-election chances or (b) from the competition among political parties with different ideologies[1]. On that account, the theory of political business cycle investigates the relationship between political cycles and economic cycles, namely how the timing of elections, the ideological orientation of governments and the nature of competition among political parties influence unemployment, economic growth, inflation and the use of various monetary and fiscal policy instruments (Jula & Jula, 2008).

In this paper we analyses the link between economic conditions and political behavior in Romania under the socialist regime. In Romania, the democratic experience computes a small number of electoral moments. Therefore, it is not possible yet to build an electoral behaviour econometric model using the political time series. In these circumstances, in the following section, by the examination of the political and economic dynamics during the 1990-2008, we try only to identify some significant signals concerning the economic impact of the electoral timing. We use an econometric model to analysis the political behaviour using a regional economic and political data. The analysis is divided in two different approaches: the elections before 2008 and the elections from 2008 (when a new electoral law was introduced – mainly the impact of uninominal voting and the change in electoral preferences of the voters from local elections to parliamentary elections).

2. Data issues

The construction of political variables was based on information from the "World Political Leaders 1945-2005" database of Zárate's Political Collections (ZPC) [2] and the database of the Centre for the Study of Civil War World (Peace Research Institute Oslo), Norway [3].

The *Great National Assembly* (in Romanian: Marea Adunare Naţională) was the unicameral legislative entity of the Romanian People's Republic (1948-1965) and of the Socialist Republic Romania (1965-1989). As Parliamentary elections, The Great National Assembly was elected every four or five years. Election timetable is presented below.

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[*] Corresponding author: mariusjula@univnt.ro

[1] Jula N.-M., 2010, Modelling of Political Business Cycles, Doctorate Thesis, Romanian Academy, National Institute of Economic Research, Bucharest
[2] http://www.terra.es/personal2/monolith/home.htm
[3] http://www.prio.no/CSCW/Datasets/Governance/

Table 1. Parliamentary Elections (for the Great National Assembly)

Year of election	Largest party	Votes for the largest party % of total votes	Total votes	Total population	Voters as a percentage of the total population
1946	People's Democratic Front	78.0	6 841 927	15 791 000	43.3
1948	People's Democratic Front	93.2	7 468 541	15 893 000	47.0
1952	People's Democratic Front	98.4	10 353 489	16 630 000	62.2
1957	People's Democratic Front	98.9	11 553 690	17 830 000	64.8
1961	People's Democratic Front	99.8	12 417 800	18 570 000	66.9
1965	People's Democratic Front	99.8	12 853 590	19 030 000	67.5
1969	United Socialist Front	99.7	13 577 143	20 010 000	67.8
1975	United Socialist Front	98.8	14 893 592	21 250 000	70.1
1980	Front of Democracy	98.5	15 629 054	22 201 000	70.4
1985	Front of Democracy	97.7	15 732 095	22 725 000	69.2

Source: Centre for the Study of Civil War, Peace Research Institute Oslo (PRIO), Norway.

As political cycle, we can mention that starting in 1955, there was one Communist Party Central Congress every five years, with an one-year ahead one in 1969.

Table 2. Party Congresses

Name	Period	Location	Name	Period	Location
First	May 1921	Bucharest	8th	June 1960	Bucharest
2nd	October 1922	Ploiesti	9th	July 1965	Bucharest
3rd	August 1924	Vienna	10th	August 1969	Bucharest
4th	July 1928	Kharkov	11th	November 1974	Bucharest
5th	December 1931	Moscow	12th	November 1979	Bucharest
6th	February 1948	Bucharest	13th	November 1984	Bucharest
7th	December 1955	Bucharest	14th	November 1989	Bucharest

Source: http://en.wikipedia.org/wiki/Romanian_Communist_Party

Data concerning the Romanian economy, from 1950 to 1989, are based on information from the *Penn World Table* (Heston A. et al. 2012). *The Penn World Table* provides purchasing power parity and national income accounts converted to international prices, for 189 countries/territories, for some or all of the years 1950-2010. The data for Romania cover the 1960-1989 period and are calculated both at current prices in national currency (leu) and at constant 2005 prices. The used variables in our analyses, based on information from the *Penn World Table*, are the following: Sum of household consumption expenditure and final consumption expenditure of NPISH's (NPISH: Non-profit institutions serving households); Sum of government collective consumption expenditure and government individual consumption expenditure; Collective consumption of government for public good type of activities; Domestic investment; Actual household consumption; Exports of goods and services; Imports of goods and services; Population (in thousand people); Exchange rate.

