



## MODELLING OF VOTING BEHAVIOUR IN ROMANIA

NICOLAE MARIUS JULA<sup>50</sup>

**Abstract:** Romania has experienced a new electoral model, a model in which a gap between general elections and the Presidential election was introduced. Also in 2008 the election law was changed. The current design provides a uninominal voting system with a correction of the total number of seats by the total number of votes obtained by each party on the national level. In these circumstances, given the uninominal component of the vote for parliament, we analyze the significance of the signal given by the municipal elections, held in mid-year, over the results recorded in the general election (with 6 months lag). We also consider the relationship between regional distribution of votes in general elections and, respectively, Presidential elections (with one year lag). We use for this purpose regional data from elections in June 2008, from general elections in November that year, and the Presidential elections in November 2009. In building the econometric model used for electoral forecast we exploit both political variables and data concerning the state and dynamics of the economy, at the national and regional level.

*KEYWORDS:* electoral process, regional election, electoral models, economic voting, political business cycles.

*JEL:* C21, D22, O18.

### 1. Electoral process in Romania - institutions, rules, outcomes.

#### 1. Local Elections - June 2008

Romania's EU membership imposed a harmonization of Romanian legislation with the common acquis, meaning supplementing the local elections law (67/2004) with a set of rules governing a non-discriminatory manner regarding Romanian citizens, the conditions on which EU citizens must meet to exercise their right to elect and be elected to local government authorities in Romania, in accordance with Council Directive 94/80/EC of 19 December 1994<sup>51</sup>.

---

<sup>50</sup> Nicolae Titulescu University from Bucharest

<sup>51</sup> Council Directive 94/80/EC of 19 December 1994 to establish procedures for exercising the right to vote and to stand in local elections by Union citizens residing in a Member State without citizenship, amended.



*Institute for Economic Forecasting, Romanian Academy*  
*"Nicolae Titulescu" University from Bucharest, Romania*  
1<sup>st</sup> Workshop on Modelling and Economic Forecast  
"New Trends in Modelling and Economic Forecast"  
9-10 December 2011



In Romania, Law no. 67/2004, republished<sup>52</sup>, regulating elections for local public administration authorities - local councils, county councils and mayors. By law, local councils, county councils, mayors and chairmen of county councils<sup>53</sup> are elected by means of a universal, equal, direct, secret, and freely expressed ballot. Local councils and county councils shall be elected in constituencies, based on electoral lists, according to the principle of proportional representation. The mayors of communes, towns, municipalities, Bucharest Municipality districts, and the general mayor of the Bucharest Municipality shall be elected in constituencies, by means of uninominal voting. For election of the local councils and mayors, each commune, town, municipality and administrative-territorial sub-division of the municipality represents a constituency. For election of the county councils, president of county council and the General Council of the Bucharest Municipality, each county, respectively Bucharest Municipality, represent a constituency.

Elections for councillors, mayors and chairmen of county councils are valid, regardless of the number of voters who participated in the vote (Art. 95). In order to distribute the councillor's seats, the constituency election bureau shall establish the election threshold of the constituency, representing 5% of the total number of validly expressed votes in that constituency. In the case of political alliances<sup>54</sup> or electoral alliances<sup>55</sup>, 2% shall be added to the 5 % threshold for the second member of the alliance. For alliances of at least 3 members, the election threshold is 8%.

For County Council chairman, candidate in the first round who obtained the highest number of votes is declared the winner. Voting the Chairmen of County Councils by direct vote was a strong premise for changing the structure of power within the parties<sup>56</sup>.

For the mayor's position, the candidate having obtained the majority (50%+1) of the validly expressed votes shall be pronounced mayor. If none of the candidates

---

<sup>52</sup> Republished in the Official Journal, Part I, no. 333 of May 17, 2007, pursuant to Art. II of Government Emergency Ordinance no. 8 / 2005 amending and supplementing Law no. 67/2004 for the election of local authorities, published in the Official Journal, Part I, no. 175 of March 1, 2005, approved by Law no. 131/2005, published in the Official Journal, Part I, nr. 420 from 18 May 2005 (a new counting system for the texts). Law no. 67/2004 published in the Official Journal, Part I, no. 271 from 29 March 2004.

<sup>53</sup> Until the local elections from 1<sup>st</sup> June 2008, according to art. 1 align. (5) from Law no. 67/2004, the presidents and the vice-presidents of the local councils, as well as the vice-mayors, were indirectly elected by the county councils, respectively local councils. In March 2008 (OUG no. 32 from 19<sup>th</sup> March 2008), the Government decided to change the procedure for electing the presidents of the county councils, by modifying and supplementing the Law 67/2004 for electing the local public administrative authorities, republished in Official Journal of Romania, Part. I, no. 333 from 17<sup>th</sup> May 2007.

<sup>54</sup> Political alliances are associations between political parties, based on an association protocol registered to Tribunal of Bucharest, according to the Law of Political Parties.

<sup>55</sup> Electoral alliances are associations between political parties and / or political alliances and / or organizations of citizens belonging to national minorities, in order to participate in elections, registered in the electoral responsible authority.

<sup>56</sup> "Ovidiu Șincai" Institute, *Report on Parliamentary Elections of November 30<sup>th</sup>, 2008*, February 1<sup>st</sup>, 2009, Bucharest, p. 5.



has obtained the majority of the validly expressed votes, a second ballot shall be organized. A second ballot shall also be organized in the event of a tie between several candidates to the mayor's position. Only the candidates ranking first and second and the candidates in a tie, respectively, shall participate in the second ballot. The second ballot shall take place two weeks after the first ballot and the person who obtains the most number of votes becomes the major.

A year before the normal expiration of the seat there are no longer hold elections for local councils, county councils, mayors, the General Council of Bucharest or the capital's Mayor.

