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Are Hard-Working MPs Electorally Rewarded? Empirical Evidence

from the 2007 French Legislative Elections

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Are Hard-Working MPs Electorally Rewarded? Empirical Evidence from the 2007 French Legislative Elections[1]

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Abstract

The purpose of this paper is to study the impact of incumbent MPs' activities on their electoral fortune. In other words, are incumbents with a strong parliamentary record rewarded by their party and their voters? We ask this question in the context of the French political system characterized by: an executive domination; a candidate-centered electoral system; and an electoral agenda maximizing the impact of the presidential elections. Since these three institutional features have contradictory expected effects on relationship between MP's activities and electoral fortune, their overall impact can only be assessed empirically. Taking the 2007 French legislative elections as a study case, we test the effects of several measurements of the MPs' activities on both votes share and reelection probability, and we take into account the potential bias related to the decision to be candidate. Our results show that MPs' activities differently impact both the incumbents' candidacy prospects, their first-round vote share and their reelection. Despite the weakness of the French National Assembly, it is demonstrated that several parliamentary activities, especially bill-initiation, have a positive effect on the MPs' probability of running again and staying in office.

1 Introduction

The reiteration of elections is deemed to be a powerful incentive pushing representatives to act in the interest of their voters (Pitkin 1967; Manin 1997). Reelection seeking politicians are expected to act so as to maximize their electoral support, while voters should take the incumbents' performance into account when casting their vote (Ferejohn 1986). There have been numerous publications documenting how this accountability mechanism works for incumbent majorities and governments, especially with respect to their economic performances (Fiorina 1981; Healy and Malhotra 2013). Surprisingly, however, there is much less real-world evidence about this type of sanction/ reward mechanism at the parliamentary level, and specifically about how this mechanism is related to the MPs' activities within the parliamentary arena. In fact, little is known about the effectiveness of MPs' personal vote-seeking activities. The purpose of this article specifically is to ask whether MPs' parliamentary behaviors and performance have any impact on their chances of staying in office.

More precisely, the ambition of this article is threefold. First, we question the very plausibility that individual parliamentary activities have *any* impact on the electoral performance of incumbents. This hypothesis has been tested – with mixed results – for a limited number of legislatures, namely the UK House of Commons (Bowler 2010), the European Parliament (Navarro 2010) and the Belgian Chamber of Representatives (Däubler et al. 2016). Here, we want to test it again in one parliament where the electoral impact of parliamentary work is *a priori* uncertain, namely the French National Assembly. French MPs are indeed elected through a candidate-centred electoral system, which theoretically allows voters to sanction or reward MPs individually. But, on the other hand, the National Assembly is usually seen as a weak institution where individual work has a limited policy impact. Besides, the results of the legislative elections are in general interpreted as a mere confirmation of the presidential elections, not as a retrospective evaluation of the assembly's record. Due to these contradictory characteristics, the French National Assembly is a good test case to ask if, and to what extent, MPs can be held accountable, individually, for their parliamentary performance.

Second, this article seeks to contribute to the literature on the personal vote by questioning *what* is rewarded (or sanctioned) by voters when they reelect their representatives and *under*

what conditions. The emerging literature on the electoral impact of parliamentary activities tends to restrain itself to one single indicator (namely bill-initiation) or to one type of activity (legislative work). However, the functions of parliaments – from representation and control through deliberation and legislation – are manifold and, consequently, the diversity of MPs' activities is potentially unlimited. It is therefore necessary to investigate the consequences of different activities and behaviors for individual careers as well as the effectiveness of various individual vote-seeking strategies. Concretely, this article will test the electoral impact of a plurality of indicators reflecting the great variety of parliamentary functions and activities.

The third gap in the literature that this article tries to bridge relates to the connection between candidates' selection processes and the reelection of incumbent MPs. In order to remain in parliament, incumbents have to go through a two-step process: they must be reselected by their party to stand as candidates and they must gain a sufficient amount of votes to prevail amongst their competitors. Although incumbent MPs clearly have an advantage in terms of party selection, this first step is not necessarily automatic: at the end of each term, a significant number of incumbents are not candidates for a new mandate. Do parliamentary activities have an impact on the MPs' likelihood to stand again as candidates? Does this, in turn, affect their reelection prospect? By analyzing the impact of in-parliament activities on reselection and reelection, this article will bring a subtler understanding to an important democratic problem.

The focus of the article is on the reselection and reelection of French MPs for the 2007 legislative elections. The French case constitutes an excellent benchmark for the electoral impact of in-parliament activities because of its conflicting institutional characteristics, in particular a weak parliament, a candidate-centered electoral system and the timing of the election. We confirm the electoral benefits associated with hard work in the parliament, but we also uncovers the contrasted impact of parliamentary activities, including bill initiation, on the incumbent MPs' reselection and reelection. The effects are more visible for the former than for the latter and, contrary to our expectations, leadership positions within the assembly do not increase the reelection probability of incumbents. The empirical analysis of French MPs' in-parliament record and electoral performance therefore gives a nuanced picture of how electoral accountability mechanisms work in an executive-dominated democracy.

The remainder of the article is organized as follows. The next section reviews the existing literature on the electoral consequences of MPs' personal-vote seeking efforts; it also discusses the specificities of French political institutions. Section three introduces the data and methodology while section four describes the empirical findings. The article concludes in section five with a discussion of the significance of this research.

2 Theoretical framework

The general consensus in legislative studies is that MPs act so as to maximize their reelection chances (Mayhew 1974). However, whether the incumbents' efforts are acknowledged and rewarded remains unclear. Actually, relatively little is known on the electoral returns for legislators' individual efforts within the parliamentary arena.

2.1 Electoral rewards for personal vote cultivation

A broad literature on the personal vote suggests that the electoral performance of candidates for legislative elections does not exclusively depend upon their partisan affiliation: this is because voters do not only vote for a party but they also express a preference for a person. The personal vote, defined as "that portion of a candidate's electoral support which originates in his or her personal qualities, qualifications, activities, and record" (Cain, Fiorina and Ferejohn 1987: 9), is a major factor affecting electoral outcomes, even more so in the context of a growing personalization of politics (McAllister 2007). Empirically, a number of factors have been expected to affect the personal support that incumbent legislators received. These include for example: the legislators' home style (Fenno 1978), their constituency service endeavors (Norton and Wood 1990), pork-barrel favors in committees (Cain, Fiorina and Ferejohn 1987), policy positions consonant with the constituency in roll-call votes (Carey 2009), the choice of specific role models (Martin 2010), as well as their competence (Kulisheck and Mondak 1996) and integrity (Chang *et al.* 2010). In the French context, Brouard and Kerrouche (2013) have demonstrated the manner how voters evaluate the candidates in terms of personality and efficiency affects their voting behavior.

