

# Competing on Good Politicians\*

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## Abstract

Is electoral competition good for political selection? To address this issue, we introduce a theoretical model in which ideological parties allocate high-valence (experts) and low-valence (party loyalists) candidates into the electoral districts. Voters care about a national policy—corresponding to the party ideology—and the valence of the candidate in their district. We show that parties compete on good politicians by allocating them to the most contestable districts. Empirical evidence on Italian members of parliament confirms this prediction. We find that politicians with higher ex-ante quality—as measured by years of schooling, previous market income, and local government experience—are more likely to run in a contestable district. Indeed, despite being different on average, the characteristics of politicians belonging to opposite political coalitions converge to high-quality levels in close electoral races. Furthermore, politicians elected in contestable districts make fewer absences in parliament; this is shown to be driven more by a selection effect than by reelection incentives.

**Keywords:** political competition, political selection, probabilistic voting.

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# 1 Introduction

In politics, personal identity matters. A lot. Would the UK have had a season of privatization without the leading role of Margaret Thatcher, or the US a New Deal without Franklin Delano Roosevelt? And what would have happened to the US had Bob Kennedy become its 37th president? A recent literature has recognized the crucial relevance of the identity of leading politicians in taking policy decisions and ultimately in shaping the development of their party or the entire nation (e.g., see Jones and Olken, 2005; Dewan and Myatt, 2007; 2008). Similar considerations on the crucial role played by some leading persons (that is, CEOs) apply also to the business sector (e.g., see Bertrand and Schoar, 2003).

If identity matters, selecting good politicians becomes ever more crucial. But how to achieve an efficient process of political recruitment? In this paper, we examine the effect of political competition on the allocation of political candidates across electoral districts featuring different degrees of contestability. Competition for electoral support by the voters requires the parties running for election to accurately select their political candidates into districts in order to improve their chances of winning the election. Is therefore the case that electoral competition improves political outcomes (see Stigler, 1972; Wittman, 1989), because it leads to the selection of better politicians?

To address this question, we introduce a model of political selection in a majoritarian system. The novelty of the model is to allow for a clear role of the party (leaders) in allocating political candidates to different electoral districts. Rather than analyzing the self-selection of political candidates, we concentrate on the selection of politicians by parties (leaders). Potential candidates differ in their valence (or quality), which is perfectly observable and is valued by all voters (see Stokes, 1963; 1992; Enelow and Hinich, 1982; Groseclose, 2001). Parties will therefore have to compete on good politicians. Political competition is captured by the degree of contestability of each electoral district. The electoral competition at the district level depends on the relative share of ideological and swing voters. More swing voters and a more equal share of ideological voters of the two parties increase the electoral contestability of a district. An original feature of our model is to allow the parties to target specific districts by allocating candidates of a particular valence. Furthermore, unlike many existing work in the literature, we focus on the effect of political competition on the primal

party decision, that is, the selection and allocation of politicians, rather than on the policy choice. Our theoretical model predicts that electoral competition has beneficial effects, since parties choose to send their high-valence politicians to the most contestable districts.

To test this prediction, we use a recent dataset on all Italian members of parliament elected in majoritarian (single-member) districts from 1994 to 2006. In that period, Italy represented the perfect testing ground of our theoretical model for several reasons. First, parties (leaders) played a crucial role in the recruitment of political candidates. Second, a majoritarian system was used to elect one of the largest assemblies in the world. Third, for historical reasons, there was large geographic variation in the ideological strongholds of the two major political coalitions (center-right versus center-left). All of these features provide a considerable amount of within-country variation in the degree of political contestability. We use this variation as the treatment of interest and evaluate its effect on political selection.

In particular, to measure the degree of political contestability of a single electoral district, we construct two different indicators: (i) the margin of victory in the previous political election; and (ii) the district-specific ratio of the number of swing voters over the difference between the ideological voters of the two main coalitions. The latter indicator is estimated using electoral data from the previous European elections, which take place under a proportional system and are largely believed to capture ideological voting.

Valence is instead captured by different measures, such as years of schooling, previous market income, and past experience in local governments. The rationale for each measure is simple. Years of schooling capture the acquisition of formal human capital and skills. Pre-election income, controlling for the occupational type, is a measure of market success and ability. The use of administrative experience is linked to the idea that lower-level elections can be used by high-quality politicians to build reputation and by voters to screen better candidates.<sup>1</sup> Consistently with our theoretical framework, we find evidence of an ex-ante selection effect of political competition: politicians with more years of schooling, higher pre-election income, and more local experiences tend to be allocated to contestable (nonsafe) districts. Indeed, the two main political coalitions show on average very different patterns of political selection: the center-right coalition tends to recruit politicians with higher educa-

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<sup>1</sup>On this point, from a theoretical perspective, see Cooter (2002) and Myerson (2006). Jacobson (1989) and Shugart, Valdini, and Suominen (2005) also use lower-level electoral experience as a proxy for valence.

tion, and the center-left to select more women and politicians with previous administrative experience. However, evidence from a regression discontinuity design shows that both parties converge to the same high-valence type in close electoral races. In other words, only when the going gets tough, the tough candidates get the job from their parties.

To capture ex-post quality by the elected officials, we consider the absenteeism rate in electronic parliament votes, which we consider a proxy for shirking or rent-seeking.<sup>2</sup> Our empirical evidence shows that politicians elected in contestable districts display a lower absenteeism rate. This is consistent with the selection of better politicians in those districts, but may also be driven by reelection incentives. To disentangle the two channels, we exploit some (exogenous) changes in political alliances forced by national leaders, which had the effect of altering the degree of contestability of certain local districts from one election to the next.<sup>3</sup> Interestingly, we find that the effect of political selection strongly dominates, because the ex-ante contestability of the district has a sizable impact on performance even when we control for the change in reelection incentives. An incentive effect does however exist, particularly for low-valence politicians, as we find that, when a safe district turns contestable, low-valence incumbent politicians tend to exert more effort.

Our results hence point to the existence of a positive effect of political competition on the selection of politicians in a country—Italy—characterized by a majoritarian electoral rule and by strong parties featuring a fairly centralized recruitment of candidates for parliament. However, a positive association between the ex-ante quality of politicians and political competition can be expected to hold also in majoritarian environments with strong parties but local recruitment patterns, such as the UK, or even with a weak party structure, such as the US. The last case may occur if voters at primary elections select their party’s candidate by trading off ideological loyalty for better skills, in order to attract independent voters at the general election. More generally, whenever the electoral race is tight and non-aligned voters care about the personal attributes of candidates, we expect to observe competition on good politicians. From a normative perspective, our findings thus call for institutions and

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<sup>2</sup>For instance, Gagliarducci, Nannicini, and Naticchioni (2010) show that the absenteeism rate is positively associated with the amount of outside income by Italian members of parliament.

<sup>3</sup>The instability of the party system during the period that followed the judiciary scandals known as “Mani pulite” (1992–94) and the switch from a proportional to a majoritarian electoral rule in 1994, produced national changes in political alliances both in the right-wing and left-wing coalitions, which exogenously affected the contestability of a few districts in different elections. See Section 4.3 for a discussion.

policies able to: i) increase voters' information and awareness about the valence of political candidates; and ii) enhance the degree of contestability of electoral races.

The paper proceeds as follows. Section 2 provides a review of the related literature. Section 3 introduces our theoretical framework and derives the main results regarding the selection of candidates into the electoral districts. Section 4 describes the data and the institutional framework, while the estimation strategy and the empirical results are presented in Section 5. Section 6 concludes. Proofs are in the Appendix.

## 2 Related Literature

Our paper is related to several strands of literature. The theoretical framework shares some features with the models in Groseclose (2001) and Besley and Preston (2007). Two ideological parties compete for the votes of ideological and of swing voters. The degree of political competition depends on the distribution of these voters across electoral districts. Unlike in Besley and Preston (2007), where parties choose an economy-wide policy and are unable to target specific districts, our novelty is to assign to the parties the primal role of allocating candidates into electoral districts. This allocation decision is crucial, since it allows the parties to target specific districts. And, in our setting, when it comes to elections “all politics is local” (Jacobson, 1989).

In our framework, parties select politicians according to their identity. Candidates differ in their valence (see Groseclose, 2001; Besley, 2005), such as their ability or expertise in problem solving.<sup>4</sup> On valence (or competence), all voters share identical views, as they all prefer more to less (see Stokes, 1963; 1992). However, since parties have different (exogenous) ideological positions, valence becomes crucial to determine the choice of the non-ideological voters. In our model, ideological parties thus choose valence in order to win the election. Our model borrows from a recent literature that has examined the relation between party ideology and candidate valence. Groseclose (2001) shows that the party with the candidate enjoying an exogenous valence advantage will choose to be more moderate, since this advantage becomes more relevant for lower ideological differences (see also Aragonés and Palfrey, 2002; Ansolabehere

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<sup>4</sup>Clark (2009) discusses the differences between policy-related valence, which makes a candidate more competent in dealing with some issues, and nonpolicy-related valence, which provides the candidate with an electoral advantage, unrelated to the candidate policy position, such as an “incumbency advantage.”

and Snyder, 2000). In our model, valence is more relevant for non-ideological voters. Building on this intuition, Ashworth and Bueno de Mesquita (2007) endogenize both valence and ideology to show that in equilibrium parties choose to diverge in policy in order not to compete on (costly) valence. Other models of joint determination of valence and ideology include Schofield (2003) and Dickson and Scheve (2006).

Our model concentrates on the choice of political candidates by the party. This *demand* for politicians has largely been neglected in the theoretical literature, despite the predominant role played by (strong) political parties in most of contemporaneous democracies. Among the few contributions, Carrillo and Mariotti (2001) analyze the party decision between an experienced, and thus known, incumbent and a new candidate of uncertain quality in an asymmetric information setting, to show that parties may have an incentive to confirm mediocre incumbents. Mattozzi and Merlo (2009) focus instead on the competition between parties and lobbying firms in hiring political candidates. In their framework, parties may find it optimal to attract low-quality politicians, the best individuals being out of reach.<sup>5</sup>

A recent literature examines the effect of political competition on policy outcomes. Besley, Persson, and Sturm (2010) use different measures of the degree of political competition in US local elections, and find evidence of a positive effect of competition on growth enhancing policies and, ultimately, on economic growth. Stromberg (2008) analyzes how US presidential candidates allocate resources across states to maximize their probability of winning the election, and shows that this allocation is affected by the number of electoral votes and forecast uncertainty. Dal Bo, Dal Bo, and Snyder (2009) show that political dynasties (that is, intergenerational transmission of political power and elected offices) are less likely to emerge in competitive environments.

A few empirical studies have studied the importance of candidates' valence for electoral competition. Shugart, Valdini, and Suominen (2005) study personal vote-earning attributes under proportional representation. The quality of candidates—measured as local birthplace

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<sup>5</sup>There exists instead a recent and growing literature on the *supply* (or self-selection) of politicians (see Besley, 2005, for a review). A common theme has been how to attract good politicians. Models that predict adverse selection in politics (see Besley, 2004; Caselli and Morelli, 2004) are based on the assumption that the private and political sectors are mutually exclusive, and therefore low-quality individuals have a lower opportunity cost of running for office. Mattozzi and Merlo (2008) emphasize the role of the public office in signaling ability: some high-ability citizens decide to serve for a short period, after which they leave parliament and capitalize on their political experience. Dal Bo and Di Tella (2003) and Dal Bo, Dal Bo, and Di Tella (2006) emphasize how self-selection can also be affected by threats and violence.

and lower-level electoral experience—is shown to decline with district magnitude when lists are closed, since quality becomes less useful to parties. On the contrary, quality increases with district magnitude when lists are open, because competition gets tighter. Jacobson (1989) also measures candidates’ valence as previous experience in any elective public office. He shows that high-quality candidates in the US decide to run for office only when national conditions favor their party, and that they are able to win more votes for their party, even controlling for the initial favorable conditions that motivated their self-selection decision. Stone, Maisel, and Maestas (2004) investigate the impact of incumbent’s valence on political competition. They extend the logic of Black’s (1972) “strategic politicians” thesis and use survey data on potential candidates in the US, to show that a high (perceived) valence of the incumbent deters the entrance of strong challengers. Finally, Green (2007) presents aggregate trends to suggest that British political competition has become more competence-based, since the major parties (and the electorate) have converged on the ideological (left-right) dimension.