Vice-presidents of the councils and deputy mayors are elected indirectly by secret ballot by the county councils or local councils, respectively.

In Romania, local elections took place on June, the 1<sup>st</sup>, 2008. Where appropriate, the second round was organized on June, the 15<sup>th</sup>, and in some cases a repetition or a third round was organized. Percentage of the voters' participation in elections to appoint representatives of the county councils on June 1<sup>st</sup> was 50.67% and to appoint representatives to local councils and mayors was 48.81%. For Bucharest, the rate of voters' participation in elections for the designation of the General Council and the Mayor of Bucharest on June, the 1<sup>st</sup> was 31.36%, while on second round on June, the 15<sup>th</sup> was 31.49%.

On local elections from June 2008, the Permanent Electoral Authority considered that, although elections were generally organized and took place within normal limits, respecting existing legal framework, however, "in the context of the changes in electoral laws by introducing uninominal voting system also for electing presidents of county councils, it seems that the reduction of the number of voting citizens leads to an increase of the importance in local elections, leading to increased virulence in some cases in election campaigns and electoral confrontations, the emergence of the trading phenomena of votes or the financial corruption of some categories of voters."<sup>57</sup>. However, irregularities and shortcomings, including legislative ones, did not influence the outcome of the vote.<sup>58</sup>

#### Electoral results – Local elections, June 2008

	Electoral Competitors	Number of seats			% of total valid recorded votes	
		Presidents of local counties	County councilors	Mayors	County councilors	Local councilors
1.	Social Democrat Party (afterwards PSD)	17	436	661	28.22%	26.67%

<sup>57</sup> Permanent electoral authority, *Report on the organization and deployment for election of Local Public Administration Authorities from June 2008*, p. 121-122, <http://www.roaep.ro/>

<sup>58</sup> *idem*, p. 128.



	Electoral Competitors	Number of seats			% of total valid recorded votes	
		Presidents of local counties	County councilors	Mayors	County councilors	Local councilors
2.	Democrat Liberal Party (afterwards PDL)	14	434	473	28.38%	27.70%
3.	National Liberal Party (afterwards PNL)	5	289	355	18.64%	18.08%
4.	Democratic Union of Hungarians in Romania (afterwards UDMR)	4	89	148	5.43%	4.75%
5.	Conservative Party (afterwards PC)	–	16	10	3.31%	3.71%
6.	Greater Romania Party (afterwards PRM)	–	12	3	3.65%	3.70%
7.	New Generation Party – Christian Democratic	–	5	2	2.79%	3.53%
8.	Independent Candidate	–	1	15	0.41%	3.38%
9.	Others	1 <sup>*)</sup>	56 <sup>**)</sup>	41 <sup>**)</sup>	9.17% <sup>**)</sup>	8.48% <sup>**)</sup>
	Total <sup>***)</sup>	41	1338	1708	100%	100%

<sup>\*)</sup> Democratic Forum of Germans of Romania

<sup>\*\*)</sup> Over 40 other electoral competitors

<sup>\*\*\*)</sup> The total does not include the Mayor of the Capital or the General Council of Bucharest.

Source: Central Electoral Bureau for election of Local Public Administration Authorities– 2008, <http://www.beclocale2008.ro/rezultate.html>

## 2. Parliamentary elections - November 2008

Romanian Parliament is bicameral and comprises the Chamber of Deputies and Senate. The parliamentary elections in Romania shall be conducted by observing the universal, equal, direct, secret, and freely expressed nature of the vote. Romanian citizens who have attained the age of 18 years, residing at home or abroad are entitled to vote (and to be elected) regardless of race, sex, nationality, ethnic origin, language, religion, political opinion, wealth or social origin. Exceptions are mentally defective



or alienated people, laid under an interdiction, or the persons convicted to the loss of the electoral rights, by final judgment. Citizen participation in elections is based on their free will.

November 2008 elections were the first parliamentary elections in Romania separated from Presidential elections. If for the election during 1990-2004 the Presidential candidates seemed to work as an election locomotive for the party, this time political parties acknowledged the personalization of political life and launched their own candidates for prime minister, although this feature is not directly eligible. In addition, since the 2008 elections, deputies and senators were elected in uninominal colleges by uninominal voting according to proportional representation.<sup>59</sup> Organizations of citizens belonging to national minorities, legally constituted, which did not obtain at least one seat of deputy or senator are entitled to one deputy seat, if they obtained, on entire country level, a number of votes equal to at least 10% of the average number of valid cast votes on country level to elect a deputy.

The most important change to the electoral law for the election of 2008 (Law no. 35/2008) is the replacement of the party lists voting with uninominal voting system. Thus, each electoral competition (political party, political or electoral alliance, minority party, independent candidate) has the possibility to register a single candidate in a college.

In November 2008, competitors ran for 452 electoral seats in the Romanian Parliament: 315 seats for the Chamber of Deputies (7717 candidates: 7689 from the 30 political parties and 28 independents) and 137 for Senate (895 candidates: 892 candidates from 30 political parties and three independents).

Distribution of seats was made using a multi-stage system. The first step is to collect the data at a national level and to identify political parties which exceeded the electoral threshold (number of votes obtained more than 5% of the cast votes, both the Senate and the Chamber of Deputies<sup>60</sup>, or have obtained 6 deputy seats and three seats in the Senate by an absolute majority, defined as 50% +1 of the votes). Next move is to allocate the seats on electoral competitors (parties, alliances, formations of minorities, independents), in two stages. First, the electoral bureau of constituency shall set the electoral coefficient determined by as the integer part resulted from dividing the number of validly cast votes by the total number of Deputies and Senators.

