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Working Paper Series

***Last minute policies and
the incumbency advantage***

Elena Manzoni Stefan P. Penczynski

Working Paper 14-24

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Last minute policies and the incumbency advantage^{*}

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This paper models a purely informational mechanism behind the incumbency advantage. In a two-period electoral campaign with two policy issues, a specialized incumbent and an unspecialized, but possibly more competent challenger compete for election by voters who are heterogeneously informed about the state of the world. Due to the asymmetries in government responsibility between candidates, the incumbent's statement may convey information on the relevance of the issues to voters. In equilibrium, the incumbent sometimes strategically releases his statement early and thus signals the importance of his signature issue to the voters. We find that, since the incumbent's positioning on the issue reveals private information which the challenger can use in later statements, the incumbent's incentives to distort the campaign are decreasing in his quality, as previously documented by the empirical literature. The distortions arising in equilibrium are decreasing in the incumbent's effective ability; however, the distortions may be increasing in the incumbent's reputation of expertise on his signature issue.

Keywords: Incumbency advantage, electoral competition, information revelation, agenda setting.

JEL Classification: D72, D82, D60

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1. Introduction

“We have alarming news from the Middle East. There is talk of a war. [...] Germany is willing to show solidarity, but is not available for adventures.”

— German Chancellor Gerhard Schröder, August 1st, 2002

With this statement, the German Chancellor took a very popular position against the participation in an armed conflict and put the Iraq issue on the political agenda for the general election on September 22nd, 2002. Only hours earlier, the council meeting of his Social Democratic Party had decided to immediately start, earlier than planned, the final phase of the election campaign. At the time, economic problems of unemployment and recession put the incumbent coalition of Social Democrats and Greens under pressure. In polls, they were clear second behind the conservative opposition. Within one month of the above statement, the perceived importance of the Iraq conflict jumped from 6th to 2nd rank although it was very uncertain that a war would ever be fought and German support ever requested from the US. The September elections saw the incumbent coalition confirmed.¹

This example shows vividly the incumbent’s strength in shaping the political agenda – the perception of relevant issues – and in influencing the campaign election. Our paper links the empirically established phenomenon of incumbency advantage to the timing of the political announcements in an electoral campaign. In our model, an incumbent, when competing against a challenger candidate for reelection, can credibly signal the relevance of an issue to the voters because of government responsibilities that force him to act on problems that have a particularly urgent and relevant nature. He can use this ability to also make salient

¹Fürtig (2007, pp. 314-317) describes the campaign and its context in detail. The quote is due to the Ddp News Agency as quoted in Fürtig (2007, p. 316).

those issues on which he is particularly competent. The flipside of this government responsibility is that an important issue might require immediate political action and force him to position himself. As a consequence, the challenger can position himself optimally in response to the incumbent's action. This trade-off between influencing the agenda and revealing information governs the analysis of campaign statements in this paper.

We model this trade-off in an electoral campaign over two periods with two political issues. The campaign is run by two politicians, a challenger and an incumbent. The challenger can only make statements about his proposed policies in the second period, while the incumbent can choose to take a stand on one issue in the first period. As a consequence, we can interpret period 1 as the last period of the previous government, and period 2 as the proper electoral campaign.

We assume that the incumbent is specialized on one of the two issues in the sense that he holds more precise information on that issue. The nature of his specialization (i.e. the issue on which he is more competent) is common knowledge; however we assume that the extent of his specialization is the incumbent's private information. The incumbent may have an incentive to focus the voters' attention on his signature issue by announcing his policy in period 1. This strategy is effective since it shifts the voters' perception of which issue is "relevant" and therefore may shift the perception of the best candidate. The incumbent's power to change the voters' beliefs on the relevance of the issues results from the existence of "urgencies" in which he is forced to take a stand on the urgent and therefore relevant issue. The incumbent's actions in period 1 may thus be informative about the nature of the relevant issue.

The incumbent's incentive to take an early stand and influence the debate is however mitigated by the above mentioned trade-off: early announcements disclose the incumbent's private information not only to the voters, but also to the

challenger, who can best respond to it. Therefore, in equilibrium it is not always optimal for an excellent incumbent to reveal his precise information and influence the electorate's political agenda. In other words, the returns to incumbency are decreasing in the quality of the incumbent. This is in line with the findings of the empirical literature; Aidt, Veiga and Veiga (2011) show how the incumbent's opportunistic behavior that distorts the electoral campaign diminishes when the incumbent's win-margin increases. Gordon and Landa (2009) provide a sequence of models in which high quality incumbents benefit less from the incumbency advantage, with the best incumbents potentially suffering from incumbency.

Our model shows that this result does not translate in a monotonically more efficient outcome. In particular we find that welfare is influenced both by the incumbent's ability and by the perception on such ability. While an incumbent with a better specialization is always more beneficial, the challenger mimics the incumbent only when he believes that his information and thus quality is good enough. A challenger that mimics rather than challenges is not providing the voters with alternatives, therefore an incumbent with a better reputation does not necessarily result in better options. The inefficiencies that arise from the incumbent's and the challenger's behavior therefore respond differently to the perceived and the effective ability: first of all they are decreasing in the incumbent's effective expertise. Their response to the incumbent's reputation for specialization instead vary: if the incumbent's effective expertise is low an increase in his reputation will increase the inefficiencies; if his effective expertise is high an increase in his reputation will decrease them. There is therefore an interesting interaction between the incumbent's characteristics and his reputation in the determination of the welfare.

Our model is related to two different branches of the literature. The main one is the wide literature on the incumbency advantage. The common explana-

tions for such an advantage can be grouped in four categories: (i) Environmental characteristics of the campaign that make the campaigning process easier for the incumbent.² (ii) Incumbent's characteristics that differ from the challenger's ones through the selection process of the previous election.³ (iii) The incumbent's position provides opportunities he uses in his favor.⁴

The rationale that we provide for the existence of an incumbency advantage falls in the latter category. The incumbent is able to actively distort the electoral campaign in order to increase his chances of being elected. The models that are closest in spirit to ours are by Hodler, Loertscher and Rohner (2010), Dellis (2009) and Glazer and Lohmann (1999). The first paper considers the pre-election implementation of inefficient policies that later increase the pressure to act on the incumbent's signature issues. In the paper the authors find that intermediate types of the incumbent have more incentives to distort the campaign. Our model differs from theirs in the channel through which distortions to the electoral campaign are induced (timing of the policy promises vs. inefficient policy implementation) and in the comparative statics of the distortions. In our work we find both distortions induced directly by the incumbent's actions, and distortions induced by the challenger's best response. As a consequence we are able to separate the effects of the incumbent's ability from the effects of the perception of such ability. Dellis (2009) and Glazer and Lohmann (1999) analyze how the treatment of some issues now can influence which other issues will be salient in the next election. Dellis (2009) analyzes this phenomenon when policy makers are constrained to implement only one policy per period, while Glazer and Lohmann

²See, for example, Prior (2006) who assumes a greater media coverage for the incumbent and Gordon, Huber and Landa (2007) who investigate the effects of entry costs for the challenger.

³See, for example, Ashworth and de Mesquita (2008) who model how a quality-based incumbency advantage endogenously arises through electoral selection and strategic challenger entry.

⁴Examples are an increased constituency service (Fiorina, 1977) or redistricting (Cox and Katz, 2002).

(1999) consider an electoral competition in which the incumbent government can have policy commitment before the election. Both papers are framed in a setup that is structurally different from ours as they deal with ideological candidates that can make issues salient by avoiding to implement a policy on them; we take an opposite view on this, as the incumbent in our model can increase the saliency of one issue only by taking an early stand on it, and by doing so he is forced to disclose his information to the challenger who can best respond to it. A complementary analysis of the use of information in the incumbent-challenger race is provided by Ashworth and Shotts (2011), who analyze the effects of the strategic choice of a challenger who can provide soft or hard information on the incumbent’s policy choice to the voter. In their model, an incumbent advantage arises when the challenger is silent, as part of the optimal incentive scheme that induces the challenger to gather costly information.

A second related branch of the literature considers agenda setting and the timing of statements. Petrocik (1996) introduced the view that the perceived competence of a politician in a particular field (“issue ownership”) is relevant for his success. Abbe, Goodliffe, Herrnson and Patterson (2003) modeled how politicians’ success depends on whether their core competencies are “high on the agenda”. Our setup is inspired by these concepts; we model the agenda by issues’ true relevance for the voters and the competency of the candidates by the precision of their information.

Section 2 introduces the general features of the model. The analysis of the equilibria is contained in Section 3. Section 4 presents an analysis of the distortions that the incumbency advantage may induce. Section 5 concludes after a brief discussion.

2. The model

We consider a two-period model in which an incumbent I and a challenger C compete to be elected by a voter after a two-period electoral campaign on issues a and b . The optimal policy on each issue $j = a, b$ is equal to the state of the world on that issue, $\omega_j \in \{-1, 1\}$, where both states are equally likely. The state of the world on each issue is unknown during the campaign, and voters and candidates are heterogeneously informed about ω_j .

2.1. Voter

We assume that we have a representative voter. At the beginning of period 1, the voter receives two private signals v_j , $j = a, b$, about issue j 's state of the world, where $v_j = \omega_j$ with probability $\delta > \frac{1}{2}$; signals are independent across issues. The precision of the signal δ is common knowledge.