3. Election under socialism: The purpose of election and economic aftermaths

To understand how the electoral events influenced the economy of Romania in socialist period, we must first decipher the causes which led the communist authorities to organize elections under socialism.

The foremost reason may be that the autocracies with elections are more durable than those without them, so that the establishment of elections is a mean used by the dictators hold onto power. Geddes (1999) argues that average length of rule for a military regime is 8.5 years, for personal regime – 15 years, and for single-party regime – 22.7 years. But this should be a minor motivation for the communist party because, to paraphrase Kalecki (1943): "In a democracy, one does not know what the next government will be like. Under *communism* there is no next government". In communist ideology, once the power is gained, the communist system lasts forever!

By surveying the literature, we try to identify what is the purpose of elections in the dictatorships regimes.

(1)   Schneider & Frey (1988) says that: "No government, not even the most dictatorial, is completely independent of the support by the population".

(2)   Schedler (2006, p.13) argues that elections help autocrats establish legitimacy at home or abroad.

(3)   Geddes (2005), Malesky & Schuler (2008) and others consider that the authoritarian regimes use the overwhelming electoral victories as a signal to members of the regime elite that opposition is futile.

(4)   Gandhi & Lust-Okar (2009) view authoritarian elections as an institutional tool that dictators can use to co-opt elites, party members, or larger groups within society [4].

(5)   Li (2011) argued that elections provide to single-party authoritarian regimes information about the loyalty and competence of their own party

Based on these findings, we tried to identify in Romania, during the socialism, signs of politico-economic cycles and to explain the reasons of such behaviour. We investigated how the change in macroeconomic variables is related to the political events (congresses of the Communist Party), and the electoral moments (elections for the Great National Assembly), between 1948 and 1989. Except 1965 and 1969, electoral moments do not overlap the political ones.

Dynamics of investments rates, computed as the ratio of investment to gross domestic product (at current prices) is shown in the graph below. In the same graph, we represented also the trend calculated by the Hodrick-Prescott filter, and cyclic variation as the difference between series and trend.
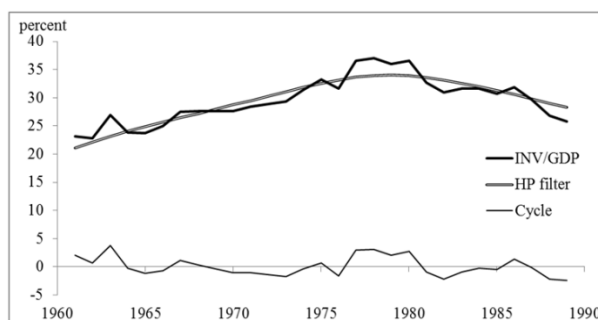

Fig. 1. Dynamics of investment rates

Source: Authors' calculations based on *Penn World Table* (Heston A. et al. 2012)

We calculated the average values of investment rates near the political events (congresses of the Communist Party), and around election time (elections for the Great National Assembly).

In the years when the Romanian Communist Party congresses were held, there was a slowdown in investment programs. The capital investment plans are revised downwards in order to make it possible to grant the population a more rapid rise in real wages (Schneider & Frey, 1988), and to decrease the inhabitants' dissatisfaction related to the level and quality of public services (other than those linked to the repression – police, army, informer). The average of consumption rate as % of GDP, around the times of political events is shown in the graph below.

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[4] Gandhi J., Lust-Okar E. 2009, Elections Under Authoritarianism, Annual Review of Political Science, vol. 12: 403-22
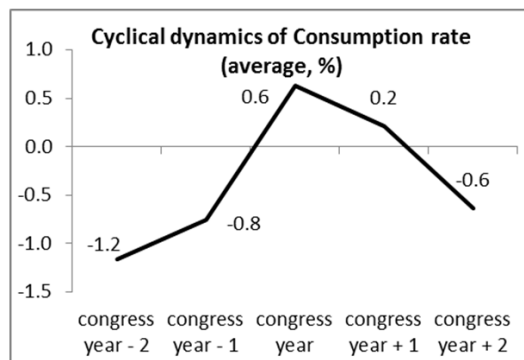
Fig. 2. Political consumption cycles

(Consumption rate is computed in per cent, as sum of household consumption expenditure and final consumption expenditure of non-profit institutions serving households, divided by gross domestic product, at current prices).