For each electoral competitor they shall divide the total number of validly cast votes by this coefficient. The integer result obtained shall constitute the number of seats allocated by the electoral bureau of constituency to the electoral competitor in the first stage. Each independent candidate shall be granted a seat by the electoral

---

<sup>59</sup> Rule of representation for the Chamber of Deputies was a deputy to 70,000 inhabitants and for the Senate, one Senator to 160,000 inhabitants.

<sup>60</sup> in the case of the political alliances and electoral alliances, to the threshold of 5% they shall add, for the second member of the alliance, 3% of the validly cast votes in all the constituencies and, for each member of the alliance, beginning with the third one, one percentage of the validly cast votes in all the constituencies, without exceeding 10% of these votes.



*Institute for Economic Forecasting, Romanian Academy*  
*"Nicolae Titulescu" University from Bucharest, Romania*  
1<sup>st</sup> Workshop on Modelling and Economic Forecast  
"New Trends in Modelling and Economic Forecast"  
9-10 December 2011



bureau of constituency if they have obtained the majority of the validly cast votes in the Uninominal College in which they stood for election.

The votes remained, that is the unused ones or those inferior to the electoral coefficient, obtained by the electoral competitors, as well as the seats that could not be allocated by the electoral bureau of constituency shall be communicated to the Central Electoral Bureau, in order to be allocated by centralization in the second stage, at national level, using the Hondt method.

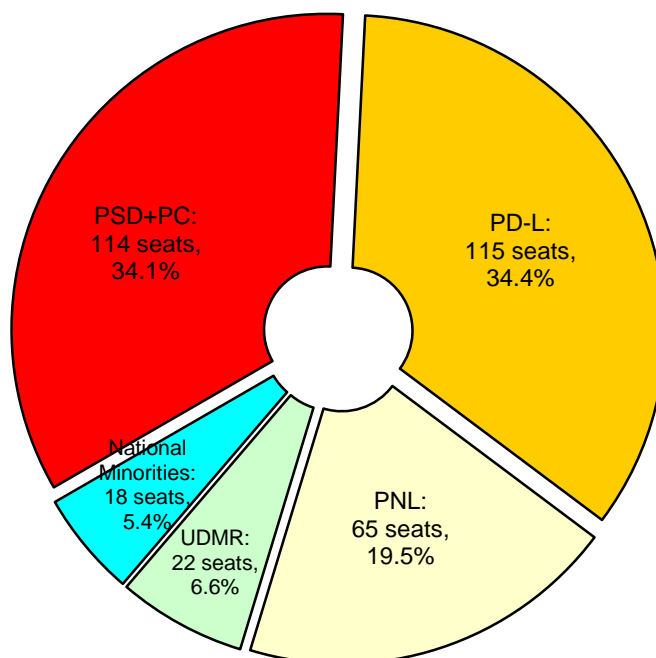
This election mechanism, in which nominations are held in constituencies and the distribution of seats is done by proportional rule has no precedent in Europe and led to the situation that 25% of senator or deputy seats may not be granted to the first ranked competitor in constituencies<sup>61</sup>.

Parliamentary elections in Romania (Chamber of Deputies and Senate) were held on November, the 30<sup>th</sup>, 2008, with a participation rate of 39.20%.

Following the aggregation of valid votes for the Chamber of Deputies, a total of 334 seats were awarded. 316 from these seats were allocated to political parties, organizations of citizens belonging to national minorities, political alliances, electoral alliances, independent candidates. 18 seats were allocated to members of national organizations that have obtained at least 10% of the national established electoral coefficient. The November, the 30<sup>th</sup> elections led to a diminution of the number of parliamentary parties on the Romanian scene: PSD + PC, PD-L, PNL, UDMR.

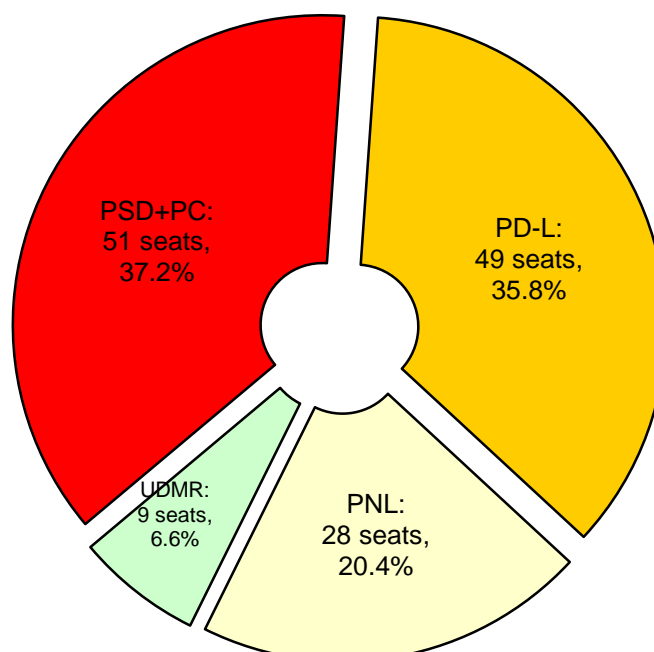
---

<sup>61</sup> The procedure is described in Articles 47 and 48 of the Voting System Law (Law for the election of the Chamber of Deputies and the Senate and for amending and supplementing Law no. 67/2004 for the election of local authorities, the local government Act no. 215/2001 and Law no. 393/2004 on the status of local elected officials, law no. 35/2008), published in the Official Journal, Part I no. 196 of 03.13.2008. The two articles count 22 paragraphs. Simplified description is taken from the *Report on November 30<sup>th</sup>, 2008 parliamentary elections* Ovidiu Sincai Institute, February 1<sup>st</sup>, 2009, Bucharest, p.11-12.



Chamber of Deputies – total number and percentage of the obtained seats by the political entities – elections from 30<sup>th</sup> November 2008

For Senate, a total number of 137 seats were distributed.