However, there has not been a lot of emphasis on how the level and type of individual parliamentary work could modify their electoral results. So far the literature on the personal vote has not systematically explored the possibility that the voters would reward or punish the

incumbents according to their activities within the assembly. In fact, the existing research on the electoral effects of parliamentary activities remains limited and partially inconclusive. In particular, it fails to establish what strategy, if any, is electorally successful. This is because it tends to limit itself to one activity indicator, bill-initiation generally speaking (Bowler 2010). With the partial exceptions of Däubler et al. (2016) for the Belgian MPs and Navarro (2010) for the members of the European Parliament, there has been no systematic attempt to compare the effects of different types of parliamentary activity. One challenge for this article will therefore be to assess the effects of various activities pertaining to the varied functions of parliaments.

Another significant limitation in the existing literature concerns an excessive simplification of the process leading to reelection. Perhaps because it regards the personal vote as a non-partisan vote, the existing literature does not pay enough attention to the role of political parties. The parties are nevertheless the real gatekeepers of politicians' careers: incumbent MPs need first to be reselected by their party in order to keep their post. The idea of a relationship between reselection processes and in-parliament activities is not new: Hazan and Rahat have argued that different party selection mechanisms induce different parliamentary behaviors (Hazan 2002, Hazan and Rahat 2005, Rahat and Reuven 2001). Here we want to hypothesize the reversed relationship where parliamentary behaviors impact the incumbents' reselection prospects. Our aim with this paper is therefore to expand the traditional question of the personal vote to the potential impact of different parliamentary activities on the candidacy and the reelection of incumbent MPs.

2.2 Expected reward of parliamentary activities in French political context

France constitutes an interesting case study, because of the ambiguous expectations that its political institutions generates. In fact, the extent to which the individual parliament activity of French incumbent MPs should affect their electoral fortune is not straightforwardly clear. There are at least three reasons for this: first, the voting system is based on single-member districts; second, the French political system is characterized by the weakness of its parliament; and third, because of their timing, legislative elections are considered as a mere confirmation of the presidential election. We expect such features of the French politics have differentiated and opposite impacts on the role of personal vote in voters decision.

The French parliament is bicameral and consists of the Senate and the more powerful National Assembly. The article focuses on the latter, because senators are not elected by the citizens but by mayors, and town councilors, departemental councilors and regional councilors. French MPs are elected through a single-member district system which does have a run-off election in every constituency where nobody wins a majority on the first round. This system places France in an intermediary place for the degree of candidate-centeredness of its electoral system, which should in principle allow for an effective control of what MPs do (Farrell and McAllister 2006). In practice, the electoral offer is usually abundant[2] and, in the first-round of the election, voters can in general choose between several candidates with close partisan positions.

This allows personal considerations to play a significant part in the voters' decision. In other words, the choice is not as restricted as with a first-past-the-post system where the voters have, so to say, more incentive to vote strategically, but on the other hand, the vote is much more personalized than in a close-list system. Furthermore, with 577 MPs for about 66 million inhabitants, the average size of the constituencies is relatively small[3]. Political parties are thus encouraged to take the personal profile of the candidates and their record into account.

However, the French political system has other features that should diminish the chances that the personal record of incumbent MPs has impacts on their electoral outcomes. The most obvious is the overall domination of the system by the executive. In France's semi-presidential system, parliament's powers have been severely limited by the constitution and the National Assembly is ordinarily considered as one of the weakest in Europe (Kesselman 2007). Article 34 of the Constitution, rather than authorizing parliament to legislate in all areas except those explicitly designated as off-limits, enumerates those areas in which parliament is authorized to legislate and prohibits legislation on all other matters. As a consequence, many areas that are regulated by law in other democracies are turned over to rule making by the executive in France. Despite the constitutional reform of 2008, the work of

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[2] There were respectively 5.0, 9.3, 11.2, 14.8, 13.4 and 11.4 candidates per constituency for respectively the 1988, 1993, 1997, 2002, 2007 and 2012 legislative elections for the French metropolitan constituencies (François and Phélippeau, 2015).

[3] Compared to the German situation (650 MPs for 82 million inhabitants) or the US (435 for 315 million inhabitants), the French case denotes a weak number of people per MP, while this ratio is higher than that of UK (650 MPs for 63 million inhabitants).

the parliament is strictly controlled. The Cabinet, rather than Parliament, is in control of the legislative process and can require priority for bills it wishes to promote. The constitution sets the maximal number of standing committees of the National Assembly. The number of members of such committees effectively prevents interaction among highly specialized deputies who could become rivals of the ministers. In such a system, it is generally recognized that the individual efforts of legislators have a limited impact on the adopted policies. As a result, this second institutional element should reduce the personal dimension for the reelection of the MPs. Given the weakness of the Parliament and consequently the lack of impacts of the MPs activities, the voters should not take into account the MPs activities when they make their voting-decision.

A third feature of French political life should also diminish the probability that the results of legislative elections vary according to the individual merits of incumbent MPs: the timing of presidential and legislative elections. Since 2002 the elections to the National Assembly are held immediately after the presidential elections. With the reduction of the mandate of the President from 7 to 5 years in 2000, it has become highly unlikely that they would not be organized the same year with the former following the later. For this reason, the legislative election has been interpreted as a mere confirmation of the presidential election (Dupoirier and Sauger 2010). In other words, the timing of the legislative election should weaken the hypothesis of an electoral accountability mechanism for individual MPs.

To sum up, whereas the voting system should enhance the personal accountability mechanism, the other two major institutional characteristics – the weakness of the parliament and the timing of the election – can be expected to deter it. Because of these contradictory factors, the impact of the parliamentary activities on the MPs' reelection must be treated as an empirical question.

3 Data and methodology

In this section, we describe successively the dataset used, the estimation methodology and the control variables introduced into the statistical models.

3.1 Dataset description

In order to analyze the parliamentary activities' effect on the electoral performance, the incumbent MPs running for the French 2007 legislative elections are taken as a test case. At the end of the 12th legislative term of the National Assembly (2002-2007), there were 554 incumbent MPs in metropolitan France[4]. Among them, 455 (82%) stood as candidates for a new mandate, of whom 379 (83%) were successful in getting reelected (at the first round of the election, they received respectively 43.38 and 44.78 percent of the votes of their constituency). In other words, a large proportion of the incumbents – around one fifth – had abandoned their mandate even before the new election took place, and the same proportion failed to be reelected. Therefore, being reelected means passing two consecutive tests successfully: to stand as a candidate and to receive enough votes in the electoral competition. This observation raises some interesting questions and has important implications for the empirical method detailed afterwards.

Following from the discussion above, the central hypothesis will bear on the level and type of in-parliament activities as the main factor affecting the degree of personal support that incumbent MPs enjoy[5]. The empirical analysis is based on the direct measure of legislators' activities and offices within the parliament.