The voter's utility is affected only by the policy implemented on one of the issues, which we call the "relevant" issue. The identity of the relevant issue is ex-ante unknown; the voter's belief is that a is the relevant issue with probability r ; r is the voter's private information.

Given his signals, the voter follows a simple behavioral rule. At the time of the election he votes for the best candidate on the issue that he views more likely to be relevant. If both candidates propose the same policy on that issue the voter randomizes with equal probability between the two candidates.⁵

⁵We are aware that this is a strong assumption in a model with two issues, but we believe that it is a useful representation of electoral processes with many independent issues. Under such conditions boundedly rational voters may be induced to consider only the set of issues that they believe will be more relevant for the next period. They cast their vote comparing candidates only on these issues and do not use less relevant issues as a tie-breaker, but rather idiosyncratic, random differences between candidates that are not explicitly modelled here.

2.2. Candidates

There are two candidates, an incumbent I and a challenger C . Candidates maximize the probability of being elected by taking one of two positions $p_j \in \{-1, 1\}$ on each issue.

Both candidates' belief on r is described by a uniform distribution over the interval $[0, k]$ with $\frac{1}{2} < k < 1$. Therefore the candidates' and the voter believe a to be the more relevant issue with probability $\frac{2k-1}{2k} < \frac{1}{2}$; this implies that the two issues are asymmetric from an ex-ante perspective.

Candidates are asymmetric in three ways. First, at the beginning of period 1 each candidate receives signals on the state of the world with different precisions. The incumbent's signal on issue j is $s_j \in \{-1, 1\}$ and the challenger's is $t_j \in \{-1, 1\}$. C 's signal t_j is correct with probability $\delta_j = \delta \in (\frac{1}{2}, 1)$ for both issues, reflecting that he is not specialized on any issue.⁶ The incumbent is instead specialized on issue a , and not competent on issue b . More precisely I 's signal on b is uninformative, $\gamma_b = \frac{1}{2}$, while I is specialized on issue a , due to a signal with $\gamma_a > \frac{1}{2}$. Consequently, the incumbent can have an objectively worse ($\gamma_a < \delta$) or better ($\gamma_a > \delta$) signal than the challenger on issue a .⁷ We assume γ_a to be a random variable, distributed according to a continuous probability distribution function f with support $[\frac{1}{2}, 1]$; the cumulative distribution function is denoted F . The precise value of γ_a is the incumbent's private information. Notice that it is commonly known that $\gamma_b = \frac{1}{2}$; therefore it is common knowledge that the incumbent is never more competent on b than on a .

Second, while both candidates can make statements in the second period, which

⁶The challenger's signals have the same precision as the voter's signals. This is only for notational ease; the results do not change substantially if we assume that the precision of the voter's signals differs from the precision of the challenger's ones. Recall that δ is common knowledge.

⁷The model can easily be extended to the case of a specialized challenger. This delivers no further insights as most of the strategic behavior comes from the incumbent. The case of an unspecialized incumbent, instead, is not relevant for our analysis, as it displays no incentive at all for the incumbent to influence the voters' perception of the issues.

we consider as the proper election campaign, only the incumbent can take a stand on the different issues in the first period. This can be viewed as the last government period, in which he can propose or implement a policy on one of the issues.⁸ Every politician can take a stand on each issue only once because they effectively commit to the proposed policies.

Finally, with probability z the relevant issue is “urgent.” Then, it is the incumbent’s government responsibility to act immediately on a given issue. This puts a restriction on the incumbent’s set of feasible strategies such that he has to act on the urgent issue by announcing p_j^I in period 1. Urgency is a characteristic that only relevant issues can have. Due to his position, the incumbent gets to know whether there is an urgent issue and which issue it is through an extra private signal $\zeta \in \{a, b, \emptyset\}$.⁹

The challenger’s strategy is a mapping

$$\sigma^C : \{-1, 1\}^2 \times \{\emptyset, -1, 1\}^2 \rightarrow \{-1, 1\}^2, \quad (1)$$

associating a pair of promises (p_a^C, p_b^C) to the vector that includes the signals (t_a, t_b) and the incumbent’s observed promise (if any).

The incumbent’s action space is instead $\{A, B, \emptyset\} \times \{-1, 1\}^2$, where A and B indicate the choice of promising p_a^I or p_b^I , respectively, in the first period, and \emptyset the waiting until the second period. With the signals on the states of the world

⁸This is without loss of generality. As will be clear from the description of the model, the challenger has no extra information on the issues’ relevance that can induce the voters to update their beliefs. Therefore an early announcement by the challenger would simply reveal his strategic position to the incumbent, without changing the probability that the election focuses on a specific issue.

⁹We interpret this sharp constraint implied by the urgent issues as follows. If the incumbent remains inactive on that issue, its urgency will be revealed to the voters, and the incumbent will not be elected in the subsequent election as a punishment for the absence of timely measures. By the nature of urgency, politicians cannot hide an urgent issue from the public, while they can make believe that an issue is urgent. For example, in the case of a potentially pandemic flu, the government can promote a plan of vaccinations and a set of restrictive measures to protect the country. Now, if the people get the vaccine, they cannot know for sure whether it was really a critical situation or not; on the contrary, if the government does not adopt any special measure and the flu spreads quickly, everyone will know that the government failed to act on time.

and the urgency, the incumbent's strategy is

$$\sigma^I : \{a, b, \emptyset\} \times \{-1, 1\}^2 \rightarrow \{A, B, \emptyset\} \times \{-1, 1\}^2, \quad (2)$$

where the following restrictions from urgency apply:

$$\sigma^I(a, s_a, s_b) \in \{A\} \times \{-1, 1\}^2, \quad (3)$$

$$\sigma^I(b, s_a, s_b) \in \{B\} \times \{-1, 1\}^2. \quad (4)$$

No restriction applies to $\sigma^I(\emptyset, s_a, s_b)$.

2.3. Timing

Figure 1 summarizes the timing of the electoral campaign. At the beginning of the first period, the voter, the incumbent, and the challenger receive signals (r, v_a, v_b) , (ζ, s_a, s_b) and (t_a, t_b) , respectively. In the first period, the incumbent decides whether to promise p_a^I , p_b^I , or nothing, where his choice is constrained in the case of an urgent issue. All other promises are revealed in the second period, the electoral campaign period. In period 3, the voter casts his vote.

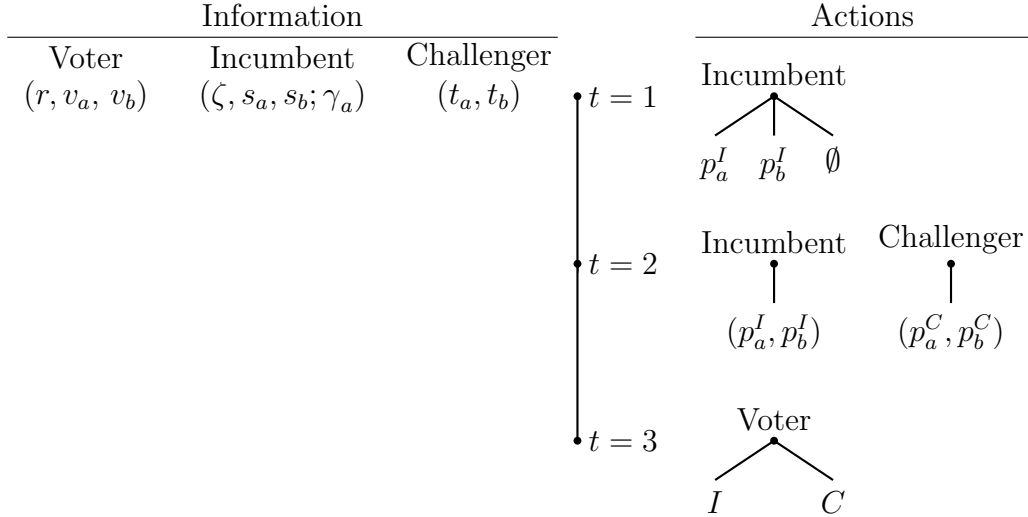


Figure 1: Timing of the electoral campaign.

2.4. Updated relevance

The voter updates the belief r according to the incumbent's behavior. The updating is induced by the possibility that the relevant issue is urgent, in which case observing a promise on issue j in the first period is informative about its relevance.

Consider issue a . With z being the probability that the relevant issue is urgent and y the probability that a is spoken about in equilibrium when there is no urgency, the posterior belief becomes via Bayes' rule¹⁰

$$\rho = \frac{(z + y(1 - z))r}{(z + y(1 - z))r + (1 - r)(1 - z)y}. \quad (5)$$

If ρ is greater than $\frac{1}{2}$ the voter bases his decision on issue a , which occurs when $r > \frac{(1-z)y}{2y-(2y-1)z}$.

3. Equilibrium analysis

We now proceed to the analysis of the equilibrium behavior of the agents in this electoral system. Given the voter's behavioral voting rule (Section 2.1), and his belief updating according to Bayes' rule (Section 2.4), a Perfect Bayesian Equilibrium of the campaigning game is given by a pair of strategies (σ^I, σ^C) such that (i) I maximizes his expected utility for each profile of signals (ζ, s_a, s_b) , (ii) C maximizes his conditional expected utility upon observing i 's first period promise (if any) for each profile of signals (t_a, t_b) , and (iii) beliefs are updated by Bayes' rule, if possible.