Senate – total number and percentage of the obtained seats by the political entities – elections from 30<sup>th</sup> November 2008



The electoral system adopted for parliamentary elections in November 2008 was relatively complicated and led to some problems in the distribution of seats. Thus, although the use of Voting System was the goal for changing the electoral system, results showed that only 21% of senators and of 26% deputies entered the Parliament by direct vote (comprising over 50% of the cast votes), while the remaining candidates have benefited from a redistribution system. Redistribution led to situations of inequity by making it possible for a candidate who obtained 49.6% of votes in its favour not to enter the Parliament<sup>62</sup>, while another candidate with only 34 votes to obtain a seat<sup>63</sup>. Also, situations when candidates from a constituency were ranked third in peoples' options, to enter into the Parliament as a result of redistribution of votes on national level, and the situation that candidates situated on the top positions received any seat. However, nationally, the chosen system allowed a proportional representation of political choices of voters.

### **Presidential election - November 2009**

Elections for President of Romania from 22<sup>nd</sup> November – 6<sup>th</sup> December 2009 were conducted in accordance with Law no. 370/2004, as amended and supplemented, supplemented by Government Emergency Ordinance no. 95/2009.<sup>64</sup>

According to the new electoral law that marks the difference between the term of President's seat (5 years) and duration of the seat of Parliament (four years) for the first time in Romanian politics, election of the President of Romania was not held simultaneously with elections for the Chamber of Deputies and the Senate. Instead, its first round of electing the President of Romania overlapped with the time of the national referendum held on the initiative of the President in office, on the shift from a bicameral Parliament in an unicameral Parliament and reducing the number of Parliament's members to the maximum of 300. The first round of Presidential elections was set on November 22<sup>nd</sup>, 2009, and the second round was scheduled two weeks later (December 6<sup>th</sup>, 2009).

In due time, a total of 29 applications were made, of which the Central Electoral Bureau admitted 12 (3 - of the independent candidates and 9 from political parties)<sup>65</sup>. The percentage of voters was 54.37%, over 15 percentage points higher than in parliamentary elections (39.20%).

---

<sup>62</sup> PSD candidate Lucian Băluț, ranked first in the constituency of Constanta with 49.6% of the vote, did not obtain a mandate, while UDMR candidate, Joseph Koto, obtained a mandate with only 34 votes (2% of votes in his constituency)!

<sup>63</sup> Permanent electoral authority, *Report on the organization and deployment for election of Chamber of Deputies and Senate from November 30<sup>th</sup>, 2008*, p. 121-122, <http://www.roaep.ro/>

<sup>64</sup> Government Emergency Ordinance no. 95/2009 amending and supplementing Law no. 370/2004 for the election of the President of Romania, published in Official Journal no. 608 of September 3, 2009.

<sup>65</sup> Applications rejected did not meet certain criteria imposed by the electoral law: in most cases, were not accompanied by a list of at least 200,000 supporters.





Results for Presidential elections – 1<sup>st</sup> round, 22<sup>nd</sup>, November 2009

No. crt.	Name and surname of the candidate	Valid cast votes	
		Number	% of total number
1	Traian BĂSESCU (PD-L)	3153640	32.44%
2	Mircea-Dan GEOANĂ (PSD)	3027838	31.15%
3	Crin ANTONESCU (PNL)	1945831	20.02%
4	Corneliu VADIM-TUDOR (PRM)	540380	5.56%
5	Hunor KELEMEN (UDMR)	373764	3.83%
6	Sorin OPRESCU (independent)	309764	3.18%
7	George BECALI (PNGcd)	186390	1.19%

Source: Central Electoral Bureau for election of the President of Romania from 2009, first round results, November, 22<sup>nd</sup>, 2009, <http://www.bec2009p.ro/rezultate.html>

The other five candidates have obtained each a percentage less than 1% of votes, which means less than the required minimum number of supporters that was presented to support the application (200,000 supporters).

In the second round, held on December 6<sup>th</sup>, 2009, the first two runners competed and the turnout has been higher, 58.02%. Traian Băseșcu, the President in office, won by a close shave the Presidential elections, with a difference of less than one percentage point from the PSD candidate (50.33% vs. 49.66%, nearly 70,000 additional votes, from a total of 10,500,000 valid votes).

As Election Observation Mission OSCE / ODIHR<sup>66</sup> assessed: "The elections for President of Romania in 2009 took place in an atmosphere characterized by respect for fundamental political freedoms and were conducted generally in accordance with OSCE commitments and international standards for democratic elections and with national legislation.

Although authorities have taken steps to correct some deficiencies observed in the first round and to investigate irregularities, further efforts are needed to address remaining weaknesses in order to improve election process and to enhance public confidence"<sup>67</sup>.

## 2. Political determination of voting

Given that for the parliamentary elections from November 2008, deputies and senators were elected in single-member constituencies, through single-member district elections, according to proportional representation and, for local elections,

---

<sup>66</sup> OSCE/ODIHR means Organization for Security and Co-operation in Europe / Office for Democratic Institutions and Human Rights

<sup>67</sup> Romania, Presidential Elections, November 22<sup>nd</sup> and December 6<sup>th</sup>, 2009 – Final Report of Election Observation Mission OSCE / ODIHR, cited by the Permanent Electoral Authority, the *White Paper for Election of President of Romania 2009*, p. 103, <http://www.roaep.ro/>



presidents of county councils are elected through uninominal voting and county councillors by direct vote on the lists, we analyzed the impact of local representation on the vote in parliamentary elections. Political impact model is:

$$cd_{ij} = a_{0,ij} + a_{1,ij} \cdot cj_{ij} + a_{2,ij} \cdot presc_{ij} + e_{ij}, \quad (1)$$

where

- $cd_{ij}$  – 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 to the Chamber of Deputies, in 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 to the Local Councils, June 2008;
- $presc_{ij}$  – dummy variable,  $presc_{ij} = 1$ , when party  $i$  won the presidency of County Council  $j$ , local elections in June 2008 and  $presc_{ij} = 0$ , otherwise;
- $a_{0,ij} \dots$  – parameters of the model;
- $e_{ij}$  – error of regression equation, random variable.

