**Additional materials for**

**Voters reward hard-working MPs. Empirical evidence from French legislative election**

This file contains three additional materials. First, we give descriptive table of data used in our work. Then, we present method and estimations once we consider the potential bias of selection. Lastly, we discuss the time question into the MPs activities measurement and the empirical model specification.

**A1. Descriptive data**

**Table A1. Statistical description of the variables**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Variables** | **N** | **Mean** | **SD** | **Minimum** | **Maximum** |
| Candidate \* | 553 | 0.823 | 0.382 | 0 | 1 |
| Vote share (1st round) \* | 455 | 43.38 | 9.401 | 5.546 | 67.38 |
| Reelected \* | 455 | 0.685 | 0.465 | 0 | 1 |
| Age \*\* | 553 | 58.669 | 8.421 | 32 | 86 |
| Victory margin 02 \* | 553 | 15.37 | 12.11 | 0.09 | 55.82 |
| Elected after 02 \*\* | 553 | 0.069 | 0.253 | 0 | 1 |
| Local mandates \*\* | 553 | 1.277 | 0.69 | 0 | 3 |
| Oral questions \*\* | 553 | 0.008 | 0.006 | 0 | 0.035 |
| Written questions per day \*\* | 553 | 0.189 | 0.373 | 0 | 3.429 |
| Single-authored bills per 100 days \*\* | 553 | 0.003 | 0.005 | 0 | 0.054 |
| Co-signed bills per 100 days \*\* | 553 | 0.098 | 0.091 | 0.001 | 0.507 |
| Law validated \*\* | 553 | 0.042 | 0.200 | 0 | 1 |
| Legislative reports per 100 days \*\* | 553 | 0.002 | 0.003 | 0 | 0.037 |
| Information reports per 100 days \*\* | 553 | 0.001 | 0.003 | 0 | 0.042 |
| Committee membership \*\*: |  |  |  |  |  |
| Law | 553 | 0.117 | 0.322 | 0 | 1 |
| Culture and education | 553 | 0.244 | 0.430 | 0 | 1 |
| National defense | 553 | 0.125 | 0.331 | 0 | 1 |
| Economy | 553 | 0.255 | 0.436 | 0 | 1 |
| Foreign affair | 553 | 0.128 | 0.335 | 0 | 1 |
| Public Finance | 553 | 0.13 | 0.337 | 0 | 1 |
| Committee bureau \*\* | 553 | 0.083 | 0.276 | 0 | 1 |
| Sex \*\* | 553 | 0.127 | 0.333 | 0 | 1 |
| Local candidate \*\* | 553 | 0.503 | 0.5 | 0 | 1 |
| Tenure \*\* | 553 | 1.64 | 1.797 | 0 | 9 |
| Local government \*\* | 553 | 0.684 | 0.466 | 0 | 1 |
| Former minister \*\* | 553 | 0.101 | 0.302 | 0 | 1 |
| Party \*\* : UMP | 553 | 0.617 | 0.487 | 0 | 1 |
| Communists | 553 | 0.022 | 0.146 | 0 | 1 |
| Other Left | 553 | 0.072 | 0.259 | 0 | 1 |
| Other Right | 553 | 0.013 | 0.112 | 0 | 1 |
| Socialists and associated | 553 | 0.277 | 0.448 | 0 | 1 |
| Spending per voters \*\*\* | 455 | 0.556 | 0.193 | 0.016 | 1.362 |
| Nb candidates \* | 455 | 13.301 | 1.979 | 7 | 20 |
| Spending per voters of other candidates \*\*\* | 455 | 0.008 | 0.004 | 0.003 | 0.045 |
| Unemployment rate \*\*\*\* | 455 | 8.165 | 1.684 | 4.8 | 11.8 |

Information sources are \* French administration of election (Minister of internal affairs), \*\* *Assemblée Nationale* website, \*\*\* National Commission of Political Financing (CNCCFP), and \*\*\*\* French Institute of Economics and Statistics.