### 3 The Model

Our model describes the allocation of political candidates into electoral districts by two parties that compete in a majoritarian election. The two parties,  $L$  and  $R$ , are ideological, and have different bliss points over a national policy, respectively  $\widehat{Y}_L \neq \widehat{Y}_R$ . The role of the party (leaders) before the election is to allocate the candidates into the electoral districts. After the election, the winning party  $i$  sets its most preferred national policy,  $\widehat{Y}_i$ ; and each winning candidate provides constituency service for his district.

Candidates differ in their valence. High-valence candidates are called “experts” to convey the idea that they are better equipped at problem solving; low-valence politicians are called loyalists (to a party) to suggest that their ability is in providing party services. Each party has a fixed share  $\mu$  of experts (and  $1 - \mu$  of loyalists) to be allocated.

Voters care about the national policy and the valence of the candidates in their district. They can be of three types: ideological supporters of either party’s national policy, or centrist, that is, not aligned to any party. Voters in group  $L$  and  $R$  are core supporters, and always vote respectively for party  $L$  and  $R$ , regardless of the valence of the two parties’ local candidates. We embed the voting decision of the centrist voters in a standard probabilistic voting model

(see Lindbeck and Weibull, 1987). Being unaligned, centrist voters strongly care about the valence of the candidates in their districts. Hence, the decision of where to allocate the experts carries important implications for winning the election. The utility that group- $C$  voters living in district  $k$  derive from the policy selected by party  $i$  and from candidate- $i$  valence is summarized by the following expression:

$$U_C^k(Y_i, z_i^k) = (1 - \rho) V_C(Y_i) + \rho V_C(z_i^k) \quad (1)$$

where  $Y_i$  is party- $i$  national policy,  $z_i^k \in \{E_i, L_i\}$  is the valence of party- $i$  candidate in district  $k$ , depending respectively on whether he is an expert ( $E_i$ ) or a loyalist ( $L_i$ ), and  $\rho$  measures the relative importance to the voters of the local candidate valence versus the national policy. We assume symmetry in the two parties' bliss point and in the centrist voters' preferences, so that  $V_C(\widehat{Y}_L) = V_C(\widehat{Y}_R)$ . Furthermore, centrist voters prefer to have expert candidates in their districts:  $V_C(E_i) > V_C(L_i)$ .

Following the probabilistic voting approach, we assume that each one of these centrist voters may feel ideologically closer to one party or another. The ideological characteristic of each centrist voter is indexed by  $s$ , with  $s > 0$  if the voter is closer to party  $R$ , and vice versa. The distribution of ideology among centrist voters is assumed to be uniform. In particular, to simplify the notation, we consider  $s \sim U[-1/2, 1/2]$ . The centrist voters' decision is also affected by a common popularity shock to the parties, which occurs before the election and may modify the perception,  $\delta$ , that all centrist voters have about the image of the two parties. In particular, if  $\delta > 0$ , party  $R$  gains popularity from this pre-electoral image shock and vice versa for  $\delta < 0$ . Again, as it is customary in this class of probabilistic voting models, we assume that  $\delta$  is uniformly distributed, so that  $\delta \sim U\left[-\frac{1}{2\psi}, \frac{1}{2\psi}\right]$  with  $\psi > 0$ .

To summarize, a centrist voter will support party  $L$  if the utility obtained by party- $L$  national policy and by party- $L$  candidate in the district is larger than the sum of the ideological idiosyncratic component,  $s$ , of the common shock,  $\delta$ , and of the utility obtained by party  $R$ . That is, a centrist in district  $k$  prefers  $L$  if  $U_C^k(Y_L, z_L^k) - U_C^k(Y_R, z_R^k) - s - \delta > 0$ .

### 3.1 Voters and Districts

The distribution of the three groups of voters in the electoral districts determines the districts where the electoral race is tight, and those where instead one of the two parties has a



substantial advantage. Call  $\lambda_k^j$  the share of type- $j$  voters in district  $k$  with  $j = \{L, C, R\}$ . We assume that the share of type- $C$  voters is constant across districts, that is,  $\lambda_k^C = \lambda^C \forall k$ .

It is convenient to define our measure of ex-ante contestability of every district  $k$  as

$$\lambda_k = \frac{1}{2} \frac{\lambda_k^R - \lambda_k^L}{\lambda^C}. \quad (2)$$

When parties  $L$  and  $R$  have an equal share of aligned voters in the district—and hence there is maximum electoral contestability—this index is equal to zero; while higher (positive) and lower (negative) values indicate less contestability. Moreover, it is easy to see that party  $L$  always wins in those districts with  $\lambda_k < -1/2$ , in which group- $L$  voters represent a majority of the electorate; while party  $R$  always prevails in districts with  $\lambda_k > 1/2$ . Hence, only districts with intermediate values of  $\lambda_k \in [-1/2, 1/2]$  are contestable. To characterize the distribution of voters type across districts, we consider a continuum of districts, characterized by a degree of contestability,  $\lambda_k$ , that is uniformly distributed around  $\lambda_k = 0$ , with a support  $\lambda_k \in \left[-\frac{1-\lambda^C}{2\lambda^C}, \frac{1-\lambda^C}{2\lambda^C}\right]$ . We refer to the cumulative distribution as  $G(\lambda_k)$ .

We are now in the position to assess the probability that a party—e.g., party  $L$ —wins a contestable district  $k$ . Call  $\tilde{s}$  the ideology of the swing voter, that is, of the centrist voter who is indifferent between party  $L$  or  $R$ . Hence,  $\tilde{s} = U_C^k(Y_L, z_L^k) - U_C^k(Y_R, z_R^k) - \delta$ , and all centrist voters with ideology  $s < \tilde{s}$  will support party  $L$ . To win district  $k$ , the sum of type- $L$  voters ( $\lambda_k^L$ ) and of the votes that party  $L$  obtains from the centrist voters has to exceed 50%. It is easy to see that this occurs for  $\tilde{s} > \lambda_k$ . Thus, the probability of party  $L$  winning district  $k$ —call it  $\Pi_L^k$ —can be expressed as a function of the popularity shock,  $\delta$ , and of the district characteristic,  $\lambda_k$ :

$$\Pi_L^k = \Pr \{ \delta < U_C^k(Y_L, z_L^k) - U_C^k(Y_R, z_R^k) - \lambda_k = d_k \} \quad (3)$$

where  $d_k$  can be interpreted as a measure of the ex-post contestability of district  $k$ , that is, after that the parties' national policy and allocation of candidates are known to the voters. Since the popularity shock is uniformly distributed with density  $\psi$ , we can rewrite equation (3) as  $\Pi_L^k = \frac{1}{2} + \psi d_k$ . If the two parties converge to the same allocation of candidates, since the national policies provide the same utility to the centrist voters, then  $d_k = -\lambda_k$ . However, parties can use the allocation of candidates to modify  $d_k$ , and thus their chances of winning district  $k$ .

## 3.2 Allocation of Candidates

To understand the choice of the allocation of candidates into districts, it is convenient to summarize the timing of events. Parties move first. Before the election, they choose how to allocate their exogenous share of expert and loyal candidates (respectively  $\mu$  and  $1 - \mu$ ) into the different electoral districts. The two parties take their allocation decision independently and simultaneously; they know the distribution of the popularity shock taking place before the election, but not the realization. After the popularity shock has occurred, centrist voters decide whom to support between the two candidates running in their district. After the election, the winning party sets its most preferred national policy, and the winning candidate delivers constituency service according to his valence.

Since parties are entitled to set their most preferred national policy only if they win the election, they will use their allocation decision in order to maximize their probability of winning the election. Parties will hence compete by allocating experts to the crucial districts. The difference in utility provided to the centrist voters in district  $k$  by the two parties can be written as

$$U_C^k(Y_L, z_L^k) - U_C^k(Y_R, z_R^k) = \rho (V_C(z_L^k) - V_C(z_R^k)) \quad (4)$$

As experts are more valuable than loyalists to voters, allocating an expert to a district  $k$ , where the other party sent a loyalist, amounts to increase the centrist voters' utility by a positive wedge,  $W = \rho[V_C(E) - V_C(L)]$ . More centrist voters in that district will then favor party  $L$ . Hence, parties compete on good politicians (the experts) to increase their probability of winning a contestable district.

To understand the logic behind this simultaneous allocation game, suppose that only loyal candidates have been sent to districts, and are thus perfectly matched, that is, every party- $L$  loyalist faces a party- $R$  loyalist. This implies that  $V_C(z_L^k) - V_C(z_R^k) = V_C(L) - V_C(L) = 0$ . By equation (3), party  $L$  thus wins a district  $k$  if the shock is:  $\delta < d_k = -\lambda_k$ . Moreover, given the distribution of districts ( $\lambda_k$ ), party  $L$  wins the elections—that is, it obtains more than 50% of the districts—if the shock is strictly in its favor:  $\delta < d_0 = 0$ . In this case, party  $L$  wins all the districts with  $\lambda_k < 0$ , as shown in Figure 1; whereas it ties the election for  $\delta = d_0 = 0$ . Thus, the marginal (or pivotal) districts to win are in a small interval around  $\lambda_k = 0$  (henceforth, district zero, i.e.,  $\lambda_0$ ). It is convenient to represent a small district

interval around  $\lambda_0$  as  $[\lambda_\varepsilon, \lambda_\Xi]$  with  $\lambda_0 - \lambda_\varepsilon = \lambda_\Xi - \lambda_0 = \varepsilon$  small enough.

Suppose now that party  $L$  sends experts to the district interval  $[\lambda_0, \lambda_\Xi]$ . Using again equation (3), it is easy to see that party  $L$  is now more likely to win districts  $[\lambda_0, \lambda_\Xi]$ . In fact, party  $L$  wins district  $\lambda_0$  even for a less favorable (i.e., larger) realization of the shock, that is, for  $\delta < W$ . Define the district  $\lambda_w = -W$ , such that  $d_w = W$ . Then, if party  $L$  allocates an expert to the most contestable district,  $\lambda_0$ , where party  $R$  has instead sent a loyalist, party  $L$  wins this district with the same probability with which it wins district  $\lambda_w < 0$  (which is ex-ante biased in favor of party  $L$ ) when both parties send a loyalist. Hence, for  $\delta = d_0 = 0$ , with experts in the district interval  $[\lambda_0, \lambda_\Xi]$ , party  $L$  would win the election, rather than just tying it. Analogously, if party  $R$  allocates an expert to the most contestable district,  $\lambda_0$ , while party  $L$  sends a loyalist, party- $R$  probability of winning district  $\lambda_0$  will equate the probability of winning district  $\lambda_W = W$ , such that  $d_W = -W$ , when both parties allocate a loyalist.

Districts  $\lambda_w$  and  $\lambda_W$  represent crucial thresholds, respectively for party  $L$  and  $R$ . To see this, suppose that party  $R$  only allocates loyalists; then party  $L$  would maximize its probability of winning the election by sending experts to all districts between  $\lambda_w$  and  $\lambda_\Xi$ . In this case, party  $L$  would win the election if  $\delta \leq d_w = \lambda_w$ ; and allocating an additional expert in any district would not modify this probability. It is convenient to define the mass of districts included between  $\lambda_w$  and  $\lambda_0$  as  $\eta/2$ ; that is,  $[G(\lambda_0) - G(\lambda_w)] = \eta/2$ . Then,  $\eta/2$  experts would be needed by party  $L$  to span the districts between  $\lambda_w$  and  $\lambda_0$ . The same logic applies to party  $R$ , with the threshold district being  $\lambda_W$ , and  $[G(\lambda_W) - G(\lambda_0)] = \eta/2$ . Notice that the mass of crucial districts between  $\lambda_w$  and  $\lambda_W$  is equal to  $\eta = \frac{2\lambda^C}{1-\lambda^C} \rho (V_C(E) - V_C(L))$ . The share of experts needed to cover all the crucial districts thus depends positively on the proportion of centrist voters ( $\lambda^C$ ), on the relative importance that they give to the local policy ( $\rho$ ), and on the value that they attribute to having an expert in their district,  $V_C(E) - V_C(L)$ .

