Popularity and Vote: Forecasting the 2007 French Presidential Election

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Introduction

Since the end of the 1970s, numerous econometric vote models have been developed to explain and forecast the result of the French national and local elections. For the French presidential elections, the first models (Courbis, 1995; Lewis-Beck, 1995, 1997) used national data but as the number of French presidential elections is low (only seven elections from 1965 to 2002), the use of these models to explain and forecast the French presidential vote is rather uncertain except when we use only one or two independent variables.[1] It is also possible to use national and local data (pooled data). Compared to national models, the number of observations is larger and we can use more independent variables (Dubois, 2002; Jérôme et al., 2003; Jérôme and Jérôme-Speziari, 2004, for the French presidential elections).

Jérôme and colleagues (2003) built a model to explain the first-round vote obtained by the ruling parliamentary majority in the French presidential elections (1974–1995) with regional and national independent variables. Unfortunately, their *ex ante* forecast for the French 2002 presidential election was very inaccurate: their model forecasted 52.36 per cent of the first round votes for the left parties and the victory of the left-wing candidate in the second round while in fact the left was eliminated after the first round.[2] This forecast error is partially explaining by the very high National Front (extreme right) first-round vote.[3] Jérôme and Jérôme-Speziari (2004) also built a model to explain the first-round vote for candidates of the incumbent's coalition in the French presiden-

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tial elections (1974–2002) with regional and national independent variables. Their model also explained the second-round vote for candidates of the right. Their national *ex post* forecast for the 2002 French presidential election was accurate but they did not present national *ex ante* forecast for the 2002 French presidential election. Dubois (2002) built a model explaining the second-round vote for candidates of the ruling presidential majority in the French presidential elections (1981–1995) with local and national independent variables.[4] For the 2002 French presidential election, the author only presented *ex ante* forecasts in the vote for the second round.

In this article, we shall build a vote function for the French presidential elections that explains the first-round vote for the left and the right over the periods 1981–1995 and 1981–2002 and the second-round vote for the left and the right over the 1981–1995 period and for the left over the 1981–2007 period (without 2002). This model, which uses data at the local level and at the national level, makes notably *ex post* forecasts over the period 1981–1995 and the best results are obtained with the second-round vote for the left and *ex ante* forecasts in the vote (second round) for the left at the local level and at the national level for the 2007 French presidential election (second round). We highlight the positive influence of the popularity of the Socialist party and that of a local partisan variable which takes into account the persistence in the orientation of the vote for the left.

After presenting the forecasting vote models and the different variables used (first- and second-round vote for the left and the right), we analyze the results. We make *ex post* forecasts for the French presidential elections of the past and national *ex ante* forecasts in the vote (second round) for the 2007 French presidential election.

A Forecasting Model of French Presidential Elections

Our study is made over the 1981–1995 period (three French presidential elections: 1981, 1988 and 1995) and 1981–2002 (four French presidential elections: 1981, 1988, 1995 and 2002) for the first- and second-round vote and over the 1981–1995 period for the second-round vote.[5,6] In the first three French presidential elections, the Socialist party led the parliamentary opposition while for the 2002 presidential election, the Socialist party led the parliamentary majority.

We made use of Fisher's test to choose between a model with fixed effects (FE) and a model without effects: for the model (1) over the periods 1981–1995 and 1981–2002 (estimates 1 and 1a) and for the model (2) over the period 1981–1995 (estimates 2), we chose the model with fixed effects at the statistical level of 5 per cent: $F(95,190) = 2.09$,

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Abstract. The purpose of this article is to build a model that explains and forecasts the outcome of the second-round vote in the French presidential elections (with the hypothesis of a classic duel between left and right) in each department and at the national level. This model highlights the influence of the popularity of the Socialist party and a partisan variable in the explanation of the second-round vote for the candidate of the left in the French presidential elections. Its forecasts for the elections of the past (1981–1995 and 1981–2007, excluding 2002) are satisfactory and we make *ex ante* forecasts for the 2007 French presidential election.