**A2. Estimations with potential selection bias**

***Statistical concern***

The focus on the incumbent candidates may generate an important statistical concern. Only some of the incumbents run again at the election, the remaining part leaves definitively the post before the election. There is an endogenous selection of a part of the incumbents, which could induce a potential statistical bias in our estimation of the impact of parliamentary activities on electoral fortune. The sub-population of MPs who run again could have specificities, for instance in terms of parliamentary activities. To eliminate this bias (and even if this is not the first purpose of the study), we must – prior to explaining either the percentage of votes at the first round or the probability to be reelected for the sole incumbents running again – explain the probability of running again for all of the incumbents.

Formally, this results in a two-equation model. The first equation determines whether (or not) the incumbent is a candidate

(the binary variable ).

The second explains either the percentage of votes received at the first round ( or the likelihood of the incumbent candidates’ reelection (.

and

The first equation is applied to the overall population, while the second is implemented on the sole MPs running again, i.e. the selected part of the sample.

The models specify that and are only observed when , i.e. when the incumbent candidates, and each binary outcome has a latent equation ( and ) where *X* and *Z* are vectors of regressors and, and : We assume that the share of votes received at the first round () has same factors than the probability of being reelected.

The main statistical concern is related to the potential relation between the two error terms of the equations: and . This correlation depends on the selection bias existing and coming from the incumbent’s decision of being candidate.

When , the classic OLS or *probit* model depending on the dependent variable are the most efficient and the selection bias is not an issue. In this case, a two-part model is more relevant to estimate both the vote share and the reelection equation. When , an OLS estimation of the vote share and a standard *probit* method yield some biased results because there is a selection bias. To solve this problem, we use the estimation method of selection developed by Heckman (1979) in the case of the continuous variable (vote share of the incumbent) and a derived method from this model in the case of binary variable (likelihood of reelection) (Van de Ven and Van Pragg, 1981). Both estimation methods provide consistent and asymptotically efficient estimates for parameters and indirect estimations of . So with , the models with selection are more efficient to estimate the coefficients of the vote share and reelection equations than the two-part models.

***Specifications***

Even if we use the same specification for the two election outcomes than in the text, the main issue is now to establish whether the independent variables affect the probability to stand as a candidate and/or the probability to be reelected or the vote share, since we use a model with selection. This is especially relevant in the case of the variables relating to parliamentary outputs and offices described above, which can be hypothesized to influence both the candidacy and/or the ultimate outcome. For this reason, we employ two distinct specifications. In the first specification, we consider that the parliamentary activities and offices impact exclusively the election outcome; and in the second one, we consider that they influence both the candidacy and election outcome.

A number of control variables are included into the first equation. To explain the likelihood of an incumbent MP running again in the 2007 legislative election, the first variable is the MP’s age (in years). We expect this variable to have a negative effect: the eldest MPs have, by hypothesis, no choice but to retire and the likelihood to retire should increase with age. At the opposite, we anticipate the victory margin[[1]](#footnote-1) in the previous 2002 election – our second control variable – to have a positive impact: it contains information on the electoral competition at the constituency level, and we hypothesize that a wider margin encourages the incumbent to run again and his party to support him. By the same logic, the local mandates[[2]](#footnote-2) that an MP holds at the end of the term can be taken as a proxy for his or her local popularity: they should have a positive effect on the decision to candidate. The final variable is a binary one indicating whether the MP was elected during the 2002 general election or after. We make the hypothesis that the substitute MPs or the MPs elected at a by-election are more likely to give up their mandate at the end of the term. In the second model (models 2), we add to these variables those relating to the parliamentary activities and offices which are identical to those contained in the election outcome equations.

Table A2: Estimations of MPs vote share (1st round) and reelection probability taking into account potential selection bias