Before turning to the next proposition, which characterizes the equilibrium allocation of candidates, it is convenient to introduce some definitions. Define  $\Lambda^L$ , party- $L$  allocation of experts, as the union of the district intervals  $\Lambda_i^L = [\lambda_I^i, \lambda_{II}^i]$  where party  $L$  allocates its experts,  $\Lambda^L = \cup_i \Lambda_i^L$ , and analogously  $\Lambda^R$  for party  $R$ .

**Proposition 1.** *Parties allocate experts in district intervals that include the most contestable district  $\lambda_0$ .*

- (I) For  $\mu > \eta/2$ , party-L allocation of experts  $\Lambda^L$  includes  $\Lambda_i^L = [\lambda_I^i, \lambda_{II}^i]$  with  $\lambda_I^i < \lambda_w$  and  $\lambda_{II}^i > \lambda_\Xi$ ; and party-R allocation  $\Lambda^R$  includes  $\Lambda_i^R = [\lambda_I^i, \lambda_{II}^i]$  with  $\lambda_I^i < \lambda_\varepsilon$  and  $\lambda_{II}^i > \lambda_W$ ;
- (II) For  $\mu \leq \eta/2$ , party-L allocation of experts is  $\Lambda^L = [\lambda_0, \lambda_B]$ , such that  $G(\lambda_B) = 1/2 + \mu$ , and party-R allocation is  $\Lambda^R = [\lambda_b, \lambda_0]$ , such that  $G(\lambda_b) = 1/2 - \mu$ .

*Proof.* See Appendix. □

The bottom panels of Figures 2 through 4 provide a graphical representation of the equilibrium allocations described in the proposition above. As previously argued, allocation matters in the districts  $[\lambda_w, \lambda_\Xi]$  for party  $L$ , and  $[\lambda_\varepsilon, \lambda_W]$  for party  $R$ , where sending an expert may actually change the probability of winning the election. For  $\mu > \eta/2$ , parties have enough experts and will hence send them to cover these critical districts. The allocation of additional experts does not affect the probability of winning the election, although it modifies the share of seats obtained by the party. Figure 2 displays a case in which parties match candidates' type in every district (see bottom panel); hence the probability of winning a district  $k$  only depends on its idiosyncratic characteristic,  $\lambda_k$  (see top panel). Figure 3 (bottom panel) presents instead a symmetric equilibrium allocation in which parties span their experts on the relevant contestable districts that are biased in their favor, and send additional experts to the districts that are more favorable to the opposing party. The top panel shows how the resulting probability of winning a district is higher for the party whose expert faces a loyalist from the opposing party.

When parties are instead supply constrained in the share of experts,  $\mu < \eta/2$ , the allocation strategy changes radically. Rather than concentrating their experts on a subset of the districts that are in their favor, parties prefer to use their few experts to try to win the districts that are (weakly) in favor of the other party. For instance, party  $L$  will send experts to districts  $\lambda_k \in [\lambda_0, \lambda_A]$ , as shown in Figure 4 (bottom panel). The intuition is the following. With only a few experts to allocate, party  $L$  could still secure the favorable districts close to the pivotal one (as in the previous strategies), but it would have to send loyalists to the other more favorable, albeit still contestable, districts. This would leave them open to the competition by party  $R$ , which would have an incentive to send there its experts, thereby turning these districts into its favor. Instead of using this (losing) defensive strategy, party  $L$

will prefer to allocate its experts to the districts close to the pivotal ( $\lambda_0$ ), which ex-ante favor its opponent. And analogously for party  $R$ . Figure 4 (top panel) shows how this offensive strategy turns some of the districts ex-ante close to party  $R$  (namely, those between  $\lambda_0$  and  $\lambda_B$ ) in favor of party  $L$ , and vice versa for the districts between  $\lambda_b$  and  $\lambda_0$ .

The next corollary shows that the above allocation strategies translate into more experts being elected in contestable districts than elsewhere.

**Corollary 1.** *The share of experts elected in the interval  $[\lambda_\varepsilon, \lambda_\Xi]$  around the most contestable district,  $\lambda_0$ , is (weakly) larger than the share of experts elected in  $[\lambda, \lambda_\varepsilon] \cup [\lambda_\Xi, -\lambda] \forall \lambda < \lambda_\varepsilon$ , and thereby than the share of elected experts.*

*Proof.* See Appendix. □

To see this, consider the case of many experts ( $\mu > \eta/2$ ), where both parties send them to the most contestable district interval  $[\lambda_\varepsilon, \lambda_\Xi]$ . Only experts are hence elected in that interval, regardless of the realization of the popularity shock. With fewer experts ( $\mu < \eta/2$ ), again only experts would win in  $[\lambda_\varepsilon, \lambda_\Xi]$  for small realizations of the shock; but for larger shocks only the winning party would elect experts (see Figure 5). The share of experts in  $[\lambda_\varepsilon, \lambda_\Xi]$  would then be  $1/2$ , which is still greater than the overall share of elected experts, as long as the fraction of crucial districts ( $\eta$ ) is lower than one.

## 4 The Data

### 4.1 Italian Institutions and Politics from 1994 to 2006

In order to test the main empirical implications of our theoretical model, we use data about the members of the Italian parliament (House of Representatives and Senate) from 1994 to 2006, which refer to legislative terms XII (1994–96), XIII (1996–2001), and XIV (2001–06). During this period, Italy experienced a mixed electoral system (75% majoritarian and 25% proportional). In the majoritarian tier, members of parliament were elected in single-member districts with plurality voting. In the proportional tier, they were selected from closed party lists at the regional level (House) or from the best losers in the majoritarian districts (Senate).

The switch in 1994 from an open-list proportional system to a mixed-member rule was accompanied by major political changes, including the breakdown of the existing party sys-

tem that followed judicial scandals for corruption charges involving the leaderships of all government parties. As a result, the 1994 elections featured new parties competing under the mixed electoral system. A right-wing coalition led by Silvio Berlusconi, which included his party, *Forza Italia*, together with *Lega Nord*, *Alleanza Nazionale*, and *Centro Cristiano Democratico*, won the general election with 42.8% of the votes, and 57% of the seats in the House. A year later, a political crisis in the center-right coalition, initiated by *Lega Nord* (the separatist movement founded and led by Umberto Bossi), brought down the first Berlusconi government, and led to a one-year-long “care-taker” government by Lamberto Dini (former minister in the Berlusconi government). In 1996, *Lega Nord* ran alone in the general election securing 10% of votes at the national level, a remarkable result for a party with a strong regional base. The elections, however, were won by the center-left coalition *Ulivo* (Olive Tree) led by Romano Prodi. Like the first center-right alliance, *Ulivo* resembled more an electoral cartel plagued by internal competition, rather than a government coalition (see Di Virgilio, 1998). In 1998, the leftist *Rifondazione Comunista*, which was part of the center-left electoral coalition, but had not joined the cabinet, determined the fall of the Prodi government. The center-left coalition managed to survive for the rest of the term by forming three other cabinets, but—without *Rifondazione Comunista*—lost the next general election in 2001. It was again the turn of Silvio Berlusconi and his center-right coalition (this time including *Lega Nord*) to rule the country until 2006, which is the end of our sample period.<sup>6</sup>

The introduction of a mixed electoral system did not reduce the dominance of party organizations in Italian politics, as they maintained a firm grip over the recruitment process of political candidates in both the majoritarian and proportional tier. Compared to other political systems characterized by single-member districts, Italy displayed a centralized process of candidates’ selection, where party leaders exercised direct control over nominations, rather than leaving discretion to local party branches. In fact, a very few representatives were rooted in a particular constituency (see Ferrara 2004a; Di Virgilio, 1998). This recruitment process hence perfectly matches the allocation game described in our model at Section 3. Furthermore, Italy represents the ideal ground for evaluating the impact of political compe-

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<sup>6</sup>After three terms under a mixed system, in the eve of the 2006 general election, the Italian electoral system was again modified to move back to a proportional system, which—unlike the proportional system in place between 1948 and 1994—featured coalition and party thresholds to gain parliament seats, a premium (in terms of additional seats) for the winning party (or coalition), and closed party lists.

tition on political selection, because of other peculiar features of its institutional and political framework, namely: i) the 75% majoritarian electoral system in place from 1994 to 2006 was fairly isolated and not contaminated by the 25% proportional tier (see Ferrara, 2004b); ii) Italy has one of the largest legislative assemblies in the world (945 members of parliament against, for instance, 535 in the US or 575 in France); iii) there exists a large geographic variation in the ideological strongholds of the center-right and center-left coalitions. These features provide a considerable amount of within-country variation in the degree of political contestability of the electoral districts, which allows us to test the theoretical prediction at Corollary 1.

## 4.2 Data Sources

We use data on all Italian members of parliament (House and Senate) elected in single-member districts in the general election of 1994, 1996, and 2001. In each district, one representative was elected by simple plurality according to a pure first-past-the-post election. The original sources used to collect the data include: the Annals of the Italian Parliament (*La Navicella*) for demographic information, as well as professional and political experience; the Archive of Tax Returns of the members of the Italian Parliament (*Servizio Prerogative e Immunità*) for income information; and the Italian Parliament Press Office (*Ufficio Stampa*) for data on individual attendance at voting sessions.<sup>7</sup>

The dataset contains the following information on each (majoritarian) member of parliament: demographic characteristics (age, gender, marital status, number of children, level and field of education); self-declared previous job (before entering parliament for the first time); absenteeism rate (the share of electronic votes missed without any legitimate reason); parliament appointments (president, vice president, and secretary either of the parliament or of a legislative committee); government appointments (minister, vice minister); party affiliation and political roles (member of the directive board of the party at the local, regional, or national level); local government experience (mayor, city councillor, president of a region, etc.); tier of election, electoral district, and margin of victory.

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<sup>7</sup>For more information, see Gagliarducci, Nannicini, and Naticchioni (2010). For other empirical studies on the evolution of the Italian parliament elite, see Verzichelli (1998) and Merlo et al. (2008).

### 4.3 Measuring Political Competition

We decided to restrict our analysis to politicians elected in majoritarian districts, because for them we can measure the degree of political contestability, that is, the expected electoral gap between the two major coalitions. There were 705 districts (475 in the House and 230 in the Senate) for each legislative term. Hence, our sample could consist of at most 2,115 observations across the three terms covered by the dataset. After dropping observations with missing values in the relevant variables, we are left with a sample of 1,977 observations for the terms XII-XIII-XIV (1,307 when we consider only the terms XIII-XIV).

Table 1 shows that, in 25% of the districts, the center-left coalition won all three elections, while the center-right always won in 34%. The remaining 40% swang at least once. Safe (nonswing) districts are particularly concentrated in the North East and Center of the country (see Table 2). The lagged margin of victory in absolute value ( $MV$ ) is an obvious measure of the ex-ante contestability of the district: for example, if a coalition won by 30 percentage points in the previous election, it will be very difficult for the other coalition to fight back and win the district the next time. By the same token, alternative measures of the safeness of a district could be  $MV$  being greater than 5 (*Safe1*) or greater than 10 (*Safe2*). The distribution of the margin of victory in each single-member district—expressed in percentage points—is positively skewed. In about 29% of the districts, the lagged margin of victory was lower than 5, while in about 49% it was lower than 10.

All of these measures, based on the lagged margin of victory, should be good predictors of the swinging probability of a district, but their correlation with the characteristics of the individual candidates could be biased when the incumbent runs for reelection. In this case, the lagged margin of victory would refer to an election run by the same politician, and thus partly depend on his skills. Furthermore, measures based on the lagged margin of victory are not available for the XII legislative term, because the majoritarian districts were first introduced in this term. To address both issues, we construct an additional measure of contestability by using the district-specific vote shares of different parties at the European elections, held either in 1994 or 1999. We consider as ideological (or loyal) voters those who supported the center-left ( $L$ ) or center-right coalition ( $R$ ) in the previous European election. These elections, in fact, were held under proportional representation to appoint the Italian representatives in the European Parliament. Their turnout rate has usually been



lower than in national elections, because government decisions are not at stake. Political analysts therefore agree that voters cast a more ideological vote in this type of electoral contest. Our new measure of safeness (*Safe3*) is equal to one if

$$\frac{1 - L - R}{|L - R|} \leq 1. \quad (5)$$

This measure can be interpreted as the empirical counterpart of  $1/\lambda_k$  in the theoretical model. Furthermore, it has the advantage of allowing us to identify changes in the degree of contestability of a district due to national variations in political alliances within each coalition. As discussed in Section 4.1, large modifications occurred twice: before the 1996 election, when the separatist party *Lega Nord* quit the center-right coalition; and before the 2001 election, when the leftist party *Rifondazione Comunista* quit the center-left coalition. These alliance breakdowns originated from the (narrow) incentive of the two small parties to keep up their (proportional) vote share and bargaining power, and involved decisions by the national leaders. Their impact on the political future of back-benchers and on the contestability of districts was not internalized, as indirectly shown by the fact that after the crises some incumbents left the two small parties to join large coalition parties. As a result, the political decisions of the leaders of small parties, which followed purely “proportionalistic” motivations, mainly affected the destiny of the representatives of big parties in marginal districts.<sup>8</sup> Hence, these national shocks altered the degree of contestability of a few districts in a way that can be interpreted as exogenous with respect to the characteristics of politicians previously elected in those districts.