Résumé. L'objet de cet article est de construire un modèle qui explique et prévoit le résultat du second tour de scrutin aux élections présidentielles françaises (en supposant le duel classique entre la gauche et la droite) dans chaque département et au niveau national. Ce modèle met en lumière l'influence de la popularité du Parti socialiste et d'une variable partisane dans l'explication du vote au second tour pour le candidat de la gauche aux élections présidentielles. Les prévisions ex post pour les élections passées (de 1981 à 1995 et de 1981 à 2007, en excluant 2002) sont satisfaisantes et on établit des prévisions ex ante pour l'élection présidentielle française de 2007.

$F(95,286) = 1.38$ and $F(95,190) = 1.96$ (the critical value is 1.34); for the model (3), the results are favourable to the model with fixed effects over the period 1981–1995 (estimates 3) and favourable to the model without effects over the 1981–2002 period (estimates 3a): $F(95,190) = 1.65$, $F(95,286) = 0.63$ (the critical value is 1.34); for the model (4), we chose the model without effects over the 1981–1995 period at the statistical level of 5 per cent (estimates 4): $F(95,190) = 1.01$ (the critical value is 1.34). As our study concerns all the departments of metropolitan France (exhaustiveness), a model with fixed effects is preferable to a model with random effects.[7] The model with fixed effects enables us to take into account specific factors in every department (with dummy variables) which are not taken into account by the various independent variables.

To explain the first- and second-round vote received by the left, we use the following equations (1) and (2): estimates (1) and (1a) over the 1981–1995 and 1981–2002 periods and estimates (2) over the 1981–1995 period:

$$\mathrm{VOTEL1}_{it} = c_i + \alpha_1 \mathrm{POPPS1}_t + \alpha_2 \mathrm{VPL1}_{it} + \varepsilon_{1it} \quad (1)$$

$$\mathrm{VOTEL2}_{it} = d_i + \beta_1 \mathrm{POPPS2}_t + \beta_2 \mathrm{VPL2}_{it} + \varepsilon_{2it} \quad (2)$$

where $\mathrm{VOTEL1}_{it}$ = the percentage of the first-round vote received by the left and $\mathrm{VOTEL2}_{it}$ = the percentage of the second-round vote received by the left in every department of metropolitan France (i varies from 1 to 96)[8] in the French presidential elections at date t;

$\mathrm{POPPS1}_t$ = the popularity of the Socialist party before the first round and $\mathrm{POPPS2}_t$ = the popularity of the Socialist party before the second round; $\mathrm{VPL1}_{it}$ = the difference between the local vote and the national vote for the left at the first round and $\mathrm{VPL2}_{it}$ = the difference between

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the local vote and the national vote for the left at the second round in every department at the previous French presidential elections.

We have retained two independent variables. The political factors notably depend on the Socialist party's popularity and on the ideology. The first independent variable is the popularity of the Socialist party (variable noted POPPS1 or POPPS2). It is a variable which allows political factors to be taken into account. We chose to retain the percentage of people having a good opinion of the Socialist party (average of the last three months before the first or the second round of the presidential elections, TNS Sofres in *Le Figaro Magazine*).[9] We take the popularity of the Socialist party as an indicator of the popularity of the left because the Socialist party is the most important party of the left at the first round of the French presidential elections and the Socialist candidate is present for the left at the second round. This variable is close to the popularity of the Socialist party in March, which Lafay and others (2007) use for their national forecasting model of the French presidential elections (1981–2002, second round). We are expecting the following signs: $\alpha_1 > 0$ and $\beta_1 > 0$. The second independent variable is a partisan variable (variable noted VPL1 or VPL2). We take into account the ideology in every department by a partisan variable as for the French legislative elections (Auberger and Dubois, 2003, 2005) and for the French European elections (Auberger, 2005). When a department votes significantly for the left in the previous presidential election, we may think that it will vote in favour of the left in the following presidential election. We are expecting the following signs: $\alpha_2 > 0$ and $\beta_2 > 0$.