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Vote share (1st round)** | | | | **Probability of reelection** | | | |
|  | Model 1a | | Model 1b | | Model 2a | | Model 2b | |
|  | **Equation of selection: Pr(candidate)** | | | | | | | |
| Indep. Var. | Coeff. | (s.e.) | Coeff. | (s.e.) | Coeff. | (s.e.) | Coeff. | (s.e.) |
| Age | -0.098\*\*\* | (0.012) | -0.098\*\*\* | (0.015) | -0.093\*\*\* | (0.013) | -0.092\*\*\* | (0.014) |
| Victory margin 02 | 0.022\*\*\* | (0.0041) | 0.020\*\*\* | (0.0032) | 0.0084\*\*\* | (0.0028) | 0.0035 | (0.0027) |
| Local mandates | 0.20\*\*\* | (0.047) | 0.22\*\*\* | (0.045) | -2.51\*\*\* | (0.083) | -2.81\*\*\* | (0.050) |
| Elected after 02 | -2.09\*\*\* | (0.13) | -2.39\*\*\* | (0.22) | 0.22\*\*\* | (0.045) | 0.28\*\*\* | (0.051) |
| Oral questions per day |  |  | 20.5 | (29.5) |  |  | 19.3 | (23.6) |
| Written questions per day |  |  | -0.12 | (0.35) |  |  | -0.15 | (0.32) |
| Single-authored bills per day |  |  | 37.1\*\*\* | (10.3) |  |  | 37.2\*\*\* | (7.73) |
| Co-signed bills per day |  |  | 1.46\*\*\* | (0.48) |  |  | 1.84\*\*\* | (0.44) |
| Legislative reports per day |  |  | 8.19\*\*\* | (3.08) |  |  | 14.1\* | (8.29) |
| Information reports per day |  |  | -33.6\*\*\* | (2.92) |  |  | -29.3\*\*\* | (5.64) |
| Committee membership: |  |  |  |  |  |  |  |  |
| Law |  |  | 0.11 | (0.13) |  |  | 0.22\* | (0.12) |
| Culture and education |  |  | 0.52\*\* | (0.20) |  |  | 0.60\*\*\* | (0.18) |
| National defense |  |  | 0.023 | (0.17) |  |  | 0.0056 | (0.18) |
| Economy |  |  | ref |  |  |  | ref |  |
| Foreign affair |  |  | 0.063 | (0.052) |  |  | 0.13 | (0.11) |
| Public Finance |  |  | 0.23\*\* | (0.11) |  |  | 0.28\*\*\* | (0.069) |
| Committee bureau |  |  | -0.098 | (0.062) |  |  | -0.052 | (0.085) |
| Constant | 6.50\*\*\* | (0.63) | 6.04\*\*\* | (1.11) | 6.45\*\*\* | (0.62) | 5.80\*\*\* | (0.95) |
|  | **Equation of outcome: Vote share (1st round)** | | | | **Equation of outcome: Pr(reelected)** | | | |
| **Indep. Var.** | **Coeff.** | **(s.e.)** | **Coeff.** | **(s.e.)** | **Coeff.** | **(s.e.)** | **Coeff.** | **(s.e.)** |
| Oral questions per day | 159.7\*\*\* | (21.7) | 136.6\*\*\* | (28.2) | 25.2\* | (14.4) | 17.2 | (12.3) |
| Written questions per day | -1.97\*\*\* | (0.69) | -1.82\*\* | (0.78) | 0.093 | (0.19) | 0.12 | (0.22) |
| Single-authored bills per day | 272.8\*\*\* | (58.3) | 259.2\*\*\* | (54.8) | 26.8 | (16.7) | 27.4 | (18.7) |
| Co-signed bills per day | -0.67 | (1.25) | -1.84 | (1.20) | 0.083 | (0.35) | -0.32 | (0.30) |
| Legislative reports per day | -81.8 | (114.3) | -87.3 | (117.0) | 48.3\*\* | (23.9) | 50.5\*\* | (22.6) |
| Information reports per day | 49.2\* | (29.2) | 107.8\*\*\* | (22.4) | 72.1\*\* | (30.6) | 75.9\*\* | (35.9) |