If we look at parliamentary election (election for the Great National Assembly), there is no signal of *political investment cycle*.

On the contrary, there is a counterintuitive investment growth rate in election years. This is counterintuitive because standard theories of politics begin with two simplifying assumptions: (a) Politicians want to achieve office and remain there; (b) the best strategy for surviving in office is to give constituents what they want (Geddes 1999). And it is unlikely that Romanian voters wished to increase steel production per capita, instead of consumer goods[5].

4. The politico-economic models

The link between politics and economics in Romania in the socialist regime is analysed through the econometric models. To investigate this relationship, we focus on how the electoral moment (time of election for Great National Assembly) or political events (Communist Party Congresses years) are related to the change of economic performance under the socialist regime (1948-1989).

We have built econometric models of the relationship between politics and economics as follows:

$$y_t = a_0 + \sum_i a_i x_{it} + \alpha \cdot POL_t + \beta \cdot ELECT_t + e_t, \qquad (1)$$

where:

y   – is an economic variable (gross domestic product, consumption, investment etc.);

x_i – are the control variables;

POL   – is a political dummy variable, that take value POL = 1 in the years when the Romanian Communist Party Congress was taken and POL = 0 otherwise;

ELECT – is an electoral timing dummy variable, that take value ELECT = 1 in the electoral years (election for Great National Assembly) and otherwise ELECT = 0.

The equations are presented with details in in the paper *Political Business Cycles in Romania, during the socialist regime*, D. Jula, N.M. Jula.

The link between political events and economic is measured by α coefficient. If α is significant, then a political behaviour near congress influenced the economic variable, in the meaning given by the sign of alpha.

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[5] Nannestad P., Paldam M., 1994, "The VP-function: a survey of the literature on vote and popularity functions after 25 years", Public Choice 79:213–45

The link between election and economic is measured by β coefficient. If β is significant, then a political behaviour near election influenced the economic variable, in the meaning given by the sign of β.

For all the equations, we reject the heteroskedasticity (through used both the Breusch-Pagan-Godfrey Test, as well as White – no cross-term heteroskedasticity test), they aren't autocorrelated (Durbin-Watson and Breusch-Godfrey serial correlation LM test, for lags = 4) and the distribution of the disturbances is normal (Jarque-Bera normality test).

For *investment regression equation*, in addition to Durbin-Watson statistics (inconclusive when among the explanatory variables are lagged endogenous variables) we compute Breusch-Godfrey Serial Correlation LM Test, for lags = 4. On additional equation, $nR^2 = 6.126 < \chi^2(4) = 9.488$, which means that errors are not correlated, at least up to rank 4. This hypothesis is also supported by applying the BDS (Brock, Dechert & Scheinkman) Independence test on residual variable: the residuals are independently distributed (with epsilon = 1.5 standard deviations, maximum correlation dimension = 6, and 10000 bootstrap repetitions). We performed a similar analysis for GDP equation.

The equations for *investment* and *consumption* confirm the previous analysis. Years with political events (Communist Party Congresses years) tend to have lower investment and higher consumer expenditure. In other words, economic policy instruments are used around elections to minimize the risk of riots, due to dissatisfaction associated with economic and social situation.

These results are detailed in the paper Political Business Cycles in Romania, during the socialist regime, D. Jula, N.M. Jula and in Residual Effects in Regional Vote and Popularity Function, Jula D., Jula N.[6]

5. Parliamentary elections from 2008

We have analysed here the electoral behaviour from a different approach. We have studied the impact inducted by the state and dynamics of some economic variables on the change of voting intensions from the local elections from June 2008 to parliamentary elections, same year.

The results from the electoral elections from June 2008 are econometrically significant [7]. The vote was mainly driven by local leaders and important regional personalities.