To explain the first-round and the second-round vote received by the right, we use the following equations (3) and (4): estimates (3) and (3a) over the 1981–1995 and 1981–2002 periods and estimates (4) over the 1981–1995 period:

$$\mathrm{VOTER1}_{it} = \mathrm{f}_i \text{ (or } \gamma_0) + \gamma_1 \mathrm{POPR1}_t + \gamma_2 \mathrm{VPR1}_{it} + \varepsilon_{3it} \qquad (3)$$

$$\mathrm{VOTER2}_{it} = \mathrm{g}_i \text{ (or } \delta_0) + \delta_1 \mathrm{POPR2}_t + \delta_2 \mathrm{VPR2}_{it} + \varepsilon_{4it} \qquad (4)$$

where $\mathrm{VOTER1}_{it}$ = the percentage of the first-round vote received by the right and $\mathrm{VOTER2}_{it}$ = the percentage the second-round vote received by the right in every department of metropolitan France (i varies from 1 to 96) in the French presidential elections at the date t; $\mathrm{POPR1}_t$ = the popularity of right parties before the first round and $\mathrm{POPR2}_t$ = the popularity of right parties before the second round; $\mathrm{VPR1}_{it}$ = the difference between the local vote and the national vote for the right at the first round and $\mathrm{VPR2}_{it}$ = the difference between the local vote and the national vote for the right at the second round in every department at the previous French presidential elections.

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To calculate the popularity of the moderate right wing, we calculate the average between the popularity of the Rally for the Republic (RPR) party and that of Union for French Democracy (UDF) because both parties are close in political weight (average for the last three months before the first or the second round of the French presidential election, according to TNS Sofres in *Le Figaro Magazine*).

We are expecting the following signs: $\gamma_1 > 0$ and $\delta_1 > 0$; $\gamma_2 > 0$ and $\delta_2 > 0$.

With every estimate (1–4), the Breush-Pagan test of homoscedasticity (Koenker, 1981) shows that the null hypothesis of homoscedasticity is rejected at the statistical level of 5 per cent; for example, with the estimates (1), (1a), and (2), we have: $NR^2 = 26.96 > \chi^2_{0,05}(2) = 5.99$, $NR^2 = 27.32 > \chi^2_{0,05}(2) = 5.99$ and $NR^2 = 23.66 > \chi^2_{0,05}(2) = 5.99$. There is a first-order autocorrelation of the errors at the statistical level of 5 per cent with the estimates (1), (2) and (3) because the Durbin-Watson test adapted by Bhargava and others (1982) for the model with fixed effects is respectively equal to 2.32, 2.40, 2.23; there is no first-order autocorrelation of the errors at the statistical level of 5 per cent with the estimates (1a) because the DW adapted by Bhargava and others (1982) to the model with fixed effects is respectively equal to 1.96 and there is a first-order autocorrelation of the errors with the estimates (3a) and (4) to the statistical level of 5 per cent because the DW is respectively equal to 1.54 and 3.58.

Results

We obtain the following estimates (Tables 1–2) with correction of the heteroscedasticity and first-order autocorrelation of the errors with Newey-West's (1987) method (NW): estimates (1 NW), (2 NW), (3 NW), (3a NW), (4 NW), and estimate (1a W) with correction of the heteroscedasticity with White's (1980) method (W).[10,11] We also present estimates with correction of the first-order autocorrelation of the errors with the Prais-Winsten transformation[11] and correction of the heteroscedasticity: panel-corrected standard errors with correction of the heteroscedasticity with Beck and Katz's (1995) procedure (BK): estimates (1 BK), (2 BK), (3 BK), (3a BK), (4 BK), and estimate (1a BK) with simply correction of the heteroscedasticity with Beck and Katz's procedure.[12]