Contrary to earlier studies which took bill initiation as the most significant indicator of parliamentary activity (Bowler 2010; Däubler et al. 2016), we decided to select a plurality of variables reflecting the constitutional functions parliaments and the tasks MPs must take charge of . The list of activities a legislator may perform is potentially unlimited (legislators may deliver speeches, meet with lobbyists, send letters to their constituents, table legislative amendments, etc.) and it is not clear what the voters really want their representative to do. Since MPs face time and resource constraints, they may be forced to trade-off between alternative activities like asking more parliamentary questions or alternatively proposing more bills. That MPs proposing very few (or no) bills are reelected does not necessarily mean that voters do not take the MPs' record into consideration: it might be that these MPs are rewarded because they did something else that the voters value more than bill initiation. It is thus

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[4] MPs from the oversea territories are excluded from the study due to the specificities of these 22 constituencies. The speaker of the National Assembly is also excluded.

[5] It could be suggested that other factors related to the individual performance of legislators in the parliament – and not only their degree of attention to local issues – should be taken into consideration. One such factor is the propensity of the MPs to break party unity in order to please their constituents. However, party discipline in the French parliament is generally very high and previous studies explicitly put aside legislative votes as a potential explanation of reselection and reelection (Godbout & Foucault 2013).

crucial to compare the effects of different dimensions of parliamentary work, which may correspond to competing vote-seeking strategies and could even "compensate" each other.

3.2 Measures of MPs activities

We therefore selected a set of indicators that reflect the varied fundamental aspects of parliamentary work -in particular constituency representation, law production, control of the executive, information gathering and management of the parliament- and that allow for meaningful comparisons. These measures of the parliamentary activities cover the main parliamentary functions; they also capture the offices that the MPs may hold within the parliament during their mandate, as well as their membership and management of the various parliamentary committees and groups. These indicators of parliamentary activity can be divided into two categories: quantitative indicators of in-parliament activities, on the one hand, and committee membership and leadership positions, on the other hand (Table 1).

Table 1 around here

The first category of indicators reflects the most important tasks that MPs must perform in connection to the legislative, representative and control functions of the parliament[6]. The first two indicators – the number of written and oral questions to the government – display a huge degree of variation at the individual level: while three MPs did not ask any question, the most prolific one tabled more than 4,000 written questions[7]. While the written questions can be sent to the ministers at any time, the oral questions (which are very short) can be asked only during the plenary sessions of the National Assembly and are live covered by the public television broadcaster. This last feature guarantees a broad media coverage to this specific parliamentary activity even though, given time constraints, the number of oral questions by MP is limited.

The third indicator corresponds to the number of "information reports" produced by each MP. This type of report and note addresses a specific topic, for which the Parliament wants to have

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[6] On the study of the French MPs production, see Kerrouche (2006) and Conley (2011) for a macro perspective, and Lazardeux (2005), Navarro et al. (2012), Vigour (2013) and François and Weill (2016) for individual factors.
[7] For all quantitative indicators of parliamentary work, the reference period runs from the beginning of the legislature in June 2002 until 31 December 2006.

in-depth information and for which one MP (or sometimes more than one) is appointed. Here again, Table 1 displays a high level of inter-individual variance.

The three last indicators of in-parliament activity are strictly related to the legislative process. Bills ("*propositions de loi*") are analyzed separately depending on how many MPs supported them: there is a distinct indicator for "single-author bills" and another one for "co-signed bills". The latter indicates how many bills introduced by other MPs have been supported (technically co-signed) by each MP. This distinction explains why there are almost ten times more co-signed bills than single-authored bills. The last indicator of legislative output – the number of legislative reports that each MP has been in charge of – is also related to the law-making function of the parliament. By contrast to the information reports, the scope of this type of report is more specific but it is directly part of the legislative process.

For all these indicators, two types of measurements are possible. Indeed, if most MPs were elected at the 2002 legislative election and have completed a full five-year term, some started their mandate later during the parliamentary term[8]. To take into account these different mandate durations, two alternative measurements of the parliamentary output were tested: the simple count of the total number of questions, reports and bills, on the one hand, and, on the other hand, the mean value of these same indicators for each day as an MP. Both measurements are displayed in Table , but the rest of the analysis will rely exclusively on the daily measurement, which better reflects the real degree of involvement of an MP in his role.[9]

The second category of indicators corresponds to the MPs' responsibilities within the organization of the parliament. In the National Assembly, every MP is a member of one of the six standing committees, which cover broad policy domains and have an uneven membership (the most populous committee being the one dedicated to economic issues). Although there is no official hierarchy between the standing committees, there are cues suggesting that they have an unequal influence on the policy-making process and that they have a varying level of

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[8] According to the electoral law, an MP who dies or becomes a minister during the legislative term is replaced by a substitute MP. It is only in the other cases of vacancy (such as the election of the MP to the European Parliament or the Senate, the resignation or the annulment of the election by a court) that a by-election is organized.

[9] It is also noteworthy that the form of the parliamentary activities' variables has no incidence on our findings. Indeed, replacing the raw values by the logarithmic transformation of the continuous variables in the empirical models' specifications leads to the same results. More precisely, to keep the observations with null values, we make the logarithmic transformation of each variable plus one. None of the outcomes are altered by this change, meaning that our conclusions are not sensitive to this issue.

prestige. It is therefore interesting to test the impact of committee membership on the reelection of incumbents.

Apart from committee membership, leadership positions within the assembly can also be expected to have an effect on the incumbents' electoral fortune. There are a number of leadership positions (as president, vice-president or secretary) in the bureaus of three distinct institutional bodies: the standing committees, the working groups and the friendship groups. The working groups are established to tackle very specific policy issues; by contrast to membership in the standing committees, MPs do not have to participate to a working group, but they are allowed to participate in as many working groups as they wish. By the same token, the participation in a friendship group handling the relations of the Parliament with other nations is also optional. Table 1 shows that 8 percent of the MPs have a leadership role in a committee, whereas 60 percent have such a role in a working group and 45 percent in a friendship group.

On the whole, the descriptive statistics point to huge disparities for the indicators of parliamentary output, probably echoing a high variance of investment from the MPs, while the offices are less unevenly distributed.

Table 2 around here

The cross-tabulations of parliamentary output indicators and offices, on the one side, and the MPs' electoral fortune, on the other side, allow for several observations. We comment in turn the two successive steps of candidacy and reelection. First, the parliamentary output does not differ dramatically between the MPs who run for reelection and those who do not (Table 2). Only three indicators out of six are significantly different: the average number of written questions, oral questions and single-authored bills is higher for the MPs competing in the 2007 election. There is no significant difference between the reelected MPs and the others as far as their parliamentary output is concerned. Furthermore, the correlation between the level of parliamentary output and the electoral support received by the incumbents in the first round of the 2007 election is significant: the highest coefficient of correlation reaches only 0.28; however, all of the coefficients (except for the two for parliamentary questions) are statistically significant.