Table 3 shows that all our measures of ex-ante contestability are correlated with the ex-post probability that a district swings from a coalition to the other. The probability of swinging is always higher when our safeness indicators are equal to zero, and the differences are statistically significant either at the 1% level (*Safe1* and *Safe2*) or at the 5% level (*Safe3*). The probability of swinging also increases with the lagged margin of victory.

#### 4.4 Measuring Valence

The above measures of political competition represent our treatment of interest. We want to evaluate whether increasing the intensity of such a treatment affects the patterns of political

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<sup>8</sup>On the crisis of the center-right coalition in the XII term, see Di Virgilio (1998); on the crisis of the center-left coalition in the XIII term, see Legrenzi (1998).

selection. In other words, we want to assess whether political parties allocate candidates with different (ex-ante) valence according to the degree of contestability of each district. In line with Krasno and Green (1988), we think of quality (or valence) as something that exists in advance of and separate from other aspects of the electoral campaign. In particular, we measure valence as: i) years of schooling, ii) previous market income, and iii) past experience in local governments. The rationale for each measure is simple. Years of schooling capture the acquisition of formal human capital and skills.<sup>9</sup> Preelection income—controlling for the previous occupation—is a measure of market success and ability. The use of administrative experience is linked to the idea that lower-level elections can be used by high-quality politicians to build reputation and by voters to screen better candidates. Previous empirical studies have usually used lower-level electoral experience as a proxy for valence (see Jacobson, 1989; Shugart, Valdini, and Suominen, 2005).

Table 4 summarizes the preelection characteristics of the politicians in our sample, according to the contestability of the district where they were elected (as captured by the indicator *Safe2*). On average, candidates allocated to nonsafe districts are more educated, have lower parliament or government experience but greater local government experience, and declare higher preelection incomes. Physicians tend to run in more contestable districts. Party officers, on the contrary, are allocated to safer districts.

Table 5 instead summarizes information on the ex-post behaviors and appointments of the members of parliament. Politicians elected in contestable districts tend to work harder in parliament, that is, they display a lower absenteeism rate in electronic votes, both overall and at the end of the legislative term.<sup>10</sup> It is worth noticing that politicians elected in contestable districts have a higher probability of entering the government (if their coalition wins the general election), although they have lower government experience than politicians running in safe districts (see again Table 4). This is consistent with the view that candidates in contestable districts are more skilled, and are rewarded for winning tougher races.

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<sup>9</sup>Besley and Reynal-Querol (2009) use the same measure to assess political selection in democracy versus autocracy. Zhang and Congleton (2008) find a positive correlation between the educational level of US Presidents and aggregate economic outcomes.

<sup>10</sup>Only votes missed without any legitimate reason are considered (i.e., parliament missions or cabinet meetings are not counted as absences). Electronic votes account for about 90% of total floor votes (almost the totality if the vote was on a final bill approval), the rest being held with hand counting.

## 5 Empirical Results

### 5.1 The Impact of Political Competition on Valence

To evaluate whether any predetermined characteristic ( $X_{ijt}$ ) of politician  $i$  in district  $j$  at time  $t$  is associated with the degree of contestability of the district where he is elected ( $C_{ijt}$ ), we implement the following set of regressions (depending on the measure used to capture contestability):

$$C_{ijt} = \delta_t + \gamma_j + \beta X_{ijt} + \eta_{ijt}, \quad (6)$$

where regional dummies  $\gamma_j$  control for geographical factors correlated with both political competition and political selection,  $\delta_t$  for time fixed effects, and the error terms  $\eta_{ijt}$  are clustered at the individual level. If  $C_{ijt}$  is a dummy, we estimate a Probit model; if it is continuous, we use OLS. These estimations can be seen as a direct test of Corollary 1, which suggests that high-valence candidates (defined on the basis of the observable characteristics discussed above) are more likely to be elected in contestable districts.

Estimation results are reported in Table 6. To control for the possible endogeneity problem between  $C_{ijt}$  and  $X_{ijt}$ , which arises when  $C_{ijt}$  is based on the lagged margin of victory, and is thus partly affected by the skills of the incumbent who is now running for reelection, we also restrict the sample to non-incumbents only.<sup>11</sup> To evaluate the effect of preelection income, we further restrict the sample to freshmen, for whom preelection income refers to private activity and can thus be interpreted as market skills (controlling for occupation).

The results show that more years of schooling, past local government experiences, and higher preelection income increase the probability of running for election in a contestable (nonsafe) district. In other words, the harsher is political competition, the higher is the probability that political parties rely on high-valence candidates. These are defined as politicians with higher educational attainments or private income—both proxies for market skills—or politicians who proved their political ability in subsequent rounds of local elections, which

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<sup>11</sup>In principle, the characteristics of a high-quality candidate, if matched with a high-quality opponent, should not affect the margin of victory in the district. However, as shown by the case with few experts ( $\mu < \eta/2$ ) in the theoretical model, in some districts a high-quality candidate of a party could be matched by a low-quality candidate from the other party. In these cases, the lagged margin of victory is affected by the characteristics of the incumbent who then runs for reelection. By focusing on no incumbents only, we can avoid this potential problem and address the decision of parties to allocate freshmen in safe versus swing districts.

can be seen as “filters” for politicians’ quality (i.e., competence or honesty) in a federal system (see Cooter, 2002; Myerson, 2006). Our results are robust to the use of different contestability measures. Interestingly, when we use the entire sample, the results are statistically significant only with the *Safe3* indicator. The other indicators—based on the lagged margin of victory—turn significant only when we restrict the sample by dropping incumbents. This is consistent with the concern that the (incumbent) endogeneity discussed above could downward bias the estimate of the association of political competition with candidates’ quality.

From a quantitative point of view, the estimates in Table 6 (using the *Safe1* indicator) suggest that two more years of schooling—equal to one standard deviation—increase the probability of running in a contestable district by 5.2 percentage points (that is, by about 7% with respect to the average). Similarly, past administrative experiences lower the probability of running in a safe district by 6.8 percentage points (that is, by about 9%). Looking at freshmen, even if we control for previous job fixed effects, preelection income has a negative impact on the probability of running in safe districts for two out of the four indicators. In particular, if we look at *Safe2*, an increase in preelection income equal to one standard deviation (421,000 euros) reduces the probability of running in a safe district by 35.4 percentage points (that is, by about 41%). Also a lower income increase of 100,000 euros produces a sizable effect of 8.4 percentage points.

## 5.2 Convergence of Politicians’ Attributes in Close Races

In the previous section, we showed that good politicians are more likely to run (and hence to be elected) in contestable districts. But is this allocation strategy common to both political coalitions? Is there any difference in political selection between the center-right and center-left? To shed light on this point, we proceed in two steps. First, we look at any statistically significant difference in the observable characteristics of center-right versus center-left members of parliament. Second, we follow Lee (2008) to implement a Regression Discontinuity Design (RDD) on the margin of victory in single-member districts.<sup>12</sup> Specifically, we calculate the margin of victory of the center-right coalition (*MVR*) in each district: this measure

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<sup>12</sup>Ferreira and Gyourko (2009) and Petterson-Lidbom (2008) use the same identification strategy to estimate the impact of political parties on policy outcomes in the US and Sweden, respectively. We look instead at political differences in candidates’ attributes in close electoral races.

is positive (negative) in all districts won by the center-right (center-left) coalition. We then look at the predetermined characteristics  $X_{ijt}$  of politician  $i$  elected in district  $j$  at time  $t$  (with a particular attention to our valence indicators) and fit a  $p$ -order polynomial in  $MVR$  on either side of the threshold  $MVR = 0$ , at which the electoral result sharply changes in favor of the center-right:

$$X_{ijt} = \alpha + \tau D_{ijt} + \sum_{k=1}^p \delta_k MVR_{ijt}^k + D_{ijt} \cdot \sum_{k=1}^p \beta_k MVR_{ijt}^k + \psi_{ijt} \quad (7)$$

where  $D_{ijt} = 1[MVR_{ijt} > 0]$  and the error terms  $\psi_{ijt}$  are clustered at the individual level. The parameter  $\tau$  identifies the effect of interest: that is, whether politicians running in close races are intrinsically different in their observable characteristics according to the political coalition they belong to. The underlying assumption of this identification strategy is that electoral outcomes depend on both predictable elements (such as candidates' skills and valence) and random chance, which is then crucial only for close electoral races. It is important to notice that in this analysis we are using the actual (instead of the lagged) margin of victory, so that the victory of one coalition over the other at  $MVR = 0$  represents a random event. As a result, a significant jump in politicians' attributes would show up only if the two coalitions followed alternative (non-symmetric) allocation strategies in close races.

The first panel of Table 7 reports the results for the whole sample of members of parliament. On average, left-wing politicians are older, less educated, feature a longer parliament tenure and more local government experiences. The right-wing coalition recruits more entrepreneurs, self-employed, and lawyers; the left-wing coalition selects more professional politicians, teachers, college professors, union representatives, and females.

The two main political coalitions thus show very different patterns of political selection. Yet, the RDD evidence shows that they both converge to the same (high-valence) type in close races. The second panel of Table 7 reports the estimated discontinuity at a zero margin of victory: there is no significant difference between center-right and center-left politicians in any demographic characteristic or previous market and political experience. In particular, education, parliament tenure, gender, and local government experience, despite being different in the whole sample, are perfectly balanced in close races. Figures 6 through 8 provide a graphical representation of the estimated polynomials and of the jumps at  $MVR = 0$ . These figures clearly show a pattern of convergence in the predetermined attributes of political

candidates. For instance, the center-left coalition has fewer candidates with high educational attainments, but allocates all of them to marginal districts, where the gap with the center-right coalition is thus filled; all candidates with lower education are instead allocated to safer districts. Only with respect to the previous occupations, where the two coalitions may be supply constrained in certain characteristics, the center-left selects fewer entrepreneurs and self-employed, and the center-right fewer teachers and professional politicians. These intrinsic differences remain also in close electoral races (see Figure 8).

### 5.3 The Impact of Political Competition on Absences

To evaluate whether the degree of ex-ante contestability ( $C_{ijt}$ ) affects the in-office effort ( $Y_{ijt}$ ) of politician  $i$  elected in district  $j$  at time  $t$ , we run the following regressions:

$$Y_{ijt} = \delta_t + \gamma_j + \tau C_{ijt} + \alpha_1 X_{ijt} + \alpha_2 P_{ijt} + \epsilon_{ijt} \quad (8)$$

where  $X_{ijt}$  are the predetermined individual characteristics,  $P_{ijt}$  represent additional post-election characteristics affecting the absenteeism rate  $Y_{ijt}$  (e.g., belonging to the majority coalition or being appointed to a government position),  $\gamma_j$  and  $\delta_t$  are regional and time dummies, and the error terms  $\epsilon_{ijt}$  are corrected for clustering at the individual level. The absenteeism rate is a measure of shirking or rent-extraction, since it excludes absences with a legitimate reason; moreover, we control for political appointments that may reduce parliament attendance. In the subsample of freshmen, we also control for preelection income, which has been shown to be a good predictor of outside income and shirking in parliamentary activity (see Gagliarducci, Nannicini, and Naticchioni, 2010).