The model was estimated only for parties that exceed the electoral threshold and, consequently, have parliamentary representation: the Social Democratic Party + Conservative Party (PSD + PC), Democratic - Liberal Party (PD-L), National Liberal Party (PNL) and Democratic Union of Hungarians in Romania (UDMR).

The results confirm a panel model, with specific effects for constant terms and common effects for explanatory variables. Accepted model is the following:

$$cd_{ij} = a_{0,i} + a_1 \cdot cj_{ij} + a_2 \cdot presc_{ij} + e_{ij}, \quad (1')$$

where

- $a_{0,i}$  – represents the constant in the regression equation associated to the party  $i$  (specific effect);
- $a_1, a_2$  – constant parameters of the model.

The obtained results are presented in the table below:

Dependent Variable: CD?  
 Method: Pooled EGLS (Period SUR)  
 Included observations: 4  
 Cross-sections included: 42  
 Total pool (balanced) observations: 168  
 Linear estimation after one-step weighting matrix

Variable	Coefficient	Std. Error	t-Statistic	Prob.
$a_{0,PSD}$	7.131789	0.839826	8.491985	0.0000
$a_{0,PDL}$	6.635535	0.945950	7.014680	0.0000
$a_{0,PNL}$	2.300443	0.808208	2.846350	0.0050
$a_{0,UDMR}$	1.652317	0.405851	4.071237	0.0001
CJ?	0.708750	0.021673	32.70130	0.0000
PRESCJ?	4.613843	0.991318	4.654250	0.0000



Weighted Statistics			
R-squared	0.955322	Mean dependent var	10.31194
Adjusted R-squared	0.953943	S.D. dependent var	5.212104
S.E. of regression	1.008735	Sum squared resid	164.8426
F-statistic	692.7880	Durbin-Watson stat	2.007981
Prob(F-statistic)	0.000000		
Unweighted Statistics			
R-squared	0.924140	Mean dependent var	22.53792
Sum squared resid	2944.400	Durbin-Watson stat	2.724072

A similar model is valid also for the Senate:

$$\text{sen}_{ij} = b_{0,ij} + b_{1,ij} \cdot \text{c}_{jij} + b_{2,ij} \cdot \text{presc}_{jij} + e_{ij}, \quad (2)$$

where

$\text{sen}_{ij}$  – 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 to the Senate, in November 2008;

$\text{c}_{jij}$  – 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 to the Local Councils, June 2008;

$\text{presc}_{jij}$  – dummy variable,  $\text{presc}_{jij} = 1$ , when party  $i$  won the presidency of County Council  $j$ , local elections in June 2008 and  $\text{presc}_{jij} = 0$ , otherwise;

$b_{0,ij} \dots$  – parameters of the model;

$e_{ij}$  – error of regression equation, random variable.

The same, the tests validate a model with specific effects for constant terms ( $b_0$ ) and common effects for explanatory variables, so that we use the following model:

$$\text{sen}_{ij} = b_{0,i} + b_1 \cdot \text{c}_{jij} + b_2 \cdot \text{presc}_{jij} + e_{ij}, \quad (2')$$

where

$b_{0,i}$  – represents the constant in the regression equation associated to the party  $i$  (specific effect);

$b_1, b_2$  – constant parameters of the model.

The obtained results are presented in the table below:

Dependent Variable: SEN?

Method: Pooled EGLS (Period SUR)

Total pool (balanced) observations: 168

Linear estimation after one-step weighting matrix

Variable	Coefficient	Std. Error	t-Statistic	Prob.
$b_{0,PSD}$	7.368119	0.828612	8.892118	0.0000
$b_{0,PDL}$	7.230648	0.949825	7.612610	0.0000
$b_{0,PNL}$	1.964547	0.813176	2.415893	0.0168
$b_{0,UDMR}$	1.748847	0.400904	4.362257	0.0000
CJ?	0.727403	0.021240	34.24688	0.0000
PRESCJ?	5.000008	0.982771	5.087664	0.0000



Weighted Statistics			
R-squared	0.958652	Mean dependent var	11.20433
Adjusted R-squared	0.957376	S.D. dependent var	5.891028
S.E. of regression	1.012407	Sum squared resid	166.0448
F-statistic	751.1945	Durbin-Watson stat	2.009669
Prob(F-statistic)	0.000000		
Unweighted Statistics			
R-squared	0.929167	Mean dependent var	23.22869
Sum squared resid	2975.737	Durbin-Watson stat	2.682022

As a synthesis, the results are:

	Chamber of Deputies				Senate			
	PSD	PD-L	PNL	UDMR	PSD	PD-L	PNL	UDMR
Constant	7.1318 (8.49)	6.6355 (7.01)	2.3004 (2.85)	1.6523 (4.07)	7.3681 (8.89)	7.2306 (7.61)	1.9645 (2.42)	1.7488 (4.36)
CJ	0.7088 (32.7)				0.7274 (34.25)			
PRESCJ	4.6138 (4.65)				5.0000 (5.09)			
R <sup>2</sup>	0.9553				0.9586			
R <sup>2</sup> adjusted	0.9539				0.9574			

(in brackets, under the estimators, there are standard deviation values; the estimators have a confidence level over 95%)

The results confirm the hypothesis of a political determination of the vote. On average, about 70% of political votes in local elections have been preserved up to parliamentary elections by the electoral competitors and the presence as the head of County Council of a representative of the party fired up the party's election outcomes with 4.6 - 5 percentage points.