The statistical indicators of the various estimates show that the vote for the left is better explained than the vote for the right and that the second-round vote is better explained than the first-round vote. The adjusted R-squared indicates that it approximately accounts for 90 per cent (1981–1995 period) and 85 per cent (1981–2002 period) of the variance in the first-round departmental vote for the left while it approximately accounts for 85 per cent (1981–1995 period) and 50 per cent

TABLE 1

	Estimates of Votes 1981–1995 and 1981–2002 (Left, First Round)				Estimates of Votes 1981–1995 (Left, Second Round)		
Estimate	(1 NW)	(1 BK)	(1a W)	(1a BK)		(2 NW)	(2 BK)
$POPPS1_t$	0.74	0.79	0.78	0.78	$POPPS2_t$	0.45	0.42
	(36.90)***	(10.77)***	(31.49)***	(4.76)***		(29.71)***	(8.53)***
$VPL1_{it}$	0.21	0.35	0.32	0.32	$VPL2_{it}$	0.46	0.59
	(3.41)***	(1.65)*	(4.48)***	(1.47)		(8.01)***	(2.92)***
N	288	288	384	384	N	288	288
R^2	0.91	0.90	0.85	0.85	R^2	0.91	0.90
Ad. R^2	0.87	0.85	0.81	0.81	Ad. R^2	0.87	0.85
SER	2.47	2.67	2.92	2.92	SER	2.12	2.27
AENF	0.93	1.13	1.51	1.51	AENF	0.60	0.75
AELF	1.58	1.73	2.08	2.08	AELF	1.28	1.42

Common notes for Tables 1–2:
t statistics with the estimates NW and z statistics with the estimates BK: *** significant at 1%, ** significant at 5%, * significant at 10%.
SER: standard error of the estimate.
AENF: average error with national forecast (absolute value) ; AELF: average error with local forecast (absolute value).

TABLE 2

Estimates of Votes 1981–1995 and 1981–2002 (Right, First Round)					Estimates of Votes 1981–1995 (Right, Second Round)		
Estimate	(3 NW)	(3 BK)	(3a NW)	(3a BK)		(4 NW)	(4 BK)
Constant			31.20	33.56	Constant	28.00	28.13
			(19.13)***	(17.35)***		(23.07)***	(3.11)***
$POPR1_t$	0.97	0.96	0.57	0.52	$POPR2_t$	0.49	0.48
	(28.71)***	(8.07)***	(15.32)***	(1.33)		(17.51)***	(2.28)**
$VPR1_{it}$	0.14	0.34	0.75	0.67	$VPR2_{it}$	0.80	0.80
	(1.77)*	(1.67)*	(16.50)***	(5.29)***		(26.55)***	(12.11)***
N	288	384	384	384	N	288	288
R^2	0.88	0.86	0.53	0.52	R^2	0.75	0.75
Ad. R^2	0.82	0.79	0.52	0.52	Ad. R^2	0.75	0.75
SER	2.93	3.17	4.57	4.60	SER	2.96	2.96
AENF	1.20	1.31	3.27	3.35	AENF	1.74	1.79
AELF	1.96	2.06	3.87	3.94	AELF	2.23	2.25

(1981–2002 period) of the variance in the first-round departmental vote for the right. The adjusted R-squared indicates that it accounts for approximately 85 per cent (1981–1995 period) of the variance of the second-round departmental vote for the left while it accounts for approximately 75 per cent (1981–1995 period) of the variance of the second-round departmental vote for the right. All the coefficients have the expected sign and are significant at the statistical level of 1 per cent except those of the variable VPL1 with the estimates (1 BK) and (1a BK) over the 1981–1995 and 1981–2002 periods which are respectively significant at the statistical level of 10 per cent and not significant at the statistical level of 10 per cent, those of the variable VPR1 with the estimates (3 NW) and (3 BK) over the period 1981–1995 which are only significant at the statistical level of 10 per cent, that of the variable VPR1 with the estimate (3a BK) over the 1981–2002 period which is not significant at the statistical level of 10 per cent and that of the variable VPR1 with the estimate (4 BK) over the 1981–1995 period which is significant at the statistical level of 5 per cent.