¹⁰More extensively ρ is the probability that A is relevant given that the incumbent makes an announcement over A in period 1. Such announcement can be due to (i) A being relevant and urgent, which happens with probability zr ; in this case the probability of an announcement over A is 1, (ii) A being relevant and not urgent, which happens with probability $r(1 - z)$; in this case the probability of an announcement over A is y , (iii) B being relevant and not urgent, which happens with probability $(1 - r)(1 - z)$; also in this case the probability of an announcement over A is y . The only case in which there can be no early announcement over A is when B is relevant and urgent (probability $(1 - r)(1 - z)$).

The first aspect to be considered is what happens in the simplest case, in which all the political action is concentrated in the second period. In this period the candidates' announcement has no effect on the voter's belief about which issue is relevant; therefore, announcements released in this stage cannot move the voter's attention from one issue to the other one. Hence, in this stage, candidates choose on each issue the promise that is more likely to correspond to the voter's belief about the true state of the world. Notice that the voter receives informative signals on both issues. As a consequence the candidates' best promise is, on each issue, their own belief on the true state of the world. This implies that the challenger makes announcements according to his signals on both issues, and the incumbent does the same on issue a ; any announcement on issue b is an equilibrium announcement for the incumbent, as his signal on b is uninformative.

The more interesting aspects of the model are related to the incumbent's choice of timing of his announcements, and to the challenger's second period behavior when the incumbent announces his policy promise in the first period.

To understand the incumbent's behavior we first notice that, given the informational structure of this model, an early announcement on issue j increases the perceived relevance of issue j . Therefore the incumbent makes a first period promise on issue b only when he is forced to, i.e. when b is urgent. As for issue a , it can be shown that also in the first period it is optimal for the incumbent to promise what he believes to be the true state of the world, that is, $p_a^I = s_a$. The incumbent's timing, instead, depends both on the precision of his signal s_a and on the challenger's behavior. By announcing his policy promise p_a^I in the first period, the incumbent reveals his information to the challenger. If the challenger never mimics the incumbent upon observing p_a^I , every type of incumbent optimally promises p_a^I in the first period; in this way the incumbent increases the likelihood that a is the decisive issue for the election, without changing the

challenger's behavior, that is, without altering the conditions of the competition. If there is a positive probability that the challenger will mimic the incumbent's promises, instead, only incumbents with a low γ_a will make an early announcement on a ; a first period promise on a in this case has two effects: it increases the likelihood that a will be the decisive issue, but it also reduces the incumbent's probability of winning the competition on issue a . As the cost of such early intervention on a is increasing in γ_a , while the benefit is constant, the incumbent's strategy is characterized by a threshold below which the incumbent promises p_a^I in the first period.

The challenger's behavior, instead, can depend only on the distribution of γ_a , not on γ_a itself. Given the incumbent's threshold strategy, if f gives sufficient weight to low competencies ($\mathbb{E}(\gamma_a) < \delta$), the challenger never mimics the incumbent; this implies that all types of incumbents are active in the first period. If f gives sufficient weight to high competencies, so that the incumbent's expected precision conditional on the fact that he announces p_a^I in the first period is greater than the challenger's precision on a the challenger always mimics the incumbent. In this case the challenger finds the incumbent's signal more reliable in expectation than his own, even conditioning on the fact that the incumbent's type is low enough to speak in the first period.¹¹ Intermediate cases generate challenger's mixed behavior. Proposition 1 fully characterizes the equilibrium behavior and the relevant thresholds. The formal proof is included in the Appendix.

¹¹The incumbent's expected precision given that the challenger observes an early announcement on a and given that the incumbent makes early announcements in absence of urgent issues only for $\gamma_a < \Xi$ is

$$\frac{(1-z)F(\Xi)2k}{z(2k-1) + (1-z)F(\Xi)2k} \mathbb{E}(\gamma_a | \gamma_a \leq \Xi) + \frac{z(2k-1)}{z(2k-1) + (1-z)F(\Xi)2k} \mathbb{E}(\gamma_a).$$

The updating weights the incumbent's unconditional expected type, and the expected type when $\gamma_a < \Xi$ for the (ex-post) probability that a is urgent and for the ex-post probability that a is not urgent, respectively.

Proposition 1 *For any distribution of γ_a the following holds in equilibrium:*

- i. The challenger always promises $p_b^C = t_b$. He promises $p_a^C = t_a$ if there has been no announcement on a in the first period;*
- ii. The incumbent promises $p_j^I = s_j$, $j = a, b$. If $\zeta = j$ he promises p_j^I in the first period; if $\zeta = \emptyset$ he promises p_b^I in the second period.*
- iii. The timing of the incumbent's announcement on issue a when $\zeta = \emptyset$ and the challenger's behavior when he observes p_a^I in the first period depend on the distribution of γ_a as follows.*

(Eq 1) $\mathbb{E}(\gamma_a) < \delta$.

The incumbent announces p_a^I in the first period and the challenger does not mimic him.

(Eq 2) $\frac{(1-z)F(\Xi)2k}{z(2k-1)+(1-z)F(\Xi)2k}\mathbb{E}(\gamma_a|\gamma_a \leq \Xi) + \frac{z(2k-1)}{z(2k-1)+(1-z)F(\Xi)2k}\mathbb{E}(\gamma_a) > \delta$.

The incumbent announces p_a^I in the first period if and only if $\gamma_a < \Xi$, where Ξ is the minimum between 1 and the solution to the following implicit function and the maximum between 0.5 and the solution to the implicit equation $\Xi = \delta + \frac{([2F(\Xi)-(2F(\Xi)-1)z]-2F(\Xi)(1-z))(\frac{1}{4}-\delta+\delta^2)}{(2k-1)(\delta-\frac{1}{2})[2F(\Xi)-(2F(\Xi)-1)z]}$. The challenger mimics him on a .

(Eq 3) $\frac{(1-z)F(\Xi)2k}{z(2k-1)+(1-z)F(\Xi)2k}\mathbb{E}(\gamma_a|\gamma_a \leq \Xi) + \frac{z(2k-1)}{z(2k-1)+(1-z)F(\Xi)2k}\mathbb{E}(\gamma_a) < \delta$ and $\mathbb{E}(\gamma_a) > \delta$.

The incumbent announces p_a^I in the first period if and only if $\gamma_a < \Xi(\beta^)$, where $\Xi(\beta^*) > \Xi$ is such that $\frac{(1-z)F(\Xi(\beta^*))2k}{z(2k-1)+(1-z)F(\Xi(\beta^*))2k}\mathbb{E}(\gamma_a|\gamma_a \leq \Xi(\beta^*)) + \frac{z(2k-1)}{z(2k-1)+(1-z)F(\Xi(\beta^*))2k}\mathbb{E}(\gamma_a) = \delta$. The challenger mimics the incumbent with probability β such that the incumbent is indifferent between speaking in the first and in the second period when $\gamma_a = \Xi(\beta^*)$.*

We focus our analysis on the case in which the challenger is unspecialized, while the incumbent is specialized on issue a and less competent than the challenger

on issue b . We do so because this is the parametric region in which the timing of the election statements is most interesting. The model can be solved for all other regions. In the following, we briefly describe what happens in the other cases. When both politicians are unspecialized, the incumbent's likelihood of winning is the same regardless of which issue is considered by the voters. He therefore has no incentive to distort the campaign. If the incumbent is better informed on both issues, ($\gamma_a > \delta_a$ and $\gamma_b > \delta_b$), the incumbent has even less incentives to distort the campaign. His probability of winning if voters focus on any issue j is $\frac{1+\gamma_j-\delta_j}{2} > \frac{1}{2}$. Suppose now that he tries to distort the campaign in favor of issue a : by doing so he reveals his signal on a , the challenger mimics him and his probability of winning on issue a decreases to $\frac{1}{2}$, so that the incumbent now has a higher probability of winning on issue b . However, the likelihood that voters focus on issue a increases, so that the incumbent is unambiguously worse off by trying to influence the debate. In the remaining cases of both politicians or only the challenger being specialized, the intuition is the same as in our main analysis. As long as the incumbent can increase his likelihood of winning by moving the electorate's attention to a particular issue, the behavior will qualitatively be as predicted in the model. Only the parameter regions in which different equilibria arise will change.

4. Distortions arising from political specialization

The behavior described in Proposition 1 generates distortions in the candidates' behavior which decrease the probability that the policy implemented corresponds to the true state of the world on the relevant issue. The benchmark is the case in which both politicians follow their signal and the incumbent speaks in the first period only when there is an urgency. In this scenario the probability of electing a politician who implements the optimal policy is increasing in γ_a . This is due

to the fact that a higher competence increases the probability that a candidate promising the “correct” policy is offered in the election.

We can distinguish three distortions when the incumbent can choose to speak in the first period without urgency. First, in the benchmark, the incumbent speaks in the first period only when the issue is both urgent and relevant; therefore the urgency of the issue reveals its relevance with certainty. Once the early statement on issue a might be due to the incumbent’s interest, the urgency of such issue can not always be recognized. Hence, the voter has a distorted expectation of the relevant issue and may not vote optimally, as he assigns a probability smaller than 1 to a being urgent when it is relevant. Since in every equilibrium there is a positive probability that the incumbent speaks on a in the first period when a is not urgent, the urgency of a can never be perfectly recognized.