Table 3 around here

When we look at parliamentary offices (Table 3), there is little evidence of a relationship between the MPs' work in the assembly and their situation with respect to the 2007 election . Committee membership seems to impact both the probability of candidacy and the electoral outcome. While 90 percent of the public finance committee members ran in the 2007 election, only 75 percent of the national defense committee members did so. Regarding the election itself, 94 percent of the members of the foreign affairs committee were reelected in 2007, as compared to 71 percent of those of the culture and education committee. It is also noteworthy that the electoral scores at the first round of the 2007 election vary from one committee to the other. The members of the foreign affair committee have the highest mean, while the members of the law committee have the lowest.

The differences are less obvious regarding the effect of leadership positions. As far as candidacy is concerned, 82.6 percent of the members of a committee bureau, and about 85 percent of those of a working group or a friendship group bureau ran for reelection in 2007, whereas the figure was 76.4 percent for the other MPs. Whereas 75.5 percent of the backbench incumbents who ran again were reelected, the figures are respectively 85 percent and 88.6 percent for the bureau members of a working group and a friendship group, and 81.6 percent for the managers of a committee. The share of votes received by the parliamentary frontbenchers is also only slightly higher than that of the other MPs.

This simple descriptive statistics suggest the existence of a potential relationship between the individual parliamentary record of MPs (both activities and offices), on one side, and their decision to run again and electoral success, on the other side. The multivariate analysis provided hereafter aims at testing this relationship. Before getting to this, it is necessary to detail the estimation methodology.

3.3 Estimation methodology

The dependent variables present a certain degree of complexity. If the candidacy step can simply be captured by a dichotomous variable, the electoral impact offers more possibilities stemming from the specificities of the French electoral system. In theory, an incumbent can face four alternative scenarios: to be reelected or to be eliminated at the first round of the

election, or, if going to the second round, to be defeated or to be reelected at this final round. In consequence, the French electoral system allows for assessing the electoral impact of legislative activities at both rounds of the election, and it is also possible to take into account the electoral results through either the absolute number or the percentage of votes received. In view of keeping the methodology as simple and efficient as possible, the subsequent analysis relies on two distinct measures of the electoral performance. The first measure is the percentage of votes received by the incumbents at the first round of the election: this gives a fair idea of the electoral support they enjoy and is more informative than their score at the second round which only a part of the incumbents reaches. Second, the impact of parliamentary activities on the final outcome of the election is simply modeled by a dichotomous variable indicating whether or not the incumbent is reelected.

Additionally, in order to test the effect of parliamentary work on both the vote share and reelection determinants, we must control for a potential statistical bias, namely the endogenous selection of a part of the incumbents' whole population. More formally, prior to explaining either the percentage of votes at the first round or the probability to be reelected, we need to explain the probability of running again. This results in a two-equation model, where the first equation determines whether or not the incumbent is a candidate.

$$y_{cand} = \begin{cases} 0 \ if \ y^*_{cand} \leq 0 \\ 1 \ if \ y^*_{cand} > 0 \end{cases}$$

The second equation explains either the percentage of votes received at the first round (y_{votes}), which is a continuous variable, or the likelihood of the incumbent candidates' reelection (y_{reel}), which is a binary variable.

$$y_{votes} = \begin{cases} - \ if \ y^*_{cand} \leq 0 \\ [0 \ ; 100] \ if \ y^*_{cand} > 0 \end{cases} \ and \ y_{reel} = \begin{cases} - \ if \ y^*_{cand} \leq 0 \\ 0 \ if \ y^*_{cand} > 0 \ and \ y^*_{reelec} \leq 0 \\ 1 \ if \ y^*_{cand} > 0 \ and \ y^*_{reelec} > 0 \end{cases}$$

The models specify that y_{votes} and y_{reelec} are only observed when $y_{cand} > 0$ and each binary outcome has a latent equation where X and Z are vectors of regressors and ε_c, ε_v and ε_r $\sim N(0,1)$:

$$y^*_{cand} = X\beta_c + \varepsilon_c$$
$$y_{votes} = Z\beta_v + \varepsilon_v$$
$$y^*_{reel} = Z\beta_r + \varepsilon_r$$

Note that the same factors are introduced to explain both the percentage of votes and the reelection. The main statistical concern is related to the potential relation between the two error terms of the equations: $\rho_v = corr(\varepsilon_c, \varepsilon_v)$ and $\rho_r = corr(\varepsilon_c, \varepsilon_r)$.

When $\rho = 0$, 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 $\rho \neq 0$, 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 econometric 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 methods provide consistent and asymptotically efficient estimates for parameters and indirect estimations of ρ. So with $\rho \neq 0$, the models with selection are more efficient to estimate the coefficients of the vote share and reelection equations than the two-part models.

3.3 Specification and control variables

Since we use a model with selection, the main issue is to establish whether the independent variables affect the probability to stand as a candidate and/or the probability to be reelected. This is especially relevant in the case of the variables relating to parliamentary outputs and offices, which are hypothesized to influence both the candidacy and/or the ultimate outcome (to be reelected). For this reason, we employ two distinct specifications. In the first specification, we consider that the parliamentary activities and offices impact exclusively the reelection probability; and in the second one, we consider that they influence both the candidacy and reelection probabilities.

A number of control variables are added to the main explanatory factors.[10] To explain the likelihood of an incumbent MP running again inthe 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

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[10] A statistical description of the variables is given in appendix.

age. At the opposite, we anticipate the victory margin[11] 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 or her party to support him or her. By the same logic, the local mandates[12] 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.

In order to explain the electoral outcome (and not only the candidacy), we do not rely solely on measures of parliamentary activities and offices, but also on three additional subsets of independent variables. The first subset comprises personal characteristics describing the incumbent candidates; it includes information on gender, local roots[13], tenure (measured by the number of past mandates as an MP), local mandates, local executive responsibilities[14], and ministerial experience; with the exception of tenure, all variables are binary. The second subset corresponds to the dichotomous variables indicating the MPs' partisan affiliation. Given that the majority group in the parliament is the right-wing UMP group, we use this dummy variable as reference. The last subset of variables contains information about the constituency characteristics, in particular the degree of electoral competition. The first variable here is the money per registered voters spent by the incumbent during the electoral campaign. Two variables are designed to measure the competition intensity: the number of candidates at the first round of the election and the average campaign spending per registered voters of the other candidates. And finally, the unemployment rate in the department controls for the economic component of the vote.

4 Estimations Results

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[11] 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.

[12] In France, there are four levels of local government: municipal, inter-municipal, departmental, and regional. In 2007, it was still possible to hold local mandates, including an executive one, jointly with a national legislative mandate.

[13] We define the local candidate as the candidate born in the department of the constituency.

[14] We make a distinction between representative mandates in local assemblies and executive functions in local governments; the variables are respectively labelled: 'local mandates' and 'local government'.

Results of the empirical analysis are detailed in Table 4. They confirm the general hypothesis of a link between parliamentary activities and reelection. Before detailing the impact of parliamentary activities on the selection, vote received and reelection of incumbent MPs, we provide general comments.

4.1 General comments

In table 4, 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).