By estimating the impact of ex-ante political competition on the future performance of elected officials, we want to assess whether the positive effect of electoral competition on selection leads also to better political outcomes, that is, whether more skilled candidates perform better once in office. Table 8 reports the estimation results. The empirical evidence shows that politicians elected in contestable districts display a lower absenteeism rate in electronic parliament votes. If we look at the *Safe1* indicator in the subsample with no incumbents, running in a contestable district reduces the ex-post absences by 5 percentage points (that is, by about 16% with respect to the average). The effect is always significant

at the 1% or 5% level, irrespective of the contestability measure we use.<sup>13</sup>

These findings may be driven by selection, but they may also have an alternative explanation: members of parliament facing tougher political competition might choose to exert more effort in order to gain reelection. To disentangle whether the higher productivity of politicians elected in contestable districts arises from the selection of better candidates or from different reelection incentives, we exploit the (exogenous) changes in national coalitions discussed in Section 4.3, which altered the degree of contestability of certain districts from one election to the next. In Table 9, *Safe3* is constructed as before (see equation 5), while *Safe3-next* uses the same method but refers to the next election (keeping into account the variations that occurred in the political alliances within coalitions). As outcome variable, we use the absenteeism rate during the last year of the legislative term, because at that time the new electoral coalitions are known and reelection incentives are probably at their maximum.

Column (1) shows that the effect of the ex-ante contestability (*Safe3*) remains strong: even if we control for future reelection incentives (*Safe3-next*), good politicians—elected in contestable districts—reduce their absences by 8.2 percentage points (about 35% with respect to the last-year average). Columns (2) and (3) confirm this result: (bad) politicians elected in safe districts make more absences at the end of the legislative term, both when their district has turned contestable and when it has remained safe. Selection hence matters. Similarly, in columns (3) and (4), we look at the impact of the future contestability of the district on last-year absences, controlling for the ex-ante contestability. As expected from the result in column (1), incentives are less relevant. Yet, there is still some evidence of an additional accountability effect for low-quality politicians. In fact, if a safe district turns contestable, (bad) politicians tend to exert more effort (by 4.1 percentage points, about 17%). But the opposite does not hold: (good) politicians elected in contestable districts show a high productivity even when their district turns safe.

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<sup>13</sup>Since the absenteeism rate is bounded between 0 and 1, we also implemented the GLM estimator proposed by Papke and Wooldridge (1996); the results—available upon request—are almost identical to the OLS estimates reported in Table 8.

## 6 Conclusion

In this paper we address a recurring question in political science and political economy: is electoral competition as quality enhancing as economic competition? We provide a positive answer and suggest a possible channel: the selection of high-quality candidates by political parties that want to attract non-aligned voters.

Our theoretical model provides a crucial role for the parties in selecting and allocating politicians to the different electoral districts. Hence, we disregard self-selection by individual politicians and concentrate on the effect of political competition on party selection. Our ideological parties select party loyalists and experts—who are highly valued by the swing voters—into districts in an attempt to increase their probability of winning the election. Political competition pushes political parties to allocate (high-valence) experts to the most contestable districts.

The ground field to test this prediction is the Italian majoritarian political system between 1994 and 2006. And the empirical evidence supports the prediction. Ex-ante valence—as measured by years of schooling, previous market income, and local government experience—increases the probability of running in a contestable district. Evidence from a regression discontinuity design shows that, despite being different on average, the personal attributes of the politicians of the two major coalitions converge to high-valence levels in close electoral races. Politicians elected in nonsafe districts have also a better level of ex-post quality, as measured by their absenteeism rate in parliament. This higher effort is driven more by the selection of better politicians than by reelection incentives. Accountability does however play an additional role, at least for low-quality candidates: if a safe district turns contestable, politicians tend to exert more effort. Yet, high-quality politicians, elected in contestable districts, do not reduce their ex-post productivity even when their district becomes safe.

Our results have normative implications. They suggest the adoption of institutions and policies aimed at enhancing both political competition and voters' information on the quality of individual candidates. For example, in a majoritarian system, the amount of ex-ante contestability could be increased by an “optimal” gerrymandering that evens out the relative shares of the main parties' ideological voters across electoral districts. We leave the study of these implications to future research.



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# Appendix

## Proof of Proposition 1

First, define  $H(\Lambda_i^L) = G(\lambda_{II}^i) - G(\lambda_I^i)$  as the mass of districts in the interval  $\Lambda_i^L$ . Parties' objective in allocating their experts is to maximize the probability of winning the election, i.e., of winning more than 50% of the districts. Consider party  $L$ . Its probability of winning a district  $k$  is  $\delta < d_k = \rho(V_C(z_L^k) - V_C(z_R^k)) - \lambda_k$ . Thus, party  $L$  allocates experts to districts in order to modify  $V_C(z_L^k)$  in the marginal districts. These are the district(s) such that, given the shock, winning the district(s) increases the probability of winning the election. For instance, if candidates are matched in every districts, we would have  $V_C(z_L^k) = V_C(z_R^k) \forall k$ , and party  $L$  probability of winning the election would be  $\delta < -\lambda_0$ , so that the interval of districts around  $\lambda_0$  would be pivotal.

Consider first the case that parties have enough experts to span the interval between  $\lambda_w$  and  $\lambda_0$ , i.e.,  $\mu > \eta/2$ . Consider an allocation  $\Lambda^L$  by party  $L$  which includes  $\Lambda_i^L$  s.t.  $[\lambda_w, \lambda_\Xi] \subset \Lambda_i^L$ . It is easy to see that an allocation  $\Lambda^R$  by party  $R$  which includes  $\Lambda_i^R$  s.t.  $[\lambda_\varepsilon, \lambda_W] \subset \Lambda_i^R$  is a best response to  $\Lambda^L$ . In fact, given  $\Lambda^L$ , by sending its experts to the interval  $[\lambda_\varepsilon, \lambda_W]$ , party  $R$  restores its probability of winning the election to 1/2. In particular, party  $R$  wins the election for  $\delta > 0$ , and  $L$  for  $\delta < 0$ . Allocating additional experts may modify the share of seats won by party  $R$ , but not its probability of winning the election. The same reasoning shows that  $\Lambda^L$  with  $\Lambda_i^L$  s.t.  $[\lambda_w, \lambda_\Xi] \subset \Lambda_i^L$  is a best response to  $\Lambda^R$  with  $\Lambda_i^R$  s.t.  $[\lambda_\varepsilon, \lambda_W] \subset \Lambda_i^R$ . Hence, a pair of allocations  $\Lambda^L$ , including  $\Lambda_i^L$  s.t.  $[\lambda_w, \lambda_\Xi] \subset \Lambda_i^L$  and  $H(\Lambda^L) = \sum_i H(\Lambda_i^L) = \mu$ , and  $\Lambda^R$ , including  $\Lambda_i^R$  s.t.  $[\lambda_\varepsilon, \lambda_W] \subset \Lambda_i^R$  and  $H(\Lambda^R) = \sum_i H(\Lambda_i^R) = \mu$ , are a Nash equilibrium of the allocation game.

To prove than any equilibrium allocation  $\Lambda^L$  has to include  $\Lambda_i^L$  s.t.  $[\lambda_w, \lambda_\Xi] \subset \Lambda_i^L$ , consider first an allocation  $\widehat{\Lambda}^L$  with  $\widehat{\Lambda}_i^L = [\lambda_I^i, \lambda_{II}^i]$  s.t.  $0 > \lambda_I^i > \lambda_w$  and  $\lambda_{II}^i > \lambda_\Xi$ , and no other experts in  $[\lambda_w, \lambda_I]$ . Party- $R$  best response is to allocate its experts in  $[\lambda_w, \lambda_I] \cup [\lambda_0, \lambda_{II}]$ . Following this strategy, party  $R$  wins the election with a probability greater than 1/2, since for  $\delta = 0$  party  $R$  wins all districts with  $\lambda > 0$  (and hence 50%), but also the districts in  $[\lambda_w, \lambda_I]$ . Hence,  $\widehat{\Lambda}^L$  cannot be part of an equilibrium since simply matching the previous best response by party  $R$  would give party  $L$  50% probability of winning the election. Finally, it is trivial to show that an equilibrium allocation  $\Lambda^L$  has to include the interval  $[\lambda_\varepsilon, \lambda_\Xi]$ . Consider  $\widehat{\Lambda}^L$  with  $\widehat{\Lambda}_i^L = [\lambda_I^i, \lambda_{II}^i] \in [\lambda_w, \lambda_\varepsilon]$  and  $\widehat{\Lambda}_j^L = [\lambda_I^j, \lambda_{II}^j] \in [\lambda_\Xi, \lambda_W]$ . Party- $R$  best response would be  $\Lambda^R$  such that  $\Lambda_i^R = [\lambda_\varepsilon, \lambda_W]$ , which yields party  $R$  a winning probability greater than 1/2. Hence,  $\widehat{\Lambda}^L$  cannot be part of an equilibrium.

For  $\mu \leq \eta/2$ , suppose that party  $L$  allocates its experts to  $[\lambda_0, \lambda_B]$ . What is party- $R$  best response? To re-establish its probability of winning the election to 1/2, party  $R$  can send its experts to  $[\lambda_b, \lambda_0]$ . As displayed in figure 5, party  $L$  wins the election for

$\delta < \max[-\lambda_B, -\lambda_b - W]$ , party  $R$  for  $\delta > \min[-\lambda_b, -\lambda_B + W]$ , and the election is tied for  $\delta \in [-\lambda_B, -\lambda_b]$ . Finally, notice that party  $R$  cannot increase its probability of winning the election above  $1/2$  by allocation experts in other districts (see figure 5). Hence, party- $L$  allocation in  $[\lambda_0, \lambda_B]$  and party- $R$  allocation in  $[\lambda_b, \lambda_0]$  is an equilibrium.

To prove that no other equilibrium allocation exists, first notice that allocating experts outside the interval  $[\lambda_w, \lambda_W]$  is never part of an equilibrium, since it does not modify the probability of winning election, which can instead be achieved by allocating experts in this interval. Consider party- $L$  allocation  $\Lambda^L = [\lambda_b, \lambda_0]$ . Party- $R$  best response would be to allocate experts  $[\lambda_w, \lambda_b]$ , which would yield party  $R$  a winning probability above  $1/2$ , since for  $\delta = 0$  party  $R$  would win in districts with  $\lambda > 0$  and in  $[\lambda_w, \lambda_b]$ . The same reasoning applies to any  $\widehat{\Lambda}^L = [\lambda_I, \lambda_{II}]$  s.t.  $\lambda_I \in [\lambda_w, \lambda_0)$ ,  $\lambda_{II} \in [\lambda_w, \lambda_b)$  and  $G(\lambda_{II}) - G(\lambda_I) = \mu$ . And to  $\widehat{\Lambda}^L = [\lambda_I, \lambda_W]$  and  $G(\lambda_W) - G(\lambda_I) = \mu$ .

### Proof of Corollary 1

First, simply notice that by Proposition 1 for  $\mu > \eta/2$  the share of experts in the interval  $[\lambda_\varepsilon, \lambda_\Xi]$  is 100%. Second, notice that for  $\mu \leq \eta/2$ , given the equilibrium allocations described in Proposition 1, the share of experts in the interval  $[\lambda_\varepsilon, \lambda_\Xi]$  could be equal to 50% when only the experts of the winning party are elected. Then, the share of experts elected in  $[\lambda, \lambda_\varepsilon] \cup [\lambda_\Xi, -\lambda] \forall \lambda < \lambda_\varepsilon$  is (weakly) less than 50% and so is the share of elected experts.

# Tables and Figures

Table 1: Patterns of political victory in single-member districts

Pattern	Obs.	Percent
Left-Left-Left	179	25.39
Right-Left-Left	55	7.80
Left-Right-Left	12	1.70
Right-Right-Left	9	1.28
Left-Left-Right	42	5.96
Right-Left-Right	117	16.60
Left-Right-Right	25	3.55
Right-Right-Right	243	34.47
Other	23	3.26
Total	705	100.00

Notes. *Left* stands for victory of the center-left coalition; *Right* stands for victory of the center-right coalition; *Other* means victory of at least one third-coalition candidate. The first, second, and third term in each pattern refer to the XII, XIII, and XIV legislative term, respectively.