Second, when the incumbent makes a statement on a in the absence of urgency in the first period, he influences the agenda in the sense that he distorts the perception of which issue is most likely to be relevant. The voter has a distorted expectation of the relevant issue and may not vote optimally, as he assigns a probability higher than r to a being the relevant issue. This distortion is present in (Eq 1) for all incumbent’s types and in (Eq 2) and (Eq 3) for low incumbent’s types.

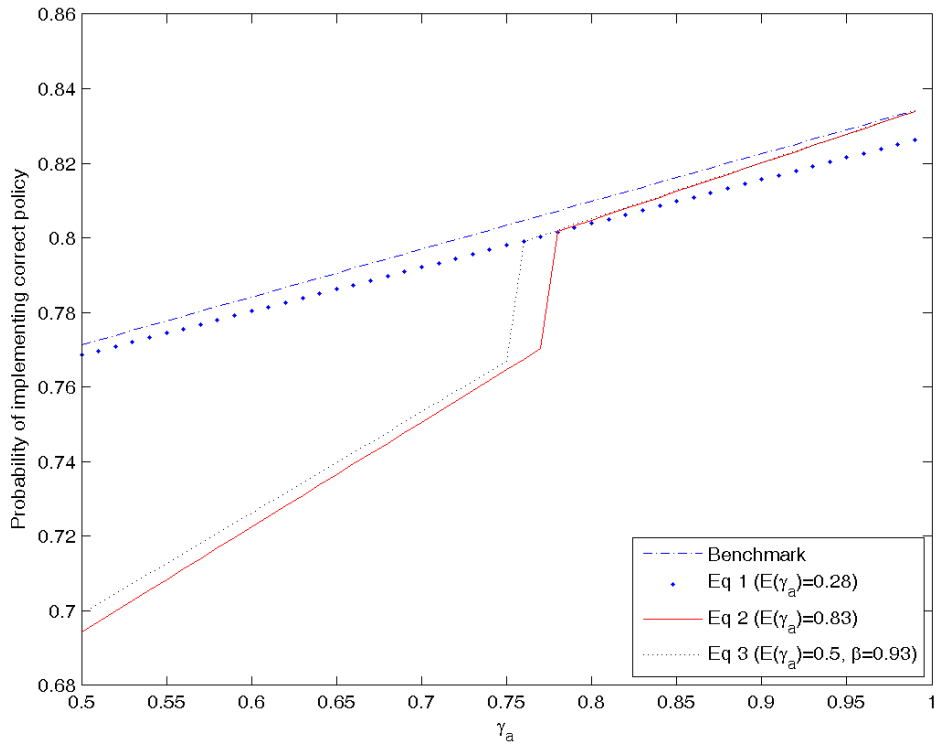
The third effect results from the challenger mimicking the incumbent’s statement. The probability that the election offers a candidate who promises the right policy is diminished as a result of the challenger not using the information of his signal. This effect has a positive side as well: due to the mimicking, the probability that the incumbent is elected when the voters vote on issue a decreases, and therefore the probability of having a candidate who implements the correct policy on b increases. However, the overall effect of this distortion is negative. This type of distortion arises when the incumbent speaks in the first period without

urgency and the challenger mimics the incumbent, and is therefore present only when $\mathbb{E}(\gamma_a) > \delta$ (i.e. for distributions of types that induce (Eq 2) and (Eq 3)) and for low types of the incumbent (i.e, γ_a smaller than the relevant threshold). Moreover, since the probability of mimicking in (Eq 3) is $\beta < 1$, this distortion has a smaller impact on (Eq 3) than on (Eq 2), so that (Eq 3) outperforms (Eq 2) for low types.

For exemplary parameter values, figure 2 illustrates the benchmark and the three equilibria obtained under different distributions of γ_a .¹² A more detailed and analytical analysis of the distortions that arise in the three types of equilibrium is included in the Appendix.

¹² γ_a is distributed according to Beta($\alpha_\beta, \beta_\beta$) distributions with parameter $\alpha_\beta = 2$ and three different parameters $\beta_\beta \in \{0.4, 2, 5\}$. $E(\gamma_a) \equiv \frac{\alpha_\beta}{\alpha_\beta + \beta_\beta}$.

Figure 2: Probability of implementing the correct policy in different equilibria.
Example with $k = 0.75$, $z = 0.1$.



It can be noticed that the probability of electing a politician who proposes the correct policy is increasing in γ_a but it displays non-monotonic patterns in the expected value of γ_a . This implies that an increase in the perceived specialization of the incumbent does not necessarily imply a better outcome for the voters. More precisely a low expected value of γ_a induces a higher welfare if the effective specialization of the incumbent is low (i.e. (Eq 1) outperforms (Eq 2) and (Eq 3)); the converse is true when the effective specialization of the incumbent is high. We can therefore conclude that a higher specialization of the incumbent is beneficial for voters' welfare; however, the perceived specialization may be detrimental because it may trigger more distortions that affect negatively the probability of implementing the correct policy.

5. Conclusion

This paper models a purely informational mechanism behind the incumbency advantage. The model captures political moves such as German Chancellor Gerhard Schröder's opposition to the Iraq War as described in the introduction. This example shows how the incumbent used its government responsibility as well as its alleged office-related informedness to influence the political agenda in his favor. Our formal treatment investigates the fundamental mechanism behind such agenda setting and allows us to identify resulting distortions.

We analyze a two-period electoral campaign characterized by two policy issues in which a specialized incumbent competes against an unspecialized, but possibly more competent challenger. Due to his government responsibilities, the incumbent's statements can credibly attach importance to issues and influence the political agenda. The analysis of this novel rationale for the incumbency advantage delivers the following predictions.

First, the incumbent can be advantaged even when he is objectively worse than

the challenger. In contrast, the hypothesis of an electoral selection process links the incumbency advantage with superior quality of the incumbent.

Second, the incumbent does not always have incentives to influence the debate and to use his advantage. If his signal is very informative, he waits to make a statement and does not give the challenger the possibility to respond optimally to his information. Indeed, the returns to incumbency are decreasing in the quality of the incumbent. In other words, if his precise information makes re-election probable enough in itself, he chooses not to influence the agenda. This is in line with findings of the empirical literature which show that stronger incumbents have smaller incentives to influence the elections (Aidt et al., 2011). Our introductory example is a case in point since the incumbent coalition did poorly in the polls when they changed the campaign strategy.

Finally, we show that even given that the incumbent's incentives to distort the campaign are decreasing in the incumbent's quality, the probability of implementing the correct policy is monotonically increasing in the degree of the incumbent's specialization; however, voters' welfare behaves non-monotonically with respect to the perceived degree of specialization. We show that having an incumbent who is perceived as objectively worse than the challenger may be better for the electorate than one who is perceived as partially more competent only on one of the issues.

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A. Proof of Proposition 1

We proceed in proving Proposition 1 by a sequence of claims. Remember that the voter focuses only on the issue that he believes to be more likely to be relevant. We begin our analysis with the behavior of candidates in the second period, when nothing has been announced in the first period. Note that that even though the voter is not perfectly informed on the state of the world, the best that each candidate can do at the last stage, given the his opponent's behavior, is to try his best to match the correct state of the world. This implies that the challenger promises $p_j = t_j$ for every issue j and that the incumbent promises $p_a = s_a$; the incumbent's promise on issue b is undetermined, as his signal on b is uninformative.

Claim 2 *If nothing has been announced in the first period on issue j , the best that the challenger can do is to promise $p_j = t_j$ for any possible strategy of the incumbent.*

Proof.

When nothing has been announced in the first period, the announcement game between the challenger and the incumbent is a simultaneous game. In this claim we show that following his own signal t_j is a dominant strategy for the challenger. The incumbent's possible pure strategies on each issue are 4, $p_j^I = 1$, $p_j^I = -1$, $p_j^I = s_j$ and $p_j^I = -s_j$. Table A shows, for the case in which $t_j = 1$ the challenger's winning probability if he chooses $p_j^C = 1$ and $p_j^C = -1$, and j is the decisive issue. To understand how each entry in the table is computed, consider for example the probability of winning when $t_j = 1$ and both the incumbent and the challenger

follow their signal,

$$\begin{aligned}
& \Pr(s_j = 1|\omega_j = 1) \cdot \Pr(\omega_j = 1|t_j = 1) \cdot \frac{1}{2} \\
& + \Pr(s_j = -1|\omega_j = 1) \cdot \Pr(\omega_j = 1|t_j = 1) \cdot \delta \\
& + \Pr(s_j = 1|\omega_j = -1) \cdot \Pr(\omega_j = -1|t_j = 1) \cdot \frac{1}{2} \\
& + \Pr(s_j = -1|\omega_j = -1) \cdot \Pr(\omega_j = -1|t_j = 1) \cdot (1 - \delta)
\end{aligned}$$

Notice that when both candidates make the same announcement, each one has a winning probability of $\frac{1}{2}$, while when they make different announcements the candidate who makes the promise equal to the true state of the world wins with probability δ , while the candidate that makes the promise that is different from the true state of the world wins with probability $1 - \delta$. This is due to the fact that the precision of the voter's signals is δ .