Table 5 around here

It should first of all be noted that the estimated coefficients of correlation between the error terms of the two equations are significantly different from zero ($\hat{\rho} \neq 0$) and the associated Chi-tests are conclusive for all of the four models. Hence the choice to take into account the potential selection bias related to candidacy is validated.

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. There are only three exceptions: the single-authored bills coefficient becomes insignificant in model 2b (but the coefficient is barely significant in model 2a), the information reports coefficient becomes significant in model 1b, and the coefficient associated with friendship group bureaus becomes significant in model 2b. But on the whole, 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. It is therefore possible to restrict the comments to the second specification (models 1b and 2b).

On the other hand, the coefficients of most control variables have the expected sign, although some of them are not statistically significant. The candidates' party logically has an impact on both the first-round votes and on the probability to be reelected. An increase in the intensity of the electoral competition – measured by the campaign spending and the number of candidates – reduces both the vote share at the first round and the reelection likelihood. As anticipated from the literature (Costa and Kerrouche 2007), holding a local mandate boost the chances of being re-nominated; however, it does not improve the electoral results. The only surprising outcome concerns the candidates' local roots. Whereas to be a local candidate has no effect on the votes received at the first round, it diminishes the probability to be reelected: the coefficient is significant and has a negative sign in the estimation of reelection probability (models 2a and 2b).[15] At a first glance, this could be explained by the restrictive definition of the variable or by an electoral gain for national personalities supported by the newly elected President.

Turning to the MPs' personal parliamentary record, it appears that both the amount of work and the offices held in the assembly impact the candidacy probability *as well as* the first round votes and the final outcome of the election. However, this impact varies strongly depending on the type of parliamentary activity and on whether we consider the vote share or the reelection likelihood. This observation bears important empirical and theoretical implications as it suggests that parliamentary activities have an incidence all along the electoral process: on the incumbents' decision to stand, the percentage of votes that they receive at the first round, and the final electoral outcome of the election, namely their reelection probability. These successive stages are discussed separately.

4.2 Effects of the MPs' activities on the probability of being a candidate

The variables reflecting the incumbents' parliamentary activities have a distinct impact on their probability of being candidates. Four out of six coefficients are significant: the single-authored bills, the co-signed bills and, with a lower level of significance, the legislative reports all positively impact the candidacy probability, whereas the effect of information

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[15] The coefficient associated to a past experience as national minister could also be seen as surprising. However, it must be kept in mind that this variable does not indicate an incumbent minister (any past ministerial experience is counted). The negative sign probably corresponds to a mechanism of renewal of the National Assembly related to electoral alternation.

reports' coefficient is negative. The questions – oral as well as written – do not have any significant effect. These observations are clearly consistent across Model 1b and Model 2b, and the magnitudes of the effects[16] are rather high. As a matter of fact, an increase of one percent in the number of single-authored bills per day and of co-signed bills per day induces an increase of respectively 0.02 and 0.06 percent of the probability to candidate. The increase of one percent of the number of legislative report per day leads to an increase of the likelihood of 0.005 percent. At the opposite, a one percent increase in the number of information reports per day leads to a 0.007 percent decrease in the probability to candidate.

The other aspects of the parliamentary record have a more ambiguous effect. Regarding committee membership, the members of the Culture, Foreign Affairs and Public Finance committees are respectively 0.09, 0.03 and 0.05 times more likely to be candidate than the members of the Economic committee. As for the leadership positions in one of the parliament's bodies, contrary to our expectations, they do not induce a higher candidacy probability; they even have a weakly significant negative impact as far as the committee bureaus are concerned (in model 1b).

To sum up, the activities which are deemed to be 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.

4.3 Effects of the MPs' activities on the first-round vote share

The parliamentary activities have distinct consequences on the candidacy and on the percentage of votes at the first round of the election (model 1b). Contrary to what is observed for the candidacy, the parliamentary questions – written and oral – have a highly significant and strong effect on the collected votes, but the effects are divergent depending on the type of

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[16] The elasticity measurements of the effects are calculated at the mean for all other variables equal its mean.

questions. The written questions have a negative impact: a 1% increase in the written questions per day is associated to a decrease of 0.008 percent of the vote share. On the contrary, the oral questions have a positive impact: an increase of 1% of the oral questions per day is associated to an increase of 0.03 percent of the vote share. This finding is consistent with earlier observations that written questions lack public visibility and are a way for MPs to obtain information, not to raise politicized matters or to foster the electoral connection (Lazardeux 2005). From an electoral perspective, the oral questions, which take place in the plenary sessions and are broadcaston public television channels, are much more efficient.

Beyond the written and oral questions, the single-authored bills have – unlike the co-signed bills – a strong impact on the votes obtained by the incumbent candidates: a 1% increase for this variable results in an additional 0.03 percent in the incumbents' vote share. In other words, to take the initiative of proposing a new law is clearly rewarded by the voters. In the same vein, the production of information reports has a significant positive impact on the vote share, while the production of legislative reports does not. It thus appears that the activities valued by the voters at the electoral stage are not similar to those that are important for the candidacy.

Regarding committee membership, the only visible effect is for the members of the Foreign Affairs committee who are more successful than those of Economy committee. Given the lack of significance of the other committees' variables, we conclude that the membership of the Foreign Affairs – one of the most prestigious – increases the vote share. Moreover, to be in charge of either a friendship group or a working group has contrasting impacts: the management of a working group diminishes the votes collected while that of a friendship group increases the votes. This contradicts the idea that international activities are of little electoral value for parliamentarians.

4.4 Effects of the MPs' activities on their reelection likelihood

Finally, the effect of parliamentary activities is also different for the reelection, which normally takes place at the second round of the election, compared to what it is at the first round. Whereas four types of activities have a significant coefficient at the initial stage, only two – the legislative and the information reports – have a significant impact on the final outcome of the election. By contrast to the vote share, the probability of reelection is neither

impacted by the questions asked by the incumbent nor by the tabled bills. Among the variables depicting the MPs' activity, only the production of information report has an impact on both vote share and probability reelection.

Turning to committees, the following observations can be made. The members of committees on "law", "culture and education", "national defense" and "public finance" have a lower probability to be reelected than the members of committees on "economy" and "foreign affairs". There is, however, no clear underlying logic in this finding and it is, by and large, difficult to distinguish a rationale based on the MPs, the parties or the voters behind it. Contrary to our hypothesis, the administration of a committee, a working group or a friendship group does impact the probability to be reelected. It can probably be argued that, while this type of leadership positions can contribute to boosting the career of some MPs, they are usually allocated following a seniority rule (Rozenberg 2016: 29); MPs therefore tend to reach such positions just before they decide to retire.

Table 6 around here

These two variables are completed by an indicator relating to the success in transforming a bill into law. Here we rely on a binary variable that takes the value 1 if one or more of these legislative bills has been successful and 0 in all other cases[17]. All 554 MPs in the dataset have co-signed at least one bill, but only 4 percent managed to validate a law. For the 344 MPs single-authoring a bill, the success rate reaches 6.4 percent.