We thus retain the estimates of Table 1 which have the best statistical indicators. With the estimates (2 NW) and (2 BK), the coefficient of the variable POPPS2 shows that an increase in the popularity of the Socialist party of 5 points leads to an increase in the vote for the left at the second round by 2.25/2.10 points. The coefficient of the variable VPL2 shows that in a department with a vote for the left 5 points higher than the national vote at the second round of the previous presidential election, the gain in the vote for the left at the second round is equal to 2.30/2.95 points.

Forecasts for 2007

We have made *ex ante* forecasts in the vote (second round) for the left in metropolitan France with the hypothesis of a classic left/right (Royal/Sarkozy) duel. The first forecasts have been made in March 2006.[13] We also made forecasts in June 2006, in September 2006, in December 2006 and in March 2007.

For the popularity of the Socialist party (POPPS2 variable), we use the following data of the TNS Sofres (POPPS2 = 42 per cent in the first quarter 2006, POPPS2 = 45.33 per cent in the second quarter 2006, POPPS2 = 46.67 per cent in the third quarter, POPPS2 = 49.33 per cent in the fourth quarter 2006 and POPPS2 = 49.33 per cent in the first quarter 2007, POPPS2 = 47.33 per cent for the forecast in April 2007 and POPPS2 = 46 per cent for the forecast in May 2007). For the VPL2 variable, we use the first-round vote received by the left at the 2002 French presidential election in every department because there was no candidate of the left at the second round.

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TABLE 3

National Ex Ante Forecast in the Vote for 2007 (Left, Second Round)

Month	Predicted Value (2 NW)	Predicted Value (2 BK)
MARCH-06	45.67	46.24
JUNE-06	47.18	47.63
SEPTEMBER-06	47.79	48.19
DECEMBER-06	49.00	49.30
MARCH-07	49.00	49.30
APRIL-07	48.09	48.46
MAY-07	47.46	47.88

Table 3 gives, the *ex ante* national forecasts in the vote (second round) for the left: We notice that the result of the second round of the 2007 French presidential election looks very close in March 2007 but not so close in April and May 2007.

After the 2007 French Presidential Election

The national *ex ante* forecast made in March 2007 was 49 per cent/49.3 per cent for the left (Royal) but the national *ex ante* forecasts in April 2007: 48.09 per cent/48.46 per cent for the left and in May 2007 (two days before the second round): 47.46 per cent/47.88 per cent for the left announced more distinctly the victory of the right (Sarkozy) and they are close to the result obtained by the left (46.58 per cent in metropolitan France): that is an error equal to 0.88 per cent/1.30 per cent for the national *ex ante* forecast in May 2007.

We conducted a Fisher test to choose between a model with fixed effects (FE) and a model without effects: for the estimates (2a), we chose a model with fixed effects over the 1981–2007 period (without 2002) at the statistical level of 5 per cent: $F(95,286) = 2.27$ (the critical value is 1.34).

To explain the second-round vote received by the left, we used the following equation (2) over the period 1981–2007 (without 2002): $VOTEL2_{it} = d_i + \beta_1 POPPS2_t + \beta_2 VPL2_{it} + \varepsilon_{2it}(2)$. For the estimates (2a), the Breush-Pagan test of homoscedasticity (Koenker, 1981) shows that the null hypothesis of homoscedasticity is rejected at the statistical level of 5 per cent; we have: $NR^2 = 21{,}94 > \chi^2_{0,05}(2) = 5{,}99$. For the estimates (2a), there is no first-order autocorrelation of the errors because the DW adapted by Bhargava and others (1982) in the model with fixed effects is equal to 2.17.[14]