Notice moreover that we indicate with $\mathbb{E}(\gamma_j)$ the expected precision of the incumbent, where $\mathbb{E}(\gamma_a) > \mathbb{E}(\gamma_b) = \frac{1}{2}$.

$t_j = 1$		Incumbent			
		$p_j^I = 1$	$p_j^I = -1$	$p_j^I = s_j$	$p_j^I = -s_j$
Challenger	$p_j^C = 1$	$\frac{1}{2}$	$\delta^2 + (1 - \delta)^2$	$\frac{1}{2} + \frac{\mathbb{E}(\gamma_j)}{2} - \frac{\delta}{2}$ $-\mathbb{E}(\gamma_j)\delta + \delta^2$	$1 - \frac{\mathbb{E}(\gamma_j)}{2} + \mathbb{E}(\gamma_j)\delta$ $+\delta^2 - \frac{3}{2}\delta$
	$p_j^C = -1$	$2(1 - \delta)\delta$	$\frac{1}{2}$	$\frac{3}{2}\delta + \frac{\mathbb{E}(\gamma_j)}{2}$ $-\delta^2 - \mathbb{E}(\gamma_j)\delta$	$\frac{1}{2} + \frac{\delta}{2} - \frac{\mathbb{E}(\gamma_j)}{2}$ $-\delta^2 + \mathbb{E}(\gamma_j)\delta$

Table 1: Challenger's expected probability of winning on issue j .

It can be easily seen that $p_j^C = 1$ is dominant when $t_j = 1$. The same reasoning can be replicated for $t_j = -1$. Hence, it is a dominant strategy for the challenger make promises in accordance with his own signal. ■

Claim 3 *If nothing has been announced in the first period on issue a the best that the incumbent can do is to promise $p_a = s_a$ in the second period; any announcement on issue b in the second period is an equilibrium announcement.*

Proof. The statement can be proved following the proof of Claim 2. The incumbent's probability of winning when $s_j = 1$, for example, can be found in Table A

$s_j = 1$		Challenger			
		$p_j^C = 1$	$p_j^C = -1$	$p_j^C = t_j$	$p_j^C = -t_j$
Incumbent	$p_j^I = 1$	$\frac{1}{2}$	$\gamma_j \delta$ $+(1 - \gamma_j)(1 - \delta)$	$\frac{1}{2} + \gamma_j \delta + \frac{\delta}{2}$ $-\frac{\gamma_j}{2} - \delta^2$	$1 - \frac{\gamma}{2} + \gamma \delta$ $+\delta^2 - \frac{3}{2}\delta$
	$p_j^I = -1$	$(1 - \gamma_j)\delta$ $+\gamma_j(1 - \delta)$	$\frac{1}{2}$	$\frac{3}{2}\delta + \frac{\gamma_j}{2}$ $-\delta^2 - \gamma_j \delta$	$\frac{1}{2} - \frac{\delta}{2} + \frac{\gamma}{2}$ $+\delta^2 - \gamma_j \delta$

Table 2: Incumbent's expected probability of winning on issue j .

It can be easily checked that, given $\delta > \frac{1}{2}$, $p_a = s_a$ is a dominant strategy as long as $\gamma_a > \frac{1}{2}$. As for issue b , every strategy delivers the same probability of winning, given that $\gamma_b = \frac{1}{2}$. The incumbent's expected probability of winning on issue b when $s_b = 1$ is represented in Table A.

$s_j = 1$		Challenger			
		$p_j^C = 1$	$p_j^C = -1$	$p_j^C = t_j$	$p_j^C = -t_j$
Incumbent	$p_j^I = 1$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{4} + \delta - \delta^2$	$\frac{3}{4} - \delta + \delta^2$
	$p_j^I = -1$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{4} + \delta - \delta^2$	$\frac{3}{4} - \delta + \delta^2$

Table 3: Incumbent's expected probability of winning on issue b .

■

Now we consider the incumbent's strategy in the first period. We begin such analysis by noticing that it is never optimal for the challenger to mimic the incumbent's behavior on issue b , and nor for the incumbent to promise something on issue b , given that his signal on b is uninformative.

Claim 4 *The challenger does not mimic any first period announcement on b ; the incumbent announces p_b^I in period 1 only if $\zeta = B$.*

Proof. First of all notice that the incumbent is completely uninformed on issue b . Therefore, for any value of s_b , $\Pr[\omega_b = -1|s_b] = \Pr[\omega_b = 1|s_b] = \frac{1}{2}$.

As a first consequence of this, the challenger never finds profitable to mimic his promise on b in the second period; by mimicking the incumbent's behavior the challenger's probability of winning is $\frac{1}{2}$, while by not mimicking it is $\delta^2 + (1-\delta)^2 > \frac{1}{2}$.

Therefore the only effect that the incumbent has on the electoral campaign if he promises p_b^I in the first period is to increase the perceived relevance of b , that is to increase the probability that b is the decisive issue. This implies that his probability of winning by releasing an early statement on b is lower than his probability of winning when he waits the second period to make announcements.

■

We now consider the challenger's mimicking incentives when the incumbent makes an early announcement on a .

Claim 5 *Assume that a set G of incumbent's types promise $p_a^I = s_a$ in the first period when $\zeta = \emptyset$, while types which belong to the complement set do not promise anything in the first period. In this case the challenger mimics the incumbent's promise iff $\frac{(1-z)F(G)2k}{z(2k-1)+(1-z)F(G)2k}\mathbb{E}(\gamma_a|\gamma_a \in G) + \frac{z(2k-1)}{z(2k-1)+(1-z)F(G)2k}\mathbb{E}(\gamma_a) > \delta$.*

Proof. Let $\mathbb{E}(\gamma_a|A)$ be the expected γ_a conditional to the fact that the incumbent has announced his policy in the first period. Upon observing p_a^I announced in the first period, the challenger believes that a is urgent with probability $\frac{z(2k-1)}{z(2k-1)+(1-z)F(G)2k}$, where $F(G)$ is the measure of the set G . This comes from the fact that the challenger believes that a is relevant with probability $\frac{2k-1}{2k}$, and that the relevant issue is urgent with probability z . Therefore

$$\mathbb{E}(\gamma_a|A) = \frac{(1-z)F(G)2k}{z(2k-1)+(1-z)F(G)2k}\mathbb{E}(\gamma_a|\gamma_a \in G) + \frac{z(2k-1)}{z(2k-1)+(1-z)F(G)2k}\mathbb{E}(\gamma_a)$$

Given that he does not affect which issue the election is decided upon, the challenger chooses his optimal promise on each issue a in order to maximize the probability of winning if a is decisive. This probability is equal to $\frac{1}{2}$ if the challenger mimics the incumbent by setting $p_a^C = p_a^I$.

If $t_a = p_a^I$ the challenger trivially sets $p_a^C = t_a = p_a^I$ and wins with probability $\frac{1}{2}$. If $t_a \neq p_a^I$ and the challenger does not mimic the incumbent, his probability of winning is

$$\begin{aligned} & \Pr(\omega_a = t_a | t_a \neq s_a) \delta + \Pr(\omega_a = -t_a | t_a \neq s_a) (1 - \delta) \\ = & \frac{\delta(1 - \mathbb{E}(\gamma_a | A))}{\delta_a(1 - \mathbb{E}(\gamma_a | A)) + \mathbb{E}(\gamma_a | A)(1 - \delta)} \delta + \frac{(1 - \delta)\mathbb{E}(\gamma_a | A)}{\delta_a(1 - \mathbb{E}(\gamma_a | A)) + \mathbb{E}(\gamma_a | A)(1 - \delta)} (1 - \delta) \end{aligned}$$

which is greater than $\frac{1}{2}$ if $\mathbb{E}(\gamma_j | A) > \delta$.

■

We now focus on the incumbent's behavior on issue a . First we show that it is optimal for the incumbent to promise $p_a^I = s_a$ also when he makes announcements in the first period. Then we show that the incumbent's strategy is monotone in γ_a ; for a given strategy of the challenger, if a type $\bar{\gamma}_a$ finds optimal to make an early announcement on a , any lower type ($\gamma_a < \bar{\gamma}_a$) finds it optimal too.

Claim 6 *The incumbent promises $p_a^I = s_a$ also in the first period.*

Proof. There are two possible cases, depending on the challenger's behavior.

- i. If the challenger mimics the incumbent, then the probability of winning on that issue is $\frac{1}{2}$ regardless of what the incumbent promised.
- ii. If there is a positive probability that the challenger does not mimic the incumbent, then promising $p_j^I = s_j$ yields a strictly higher payoff, as shown in the simultaneous case.