| Committee membership: |  |  |  |  |  |  |  |  |
| Law | -0.51 | (0.74) | -0.60 | (0.71) | -0.36\* | (0.20) | -0.38\*\* | (0.19) |
| Culture and education | 0.39 | (0.73) | -0.10 | (0.71) | -0.57\*\*\* | (0.084) | -0.66\*\*\* | (0.071) |
| National defense | -0.080 | (0.48) | -0.069 | (0.57) | -0.25\* | (0.13) | -0.21\*\*\* | (0.075) |
| Economy | Ref |  | ref |  | ref |  | ref |  |
| Foreign affair | 2.14\*\*\* | (0.24) | 2.16\*\*\* | (0.25) | 0.35 | (0.26) | 0.33 | (0.28) |
| Public Finance | -0.61 | (0.81) | -0.86 | (0.78) | -0.12\* | (0.060) | -0.15\*\*\* | (0.058) |
| Committee bureau | 0.34 | (1.48) | 0.44 | (1.63) | -0.44 | (0.47) | -0.44 | (0.45) |
| Sex | 0.35\*\* | (0.17) | 0.34\*\* | (0.16) | -0.13 | (0.11) | -0.12 | (0.11) |
| Local candidate | 0.10 | (0.25) | 0.090 | (0.26) | -0.29\*\*\* | (0.078) | -0.29\*\*\* | (0.067) |
| Tenure | 0.091 | (0.12) | 0.083 | (0.13) | 0.16\*\*\* | (0.039) | 0.16\*\*\* | (0.036) |
| Local mandates | -0.041 | (1.04) | -0.030 | (1.05) | 0.038 | (0.21) | 0.083 | (0.21) |
| Local government | 0.95 | (0.86) | 0.92 | (0.83) | 0.097 | (0.36) | 0.078 | (0.35) |
| Former minister | 1.04 | (0.88) | 1.00 | (0.94) | -0.61\*\*\* | (0.17) | -0.63\*\*\* | (0.20) |
| Party : UMP | Ref |  | ref |  | ref |  | ref |  |
| Communists | -13.7\*\*\* | (1.15) | -13.7\*\*\* | (1.14) | 0.26 | (0.27) | 0.26 | (0.29) |
| Other Left | -8.52\*\*\* | (0.32) | -8.47\*\*\* | (0.33) | -0.43\*\*\* | (0.10) | -0.41\*\*\* | (0.087) |
| Other Right | -17.0\*\*\* | (3.19) | -17.2\*\*\* | (3.25) | 0.58 | (0.67) | 0.51 | (0.65) |
| Socialists and associated | -7.86\*\*\* | (0.58) | -7.72\*\*\* | (0.63) | 0.85\*\*\* | (0.057) | 0.83\*\*\* | (0.058) |
| Spending per voters | 2.71 | (2.59) | 2.75 | (2.65) | 0.31 | (0.66) | 0.41 | (0.64) |
| Nb candidates | -1.72\*\*\* | (0.45) | -1.73\*\*\* | (0.45) | -0.17\*\*\* | (0.060) | -0.16\*\*\* | (0.058) |
| Others’ spending per voters | -840.1\*\* | (350.7) | -844.3\*\* | (347.4) | -62.0\*\* | (27.4) | -62.5\*\* | (27.8) |
| Unemployment rate | -0.23\* | (0.12) | -0.25\*\* | (0.11) | 0.023 | (0.054) | 0.026 | (0.056) |
| Constant | 75.3\*\*\* | (6.41) | 76.0\*\*\* | (6.51) | 3.18\*\*\* | (0.59) | 3.10\*\*\* | (0.66) |
| rho | -0.61 | (0.109) | -0.61 | (0.085) | -1 | (0.0001) | -1 | (0.0001) |
| LR test of indep. equations (rho=0) | Chi²(1)= 16.81 \*\*\* | | Chi²(1)= 27.14 \*\*\* | | Chi²(1)= 0.01 | | Chi²(1)= 0.29 | |
| Nb obs. = 553 ; Censored obs. = 98 ; Uncensored obs. = 455 ; \*\*\*. \*\* and \* respectively mean different from zero at 1%. 5% and 10% threshold.  The s.e. are corrected by the cluster method related to the political groups in order to take into account the unobserved heterogeneity associated to the political groups | | | | | | | | |