For Presidential Elections from November 2009 – first round, we have built a similar model:

$$pr_{ij} = c_{0,ij} + c_{1,ij} \cdot cj_{ij} + c_{2,ij} \cdot prescj_{ij} + e_{ij}, \quad (3)$$

where

$pr_{ij}$  – represents the share of votes won by the competitor  $i$  for Presidency in county  $j$ , to the total number of valid votes in that county, in the Presidential Elections in November 2009;

$cj_{ij}$  – represents the share of votes won in county  $j$ , by the party from which the candidate  $i$  is, to the total number of valid votes in that county, in the elections for the Local Councils, June 2008;



- $presc_{ij}$  – dummy variable,  $presc_{ij} = 1$ , if the party of the candidate  $i$  won the Presidency of Local County  $j$ , in the local elections from June 2008 and  $presc_{ij} = 0$ , otherwise;  
 $b_{0,ij} \dots$  – parameters of the model;  
 $e_{ij}$  – error of regression equation, random variable.

The tests validate a panel model, with specific effects for constant terms ( $c_0$ ) and common effects for explanatory variables, so the model is the following:

$$pr_{ij} = c_{0,i} + c_1 \cdot cj_{ij} + c_2 \cdot presc_{ij} + e_{ij}, \quad (3')$$

where

- $c_{0,i}$  – represents the constant in the regression equation associated to the party  $i$  (specific effect);  
 $c_1, c_2$  – constant parameters of the model.

We considered only the first three candidates, so the previous description,  $i = 1$ , for Mircea Geoana (PSD + PC),  $i = 2$  for Traian Băsescu (PD-L) and  $i = 3$  for Crin Antonescu (PNL). The results are:

Dependent Variable: PR?  
 Method: Pooled EGLS (Period SUR)  
 Sample: 1 3  
 Included observations: 3  
 Cross-sections included: 42  
 Total pool (balanced) observations: 126  
 Linear estimation after one-step weighting matrix

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CJ?	0.445549	0.033772	13.19286	0.0000
PRESCJ?	2.303273	1.146651	2.008695	0.0468
$C_{Geoan\grave{a}}$	15.71962	1.258790	12.48788	0.0000
$C_{B\acute{a}sescu}$	16.53802	1.189346	13.90514	0.0000
$C_{Antonescu}$	8.683501	0.855954	10.14482	0.0000
Weighted Statistics				
R-squared	0.826710	Mean dependent var	9.584683	
Adjusted R-squared	0.820982	S.D. dependent var	3.394960	
S.E. of regression	1.016358	Sum squared resid	124.9909	
F-statistic	144.3133	Durbin-Watson stat	2.067084	
Prob(F-statistic)	0.000000			
Unweighted Statistics				
R-squared	0.747613	Mean dependent var	27.33733	
Sum squared resid	2711.178	Durbin-Watson stat	2.686440	

As shown in the previous equation, a good part of the results in Presidential elections for the first three candidates can be explained by the conservation of



electoral behaviour between local and Presidential elections under the influence of local representatives of those parties.

We also tested a model of political analysis that pursues each candidate's position to the trend recorded for the party that supported him. The model is the following:

$$pr_{ij} = (c_0 + c_1 \cdot cd_{ij}) + c_{2,i} + e_{ij}, \quad (4)$$

where

- $pr_{ij}$  – represents the share of votes won by the competitor  $i$  for Presidency in county  $j$ , to the total number of valid votes in that county, in the Presidential Elections in November 2009;
- $cd_{ij}$  – represents the share of votes won in county  $j$ , by the party from which the candidate  $i$  is, to the total number of valid votes in that county, in the elections for Chamber of Deputies, in November 2008;
- $c \dots$  – parameters of the model;
- $e_{ij}$  – error of regression equation, random variable.

The first part of the model estimates the overall national trend for each party  $i$ . The positive  $c_{2,i}$  coefficient means that the obtained votes of the candidate from party  $i$  are above the regular votes of that party and, obviously,  $c_{2,i} < 0$  means that in the Presidential Elections from 2009, the candidate  $i$  scored under the political performances of his party.

We considered this time, the top five candidates (together have 93% of the total valid votes in round I of the Presidential election, November 2009). The results are:

Dependent Variable: PR?  
 Method: Pooled EGLS (Period SUR)  
 Sample: 1 5  
 Included observations: 5  
 Cross-sections included: 42  
 Total pool (balanced) observations: 210  
 Linear estimation after one-step weighting matrix

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.119204	0.328170	15.59922	0.0000
CD?	0.730803	0.017064	42.82715	0.0000
<b>Fixed Effects</b>				
C <sub>2</sub> – Geoană (PSD+PC)	2.587327			
C <sub>2</sub> – Băsescu (PD-L)	3.855761			
C <sub>2</sub> – Antonescu (PNL)	0.095458			
C <sub>2</sub> – Kelemen (UDMR)	-5.020011			
C <sub>2</sub> – Vadim-Tudor (PRM)	-1.518535			



Weighted Statistics			
R-squared	0.967887	Mean dependent var	25.91606
Adjusted R-squared	0.967100	S.D. dependent var	18.70538
S.E. of regression	1.014598	Sum squared resid	209.9996
F-statistic	1229.723	Durbin-Watson stat	1.986549
Prob (F-statistic)	0.000000		
Unweighted Statistics			
R-squared	0.925412	Mean dependent var	19.06313
Sum squared resid	3054.200	Durbin-Watson stat	2.424733

PD-L's candidate (Băsescu) and PSD+PC's (Geoană) scored higher than the general trend of the party, Liberal candidate (Antonescu) obtained a score according to the general tendency of his party. Well below the score of the party which supported him stood the UDMR's candidate.