Finally, the introduction into our specifications of a dummy variable indicating that the MP had at least one single-authored or co-signed bill successfully turned into law strengthens our findings (Table 6).[18] If the coefficients in the two candidacy equations (models 1b and 2b) are not significant, this additional factor has a positive and strongly significant effect on both the proportion of votes at the first round and the reelection probability. Since it is common in France that a law be labelled by the name of its initiator, the statistical effect of this additional variable suggests that the incumbent MPs are rewarded for having a law named after them.

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[17] We use a dichotomous variable instead of a quantitative one since, out the 23 MPs managing to pass a law, 20 had only one successful bill (two MPs had two such bills and one three of them).

[18] Doing that, we shift the perspective about the factor: from MPs activities (with the measure of law proposed) to MPs success (with the variable of law passed). Therefore, we do not include this variable in our main model.

The causal effect may be twofold: on top of the personal visibility given by the fact to have a law named after oneself, the successful bills can also be considered as an indication of the more general efficiency and political skills of their initiators, which the voters want to reward.

5. Conclusive discussion

The purpose of this article was to analyze the effectiveness of MPs' vote-seeking strategies through parliamentary activities. Taking the French legislative elections of 2007 as a test case, we hypothesized that the voters reward or sanction the incumbents depending on their activities in the parliamentary arena among other factors. We also argued that it was, theoretically and methodologically, necessary to distinguish between the re-nomination of the incumbents and the electoral process itself. Our findings confirm these ideas, in particular the general hypothesis according to which the electoral fortune of incumbent MPs in the French National Assembly is somehow connected to what they have accomplished during their mandate.

Even when controlling for a number of contextual and personal factors, the incumbents' parliamentary record has a statistically significant impact on what happens afterwards. All indicators of activity are significant at some point and the impact is generally positive meaning that hard-working MPs are rewarded for what they did; this holds in particular for the passing of a successive bill. This finding could well alter the way the academic community as well as the political actors assess parliamentary work's impact. Whereas MPs who think that they are responsible for their reelection tend to be more locally oriented (Brouard *et al.* 2013: 153), it appears that a greater activity at the national level has the potential to boost one's chances to remain an MP.

The only two exceptions are the information reports and the written questions: these two activities have a negative effect at the candidacy stage and at the second round, respectively. These activities lack the public visibility and prestige that could make them electorally worthy, and they are easily accessible to all MPs. It is thus safe to argue that they are mostly used by the weakest ones. The written questions in particular seem to be left to those MPs who lack the personal contacts that could save them the effort and the formality of a written procedure.

The statistical analysis also confirms that one may not rely on one single indicator of activity – in particular bills – as a proxy for a wider measure of parliamentary work. Each distinct parliamentary task has its own logic and may bring differentiated electoral returns. For example, the oral questions, which have no effect on the candidacy, do increase the vote share at the first round of the election, and the information reports have an opposite impact at the candidacy stage (negative) and at the first round (positive).

The other important finding is that parliamentary activities have a tangible impact on both the incumbents' decision to stand as candidates and their reelection prospects. Actually, the statistical analysis shows that there are three distinct stages which obey their own logic: the reselection (or the decision to stand as candidate), the votes received at the first round of the election and the final electoral outcome (whether one is or is not reelected).

Beyond its methodological implications, this observation entails important empirical and theoretical lessons. The criteria used in the initial candidacy stage are different from those relied upon at the election stage. This suggests that the actors the most directly involved – the incumbents and the political parties for the candidacy and the voters for the reelection – may not have the same level of information about the legislative process and may therefore assess the varied parliamentary activities in contrasted manners. Whereas the voters value the most visible but not necessarily the most decisive activities (such as the oral questions or the information reports), the parties (which are the prime decision-makers when re-nomination is concerned) do put more emphasis on the strategic legislative reports.

The same kind of differences can also be found between the first round of the election and its final outcome (normally after a second round), although they are more difficult to interpret. There is in fact very little stability in the statistical results between the two rounds: out of six coefficients, only two are unchanged (of which one is not significant). It was thus fully justified to run two separate analyses. Interestingly, all indicators of parliamentary activity have a significant impact at either the first or the second round of the election; the only exceptions are the co-signed bills and the committee bureaus' responsibilities. On the whole, the parliamentary activities have more often an impact on the votes collected at the first round than on the reelection probability.

By and large, this study brings a more nuanced understanding of MPs' reelection process than what is usually assumed. Contrary to the general belief, when controlling for different factors, local mandate-holders are more likely to stand again, but they do not accrue a significant electoral advantage; on the contrary, incumbent MPs can improve their reelection chances by submitting more bills, writing more information reports or sitting in the foreign affairs committee. It is therefore necessary to adjust the way work in the French parliament is looked at. This is all the more necessary after the constitutional revision of 2008, which affected deeply the role and organization of the National Assembly; it would notably be interesting to know to what extent these institutional changes affect the electoral gains associated with parliamentary activity.

6 References

Bowler, S. (2010) 'Private Members' Bills in the UK Parliament: Is There an "Electoral Connection"?', *Journal of Legislative Studies*, 16, 476-94.

Brouard, S. and Kerrouche, E. (2013) 'L'effet candidat lors des élections parlementaires. L'exemple des élections législatives 2012 en France', *Revue Française de Science Politique*, 63, 1113-1136.

Brouard, S., Costa, O., Kerrouche, E. and Schnatterer, T. (2013) 'Why Do French MPs Focus More on Constituency Work Than on Parliamentary Work?', *Journal of Legislative Studies*, 19, 141–159.

Cain, B., Ferejohn, J. and Fiorina M. (1987) *The Personal Vote: Constituency Service and Electoral Independence*, Cambridge (MA), Harvard University Press.

Carey, J. M. (2009) *Legislative Voting and Accountability*, Cambridge, Cambridge University Press.

Chang, E., Golden M. and Hill S. J. (2010) 'Legislative Malfeasance and Political Accountability', *World Politics*, 62, 177-220.

Conley, R. (2011) 'C'est en forgeant qu'on devient forgeron? Assessing legislative productivity in Fifth Republic France', *French Politics*, 9, 158–181.

Costa, O., and Kerrouche, E. (2007) *Qui sont les députés français ? Enquête sur des élites inconnues*, Paris, Presses de Sciences Po.

Däubler, T., Bräuninger, T. and Brunner, M. (2016) 'Is Personal Vote-Seeking Behavior Effective?', *Legislative Studies Quarterly*, 41, 419-444.

Dupoirier, E. and Sauger, N. (2010) 'Four rounds in a row: The impact of presidential election outcomes on legislative elections in France' *French Politics*, 8, 21-41.

Farrell, D. M. and McAllister, I. (2006) 'Voter satisfaction and electoral systems: Does preferential voting in candidate-centred systems make a difference?', *European Journal of Political Research*, 45, 725-49.

Fenno, R. F. (1978) *Home Style: House Members in their Districts*, Boston, Little Brown.