***Estimations comments***

Results of the empirical analysis are detailed in Table A2, where the first two columns report the estimation of the incumbents’ vote share at the first round of the election with respect to the two specifications proposed to explain the likelihood of candidacy (models 1a and 1b). As for the last two columns, they show the estimation of reelection probability using the same two specifications (models 2a and 2b).

It should be noted first that the estimated coefficients of correlation between the error terms of the two equations are significantly different from zero () and the associated Chi-tests are conclusive for the first estimations only. In other words, the statistical issue of selection is lonely relevant when we study the vote share collected by the incumbent at the first round.

Interestingly, there are only minor differences between the two specifications proposed, that is between model 1a and model 2a, on the one hand, and between model 2a and model 2b, on the other hand. The introduction of parliamentary activities’ indicators in the estimation of the candidacy probability does not modify radically the coefficients of the other variables, especially the coefficients of the outcome equations related to parliamentary activities.

To sum up, the activities that are deemed the most significant for the legislative process – bills and reports – have a significant and positive effect on the candidacy, whereas less strategic activities such as written and oral questions have no visible impact. This probably reflects the fact that the candidacy decision depends primarily upon the incumbents themselves and the political parties: such informed actors value certain types of activities – the most strategic ones – at the expense of others. If this is true, the negative coefficient for the information reports suggests that these reports are evaluated negatively by the political actors and are left to the weakest MPs.

Beyond these first comments, the comparison with the standard method of estimation presented in the text provides a clear conclusion. Except for the single-authored bills variable, which loses its significance in the estimation with selection, all the coefficients of the other parliamentary activities’ variables have comparable effects in terms of both significance and direction. The committee membership has more mitigated results, but the differences between the two methods of estimations are related to the significance and not to the effect direction.

Overall, the results are very stable and not sensitive to the simultaneous presence of the same explanatory variables in both the selection and the outcome equations, which is often a criticism made to this type of empirical estimation methods. And compared to the standard method of estimation commented in the text, taking into account the selection which is relevant for only one studied variable does not lead to large change in results. Finally, our conclusion drawn from standard methods are quite robust to change in estimation method, especially the selection of the incumbent candidate does not deeply influence our estimations.

**A3. Measurement of parliamentary activities: production or productivity?**

In the article, we use the raw variable adjusted by the length (in days) of each MP’s mandate to measure MPs’ parliamentary activities. This adjustment is necessary because some MPs, who were not elected at the 2002 general election (*i.e.* at the beginning of the legislative term), started their mandate at any moment later during the legislative term.[[3]](#footnote-3) Dividing the raw variables by the length of the mandate normalizes the measures and enables us to include all incumbent MPs whatever the starting date of their mandate. However, this strategy may have theoretical implications and empirical drawbacks that we address in this section. In particular, the strategy involves that we assume implicitly the voters’ reactions to depend on the MPs’ productivity rather than on their sheer volume of production. To assess the relevance of our emphasis on productivity as well as the statistical consequences of the normalization strategy, we propose to replace the *per-day* measures with raw variables. The specifications of our models are thus strictly the same except for the change in specifications of the activity variables. We use these new variables in models A1 and A2 (table A3) to explain the electoral score at the first round, on the one hand, and the reelection probability, on the other hand.

Table A3: Influence of raw measure of legislative output on MPs’ vote share (1st round) and reelection probability