### 3. Economic determination of the voting

Economic voting is "a special case of the rational-choice perspective on electoral behaviour"<sup>68</sup> where the main focus is on the relationship between the voters and the state of the macroeconomy. In specific literature there are multiple references to the economic analyses of electoral behaviour: Owen and Tucker (2010), Lewis-Beck and Stegmaier (2000, 2008), Anderson (2007) and so on<sup>69</sup>. As Anderson stated (2007, p. 273), by the end of the twentieth century the flow of scholarly papers on the topic had "changed from a trickle to a torrent of over 300 articles and books on economics and elections" (Lewis-Beck and Stegmaier 2000, p. 183) and covered virtually every democracy for which data on economics and elections were available.

In its most straightforward form, the predominant model of economic voting employed in studies of established democracies expects that voters will tend to punish the incumbent in bad economic times and reward the incumbent when the economy is doing well. In this framework, elections function much like referenda on economic conditions during the incumbent party's term in office.

In Paldam analysis<sup>70</sup>, a Vote function (hereafter V-function) is defined as a function explaining (the change in) the vote for the government by (changes in) economic conditions and other variables. A Popularity function (hereafter P-function) explains (the change in) the popularity of the government – as measured by polls – by (change in) the economic conditions and other variables.

---

<sup>68</sup> Han Dorussen and Harvey D. Palmer, "The Context of Economic Voting," in *Economic Voting*, ed. Han Dorussen and Michael Taylor (London, Routledge, 2002), quoted in Sari Rannanpää, 2008, *Economic Voting in Estonia*, Central European University, Department of Political Science, <http://web.ceu.hu/polsci/teaching/seminarpapers/Sari.pdf>

<sup>69</sup> For more on economic voting, see, for example, the 19 articles in special issue of *Electoral Studies: Economics and Elections* (Volume 19, Number 2/3, June/September 2000).

<sup>70</sup> Paldam, Martin. 1991, "How Robust is the Vote Function? A Study of Seventeen Nations over Four Decades". In: Helmuth Norpoth, Michael S. Lewis-Beck, and Jean Dominique Lafay (eds.), *Economics and Politics*, Ann Arbor: The University of Michigan Press, 9- 32.



For Romania, we have studied the impact inducted by the state and dynamics of some economic variables on the change of voting intensions. The data are analysed in regional structures. We used a Paldam type model. In its most simple linear version the function are:

$$\Delta P_t = \{a_1 \Delta u_t + a_2 \Delta p_t + \dots\} + [c_1 D_t^1 + c_2 D_t^2 + \dots] + e_t \quad (5)$$

Here  $\Delta$  is used to indicate the first difference, P is either the vote or the popularity, for the political parties, in percent. The as and cs are coefficients to be estimated, and the e is the disturbance term. The braces contain the economic variables: the e-part of the model. Two of the variables are u and p, where u is the rate of unemployment and p the rate of price rises. The next set of variables, the ds, are the political variables forming the p-part of the model – it is found in the square brackets<sup>71</sup>.

Concretely, we have analysed a model like:

$$P_{ij} = \{a_0 + a_1 \cdot c_{jij} + a_2 \cdot \text{presc}_{jij}\} + [a_{3,i}(\text{rs}_{\text{nov2008}} - \text{rs}_{\text{mai2008}})_j] + e_{ij}, \quad (5')$$

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;

$c_{jij}$  – 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;

$\text{presc}_{jij}$  – dummy variable,  $\text{presc}_{jij} = 1$ , when party i won the Presidency of Local County j, Local Elections 2008 and  $\text{presc}_{jij} = 0$ , otherwise;

$\text{rs}_j$  – unemployment rate in county j;  $\text{nov2008} = 30$  November 2008,  $\text{mai2008} = 31$  May 2008;

a ... – parameters of the model;

$e_{ij}$  – 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 și PNL). The obtained results are:

	Chamber of Deputies			Senate		
	PSD	PD-L	PNL	PSD	PD-L	PNL
Constant	6.8377 (6.94)			6.5888 (6.684)		
CJ?	0.6400 (16.684)			0.6735 (17.553)		
PRESCJ?	5.3823 (4.539)			6.1834 (5.155)		
$RS_{\text{nov2008}} - RS_{\text{mai2008}}$	2.1514 (1.944)	2.4978 (2.085)	-3.0629 (-2.517)	1.8465 (1.679)	2.5053 (2.009)	-3.6142 (-2.856)
$R^2$	0.8397			0.8548		
$R^2$ adjusted	0.8330			0.8487		

<sup>71</sup> *idem*, p. 14.





(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 Presidential election, we have built a model where periods are shown separately: May 2008 - November 2008 (PNL in office) and November 2008 - November 2009 (PD-L in office)

$$\begin{aligned} pr_{ij} &= \{ a_0 + a_1 \cdot c_{ij} + a_2 \cdot presc_{ij} \} + \\ &+ [a_{3,i}(rs_{nov2008} - rs_{mai2008})_j] + \\ &+ a_{3,i}(rs_{nov2009} - rs_{nov2008})_j] + e_{ij}, \end{aligned} \quad (6)$$

where

$pr_{ij}$  – represents the share of votes won by the competitor  $i$  for Presidency in county  $j$ , to the total number of valid votes in that county, in the Presidential Elections in November 2009

We anticipate, in line with the economic voting theory, that  $a_3$  is negative for candidates who represent the ruling parties and positive for the ones representing opposition parties.

The results for Presidential elections in November 2009 are not econometrically significant. Nor is any other econometric model, in which the results from parliamentary elections in November 2008 are regarded as political variables and as economic variables are used the change in unemployment between the two time election, or three months before the election. Lack of regional statistics for other economic variables discussed in the specific literature in the context of vote-popularity functions (e.g. inflation) has not allowed the construction of some models with more variables. Subject to this methodological observation, the conclusion of the tested econometric models is that for Presidential elections in Romania, organized in November 2009, the economic voting has no significant influence on election results of the main candidates, as resulted in regional structures.