Table 2: Swing districts according to geographic location

	No swing (percent)	Swing (percent)
North West	70.49	29.51
North East	77.91	22.09
Center	78.83	21.17
South	65.14	34.86
Islands	69.75	30.25
Total	72.06	27.94

Notes. *Swing* is equal to one if the winner belongs to a different coalition with respect to the incumbent. ISTAT geographic classification. Legislative terms XIII and XIV; 1,410 districts.

Table 3: Swing districts according to the lagged margin of victory

	No swing (percent)	Swing (percent)
<i>Margin of victory</i>		
0-5	59.31	40.69
5-10	56.12	43.88
10-15	72.31	27.69
15-20	85.21	14.79
20-25	87.79	12.21
25-30	93.62	6.38
>30	97.35	2.65
<i>Safe1</i>		
No	59.31	40.69
Yes	77.16	22.84
<i>Safe2</i>		
No	57.96	42.04
Yes	85.83	14.17
<i>Safe3</i>		
No	69.87	30.13
Yes	75.22	24.78
Total	72.06	27.94

Notes. *Swing* is equal to one if the winner belongs to a different coalition with respect to the incumbent. *Margin of victory* is the lagged margin of victory in the single-member district. *Safe1* is equal to one if the lagged margin is greater than 5 percentage points. *Safe2* is equal to one if the lagged margin is greater than 10 percentage points. *Safe3* is equal to one if  $(1 - L - R)/|L - R| < 1$ , where  $L$  ( $R$ ) captures the expected share of voters for the center-left (center-right) coalition, estimated by means of ideological votes at the previous European elections. Legislative terms XIII and XIV; 1,410 districts.



Table 4: Ex-ante characteristics of the members of parliament

	<i>Safe2</i>		Difference	-diff95%	+diff95%
	No	Yes			
Male	0.928	0.906	0.022	-0.007	0.051
Age	51.416	50.728	0.688	-0.289	1.665
Married	0.824	0.791	0.033	-0.009	0.074
Years of schooling	16.103	15.754	0.349	0.132	0.567
Freshman	0.458	0.387	0.071	0.019	0.122
Incumbent	0.277	0.351	-0.074	-0.122	-0.025
Parliament appointment	0.098	0.151	-0.054	-0.088	-0.019
Govt. appointment	0.065	0.111	-0.046	-0.076	-0.017
Local govt. experience	0.608	0.558	0.050	-0.001	0.102
Preelection income	0.113	0.083	0.029	0.005	0.053
Lawyer	0.164	0.132	0.032	-0.006	0.069
Party officer	0.053	0.090	-0.037	-0.064	-0.010
Teacher	0.088	0.077	0.011	-0.018	0.040
Clerk	0.029	0.051	-0.022	-0.043	-0.001
Physician	0.094	0.061	0.032	0.004	0.061
Entrepreneur	0.091	0.095	-0.005	-0.035	0.026
Self employed	0.092	0.098	-0.006	-0.037	0.025
Executive	0.089	0.097	-0.008	-0.038	0.023
Professor	0.091	0.118	-0.027	-0.060	0.005
Bureaucrat	0.075	0.064	0.011	-0.016	0.037
Union representative	0.023	0.023	0.001	-0.015	0.016
Journalist	0.069	0.064	0.005	-0.022	0.031

Notes. *Safe2* is equal to one if the lagged margin of victory is greater than 10 percentage points. *-diff95%* and *+diff95%* represent the lower and upper bound of the 95% confidence interval of *Difference*, respectively. All variables are dummies, except *Age*, *Years of schooling*, and *Preelection income* (in million of euros, 2004 prices). *Freshman* means that the previous parliamentary tenure is zero. *Parliament appointment* captures whether the politician has previously been president or vice president of the parliament, or of a single committee. *Government appointment* captures whether the politician has previously been minister or vice minister. *Local Government Experience* stands for previous institutional experience at the local level (e.g., mayor). *Preelection income* is the total taxable income in the year before election (freshmen only). Job dummies refer to the preelection occupation and the omitted category includes blue collars and students. Legislative terms XIII and XIV; 1,307 observations.

Table 5: Absences and appointments of the members of parliament

	<i>Safe2</i>		Difference	-diff95%	+diff95%
	No	Yes			
Absenteeism rate:					
– whole term	0.228	0.363	-0.135	-0.162	-0.109
– last year	0.206	0.264	-0.059	-0.086	-0.031
Future parl. appointment	0.151	0.151	0.000	-0.041	0.042
Future govt. appointment	0.085	0.038	0.047	0.022	0.072

Notes. *Safe2* is equal to one if the lagged margin of victory is greater than 10 percentage points. *-diff95%* and *+diff95%* represent the lower and upper bound of the 95% confidence interval of *Difference*, respectively. *Absenteeism rate* is the percentage of votes missed without any legitimate reason. *Future parliament appointment* captures whether the politician becomes president or vice president of the parliament, or of a single committee, after the election. *Future government appointment* captures whether the politician becomes minister or vice minister after the election. Legislative terms XIII and XIV; 1,307 observations.

Table 6: The impact of political competition on political selection

	All sample			No incumbents			Freshmen only					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	<i>Safe1</i>	<i>Safe2</i>	<i>MV</i>	<i>Safe3</i>	<i>Safe1</i>	<i>Safe2</i>	<i>MV</i>	<i>Safe3</i>	<i>Safe1</i>	<i>Safe2</i>	<i>MV</i>	<i>Safe3</i>
Male	-0.059 [0.045]	-0.017 [0.056]	-2.245 [1.705]	0.093** [0.047]	-0.078 [0.053]	0.034 [0.065]	-0.927 [1.549]	0.114** [0.049]	-0.042 [0.080]	0.123 [0.093]	1.269 [2.085]	0.132** [0.064]
Age	-0.001 [0.001]	-0.002 [0.002]	-0.093** [0.038]	-0.001 [0.001]	-0.000 [0.002]	-0.003 [0.002]	-0.108*** [0.041]	-0.001 [0.001]	-0.001 [0.002]	-0.000 [0.003]	-0.086* [0.051]	-0.002 [0.002]
Married	-0.035 [0.032]	0.012 [0.039]	-0.222 [0.931]	-0.078*** [0.029]	-0.069* [0.039]	-0.006 [0.046]	-0.999 [1.008]	-0.076** [0.031]	-0.103** [0.050]	-0.039 [0.064]	-1.512 [1.395]	-0.070 [0.043]
Years of schooling	-0.012 [0.008]	-0.010 [0.009]	-0.189 [0.208]	-0.014* [0.007]	-0.026*** [0.010]	-0.016 [0.011]	-0.487** [0.242]	-0.017** [0.008]	-0.027** [0.014]	-0.022 [0.015]	-0.600* [0.314]	-0.016 [0.010]
Parl. appointment	0.028 [0.039]	0.110** [0.047]	3.451*** [1.204]	-0.054 [0.041]	0.030 [0.057]	0.083 [0.066]	2.960* [1.552]	-0.044 [0.056]				
Govt. appointment	0.081** [0.041]	0.109** [0.052]	0.814 [1.117]	-0.150*** [0.050]	-0.007 [0.065]	0.046 [0.073]	-0.261 [1.430]	-0.122** [0.061]	0.051 [0.152]	0.175 [0.165]	1.956 [3.444]	-0.262* [0.146]
Local govt. experience	-0.015 [0.026]	-0.034 [0.030]	-0.859 [0.699]	-0.056** [0.025]	-0.068** [0.033]	-0.097*** [0.037]	-2.483*** [0.772]	-0.060** [0.027]	-0.051 [0.043]	-0.112** [0.050]	-2.378** [0.988]	-0.109*** [0.034]
Preelection income									-0.244 [0.179]	-0.840*** [0.260]	-6.830*** [2.583]	0.025 [0.024]
Job fixed effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Region fixed effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Obs.	1,307	1,307	1,307	1,977	896	896	896	1,566	531	531	531	978

Notes. If *Safe1*, *Safe2*, or *Safe3* as dependent variables: Probit estimation (marginal effects reported). If *MV* as dependent variable: OLS estimation. *MV* is the lagged margin of victory in the single-member district (available for legislative terms XIII and XIV). *Safe1* is equal to one if *MV* is greater than 5 percentage points. *Safe2* is equal to one if *MV* is greater than 10 percentage points. *Safe3* is equal to one if  $(1 - L - R)/|L - R| < 1$ , where *L* (*R*) captures the expected share of voters for the center-left (center-right) coalition, estimated by means of ideological votes at the European elections (available for legislative terms XII, XIII, and XIV). Job fixed effects refer to the preelection occupation (see Table 4). Region fixed effects refer to ISTAT geographic classification (see Table 2). Robust standard errors clustered at the individual level in brackets. Significance at the 10% level is represented by \*, at the 5% level by \*\*, and at the 1% level by \*\*\*.

Table 7: Partisan differences in political selection, all versus close races

	All sample		Polynomial in $MVR \in [-25, +25]$	
	Difference <i>Right vs. Left</i>	Std.Err.	Discontinuity <i>Right vs. Left</i>	Std.Err.
Male	0.059***	[0.013]	0.009	[0.042]
Age	-0.804*	[0.427]	-0.643	[1.549]
Married	0.006	[0.019]	0.063	[0.063]
Years of schooling	0.327***	[0.095]	0.13	[0.290]
Freshman	0.106***	[0.023]	-0.013	[0.076]
Parl. appointment	-0.039***	[0.013]	0.008	[0.043]
Govt. appointment	-0.016	[0.011]	0.000	[0.034]
Local govt. experience	-0.039*	[0.023]	0.033	[0.079]
Preelection Income	0.056	[0.035]	0.011	[0.048]
Lawyer	0.119***	[0.016]	0.019	[0.060]
Politician	-0.125***	[0.011]	-0.076**	[0.034]
Teacher	-0.059***	[0.013]	-0.153***	[0.053]
Clerk	-0.054***	[0.009]	0.012	[0.028]
Physician	0.025*	[0.013]	0.06	[0.048]
Entrepreneur	0.137***	[0.013]	0.077*	[0.040]
Selfemp	0.091***	[0.014]	0.111**	[0.048]
Manager	0.022*	[0.012]	0.077*	[0.041]
Professor	-0.092***	[0.014]	-0.089*	[0.046]
Bureaucrat	-0.002	[0.011]	-0.003	[0.037]
Union representative	-0.033***	[0.006]	-0.029	[0.018]
Journalist	-0.005	[0.011]	0.033	[0.032]
Obs.	1,919		1,656	

Notes. *Difference* is the difference between the average characteristics of center-right politicians and the average characteristics of center-left politicians in all districts. *Discontinuity* is the estimated difference for close races, i.e., the discontinuity at zero of a split  $3^{rd}$ -order polynomial in the margin of victory of the center-right coalition ( $MVR$ ), fitted over the interval  $MVR \in [-25, +25]$ . Standard errors are in brackets. Significance at the 10% level is represented by \*, at the 5% level by \*\*, and at the 1% level by \*\*\*. All dependent variables are dummies, except *Age*, *Years of schooling*, and *Preelection income* (in million of euros, 2004 prices). *Freshman* means that the previous parliamentary tenure is zero. *Parliament appointment* captures whether the politician has previously been president or vice president of the parliament, or of a single committee. *Government appointment* captures whether the politician has previously been minister or vice minister. *Local Government Experience* stands for previous institutional experience at the local level (e.g., mayor). *Preelection income* is the total taxable income in the year before election (freshmen only). Job dummies refer to the preelection occupation and the omitted category includes blue collars and students. Legislative terms XII, XIII, and XIV.