Ferejohn, J. (1986) 'Incumbent Performance and Electoral Control', *Public Choice*, 50, 5-25.

Fiorina, M. (1981) *Retrospective Voting in American Elections*, New Haven, Yale University Press.

François, A. and Phélippeau E. (2015) *Le financement de la vie politique. Réglementation, pratiques et effets politiques*, Paris, Armand Colin.

François, A. and Weill L. (2016) 'Does holding a local mandate alter the activities of deputies? Evidence from the French Assemblée Nationale', *French Politics*, 14, 30-54.

Godbout, J.-F. and Foucault M. (2013) 'French Legislative Voting in the Fifth Republic', *French Politics*, 11, 307-331.

Hazan, R.Y. (2002) 'Candidate Selection' In: L. LeDuc, R.G. Niemi and P. Norris (eds), *Comparing democracies*, London, Sage.

Hazan, R.Y. and Rahat G. (2006) 'The influence of candidate selection methods on legislatures and legislators: Theoretical propositions, methodological suggestions and empirical evidence', *Journal of Legislative Studies*, 12, 366-85.

Healy, A. and Malhotra, N. (2013) 'Retrospective Voting Reconsidered', *Annual Review of Political Science*, 16, 285-306.

Heckman, J. (1979) 'Sample selection bias as a specification error', *Econometrica*, 47, 153–161.

Kerrouche, E. (2006) 'The French *Assemblée nationale*: The case of a weak legislature?', *Journal of Legislative Studies*, 12 , 336-365.

Kulisheck, M. R., and Mondak J. (1996) 'Candidate Quality and the Congressional Vote: A Causal Connection?', *Electoral Studies*, 15, 237-53.

Lazardeux, S. (2005) 'Une Question Ecrite, Pour Quoi Faire? The causes of the production of written questions in the French Assemblée Nationale', *French Politics*, 3, 258–281.

McAllister, I. (2007) 'The Personalization of Politics' In: Dalton R. J. and Klingemann H.-D. (eds.) *The Oxford Handbook of Political Behavior*, Oxford, Oxford University Press.

Manin, B. (1997) *The Principles of Representative Government*, Cambridge, Cambridge University Press.

Martin, S. (2010) 'Electoral Rewards for Personal Vote Cultivation under PR-STV', *West European Politics*, 33, 369-80.

Mayhew, D. (1974) *Congress: The Electoral Connection*, New Haven, Yale University Press.

Navarro, J. (2010) 'Le travail parlementaire, un investissement payant ? Les élections européennes comme évaluation rétrospective du bilan des députés sortants', *Revue Internationale de Politique Comparée*, 17, 141-60.

Navarro, J., Vaillant, N. and Wolff, F.-C. (2012) 'Mesurer l'efficacité des députés au sein du Parlement français : l'apport des techniques de frontières non paramétriques', *Revue Française de Science Politique*, 62, 611-36.

Norton, P. and Wood, D. M. (1990) 'Constituency Service by Members of Parliament: Does it Contribute to a Personal Vote?', *Parliamentary Affairs*, 43, 196-208.

Pitkin, H. (1967) *The Concept of Representation*, Berkeley, University of California Press.

Rahat, G. and Reuven, Y. H. (2001) 'Candidate Selection Methods: An Analytical Framework', *Party Politics*, 7, 297-322.

Rozenberg, O. (2016) 'Un petit pas pour le Parlement, un grand pas pour la Ve République. L'évaluation de la révision constitutionnelle du 23 juillet 2008', *LIEEP Working Paper*, 61.

Van de Ven W. and Van Pragg B. (1981) 'The demand for deductibles in private health insurance: A probit model with sample selection', *Journal of Econometrics*, 17, 229-52.

Vigour, C. (2013) 'French deputies and law-making: Deputies' activities and citizens' perceptions', *Journal of Legislative Studies*, 19, 219–245.

7 Appendix

Insert Table 7 around here

Table 1: Descriptive statistics of the indicators of parliamentary activity

	Mean	SD	Minimum	Maximum
Written questions	215.01	428.96	0	4,029
Per day	*0.189*	*0.373*	*0*	*3.429*
Oral questions	8.996	6.722	0	41
Per day	*0.008*	*0.006*	*0*	*0.035*
Information reports	0.84	3.01	0	49
Per day	*0.001*	*0.002*	*0*	*0.042*
Single-authored bills	3.05	5.44	0	63
Per day	*0.003*	*0.005*	*0*	*0.054*
Co-signed bills	109.07	104.60	1	596
Per day	*0.098*	*0.091*	*0.001*	*0.507*
Successful bills	0.042	0.200	0	1
Legislative reports	1.88	3.17	0	43
Per day	*0.002*	*0.003*	*0*	*0.037*
Committee				
Law	0.12	0.32	0	1
Culture and education	0.24	0.43	0	1
National defense	0.12	0.33	0	1
Economy	0.25	0.44	0	1
Foreign affair	0.13	0.33	0	1
Public finance	0.13	0.34	0	1
Leadership position				
Committee	0.08	0.28	0	1
Working group	0.60	0.49	0	1
Friendship group	0.45	0.50	0	1

Table 2: Mean parliamentary output according to the electoral fortune

Mean value (per day)	Not candidate	Candidate	Not reelected	Reelected	Correlation coef. with the vote share (1st round)
Written questions	0.126	0.202*	0.188	0.205	0.01
Oral questions	0.006	0.008***	0.008	0.009	0.05
Information reports	0.00074	0.00074	0.0004	0.0008	0.14+
Single-authored bills	0.0012	0.0030***	0.0022	0.0031	0.17+
Co-signed bills	0.096	0.098	0.112	0.095	0.28+
Legislative reports	0.0013	0.0017	0.001	0.002	0.16+

***, ** and * mean that the means are significant at respectively 1%, 5% and 10% (one-tail t-test).

+ means that the coefficient is significantly different from zero at 1%.

To differentiate the reelected MPs from the non-reelected ones, we only include those who were candidates.

Table 3: Parliamentary offices (% of MPs) according to the electoral fortune

	Not candidate in 2007	Candidate in 2007	Not reelected in 2007	Reelected in 2007	Average vote share (1st round)
Committee					
Law	13.85	86.15	16.07	83.93	42.46
Culture and education	15.56	84.44	28.95	71.05	42.61
National defense	24.64	75.36	21.15	78.85	43.01
Economy	19.15	80.85	11.40	88.60	43.87
Foreign affair	23.94	76.06	5.56	94.44	45.17
Public finance	9.72	90.28	10.77	89.23	43.52
Leadership position					
Committee bureau	17.39	82.61	18.42	81.58	44.72
Working group bureau	15.45	84.55	15.05	84.95	43.48
Friendship group bureau	14.98	85.02	11.43	88.57	44.28
None	23.61	76.39	24.55	75.45	42.35
All MPs	17.72	82.28	16.70	83.30	43.38

To differentiate the reelected MPs from the non-reelected ones, we only include those who were candidates.