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Model A1** | | **Model A2** | |
|  | **Vote share (1st round)** | | **Pr (reelection)** | |
| Indep. Var. | **Coeff.** | **(s.e.)** | **Coeff.** | **(s.e.)** |
| Oral questions | 0.27 | (0.15) | 0.17\*\*\* | (0.053) |
| Written questions | 0.0014 | (0.00072) | 0.00028 | (0.00020) |
| Single-authored bills | 0.17\*\* | (0.054) | 0.076\* | (0.040) |
| Co-signed bills | 0.0012 | (0.0023) | 0.00084\* | (0.00050) |
| Legislative reports | 0.061 | (0.069) | 0.056 | (0.039) |
| Information reports | 0.017 | (0.049) | 0.081\*\* | (0.036) |
| Committee bureau | 0.24 | (1.64) | -1.03 | (0.74) |
| Committee membership: |  |  |  |  |
| Law | 0.96 | (0.52) | -0.74\* | (0.42) |
| Culture and education | 0.89 | (1.13) | -1.40\*\*\* | (0.21) |
| National defense | 0.96 | (0.91) | -0.76\*\*\* | (0.17) |
| Economy | Ref | |  | |
| Foreign affair | 0.64 | (0.40) | 0.55 | (0.64) |
| Public Finance | -1.23 | (0.69) | 0.28 | (0.17) |
| Age | -0.18\* | (0.072) | -0.024\*\* | (0.010) |
| Sex | 0.27 | (0.17) | 0.30 | (0.28) |
| Local candidate | 0.21 | (0.41) | -0.62\*\*\* | (0.15) |
| Tenure | 0.11 | (0.21) | 0.33\*\*\* | (0.092) |
| Local mandates | 0.52 | (0.99) | 0.18 | (0.36) |
| Local government | 0.46 | (0.70) | 0.24 | (0.61) |
| Former minister | 1.42 | (1.12) | 0.87 | (0.54) |
| Party: UMP | Ref | |  | |
| Communists | -13.5\*\*\* | (1.78) | 0.34 | (0.52) |
| Other Left | -9.53\*\*\* | (0.34) | -1.23\*\*\* | (0.24) |
| Other Right | -16.2\*\*\* | (2.59) | 0.65 | (0.68) |
| Socialists and associated | -6.22\*\*\* | (0.78) | 2.05\*\*\* | (0.12) |
| 2002 victory margin | 0.29\*\*\* | (0.037) | 0.042\*\*\* | (0.0092) |
| Spending per voters | 3.42 | (2.69) | 0.69 | (1.10) |
| Nb candidates | -1.54\*\* | (0.41) | -0.30\*\*\* | (0.10) |
| Others’ spending per voters | -752.7\* | (305.2) | -78.0 | (60.0) |
| Unemployment rate | 0.11 | (0.26) | 0.085 | (0.14) |
| Constant | 75.9\*\*\* | (9.97) | 4.83\*\*\* | (1.36) |
| Adj. R²/pseudo R² | 0.62 | | 0.62 | |

The coefficients for the parliamentary activity variables in the vote share estimation (model A1 in table A3) are different from the coefficients associated to the “per day” variables (see model 1 in table 2 in the main text). While three coefficients were significant (oral questions, written questions and single-authored bills), only one (the single authored bills) is still different from zero. This result confirms our intuition that the electoral support at the first round is more related to the MPs’ productivity than to their production.

Turning to the probability of reelection (model A2 in table A3), the results differ largely from those with the “per day” variables of MP parliamentary (see model 2 in table 2 within the main text). Two variables that do not reach the significance level with the “per day” adjustment are significant with the “raw” measurement: the oral questions and co-authored bills. On the other hand, the coefficient associated to the legislative reports does not remain significant, and the coefficient for the bills loses some of its significance. In sum, the probability of reelection seems slightly more sensitive to the raw volume of the MPs activities than to their productivities measured by the per day variables.

**A4. Timing of the parliamentary activities**

Beyond the distinction between production and productivity (see appendix A3), the statistical standardization of the activity variables, and more generally the inclusion of MPs who entered the parliament at a later stage, may raise some methodological and theoretical concerns regarding the timing of the MPs’ activities. Indeed, the statistical treatment in the article assumes implicitly (1) that MPs’ activity remains constant throughout the legislative term and (2) that the timing of the parliamentary activities does not play any role in the voters’ evaluation of their MPs. Both assumptions may be questioned and therefore require some additional examination.

***Are the parliamentary activities spread evenly during the legislature?***

The first assumption regarding the temporal distribution of parliamentary activities seems to run against much of the literature on parliamentary agenda-setting that stresses the importance of legislation cycles due to institutional constraints and to MPs’ electoral strategies (e.g. Becker and Saalfeld 2004; Lagona and Padovano 2008). This may have major implications for the MPs who started their mandate during the parliamentary term, since their overall activity could significantly differ from that of the other MPs. Indeed, MPs holding their post for a longer time span probably have more opportunities to succeed through the legislative process than more recently appointed MPs (they have more time to transform their bills into laws). However, they may also seem less productive if the parliamentary activities were generally concentrated in the last year before the election.