Table 8: The impact of political competition on the absenteeism rate

	All sample				No incumbents				Freshmen only			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
<i>Safe1</i>	0.048*** [0.012]				0.050*** [0.014]				0.055*** [0.019]			
<i>Safe2</i>		0.062*** [0.013]				0.061*** [0.015]				0.053** [0.021]		
<i>MV</i>			0.003*** [0.001]				0.003*** [0.001]				0.003*** [0.001]	
<i>Safe3</i>				0.057*** [0.011]				0.028** [0.014]				0.072*** [0.014]
Majority coalition	-0.314*** [0.012]	-0.304*** [0.013]	-0.305*** [0.013]	-0.222*** [0.010]	-0.322*** [0.015]	-0.314*** [0.016]	-0.313*** [0.016]	-0.335*** [0.015]	-0.276*** [0.020]	-0.272*** [0.021]	-0.263*** [0.021]	-0.178*** [0.016]
Male	0.026 [0.019]	0.023 [0.019]	0.027 [0.018]	0.026 [0.017]	0.063*** [0.023]	0.056** [0.023]	0.059*** [0.023]	0.061*** [0.023]	0.060* [0.031]	0.051 [0.032]	0.052* [0.031]	0.035 [0.023]
Age	0.000 [0.001]	0.000 [0.001]	0.000 [0.001]	-0.000 [0.001]	-0.000 [0.001]	-0.000 [0.001]	-0.000 [0.001]	-0.000 [0.001]	-0.001 [0.001]	-0.001 [0.001]	-0.001 [0.001]	-0.002** [0.001]
Married	0.005 [0.014]	0.002 [0.014]	0.004 [0.014]	0.003 [0.012]	-0.003 [0.016]	-0.006 [0.016]	-0.003 [0.016]	-0.004 [0.016]	-0.017 [0.022]	-0.020 [0.023]	-0.016 [0.022]	-0.002 [0.018]
Years of schooling	0.005* [0.003]	0.005* [0.003]	0.005* [0.003]	0.002 [0.003]	0.009** [0.004]	0.009** [0.004]	0.009** [0.004]	0.008** [0.004]	0.004 [0.005]	0.004 [0.005]	0.004 [0.005]	0.001 [0.004]
Parl. appointment	0.035** [0.016]	0.035** [0.015]	0.037** [0.015]	0.032** [0.015]	0.048** [0.019]	0.047** [0.019]	0.049** [0.020]	0.044** [0.019]	0.028 [0.039]	0.024 [0.039]	0.031 [0.039]	0.079*** [0.029]
Govt. appointment	0.017 [0.016]	0.021 [0.017]	0.018 [0.016]	0.048** [0.020]	0.040* [0.022]	0.048** [0.023]	0.041* [0.023]	0.040* [0.022]	0.025 [0.041]	0.032 [0.040]	0.024 [0.040]	0.079** [0.037]
Local govt. exp.	-0.025** [0.012]	-0.024** [0.012]	-0.024** [0.012]	-0.028*** [0.011]	-0.043*** [0.014]	-0.042*** [0.014]	-0.041*** [0.014]	-0.044*** [0.014]	-0.080*** [0.018]	-0.078*** [0.018]	-0.076*** [0.018]	-0.053*** [0.014]
Preelect. income												
Job fixed effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Region fixed effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Obs.	1,307	1,307	1,307	1,977	896	896	896	896	531	531	531	978

Notes. Dependent variable: absenteeism rate. OLS estimations. *MV* is the lagged margin of victory in the single-member district (available for legislative terms XIII and XIV). *Safe1* is equal to one if *MV* is greater than 5 percentage points. *Safe2* is equal to one if *MV* is greater than 10 percentage points. *Safe3* is equal to one if  $(1 - L - R)/(L - R) < 1$ , where  $L$  ( $R$ ) captures the expected share of voters for the center-left (center-right) coalition, estimated by means of ideological votes at the European elections (available for legislative terms XII, XIII, and XIV). Job fixed effects refer to the preelection occupation (see Table 4). Region fixed effects refer to ISTAT geographic classification (see Table 2). Robust standard errors clustered at the individual level in brackets. Significance at the 10% level is represented by \*, at the 5% level by \*\*, and at the 1% level by \*\*\*.

Table 9: Political competition and absences in the last year of the term

	(1)	(2)	(3)	(4)	(5)
	All sample	<i>Safe3-next</i> =0	<i>Safe3-next</i> =1	<i>Safe3</i> =0	<i>Safe3</i> =1
<i>Safe3</i>	0.087*** [0.016]	0.082*** [0.021]	0.063* [0.034]		
<i>Safe3-next</i>	0.011 [0.015]			-0.039 [0.027]	0.041** [0.020]
Majority coalition	-0.042*** [0.014]	-0.117*** [0.022]	0.036 [0.022]	-0.107*** [0.022]	-0.008 [0.019]
Male	-0.002 [0.027]	-0.008 [0.031]	0.006 [0.037]	-0.002 [0.038]	0.002 [0.037]
Age	-0.001 [0.001]	0.000 [0.001]	-0.002 [0.001]	0.001 [0.002]	-0.002 [0.001]
Married	0.015 [0.018]	-0.003 [0.021]	0.040 [0.025]	-0.046* [0.025]	0.043* [0.022]
Years of schooling	0.000 [0.005]	0.007 [0.006]	-0.007 [0.007]	0.010 [0.006]	-0.005 [0.006]
Parl. appointment	0.029 [0.025]	-0.022 [0.029]	0.111*** [0.042]	-0.018 [0.037]	0.041 [0.032]
Govt. appointment	0.080** [0.034]	0.069* [0.037]	0.118* [0.061]	0.089** [0.045]	0.071 [0.044]
Local govt. experience	-0.009 [0.015]	-0.017 [0.019]	0.014 [0.023]	-0.047** [0.023]	0.015 [0.020]
Job fixed effects	yes	yes	yes	yes	
Region fixed effects	yes	yes	yes	yes	
Obs.	902	525	377	326	576

Notes. Dependent variable: absenteeism rate in the last year of the legislative term. OLS estimations. House of Representatives only. *Safe3* is equal to one if  $(1 - L - R)/|L - R| < 1$ , where  $L$  ( $R$ ) captures the expected share of voters for the center-left (center-right) coalition, estimated by means of the votes at the previous European elections (available for legislative terms XII, XIII, and XIV). *Safe3-next* is calculated in the same way but keeping into account the variations in national political coalitions at the following election, in order to capture reelection incentives. Job fixed effects refer to the preelection occupation (see Table 4). Region fixed effects refer to ISTAT geographic classification (see Table 2). Robust standard errors clustered at the individual level in brackets. Significance at the 10% level is represented by \*, at the 5% level by \*\*, and at the 1% level by \*\*\*.

Figure 1: Distribution of districts and probability of winning the election

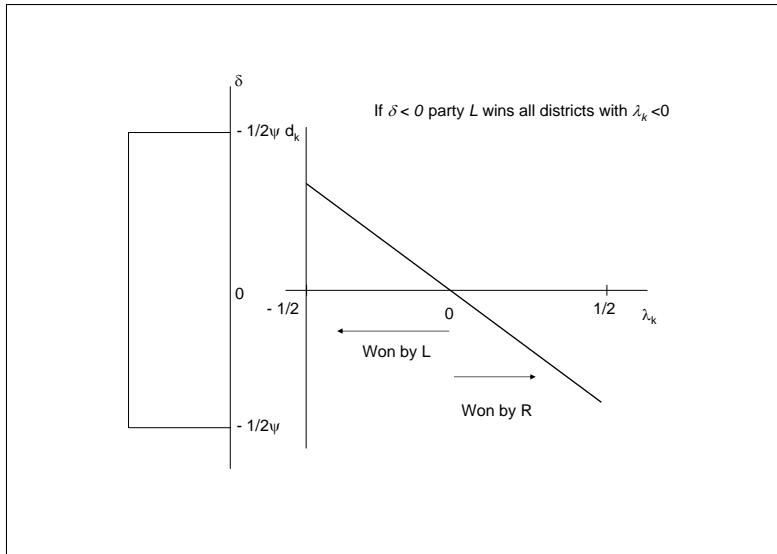


Figure 2: Allocation of experts and probability of winning, pivotal districts

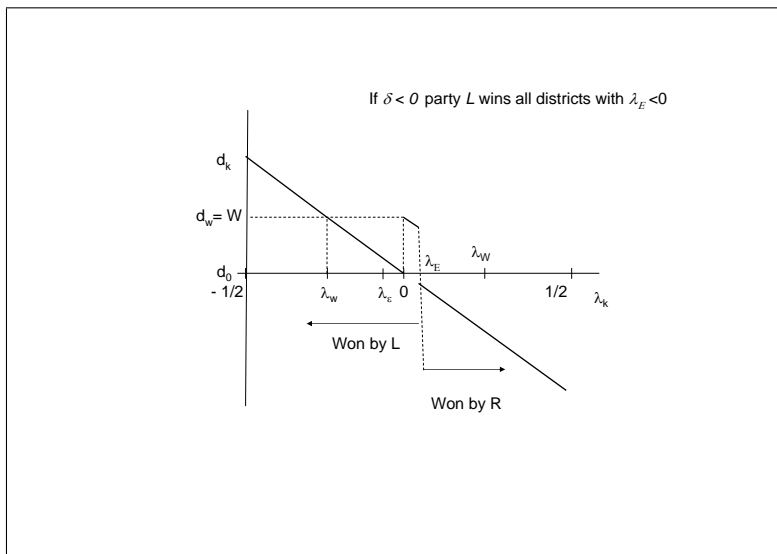


Figure 3: Allocation of experts and probability of winning if  $\mu > \eta/2$ , first case

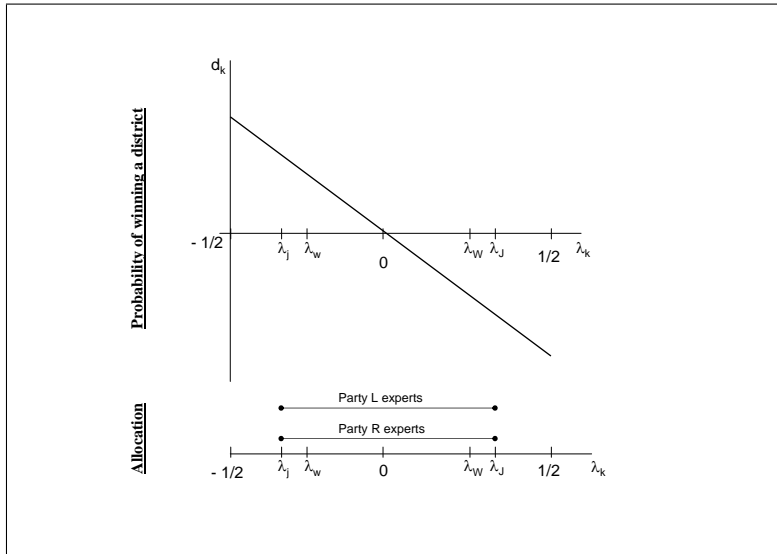


Figure 4: Allocation of experts and probability of winning if  $\mu > \eta/2$ , second case