## Conclusions

Romanian electoral system has undergone significant changes in 2008. The main elements of the new introduced electoral law are:

Presidents of county councils are elected by universal, equal, direct, secret and freely expressed vote. Until the local elections from June 1, 2008, presidents of county councils were indirectly elected by the county councils. Under the new law, a candidate who, in the first round, obtaining the highest number of votes is declared the winner. The election of Chairmen of County Councils by direct vote was a strong premise for changing the structure of power within the parties;

November 2008 elections were the first parliamentary elections in Romania separated from Presidential elections. If for the election during 1990-2004 the Presidential



candidates worked as a locomotive for the parties, this time political parties acknowledged the personalization of political life and launched their own candidate for prime minister, although this feature is not directly eligible.

Since the 2008 elections, deputies and senators were elected in single-member constituency, through single-member constituency elections, according to proportional representation. The most important change to the electoral law for parliamentary elections in 2008 refers to the replacement procedure of voting on party lists with the uninominal voting system. Each electoral competitor (political party, political alliance or electoral party of minorities, independent candidate) has the possibility to register a single candidate in a constituency.

The econometric models built for the Parliamentary elections from November 2008 confirm the hypothesis of a political determination of the vote. On average, about 70% of political votes in local elections have been preserved up to parliamentary elections by the electoral competitors and the presence as the head of County Council of a representative of the party fired up the party's election results with 4.6 - 5 percentage points.

For the Presidential elections from November 2009, econometrically, a good part of the results of Presidential elections for the first three candidates can be explained by the conservation of electoral behaviour between local and Presidential elections under the influence of local representatives of those parties.

Also there are econometric elements for supporting the fact that PD-L's candidate (Băsescu) and PSD+PC's (Geoană) scored higher than the general trend of the party (on national level), and that the Liberal candidate (Antonescu) obtained a score according to the general tendency of his party. Well below the score of the party which supported him stood the UDMR's candidate.

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). But for the Presidential elections from November 2009 (round I), the hypothesis of an economic component in voting behaviour's creation could not be based on the analyses of regional variables.

## REFERENCES

- Anderson C.J., 2007. "The end of economic voting? Contingency dilemmas and the limits of democratic accountability". *Annual Review of Political Science* 10, 271–296.
- Dorussen H., Palmer H.D., 2002, "The Context of Economic Voting", in *Economic Voting*, ed. Han Dorussen and Michael Taylor (London, Routledge)
- Duch R.M., 2006, "Voting in Context: How Political and Economic Institutions Condition the Economic Vote". Paper presented at the annual meeting of the American Political Science Association, Marriott, Loews Philadelphia, and the Pennsylvania Convention Centre, Philadelphia, PA, Aug 31, [http://www.allacademic.com/meta/p150897\\_index.html](http://www.allacademic.com/meta/p150897_index.html).



- Duch R.M., Stevenson R., 2005, Assessing the Magnitude of the Economic Vote over Time and Across Nations, <http://www.raymond duch.com/economicvoting/articles/ecpr03special%20editionjan72005.pdf>
- Hibbs D. (Jr.), 2006, "Voting and the Macroeconomy", in *The Oxford Handbook of Political Economy*, ed. Weingast B.R., Wittman D.A. (Oxford, Oxford University Press)
- Institutul "Ovidiu Șincai", Raport asupra alegerilor parlamentare din 30 noiembrie 2008, 1 februarie 2009, București.
- Jula D., 2008, Economic Impact of Political Cycles – The Relevance of European experiences for Romania, Working Papers of Institute for Economic Forecasting, <http://www.ipe.ro/RePEc/WorkingPapers/wpiecef081101.pdf>
- Jula D., Jula N.-M., 2009, "Regional Economic Voting in Romania", in *Journal for Economic Forecasting*, vol. 6, issue 1: 5-15
- Lewis-Beck M.S., 2006, *Economics and Elections: the Major Western Democracies*, The University of Michigan Press
- Lewis-Beck M.S., Nadeau R., Elias A., 2008, "Economics, Party, and the Vote: Causality Issues and Panel Data" *American Journal of Political Science* 52.1 (2008): 84-95.
- Lewis-Beck M.S., Paldam M., 2000, "Economic Voting: An Introduction" *Electoral Studies* 19.2-3 (2000): 113-121.
- Lewis-Beck M.S., Stegmaier M., 2000, "Economic Determinants of Electoral Outcomes", *Annual Review of Political Science*, June, Vol. 3: 183-219.
- Lewis-Beck M.S., Stegmaier M., 2008, "Economic Voting in Transitional Democracies" *Journal of Elections, Public Opinion and Parties* 18.3: 303-323.
- Owen A, Tucker J.A., 2010, "Past is still present: Micro-level comparisons of conventional vs. transitional economic voting in three Polish elections", *Electoral Studies, An International Journal on Voting and Electoral Systems and Strategy*, 29: 25–39
- Paldam M., 1991, "How Robust is the Vote Function? A Study of Seventeen Nations over Four Decades". In: Helmuth N., Lewis-Beck M.S., Lafay J.D. (eds.), *Economics and Politics*, Ann Arbor: The University of Michigan Press, 9-32.
- Permanent Electoral Authority, Raport asupra organizării și desfășurării alegerilor autorităților administrației publice locale din iunie 2008, <http://www.roaep.ro/>
- Permanent Electoral Authority, Raport asupra organizării și desfășurării alegerilor pentru Camera Deputaților și Senat din 30 noiembrie 2008, <http://www.roaep.ro/>
- Permanent Electoral Authority, Cartea albă a alegerilor pentru Președintele României din anul 2009, <http://www.roaep.ro/>