There are arguments, though, why parliamentary activities cycles may not be as relevant for the French National Assembly as for other parliaments. The National Assembly does not have full autonomy (far from it) on its work schedule, as the government is globally in charge of setting the legislative agenda (Lazardeux 2009). Opportunities for individual MPs to be part of the legislative process depend therefore on the timing decided by external actors and is not linked to their own initiative. Even if there are differences of opportunities between the MPs depending on their date of appointment, they have to fit their activities into the planned schedule. And only a small part of the MPs’ activities is discretionary enough to not depend on the National Assembly’s schedule and the executive branch’s agenda, namely the questions (both oral and written).

**Table A4.1 Output of the National Assembly (2002-2007)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Oral questions | Written questions | Legislative reports | Information reports | Bills | Successful bills |
| 2002-2003 | 432 | 11919 | 222 | 74 | 380 | 17 |
| 2003-2004 | 406 | 17255 | 201 | 72 | 277 | 7 |
| 2004-2005 | 388 | 17637 | 197 | 63 | 274 | 12 |
| 2005-2006 | 384 | 18265 | 174 | 95 | 339 | 12 |
| 2006-2007 | 197 | 17975 | 147 | 70 | 271 | 10 |

A clue of the decorrelation between the electoral agenda and the MPs’ individual activities in the National Assembly is given by the regularity of the legislative process at the aggregated level (Kerrouche 2006). For instance, the production of legislative reports follows the legislative process decided by the executive branch and is not correlated to the proximity of elections. This intuition is confirmed by the yearly statistics of the National Assembly’s output during the 12th term (Table A4.1). The output remains in general highly stable over the years. The reduced activity during the 2006-2007 results directly from the shorter length of the parliamentary session: it confirms the weight of the institutional constraint compared to any potential MPs’ electoral strategy.[[4]](#footnote-4)

**Table A4.2: Productivity according to the mandate length**

|  |  |  |  |
| --- | --- | --- | --- |
|  | MPs with complete mandate (N=426) | MPs with incomplete mandate (N=29) | All MPs (N=455) |
| Oral questions per day | 0.0083 | 0.0095 | 0.0084 |
| Written questions per day | 0.2035 | 0.1852 | 0.2024 |
| Single-authored bills per day | 0.0030 | 0.0028 | 0.0030 |
| Co-signed bills per day | 0.0967 | 0.1168 | 0.0980 |
| Legislative reports per day | 0.0017 | 0.0016 | 0.0017 |
| Information reports per day | 0.0007 | 0.0009 | 0.0007 |

As a further indication that no major parliamentary activity cycle is taking place and that there is no major difference between the MPs’ activities depending on their mandates’ starting date, we can also compare the average productivity between the categories according to their mandate length. Although there are few MPs with an incomplete mandate, table A4.2 shows that the productivity is nearly the same whatever the starting date of the mandate.

***Are voters sensitive to the timing of parliamentary activities?***

Whereas no difference can be observed on the MPs’ side, could it be that the voters’ evaluation of their MPs depends on the timing of the parliamentary activities? This hypothesis is consistent with the economic voting literature (see for instance Lewis-Beck and Stegmaier 2013) which shows that voters have a myopic assessment of the macroeconomic situation and take into account macroeconomic results very close (less than one year generally) to the on-going election. Likewise, it is possible that the assessment of the MPs’ productivity is more driven by activities close to the election: empirical research on Belgium supports this claim (Däubler et al. 2016). If this was true in France as well, we should observe some differences in the effect of parliamentary activity indicators depending on their timing. However, we do not have any information on the timing of the MPs’ activities (we do not know exactly when an MP writes a question or a bill, for instance). We know, however, the date of the MPs’ appointment. As a robustness check, we therefore reanalyze our data with the same statistical specification as in the article but with only the MPs who completed a full mandate (Table A4.3). The outcomes of the two analyses are almost strictly the same both as regards the sign of the coefficients and their statistical significance although the coefficient for the single-authored bills loses its significance (but the sign remains the same). We are therefore confident that the statistical treatment of the independent variables and the inclusion of MPs with shorter mandates does not create a bias in our analyses.