■

Claim 7 *The incumbent's optimal timing strategy is monotone in his type: if it is optimal for the incumbent to speak on a for some type $\bar{\gamma}_a$, then it is optimal for him to speak also for any $\gamma_a < \bar{\gamma}_a$. Moreover, if the challenger mimics the incumbent with probability 1, such threshold is given by Ξ defined as the minimum of 1 and the solution to the following implicit equation and the maximum of 0.5 and the solution to the implicit equation*

$$\Xi = \delta + \frac{([2F(\Xi) - (2F(\Xi) - 1)z] - 2F(\Xi)(1 - z)) \left(\frac{1}{4} - \delta + \delta^2\right)}{(2k - 1) \left(\delta - \frac{1}{2}\right) [2F(\Xi) - (2F(\Xi) - 1)z]}.$$

Proof. Assume that the challenger mimics the incumbent if he speaks in the first period, and suppose that in equilibrium it is optimal for the incumbent to speak on a for some type $\bar{\gamma}_a$. In this case it is optimal for him to speak also for any $\gamma_a < \bar{\gamma}_a$. To see this, let G be the set of types of the incumbent that speak on a in equilibrium in the first period, and let $F(G)$ be the probability that the incumbent's type belongs to the set G . Assume that $\bar{\gamma}_a \in G$. In this case the incumbent finds optimal to speak on a in the first period if

$$\begin{aligned} & \frac{k[2F(G) - (2F(G) - 1)z] - (1 - z)F(G)}{k[2F(G) - (2F(G) - 1)z]} \frac{1}{2} \\ & + \frac{(1 - z)F(G)}{k[2F(G) - (2F(G) - 1)z]} \left(\frac{1}{4} + \delta - \delta^2\right) \end{aligned} \quad (6)$$

is greater than

$$\frac{2k - 1}{2k} \left(\frac{1}{2} + \gamma_a \delta - \frac{\gamma_a}{2} + \frac{\delta}{2} - \delta^2\right) + \frac{1}{2k} \left(\frac{1}{4} + \delta - \delta^2\right). \quad (7)$$

Consider now $\gamma_a \notin G$ such that $\gamma_a < \bar{\gamma}_a$. The first equation does not depend on the choice of type γ_a : even if type γ_a chooses to speak in the first period, and by doing so belongs to G , this does not affect the probability of G given the continuity of the probability distribution. This said, the difference between the two equations is decreasing in γ_a , therefore if the inequality holds for $\bar{\gamma}_a$ it

holds also for every $\gamma_a < \bar{\gamma}_a$. The incumbent's choice is thus characterized by a threshold below which the incumbent will speak on a in the first period.

By equating (6) and (7) we find that the threshold when the challenger mimics the incumbent with probability 1 is Ξ defined as the minimum of 1 and the solution to the implicit equation and the maximum of 0.5 and the solution to the implicit equation

$$\begin{aligned}
\Xi &= \delta + \frac{([2F(\Xi) - (2F(\Xi) - 1)z] - 2F(\Xi)(1 - z)) \left(\frac{1}{4} - \delta + \delta^2\right)}{(2k - 1) \left(\delta - \frac{1}{2}\right) [2F(\Xi) - (2F(\Xi) - 1)z]} \\
&= \delta + \frac{z \left(\delta - \frac{1}{2}\right)^2}{(2k - 1) \left(\delta - \frac{1}{2}\right) [2F(\Xi) - (2F(\Xi) - 1)z]} \\
&= \delta + \frac{z \left(\delta - \frac{1}{2}\right)}{(2k - 1)[2F(\Xi) - (2F(\Xi) - 1)z]}. \tag{8}
\end{aligned}$$

The same reasoning can be applied to the case in which the challenger mimics the incumbent only with probability $\beta < 1$. ■

Claims 8, 9 and 10 analyze the equilibrium behavior in the three different parametric regions.

Claim 8 *If $\mathbb{E}(\gamma_a) < \delta$ the incumbent announces p_a^I in the first period and the challenger does not mimic him.*

Proof. Let the unconditional expected value of γ_a be smaller than δ . This implies that the expected precision of the incumbent given that he speaks in the first period is never be greater than δ , given that the incumbent adopts a threshold strategy in which he make early announcements for low types (Claim 7). As a consequence, promising s_a in the first period is always optimal for the incumbent, since it increases the probability that the voters look at issue a without inducing any loss in terms of probability of winning on issue a . ■

Claim 9 *If $\frac{(1-z)F(\Xi)2k}{z(2k-1)+(1-z)F(\Xi)2k}\mathbb{E}(\gamma_a|\gamma_a \leq \Xi) + \frac{z(2k-1)}{z(2k-1)+(1-z)F(\Xi)2k}\mathbb{E}(\gamma_a) > \delta$ the incumbent announces p_a^I in the first period if and only if $\gamma_a < \Xi$ and the challenger mimics him on a with probability 1.*

Proof. We proved in Claim 7 that the incumbent makes an early announcement on issue a for types $\gamma < \Xi$ even if the challenger mimics him with probability 1. If $\frac{(1-z)F(\Xi)2k}{z(2k-1)+(1-z)F(\Xi)2k}\mathbb{E}(\gamma_a|\gamma_a \leq \Xi) + \frac{z(2k-1)}{z(2k-1)+(1-z)F(\Xi)2k}\mathbb{E}(\gamma_a) > \delta$, the incumbent's expected precision when he makes an early announcement on issue a (which is weakly larger than the LHS of the inequality) is larger than the challenger's precision. Therefore the challenger mimics the incumbent with probability 1. Hence Ξ is the threshold of the incumbent's equilibrium strategy.

■

Claim 10 *Let $\frac{(1-z)F(\Xi)2k}{z(2k-1)+(1-z)F(\Xi)2k}\mathbb{E}(\gamma_a|\gamma_a \leq \Xi) + \frac{z(2k-1)}{z(2k-1)+(1-z)F(\Xi)2k}\mathbb{E}(\gamma_a) < \delta$ and $\mathbb{E}(\gamma_a) > \delta$. The incumbent announces p_a^I in the first period if and only if $\gamma_a < \Xi(\beta^*)$, where $\Xi(\beta^*) > \Xi$ is such that $\frac{(1-z)F(\Xi(\beta^*))2k}{z(2k-1)+(1-z)F(\Xi(\beta^*))2k}\mathbb{E}(\gamma_a|\gamma_a \leq \Xi(\beta^*)) + \frac{z(2k-1)}{z(2k-1)+(1-z)F(\Xi(\beta^*))2k}\mathbb{E}(\gamma_a) = \delta$. The challenger mimics the incumbent with probability β^* such that the incumbent is indifferent between speaking in the first and in the second period when $\gamma_a = \Xi(\beta^*)$.*

Proof. Notice that this is possible only when $\Xi < 1$. We analyze the situation by considering the challenger's possible strategies, and the incumbent's best responses to them:

- i. If the challenger never mimics the incumbent when he makes a promise on a in the first period, the incumbent announces $p_a^I = s_a$ in the first period for any value of γ_a . However, it is optimal for the challenger to mimic the incumbent, given that $\mathbb{E}(\gamma_a) > \delta$.
- ii. If the challenger always mimics the incumbent when he makes a promise on a in the first period, the incumbent announces $p_a^I = s_a$ in the first period

for any $\gamma_a < \Xi$. However, the challenger has no incentive to mimic the incumbent, given that the expected precision of the incumbent signal is

$$\frac{(1-z)F(\Xi)2k}{z(2k-1)+(1-z)F(\Xi)2k}\mathbb{E}(\gamma_a|\gamma_a \leq \Xi) + \frac{z(2k-1)}{z(2k-1)+(1-z)F(\Xi)2k}\mathbb{E}(\gamma_a) < \delta.$$

- iii. If the challenger mimics the incumbent with probability $0 < \beta < 1$, the incumbent has an incentive to promise $p_a^I = s_a$ in the first period as long as the incumbent's probability of winning by announcing $p_a^I = s_a$ in the first period is greater than his probability of winning by being silent in the first period. Let $G = [0.5, \Xi(\beta)]$ be the set of types who speak in the first period. The probability of winning by announcing $p_a^I = s_a$ in the first period is, for an incumbent with type γ_a ,

$$\begin{aligned} & \frac{k[2F(G) - (2F(G) - 1)z] - (1-z)F(G)}{k[2F(G) - (2F(G) - 1)z]} \left(\beta \frac{1}{2} + (1-\beta) \left(\frac{1}{2} + \gamma_a \delta - \frac{\gamma_a}{2} + \frac{\delta}{2} - \delta^2 \right) \right) \\ & + \frac{(1-z)F(G)}{k[2F(G) - (2F(G) - 1)z]} \left(\frac{1}{4} + \delta - \delta^2 \right), \end{aligned} \quad (9)$$

while his probability of winning by being silent in the first period is

$$\frac{2k-1}{2k} \left(\frac{1}{2} + \gamma_a \delta - \frac{\gamma_a}{2} + \frac{\delta}{2} - \delta^2 \right) + \frac{1}{2k} \left(\frac{1}{4} + \delta - \delta^2 \right). \quad (10)$$

We first notice that, if $\gamma_a \leq \delta$, it is always optimal for the incumbent to speak in the first period. If $\gamma_a > \delta$, instead, it is optimal for the incumbent to announce s_a in the first period only for low values of β , in particular for

$$\beta < \frac{z \left(\gamma_a - \frac{1}{2} \right)}{(2k[2F(G) - (2F(G) - 1)z] - 2(1-z)F(G))(\gamma_a - \delta)}. \quad (11)$$

Now we consider the effect of γ_a on the difference between equations (9) and (10). Such effect is

$$\left((1-\beta) \frac{k[2F(G) - (2F(G) - 1)z] - (1-z)F(G)}{k[2F(G) - (2F(G) - 1)z]} - \frac{2k-1}{2k} \right) \left(\delta - \frac{1}{2} \right). \quad (12)$$

The effect is negative for

$$\beta > \frac{z}{2k[2F(G) - (2F(G) - 1)z] - 2(1-z)F(G)}. \quad (13)$$

Given that $\frac{z}{2k[2F(G)-(2F(G)-1)z]-2(1-z)F(G)} < \frac{z(\gamma_a - \frac{1}{2})}{(2k[2F(G)-(2F(G)-1)z]-2(1-z)F(G))(\gamma_a - \delta)}$

the incumbent's behavior can be summarized as follows:

- if $\beta \leq \frac{z(\gamma_a - \frac{1}{2})}{(2k[2F(G)-(2F(G)-1)z]-2(1-z)F(G))(\gamma_a - \delta)}$ the incumbent always choose to make an early announcement on a ;
- if $\beta > \frac{z(\gamma_a - \frac{1}{2})}{(2k[2F(G)-(2F(G)-1)z]-2(1-z)F(G))(\gamma_a - \delta)}$ the incumbent has a threshold strategy such that he releases early announcements for low values of γ_a and waits for high values.