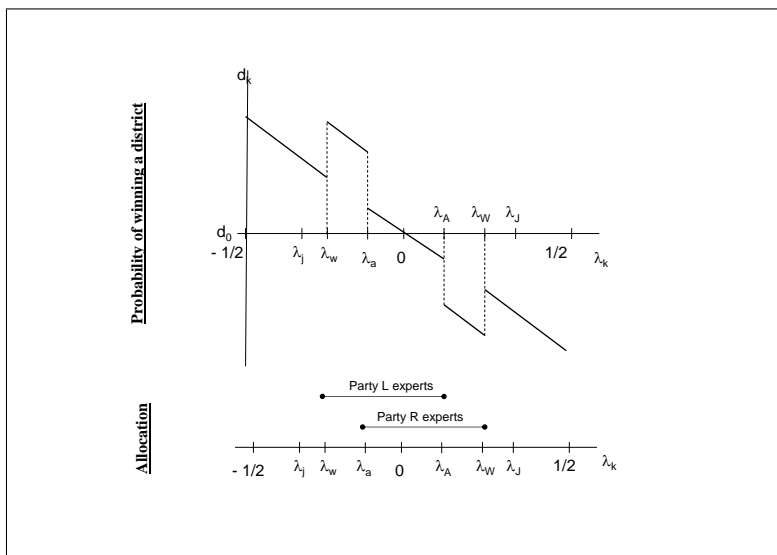




Figure 5: Allocation of experts and probability of winning if  $\mu < \eta/2$

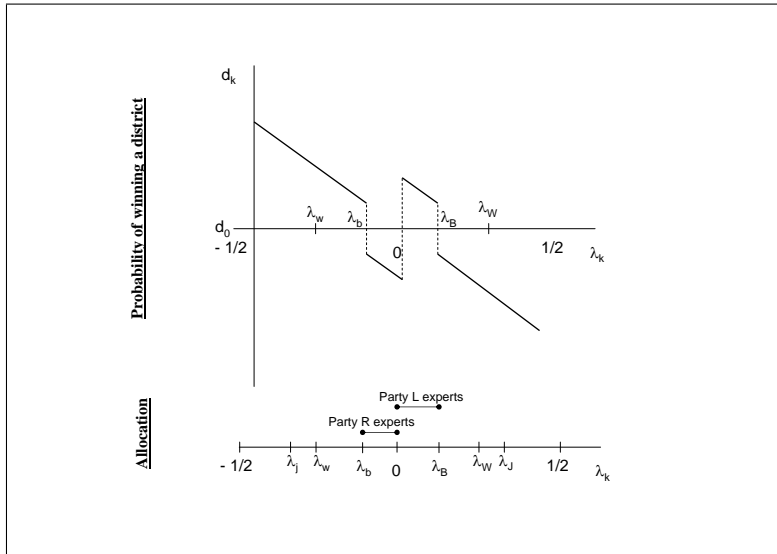
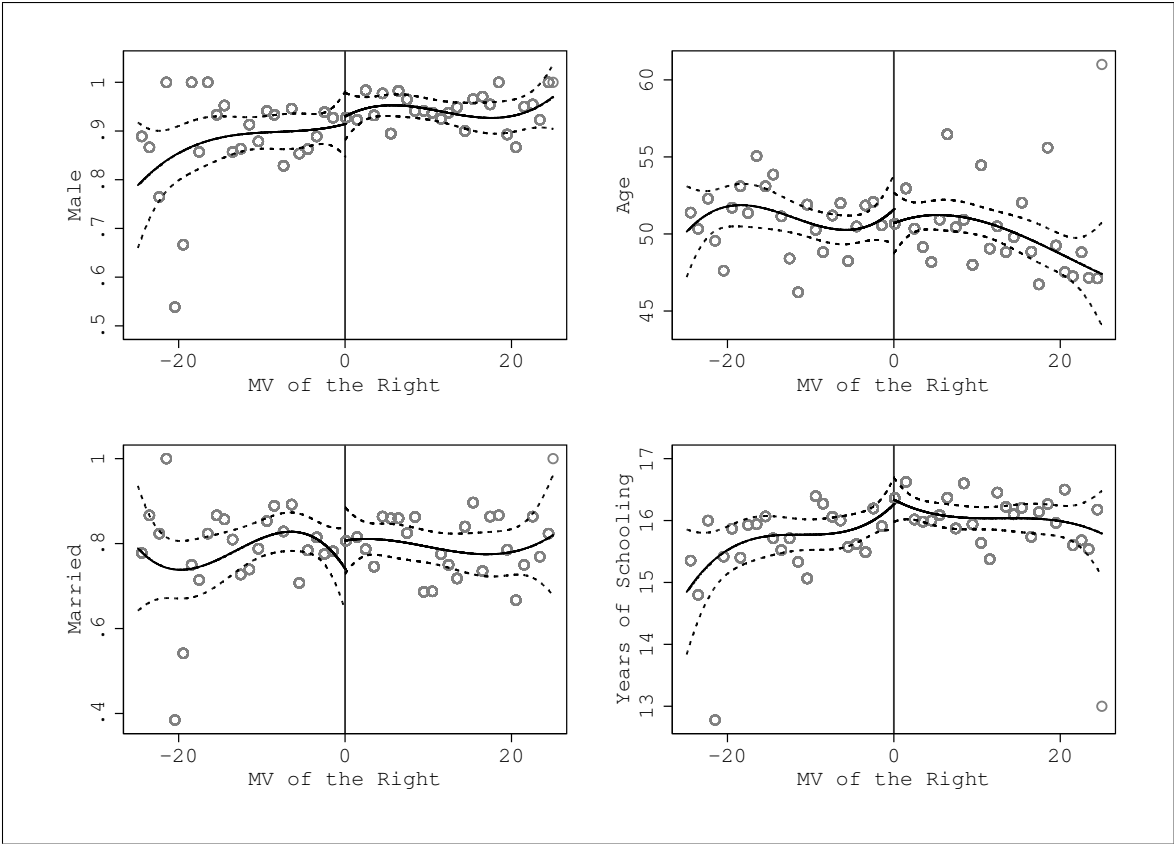
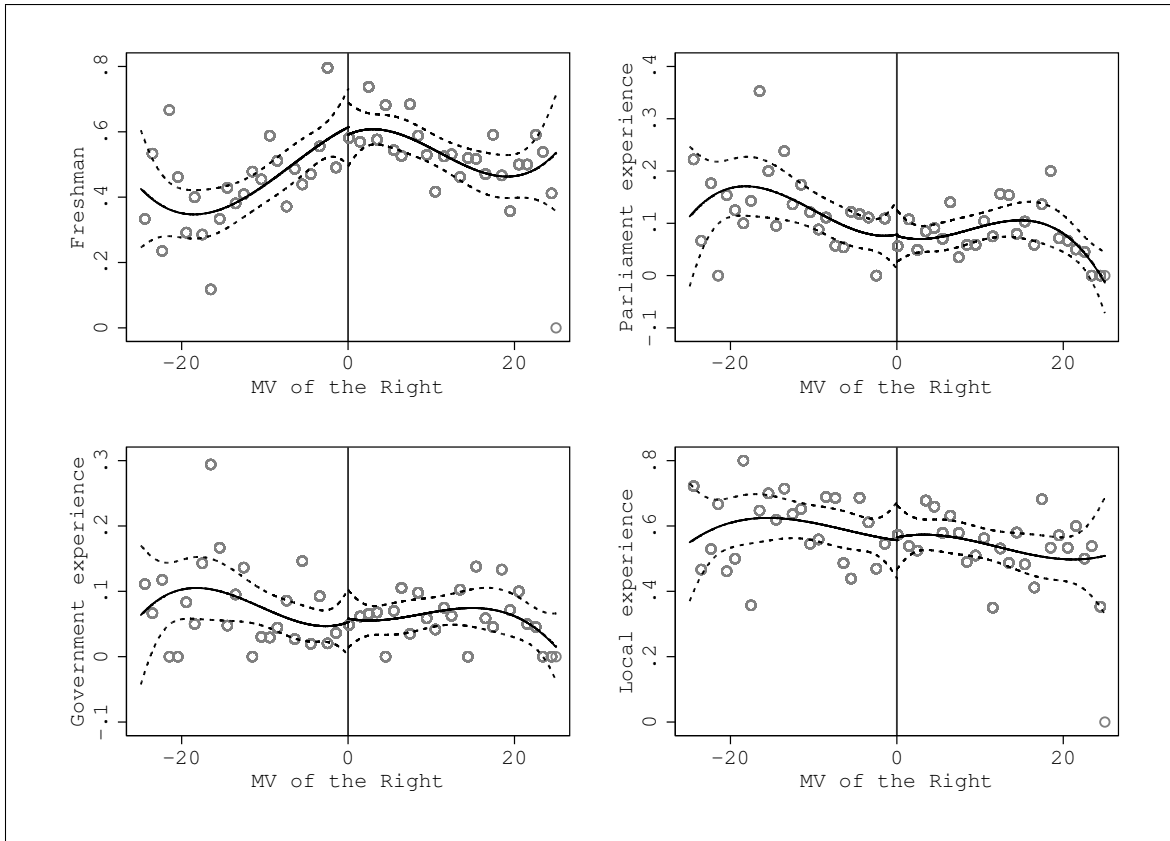


Figure 6: Convergence of demographic characteristics in close races



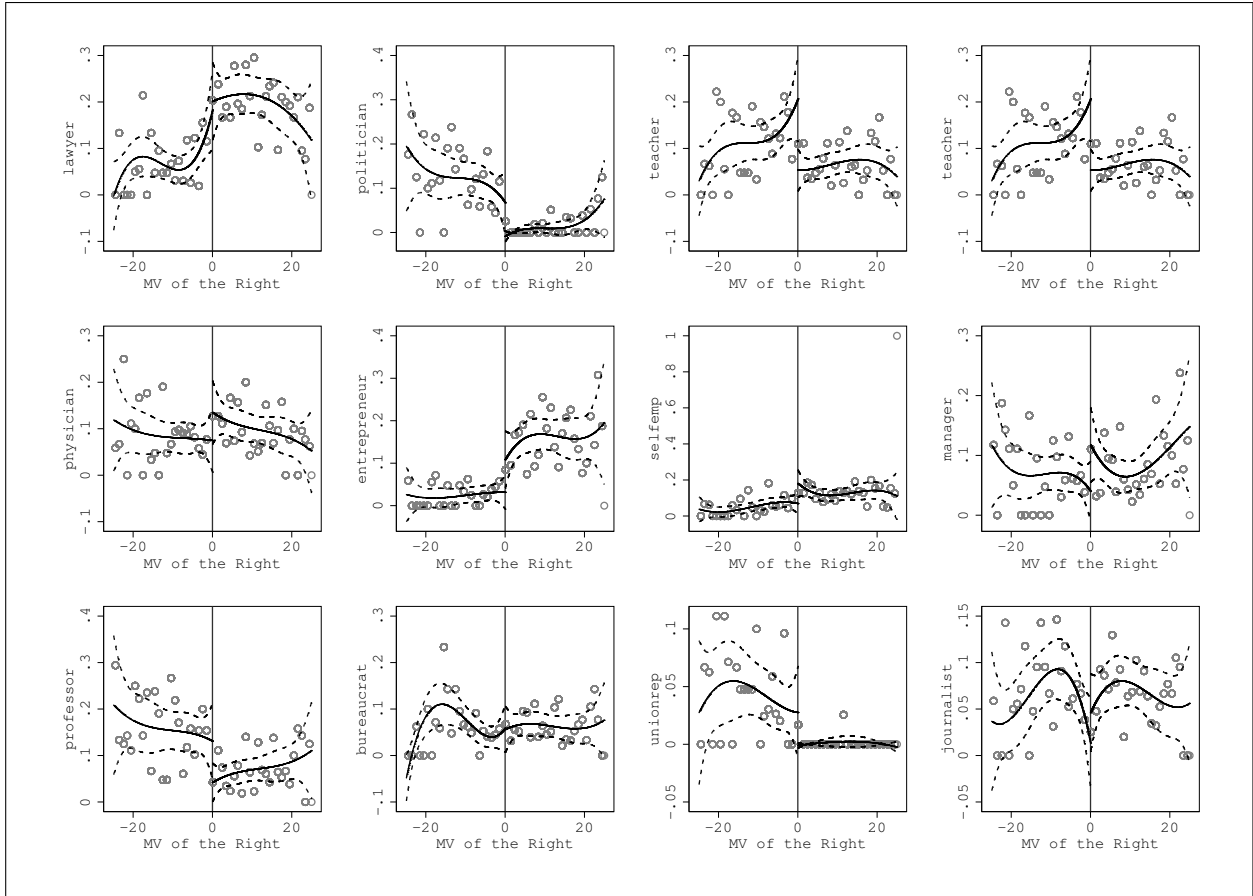
Notes. The solid line is a split 3<sup>rd</sup>-order polynomial in the margin of victory of the center-right coalition (*MVR*), fitted over the interval  $MVR \in [-25, +25]$ ; see also Table 7. The dashed lines are the 95% confidence interval of the polynomial. Scatter points are averaged over 1-unit intervals; points to the left (right) of the vertical line at zero refer to left-wing (right-wing) politicians. Legislative terms XII, XIII, and XIV; 1,656 observations.

Figure 7: Convergence of political experience in close races



Notes. The solid line is a split 3<sup>rd</sup>-order polynomial in the margin of victory of the center-right coalition ( $MVR$ ), fitted over the interval  $MVR \in [-25, +25]$ ; see also Table 7. The dashed lines are the 95% confidence interval of the polynomial. Scatter points are averaged over 1-unit intervals; points to the left (right) of the vertical line at zero refer to left-wing (right-wing) politicians. Legislative terms XII, XIII, and XIV; 1,656 observations.

Figure 8: Convergence of market experience in close races



Notes. The solid line is a split  $3^{rd}$ -order polynomial in the margin of victory of the center-right coalition ( $MVR$ ), fitted over the interval  $MVR \in [-25, +25]$ ; see also Table 7. The dashed lines are the 95% confidence interval of the polynomial. Scatter points are averaged over 1-unit intervals; points to the left (right) of the vertical line at zero refer to left-wing (right-wing) politicians. Legislative terms XII, XIII, and XIV; 1,656 observations.