Table A4.3: Exclusion of the MPs with uncomplete mandate

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Model 1** | | **Model 2** | |
|  | **Vote share (1st round)** | | **Pr(reelected)** | |
| Indep. Var. | **Coeff.** | **(s.e.)** | **Coeff.** | **(s.e.)** |
| Oral questions per day | 194.0\*\* | (64.8) | 72.6\* | (44.1) |
| Written questions per day | -1.90\* | (0.75) | 0.16 | (0.38) |
| Single-authored bills per day | 177.1\*\* | (50.1) | 71.5 | (53.6) |
| Co-signed bills per day | 0.051 | (4.11) | 0.11 | (1.02) |
| Legislative reports per day | -40.1 | (87.0) | 74.9\*\* | (34.8) |
| Information reports per day | -49.0 | (59.9) | 63.1 | (117.9) |
| Committee bureau | 0.39 | (1.80) | -1.31 | (0.87) |
| Committee membership: |  |  |  |  |
| Law | 0.28 | (0.44) | 0.080 | (0.81) |
| Culture and education | -1.04 | (1.11) | -0.91\*\* | (0.41) |
| National defense | 0.96 | (1.52) | 0.36 | (0.31) |
| Economy | Ref | | Ref | |
| Foreign affair | 0.90 | (0.68) | 1.30 | (1.34) |
| Public Finance | -1.04 | (0.74) | 0.10 | (0.39) |
| Age | -0.22\* | (0.090) | -0.057\*\* | (0.023) |
| Sex | 0.67\*\* | (0.22) | 0.11 | (0.42) |
| Local candidate | 0.33 | (0.28) | -0.78\*\*\* | (0.27) |
| Tenure | 0.14 | (0.29) | 0.11 | (0.15) |
| Local mandates | 1.07 | (1.21) | 0.48 | (0.46) |
| Local government | 0.13 | (0.68) | 0.15 | (0.83) |
| Former minister | 1.91\* | (0.79) | -0.74\*\*\* | (0.27) |
| Party : UMP | Ref | | Ref | |
| Communists | -13.2\*\*\* | (1.08) | 0.11 | (0.48) |
| Other Left | -10.4\*\*\* | (0.30) | -1.31\*\*\* | (0.39) |
| Other Right | -14.0\*\*\* | (2.76) | 2.22 | (1.68) |
| Socialists and associated | -6.13\*\*\* | (0.81) | 2.37\*\*\* | (0.21) |
| 2002 victory margin | 0.31\*\*\* | (0.040) | 0.13\*\*\* | (0.033) |
| Spending per voters | 1.12 | (2.86) | 0.43 | (1.03) |
| Nb candidates | -1.41\*\* | (0.39) | -0.33\*\*\* | (0.13) |
| Others’ spending per voters | -714.7\* | (296.0) | -146.6\* | (81.9) |
| Unemployment rate | 0.13 | (0.24) | 0.099 | (0.11) |
| Constant | 77.2\*\*\* | (8.68) | 8.01\*\*\* | (2.29) |
| Adj. R²/pseudo R² | 0.63 | | 0.32 | |
| Nb obs. 426 ; \*\*\*. \*\* and \* respectively mean different from zero at 1%. 5% and 10% threshold.  The s.e. are corrected by the cluster method to take into account unobserved heterogeneity associated to political groups | | | | |

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1. The victory margin is defined as the difference between the vote share of the winning candidate in the previous election (i.e. the incumbent in 2007) and that of the candidate who came second at the first or second round depending on which round was decisive to elect the MP. [↑](#footnote-ref-1)
2. In France, there are four levels of local government: municipal, inter-municipal, departmental, and regional. In 2007, it was possible to hold local mandates, including an executive one, jointly with a national legislative mandate. [↑](#footnote-ref-2)
3. Two types of circumstances may lead to a differed starting date for an MPs’ mandate (see footnote 5 in the article). If an MP dies or becomes a minister during the parliamentary term, a substitute MP (enrolled during the initial election) is called in. In all other cases of vacancy (such as being elected at other office), a by-election is organized, and a new MP is voted in. [↑](#footnote-ref-3)
4. The 2006-2007 parliamentary session is shorter because of the presidential election occurring in April and legislative election in June. [↑](#footnote-ref-4)