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TABLE 4

Estimates of Votes 1981–2007 (Without 2002) (Left, Second Round)

	(2a W)	(2a BK)
$POPPS2_t$	0.47	0.47
	(25.91)***	(9.24)***
$VPL2_{it}$	0.60	0.60
	(11.64)***	(3.81)***
N	384	384
R^2	0.90	0.89
Ad. R^2	0.86	0.85
SER	2.24	2.24
AENF	0.67	0.67
AELF	1.48	1.48

t statistics with the estimate NW and z statistics with the estimate BK: *** significant at 1%.
SER: standard error of the estimate.
AENF: average error with national forecast (absolute value).
AELF: average error with local forecast (absolute value).

We obtained the following estimates: estimate (2a W) with correction of the heteroscedasticity with White's method and estimate (2a BK) with correction of the heteroscedasticity with Beck and Katz's (1995) procedure (Table 4):

The adjusted R-square remains high with the three estimates and it indicates that it accounts approximately for 85 per cent of the variance in the departmental vote. The statistical indicators are satisfactory. All the coefficients have the expected sign and are significantly different from 0 at the statistical level of 1 per cent but the coefficient of the variable POPPS2 has a little increased and with the estimate (2a NW), that of the variable VPL2 has increased.

Table 5 gives, for 1981–1995 and 1981–2007 (excluding 2002), the national *ex post* forecasts in the vote (second round) for the left. The errors for 1981, 1988, 1995 and 2007 are low. The mean absolute error on four elections is approximately equal to 0.67/0.67. At the local level, the mean absolute error is equal to 1.48/1.48 over the period 1981–2007 (excluding 2002) and respectively equal to 1.36/1.36, 1.90/1.90, 1.02/1.02 et 1.65/1.65 for the 1981, 1988, 1995 and 2007 French presidential elections.

Comparison of Our Model with Some American Presidential Models and Possible Applications to Other Countries

Most of the forecasting models of American presidential elections are national models which highlight the influence of the national economic

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TABLE 5

National Ex Post Forecast in the Vote 1981–1995 (Left, Second Round)				
Election	Predicted Value (2 NW)	Predicted Value (2 BK)	Actual Value	Error
1981	53.13	53.09	52.23	0.90/0.86
1988	53.08	53.04	53.98	0.90/0.94
1995	47.33	47.75	47.32	0.01/0.43
National Ex Post Forecast in the Vote 1981–2007 (Left, Second Round)				
Election	Predicted Value (2a NW)	Predicted Value (2a BK)	Actual Value	Error
1981	53.06	53.06	52.23	0.83/0.83
1988	53.01	53.01	53.98	0.97/0.97
1995	47.02	47.02	47.32	0.30/0.30
2007	47.17	47.17	46.58	0.59/0.59

situation on the results of the American presidential elections: the growth rate of real GDP (Fair, 1996; Abramowitz, 2000, 2004; Cuzan and Bundrick, 2005), the growth rate of real GNP (Lewis-Beck and Tien, 2000, 2004), the weighted average growth rate of real disposable personal income (Hibbs, 2000) and the weighted average cumulative income growth (Erikson and Wlezien, 2000; Wlezien and Erikson, 2004), the rate of inflation (Fair, 1996). Cuzan and Bundrick (2005) also highlight the influence of federal expenditures (outlays). These national models also integrate political variables: the popularity of the incumbent president (Abramowitz, 2000, 2004; Lewis-Beck and Tien, 2000, 2004; Erikson and Wlezien, 2000; Wlezien and Erikson, 2004), the incumbency advantage if an incumbent president is a candidate for his re-election (Fair, 1996; Lewis-Beck and Tien, 2000, 2004), a duration variable from two consecutive presidential terms with the same party (Fair, 1996; Abramowitz, 2000, 2004; Cuzan and Bundrick, 2005), a partisan variable (Fair, 1996; Cuzan and Bundrick, 2005), the cumulative numbers of American military personnel killed in action in Korea and Vietnam (Hibbs, 2000).