Table 4: Influence of per day measure of legislative output on MPs vote share (1st round) and reelection

	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***	(0.016)	-0.093***	(0.013)	-0.092***	(0.014)
Victory margin 02	0.022***	(0.0042)	0.019***	(0.0045)	0.0083***	(0.0029)	0.0031	(0.0026)
Local mandates	0.20***	(0.046)	0.22***	(0.055)	0.22***	(0.041)	0.28***	(0.043)
Elected after 02	-2.09***	(0.13)	-2.39***	(0.22)	-2.49***	(0.090)	-2.80***	(0.31)
Oral questions per day			20.2	(29.0)			19.7	(18.2)
Written questions per day			-0.12	(0.35)			-0.15	(0.30)
Single-authored bills per day			36.8***	(10.3)			38.1***	(8.23)
Co-signed bills per day			1.46***	(0.44)			1.83***	(0.54)
Legislative reports per day			7.21*	(4.03)			12.2*	(6.84)
Information reports per day			-33.1***	(3.36)			-29.4***	(6.72)
Committee membership:								
Law			0.12	(0.14)			0.20*	(0.11)
Culture and education			0.53***	(0.20)			0.62***	(0.16)
National defense			0.030	(0.18)			-0.00073	(0.22)
Economy			ref				ref	
Foreign affair			0.071**	(0.031)			0.12*	(0.066)
Public Finance			0.23*	(0.12)			0.27***	(0.051)
Leadership position in:								
A committee			-0.092*	(0.055)			-0.040	(0.078)
A working group			0.018	(0.15)			-0.019	(0.094)
A friendship group			0.025	(0.25)			0.076	(0.21)
Constant	6.51***	(0.64)	6.04***	(1.18)	6.45***	(0.64)	5.80***	(0.83)
	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	162.6***	(24.3)	141.0***	(24.5)	24.5	(16.3)	17.6	(12.9)
Written questions per day	-1.93***	(0.68)	-1.78**	(0.76)	0.11	(0.16)	0.14	(0.25)
Single-authored bills per day	279.5***	(58.6)	265.6***	(56.0)	27.4*	(15.7)	28.0	(19.5)
Co-signed bills per day	-0.86	(1.30)	-2.00	(1.22)	-0.027	(0.25)	-0.43	(0.46)

	(1)		(2)		(3)		(4)	
Legislative reports per day	-84.4	(114.0)	-88.7	(116.2)	46.1*	(26.5)	48.9**	(24.3)
Information reports per day	44.9	(29.5)	102.1***	(26.5)	72.9*	(37.2)	75.0**	(34.6)
Committee membership:								
Law	-0.55	(0.72)	-0.65	(0.70)	-0.34*	(0.20)	-0.37**	(0.16)
Culture and education	0.26	(0.74)	-0.23	(0.056)	-0.57***	(0.11)	-0.66***	(0.080)
National defense	-0.22	(0.47)	-0.23	(0.13)	-0.28**	(0.12)	-0.25***	(0.061)
Economy	ref		ref		ref		ref	
Foreign affair	1.93***	(0.28)	1.96***	(0.11)	0.32	(0.27)	0.30	(0.26)
Public Finance	-0.78	(0.78)	-1.03	(0.093)	-0.13*	(0.069)	-0.16***	(0.059)
Leadership position in:								
A committee	0.37	(1.50)	0.48	(1.64)	-0.45	(0.48)	-0.45	(0.42)
A working group	-0.72***	(0.12)	-0.78***	(0.26)	-0.038	(0.042)	-0.060	(0.11)
A foreign group	0.78***	(0.14)	0.72**	(0.29)	0.19	(0.15)	0.19**	(0.097)
Sex	0.39***	(0.14)	0.38***	(0.12)	-0.12	(0.12)	-0.10	(0.12)
Local candidate	0.098	(0.23)	0.078	(0.057)	-0.29***	(0.057)	-0.29***	(0.077)
Past mandates	0.062	(0.12)	0.056	(0.048)	0.15***	(0.042)	0.16***	(0.051)
Local mandates	-0.13	(1.04)	-0.11	(0.18)	0.020	(0.18)	0.057	(0.19)
Local government	0.99	(0.89)	0.96	(0.33)	0.12	(0.35)	0.11	(0.28)
Former minister	0.98	(0.81)	0.91	(0.21)	-0.61***	(0.14)	-0.63***	(0.11)
Party : UMP	ref		ref		ref		ref	
Communists	-13.6***	(1.13)	-13.6***	(0.15)	0.28	(0.27)	0.28	(0.28)
Other Left	-17.1***	(3.16)	-17.3***	(3.26)	0.58	(0.63)	0.52	(0.66)
Other Right	-8.33***	(0.30)	-8.30***	(0.34)	-0.39***	(0.091)	-0.37***	(0.10)
Socialists and associated	-7.93***	(0.58)	-7.78***	(0.64)	0.83***	(0.052)	0.82***	(0.066)
Spending per voters	2.51	(2.62)	2.58	(2.69)	0.24	(0.61)	0.33	(0.45)
Nb candidates	-1.71***	(0.46)	-1.73***	(0.054)	-0.17***	(0.064)	-0.16***	(0.057)
Others' spending per voters	-836.0**	(349.4)	-842.4**	(28.1)	-60.3**	(28.4)	-60.8**	(29.4)
Unemployment rate	-0.22*	(0.12)	-0.23**	(0.051)	0.028	(0.050)	0.032	(0.063)
Constant	75.5***	(6.39)	76.3***	(0.98)	3.12***	(0.73)	3.04***	(0.62)
rho	-0.609	(0.110)	-0.600	(0.082)	-1	(0.0001)	-1	(0.0001)
LR test of indep. equations (rho=0)	Chi²(1)= 16.21 ***		Chi²(1)= 29.33 ***		Chi²(1)= 7.34 ***		Chi²(1)= 12.02 ***	

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

Table 5: Impacts of successful bills (binary variable)

	Model 1a		Model 1b		Model 2a		Model 2b	
	Coeff.	(s.e.)	Coeff.	(s.e.)	Coeff.	(s.e.)	Coeff.	(s.e.)
Selection	-	-	0.066	(0.127)	-	-	0.275	(0.173)
Outcome	4.35 ***	(0.401)	4.29 ***	(0.412)	0.605 ***	(0.089)	0.622 ***	(0.095)

This variable is added in the four models; all the other variables remain the same as in Table 4. The detailed results are available upon request.

Table 6: Statistical description of the variables

Variable	N	Mean	SD	Minimum	Maximum
Reelected	455	0.685	0.465	0	1
Candidate	553	0.823	0.382	0	1
Vote share (1st round)	455	43.38	9.401	5.546	67.38
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
Leadership position in:					
A committee	553	0.083	0.276	0	1
A working group	553	0.597	0.491	0	1
A friendship group	553	0.447	0.498	0	1
Sex	553	0.127	0.333	0	1
Local candidate	553	0.503	0.5	0	1
Past mandates	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

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