We have shown above that no equilibrium can exist in which all types of the incumbent speak in the first period. Therefore the equilibrium must arise with $\beta > \frac{z(\gamma_a - \frac{1}{2})}{(2k[2F(G)-(2F(G)-1)z]-2(1-z)F(G))(\gamma_a - \delta)}$. Keeping in mind that $G = [0.5, \Xi(\beta)]$ we can see that the threshold $\Xi(\beta)$ is the minimum between 1 and the solution to the following implicit equation and the maximum of 0.5 and the solution to the implicit equation, which results from the indifference of the incumbent between speaking and not-speaking in the first period.

$$\Xi(\beta) = \frac{\delta(2k[2F(\Xi(\beta)) - (2F(\Xi(\beta)) - 1)z] - 2(1-z)F(\Xi(\beta))) - \frac{z}{2}}{\beta(2k[2F(\Xi(\beta)) - (2F(\Xi(\beta)) - 1)z] - 2(1-z)F(\Xi(\beta))) - z}. \quad (14)$$

Notice that $\Xi(1) = \Xi$, therefore

$$\frac{(1-z)F(\Xi(1))2k}{z(2k-1) + (1-z)F(\Xi(1))2k} \mathbb{E}(\gamma_a | \gamma_a \leq \Xi(1)) + \frac{z(2k-1)}{z(2k-1) + (1-z)F(\Xi(1))2k} \mathbb{E}(\gamma_a) < \delta.$$

Moreover $\Xi\left(\frac{z(\gamma_a - \frac{1}{2})}{(2k[2F(G)-(2F(G)-1)z]-2(1-z)F(G))(\gamma_a - \delta)}\right) = 1$, therefore the conditional expected value is just $\mathbb{E}(\gamma_a) > \delta$. Given these two relations, and given the continuity of $\Xi(\beta)$ (implied by the continuity of the density function) there exists at least one $\beta^* \in \left(\frac{z(\gamma_a - \frac{1}{2})}{(2k[2F(G)-(2F(G)-1)z]-2(1-z)F(G))(\gamma_a - \delta)}, 1\right)$ such that

$$\frac{(1-z)F(\Xi(\beta^*))2k}{z(2k-1) + (1-z)F(\Xi(\beta^*))2k} \mathbb{E}(\gamma_a | \gamma_a \leq \Xi(\beta^*)) + \frac{z(2k-1)}{z(2k-1) + (1-z)F(\Xi(\beta^*))2k} \mathbb{E}(\gamma_a) = \delta.$$

Therefore there is at least one equilibrium in which the incumbent promises $p_a^I = s_a$ in the first period for any $\gamma_a < \Xi(\beta^*)$, such that $\frac{(1-z)F(\Xi(\beta^*))2k}{z(2k-1)+(1-z)F(\Xi(\beta^*))2k}\mathbb{E}(\gamma_a|\gamma_a \leq \Xi(\beta^*)) + \frac{z(2k-1)}{z(2k-1)+(1-z)F(\Xi(\beta^*))2k}\mathbb{E}(\gamma_a) = \delta$, and the challenger mimics him with probability β^* . Moreover all the equilibria in this region have this same structure. ■

B. Distortions arising from political specialisation

B.1. Benchmark

The probability of voting such that the correct policy on the relevant issue is implemented in our benchmark case is:

$$\begin{aligned}
Pr(\omega_{rel} = p_{rel}^*) &= z \{ E(r) (1 - (1 - \gamma_a)(1 - \delta_a)) + E(1 - r) (1 - (1 - \gamma_b)(1 - \delta_b)) \} \\
&+ (1 - z) \left\{ \Pr \left(r > \frac{1}{2} \right) \left[E \left(r | r > \frac{1}{2} \right) (1 - (1 - \gamma_a)(1 - \delta_a)) \right. \right. \\
&+ E \left(1 - r | r > \frac{1}{2} \right) \left(\frac{1 + \gamma_a - \delta_a}{2} \gamma_b + \frac{1 - \gamma_a + \delta_a}{2} \delta_b \right) \Big] \\
&+ \Pr \left(r < \frac{1}{2} \right) \left[E \left((1 - r) | r < \frac{1}{2} \right) (1 - (1 - \gamma_b)(1 - \delta_b)) \right. \\
&+ E \left(r | r < \frac{1}{2} \right) \left(\frac{1 + \gamma_b - \delta_b}{2} \gamma_a + \frac{1 - \gamma_b + \delta_b}{2} \delta_a \right) \Big] \Big\}. \tag{15}
\end{aligned}$$

In fact, with probability z the issue is urgent and the incumbent is forced to act in the first period. The voters recognize that the issue must be relevant and vote accordingly. With probability $1 - z$ the issue is not relevant. In this case the voters' behavior depends on the realization of the public signal r . If $r > \frac{1}{2}$, the voters' choice is based on issue a ; they will be able to choose a candidate with the correct proposed policy with probability $1 - (1 - \gamma_a)(1 - \delta_a)$. Therefore, this candidate will be elected that offers the best policy on a . With probability $1 - r$, however, the relevant issue is b . If the incumbent is elected (which happens with probability $\frac{1 + \gamma_a - \delta_a}{2}$) the probability of having the correct policy on b is γ_b ; if the challenger is elected (with probability $\frac{1 - \gamma_a + \delta_a}{2}$) the probability of having a correct policy on b is δ_b . If $r < \frac{1}{2}$, the voters base their choice on issue b and the probability of voting for the correct policy is symmetric.

B.2. Analysis of the distortions

We separately consider the three parametric regions that are relevant for the equilibrium analysis.

$\mathbb{E}(\gamma_a) < \delta$. In this case the incumbent always speaks early on issue a and the challenger never mimicks him; the expected welfare given γ_a becomes:

$$\begin{aligned}
Pr(\omega_{rel} = p_{rel}^*) &= z \{ E(1-r)(1-(1-\gamma_b)(1-\delta_b)) \} \\
&+ (1-z + z \cdot E(r)) \left\{ \Pr\left(r > \frac{1}{2}\right) \left[E\left(r \mid r > \frac{1}{2}\right) [1 - (1-\gamma_a)(1-\delta_a)] \right. \right. \\
&+ E\left(1-r \mid r > \frac{1}{2}\right) \left(\frac{1+\gamma_a-\delta_a}{2} \gamma_b + \frac{1-\gamma_a+\delta_a}{2} \delta_b \right) \Big] \\
&+ \Pr\left(\frac{1-z}{2-z} < r \leq \frac{1}{2}\right) \left[E\left(r \mid \frac{1-z}{2-z} < r \leq \frac{1}{2}\right) [1 - (1-\gamma_a)(1-\delta_a)] \right. \\
&+ E\left(1-r \mid \frac{1-z}{2-z} < r \leq \frac{1}{2}\right) \left(\frac{1+\gamma_a-\delta_a}{2} \gamma_b + \frac{1-\gamma_a+\delta_a}{2} \delta_b \right) \Big] \\
&+ \Pr\left(r \leq \frac{1-z}{2-z}\right) \left[E\left(1-r \mid r \leq \frac{1-z}{2-z}\right) [1 - (1-\gamma_b)(1-\delta_b)] \right. \\
&+ E\left(r \mid r \leq \frac{1-z}{2-z}\right) \left(\frac{1+\gamma_b-\delta_b}{2} \gamma_a + \frac{1-\gamma_b+\delta_b}{2} \delta_a \right) \Big] \Big\}. \tag{16}
\end{aligned}$$

The incumbent makes an early statement on issue a . This results in two distortions due to the voters inference regarding the relevance and urgency of the issue. Since the incumbent only speaks on a , urgency is recognized on issue b . Issue a , however, cannot be identified as urgent when it is. In this case, the voter is harmed since they do not gain certainty about the relevant issue, as they do in the benchmark case. Furthermore, the probability that issue a is the relevant one is distorted. For values of r between $\frac{1-z}{2-z}$ and $\frac{1}{2}$ the voters vote on issue a , although b is more likely to be the relevant issue.

$$\frac{(1-z)\mathbf{F}(\Xi)2\mathbf{k}}{z(2\mathbf{k}-1)+(1-z)\mathbf{F}(\Xi)2\mathbf{k}} \mathbb{E}(\gamma_a | \gamma_a \leq \Xi) + \frac{z(2\mathbf{k}-1)}{z(2\mathbf{k}-1)+(1-z)\mathbf{F}(\Xi)2\mathbf{k}} \mathbb{E}(\gamma_a) < \delta \text{ and } \mathbb{E}(\gamma_a) > \delta.$$

Whenever $\mathbb{E}(\gamma_a) > \delta$ the equilibria display the following behavior: the incumbent makes an early announcement for low types, and speaks in the second period for high types; the challenger mimicks him with positive probability whenever he speaks. The differences are the threshold type that

induces the incumbent to change behavior and the probability of mimicking. In this first region the threshold type is $\Xi(\beta^*)$, and the probability of mimicking is $\beta \in [0, 1]$. The expected welfare depends on whether $\gamma_a > \Xi(\beta^*)$ or not.