Two models using data per state are rather close to our model (Holbrook and De Sart, 1999; Soumbatiants et al., 2006).[15] Holbrook and De Sart (1999) pinpoint the influence of the Democratic candidate's average share of the two-party vote intention at the national level and Soumbatiants and colleagues (2006) in each state. Holbrook and De Sart (1999) also use the average Democratic share of the two-party vote in each state across the two previous presidential elections and Soumbatiants and colleagues (2006) use fixed effects by state.

Our model could be used for the forecast of the presidential elections in Russia or in the Latin American countries. The elections in the

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post-communist countries are notably studied (Fidrmuc, 2000; Tucker, 2006) but the Russian presidential elections are little studied (Tucker, 2002). Tucker (2006) notably integrates Russian presidential elections and shows that the vote in the elections for five post-communist countries depends on economic conditions: the hypothesis of responsibility for the party in power does not give good results; on the other hand, the new regime parties favourable to the reforms are rewarded in the regions that are economically vibrant and the old regime parties associated with the old communist order are favoured in the depressed regions.

Conclusion

The model developed here allows one to explain and to forecast the local and national results of the French presidential elections (percentage of the first- or second-round vote received by the left and the right) from local and national data. It is the vote at the second round received by the left which leads to the best quality estimates and forecasting the vote for the left and for the right at the first round has been much more difficult since the UDF (which became the Democratic Movement, MODEM) has been neither to the right nor to the left since the 2007 French presidential election.

We pinpoint the positive influence of the Socialist party's popularity and a partisan variable on the second-round vote obtained by the left in the French presidential elections. Overall, we can say that the econometric estimates are accurate (1981–1995 and 1981–2007, excluding 2002).

For the 2007 French presidential election, we forecast at the beginning of March 2007 (just before the decrease of the Socialist party's popularity) that the left would respectively obtain (according to the econometric method selected): 49 per cent/49.30 per cent; 48.09 per cent/48.46 per cent and 47.46 per cent/47.88 per cent at the second round with the hypothesis of a Royal/Sarkozy duel (Ségolène Royal obtained 46.58 per cent at the second round of the 2007 French presidential election in Metropolitan France).

Future research might study the vote received by every party in the first round (particularly, the PS, the UMP and the UDF now called the MODEM).

Notes

1 In Auberger (2004), we find a survey of the main French presidential models using national data.
2 We point out that the left parties obtained on the whole 42.68 per cent of the votes in the first round (metropolitan France).
3 Indeed, a part of the National Front's voters are former voters of the left parties.

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4 Dubois (2002) is the first one to build a model per department (French presidential elections).
5 For the 2002 French presidential election, there was no candidate of the left at the second round but a duel between Chirac (moderate right)/Le Pen (National Front, extreme right).
6 A part of our electoral data comes from the database of the CIDSP, Grenoble and other electoral data come from the Constitutional Council.
7 It is what Hsiao suggests (2003: 43).
8 We do not take into account departments and overseas territories.
9 Other variables for the popularity have been tested: three monthly popularity data before the first or the second round of the presidential election but the adjusted R-square and the *ex post* forecasts with these variables are not so accurate.
10 With Newey-West's and White's methods, the estimated coefficients are the same that with OLS but the standard errors are different.
11 When we use the Prais-Winsten transformation (Beck and Katz's procedure, 1995), we suppose that the coefficient of the AR(1) process for the disturbances is common to all of the departments.
12 Beck and others (1993) and Beck and Katz (1995) criticize the Parks method (FGLS) unless T is substantially larger than N.
13 We make the forecasts at the beginning of a month when the popularity data and the unemployment data are known.
14 If we make a correction of the first-order autocorrelation of the errors, we obtain similar estimates.
15 The construction of our model was made independently of these two models.

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