The data are analysed in regional structures. We used a Paldam type model. In its most simple linear version the function are:

$$\Delta P_t = \{a_1\Delta u_t + a_2\Delta p_t + ...\} + [c_1 D^1_t + c_2 D^t_2 + ...] + e_t \qquad (2)$$

Concretely, we have analysed a model like:

$$P_{ij} = \{a_0 + a_1 \cdot cj_{ij} + a_2 \cdot prescj_{ij}\} + [a_{3,i}(rs_{nov2008} - rs_{mai2008})_j] + e_{ij}, \qquad (3)$$

where:

P_{ij} - represents the share of votes won by the competitor *I* in county *j*, to the total number of valid votes in that county, in the Parliamentary Elections from November 2008;

cj_{ij} - represents the share of votes won by the competitor I in county j, to the total number of valid votes in that county, in the elections for the Local Councils, June 2008;

$prescj_{ij}$ - dummy variable, $prescj_{ij} = 1$, when party I won the Presidency of Local County j, Local Elections 2008 and $prescj_{ij} = 0$, otherwise;

rs_j - unemployment rate in county j; nov2008 = 30 November 2008, mai2008 = 31 May 2008;

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[6] Jula D., Jula N.-M., 2008, Residual Effects in Regional Vote and Popularity Function, Jula D., Jula N., 2008, "Residual Effects in Regional Vote and Popularity Function", 48th European Regional Science Association Congress: Culture, Cohesion and Competitiveness: Regional Perspectives, Liverpool, UK, http://www.liv.ac.uk/ersa2008/conf/rsa98.pl?conf=ersa2008&type=showabstr&nr=263

[7] idem

a … - parameters of the model;

eij - error of regression equation, random variable.

The used data are in regional structures and refer to the first 3 parliamentary parties (PSD+PC, PD-L and PNL). The obtained results are:

Table 3. Election results using regional structures

	Chamber of Deputies		
	PSD	PD-L	PNL
Constant	6.8377 (6.94)		
CJ?	0.6400 (16.684)		
PRESCJ?	5.3823 (4.539)		
$RS_{nov2008}$-$RS_{mai2008}$	2.1514 (1.944)	2.4978 (2.085)	-3.0629 (-2.517)
R^2	0.8397		
R^2 adjusted	0.8330		

	Senate		
	PSD	PD-L	PNL
Constant	6.5888 (6.684)		
CJ?	0.6735 (17.553)		
PRESCJ?	6.1834 (5.155)		
$RS_{nov2008}$-$RS_{mai2008}$	1.8465 (1.679)	2.5053 (2.009)	-3.6142 (-2.856)
R^2	0.8548		
R^2 adjusted	0.8487		

(in brackets, under the estimators, there are standard deviation values; the estimators have a confidence level over 90%)

The results suggest an interpretation consistent with the theory of economic voting: in the period June to November 2008, Liberal Party was the party of government. Increase of unemployment in regional structures resulted in a penalty for PNL and an increase in intentions to vote for opposition parties (PSD and PDL). Estimators are econometrically significant.

For an extended analysis, we recommend the paper *Econometric Analysis On Vote-Popularity Function For Romania*, Jula, Nicolae-Marius; Jula, Nicoleta, CKS - Challenges of the Knowledge Soc; Jan 2011, p1101, Conference Proceeding.

5. Conclusions

Economic policy instruments are used around elections to minimize the risk of riots, due to dissatisfaction associated with economic and social situation. The party members impulse the economic growth to signal their loyalty and competence, pursuing the promotion to the central leadership or to the local line-ups of communist party, promotion associated with more privileges and a better future career chance. In consequence, we found evidence of political-economic cycles if we used the dates of the communist party congresses as political variable. Around the years with communist party congresses, there was a slowdown in investment programs, in order to have the possibility to offer the population a more rapid rise in real wages

and consumption and to decrease the inhabitants' dissatisfaction related to the level and quality of public services (other than those linked to the repression mechanisms – police, army, informer).

Regarding the economic voting for the Parliamentary elections from November 2008, the increase of unemployment in regional structures resulted in a penalty for PNL (as the party in office) and an increase in intentions to vote for opposition parties (PSD and PDL).

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