- $\gamma_a > \Xi(\beta^*)$. If the incumbent's competence is such that he only speaks on urgent issues and then gets mimicked by the challenger with probability β , the probability of electing a candidate who proposes the correct policy on the relevant issue is,

$$\begin{aligned}
Pr(\omega_{rel} = p_{rel}^*) &= z \{E(r) [\beta\gamma_a + (1-\beta)(1-(1-\gamma_a)(1-\delta_a))] + E(1-r)(1-(1-\gamma_b)(1-\delta_b))\} \\
&+ (1-z) \left\{ \Pr\left(r > \frac{1}{2}\right) \left[E\left(r|r > \frac{1}{2}\right) (1-(1-\gamma_a)(1-\delta_a)) \right. \right. \\
&+ E\left(1-r|r > \frac{1}{2}\right) \left(\frac{1+\gamma_a-\delta_a}{2}\gamma_b + \frac{1-\gamma_a+\delta_a}{2}\delta_b \right) \Big] \\
&+ \Pr\left(r < \frac{1}{2}\right) \left[E\left((1-r)|r < \frac{1}{2}\right) (1-(1-\gamma_b)(1-\delta_b)) \right. \\
&+ E\left(r|r < \frac{1}{2}\right) \left(\frac{1+\gamma_b-\delta_b}{2}\gamma_a + \frac{1-\gamma_b+\delta_b}{2}\delta_a \right) \Big] \Big\}. \tag{17}
\end{aligned}$$

where $\beta = \beta^*$.

The incumbent only speaks when the issue is urgent, similar to the benchmark. If this issue is a , the high expected competence $\mathbb{E}(\gamma_a)$ makes the challenger mimic the incumbent with probability β , thus reducing the probability that a candidate with the right policy is up for election from $1-(1-\gamma_a)(1-\delta_a)$ to $\beta\gamma_a + (1-\beta)(1-(1-\gamma_a)(1-\delta_a))$.

- $\gamma_a < \Xi(\beta^*)$. If the challenger speaks early and is mimicked by the

challenger with probability β , the expected welfare becomes

$$\begin{aligned}
Pr(\omega_{rel} = p_{rel}^*) &= z \{E(1-r)(1-(1-\gamma_b)(1-\delta_b))\} \\
&+ (1-z+z \cdot E(r)) \left\{ \Pr(r > \frac{1}{2})\beta \left[E(r|r > \frac{1}{2})[\gamma_a] + E(1-r|r > \frac{1}{2})\frac{\gamma_b + \delta_b}{2} \right] \right. \\
&+ \Pr\left(r > \frac{1}{2}\right)(1-\beta) \left[E\left(r|r > \frac{1}{2}\right) [1-(1-\gamma_a)(1-\delta_a)] \right. \\
&+ \left. E\left(1-r|r > \frac{1}{2}\right) \left(\frac{1+\gamma_a-\delta_a}{2}\gamma_b + \frac{1-\gamma_a+\delta_a}{2}\delta_b \right) \right] \\
&+ \Pr\left(\frac{1-z}{2-z} < r \leq \frac{1}{2}\right)\beta \left[E(r|\frac{1-z}{2-z} < r \leq \frac{1}{2})[\gamma_a] + E(1-r|\frac{1-z}{2-z} < r \leq \frac{1}{2})\frac{\gamma_b + \delta_b}{2} \right] \\
&+ \Pr\left(\frac{1-z}{2-z} < r \leq \frac{1}{2}\right)(1-\beta) \left[E\left(r|\frac{1-z}{2-z} < r \leq \frac{1}{2}\right) [1-(1-\gamma_a)(1-\delta_a)] \right. \\
&+ \left. E\left(1-r|\frac{1-z}{2-z} < r \leq \frac{1}{2}\right) \left(\frac{1+\gamma_a-\delta_a}{2}\gamma_b + \frac{1-\gamma_a+\delta_a}{2}\delta_b \right) \right] \\
&+ \Pr(r \leq \frac{1-z}{2-z})\beta \left[E(1-r|r \leq \frac{1-z}{2-z})[1-(1-\gamma_b)(1-\delta_b)] + E(r|r \leq \frac{1-z}{2-z})\frac{\gamma_a + \delta_a}{2} \right] \\
&+ \Pr\left(r \leq \frac{1-z}{2-z}\right)(1-\beta) \left[E\left(1-r|r \leq \frac{1-z}{2-z}\right) [1-(1-\gamma_b)(1-\delta_b)] \right. \\
&+ \left. E\left(r|r \leq \frac{1-z}{2-z}\right) \left(\frac{1+\gamma_b-\delta_b}{2}\gamma_a + \frac{1-\gamma_b+\delta_b}{2}\delta_a \right) \right] \}. \tag{18}
\end{aligned}$$

$\frac{(1-z)\mathbf{F}(\Xi)2\mathbf{k}}{z(2\mathbf{k}-1)+(1-z)\mathbf{F}(\Xi)2\mathbf{k}}\mathbb{E}(\gamma_a|\gamma_a \leq \Xi) + \frac{z(2\mathbf{k}-1)}{z(2\mathbf{k}-1)+(1-z)\mathbf{F}(\Xi)2\mathbf{k}}\mathbb{E}(\gamma_a) < \delta$ In this case the incumbent makes an early announcement for $\gamma_a < \Xi$, and speaks in the second period for higher types; the challenger mimicks him whenever he speaks early. The expected welfare depends on γ_a .

- $\gamma_a > \Xi$. If the incumbent's competence is such that he only speaks on urgent issues and then gets mimicked by the challenger, the probability of electing a candidate who proposes the correct policy on the relevant issue is,

$$\begin{aligned}
Pr(\omega_{rel} = p_{rel}^*) &= z \{E(r)\gamma_a + E(1-r)(1-(1-\gamma_b)(1-\delta_b))\} \\
&+ (1-z) \left\{ \Pr\left(r > \frac{1}{2}\right) \left[E\left(r|r > \frac{1}{2}\right) (1-(1-\gamma_a)(1-\delta_a)) \right. \right. \\
&+ \left. E\left(1-r|r > \frac{1}{2}\right) \left(\frac{1+\gamma_a-\delta_a}{2}\gamma_b + \frac{1-\gamma_a+\delta_a}{2}\delta_b \right) \right] \\
&+ \Pr\left(r < \frac{1}{2}\right) \left[E\left((1-r)|r < \frac{1}{2}\right) (1-(1-\gamma_b)(1-\delta_b)) \right. \\
&+ \left. E\left(r|r < \frac{1}{2}\right) \left(\frac{1+\gamma_b-\delta_b}{2}\gamma_a + \frac{1-\gamma_b+\delta_b}{2}\delta_a \right) \right] \}. \tag{19}
\end{aligned}$$

The incumbent only speaks when the issue is urgent, similar to the benchmark. If this issue is a , the high expected competence $\mathbb{E}(\gamma_a)$ makes the challenger mimic the incumbent, thus reducing the probability that a candidate with the right policy is up for election from $1 - (1 - \gamma_a)(1 - \delta_a)$ to γ_a .

- $\gamma_a < \Xi$.

If the challenger speaks early and is mimicked by the challenger, the expected welfare becomes

$$\begin{aligned}
Pr(\omega_{rel} = p_{rel}^*) &= z \{E(1-r)(1 - (1 - \gamma_b)(1 - \delta_b))\} \\
&+ (1 - z + z \cdot E(r)) \left\{ \Pr(r > \frac{1}{2}) \left[E(r|r > \frac{1}{2})[\gamma_a] + E(1-r|r > \frac{1}{2}) \frac{\gamma_b + \delta_b}{2} \right] \right. \\
&+ \Pr(\frac{1-z}{2-z} < r \leq \frac{1}{2}) \left[E(r|\frac{1-z}{2-z} < r \leq \frac{1}{2})[\gamma_a] + E(1-r|\frac{1-z}{2-z} < r \leq \frac{1}{2}) \frac{\gamma_b + \delta_b}{2} \right] \\
&\left. + \Pr(r \leq \frac{1-z}{2-z}) \left[E(1-r|r \leq \frac{1-z}{2-z})[1 - (1 - \gamma_b)(1 - \delta_b)] + E(r|r \leq \frac{1-z}{2-z}) \frac{\gamma_a + \delta_a}{2} \right] \right\}. \tag{20}
\end{aligned}$$

In this case the incumbent makes an early statement and gets mimicked by the challenger. On top of the distortions present in the previous case, the imitation reduces the probability that a candidate who proposes the right policy is available, as in the first range considered.