

The Double Dividend of Political Competition*

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Abstract

Does electoral competition lead to a better selection of politicians while providing also stronger reelection incentives to incumbents? To address the existence of this double dividend of political competition, we introduce a theoretical model in which ideological parties have to select political candidates between party loyalists and experts, and have to allocate them into the electoral districts. Non-ideological voters care about national and local policies and strongly prefer experts, who are better able to respond to the shocks to the economy. Parties hence face a trade-off between more party loyalty and more expertise and hence a higher probability of winning the election. We show that competition disciplines political parties to select more experts and to allocate them in more contestable districts. Expert candidates serve also as a commitment device of the future policies. The theoretical model also suggests that re-election incentives induce the incumbents in contestable districts to acquire costly information about the economic shock and to exert more effort. This effect is particularly strong for the low-quality incumbents. The empirical evidence on Italian political elections confirms the main predictions of the model. According to different indicators of contestability of the districts, we find that measures of ex-ante quality--such as years of schooling, previous market income, and local government experience--decrease the probability of running in a safe district. Furthermore, politicians elected in safe districts carry out fewer bills for their constituency and make more absences in parliament. To disentangle incentives from selection, we exploit exogenous variations in national alliances, which altered the degree of contestability of some districts. We find that incentives matter only for low-quality candidates: if a safe district turns contestable, politicians tend to exert more effort. But the opposite does not hold: politicians elected in contestable districts display high productivity even if their district turns safe.

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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 Margareth Thatcher or the US a New Deal without F.D. Roosevelt? How crucial was Mao in China's Great Leap Forward or Fidel Castro in Cuba's recent history? A recent literature has recongnized the crucial relevance of the identity of the leading politicians in taking policy decisions and ultimately in shaping the development of the entire nation (e.g., see Jones and Olken, 2005). Similar considerations of the crucial role played by some leading figures (i.e., 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 selection and recruitment? In this paper, we examine the double effect of political competition on the selection of political candidates and on the incentives that they face once elected. Ex ante, competition for electoral support by the voters requires the parties running for election to select their political candidates accurately in order to improve their chances of winning the election. Ex-post, the existence of re-electoral concerns allows political competition to shape the incentives for the incumbent politicians. Can we thus agree with Stigler (1972) that electoral competition is as quality enhancing for political candidates as economic competition is for goods and services? Should we be even more bold in arguing that there exists a double dividend of political competition in terms of better political selection and stronger political incentives?

To address these questions, we introduce a model of political selection in which two ideological parties run in a majoritarian system. Parties select political candidates and allocate them to different electoral districts. This selection and recruiting process is modeled as a party (leaders) decision, as opposed for instance to the political candidates' self-selection that occurs in citizen candidate models. Candidates differ ex-ante in their identity – namely in their ideology and quality. Quality is perfectly observable by the voters. Hence, good, i.e., high quality, politicians are highly valued by all non-ideological voters. Yet, good politicians come at a cost for the party since they are more independent in their policy decisions, while not being perfectly ideologically aligned to the party. Thus, a trade-off between loyalty and quality shapes the ex-ante selection and allocation decisions by the parties. In our environment, political competition is captured by the degree of contestability of each electoral

district. And parties choose to send their high quality politicians to the more contestable districts.

Political competition may affect the politicians behavior also ex-post, that is, after the election has taken place. In fact, the winning candidates will soon be concerned with their re-election probability. We model how these electoral incentives may modify their political decisions on whether to acquire costly information on the state of the economy and on how much costly effort to exert in order to counteract possible shocks. The main theoretical implication is that ex-post incentives seem particularly relevant for low-quality (loyal) politicians, who can be persuaded to exert more effort by the stronger reelection concerns present in the more contestable districts.

To test the prediction of our theoretical model on the existence of a double dividend of political competition on political selection and incentives, we use a recent dataset on all Italian members of parliament elected in majoritarian single-member districts from 1994 to 2006. Italy represents the perfect testing ground for our theoretical implications for several reasons. First, parties (leaders) have historically played a crucial role in the selection and recruitment of political candidates, as described in our theoretical model. Second, the selection and reelection incentives discussed in the paper are fully at work in the majoritarian system that has been in place in Italy from 1994 to 2006. Third, the instability of the party system during the transition period, which followed the season of judiciary scandals known as “Mani pulite” and the switch from a proportional to a majoritarian electoral rule, produced national changes in political alliances both in the right and left wing coalitions, which exogenously affected the contestability of some districts in different elections.

To measure the degree of political contestability of an electoral district, we construct two different indicators: the margin of victory in the same district in the previous political election; and the district-specific ratio of the number of swing voters over the difference between the ideological voters of the two main coalitions, which we estimate using electoral data from the previous European elections. Ex-ante quality by the politicians is instead captured by different measures, such as years of schooling, previous market income (controlling for the occupational type), and past experience in local governments. Consistently with our theoretical framework, we find evidence of an ex-ante selection effect of political competition: only when political competition is binding, political parties recur to high quality candidates.

To capture ex-post quality by the incumbents—corresponding to information and effort

level in our theoretical model—we consider two additional measures: share of bills presented by the incumbent that refer to its constituency and absenteeism rate in electronic votes. Our empirical evidence shows that politicians elected in safe districts carry out fewer bills for their constituency and display a higher absenteeism rate. While this is consistent with the existence of a second dividend of political competition—the ex-post accountability—this result could also be driven by the selection of better politicians, rather than by the reelection incentives. To disentangle the two channels, we exploit the (exogenous) changes in national coalitions, which had the effect of altering the degree of contestability of certain districts from an election to the next. Interestingly, we find that incentives matter only for low-quality candidates: that is, when a safe district turns contestable, incumbent politicians tend to exert more effort. But the opposite does not hold: politicians elected in contestable districts keep a high productivity even if their district turns safe.

Our paper is related to several strands of literature. Our model follows Besley’s (2005) recent assessment of the literature on political selection in providing a double role to the identity of the politicians. Due to their idiosyncratic preferences and skill levels, the selection of candidates amounts to a commitment on future policies. In fact, in our model parties delegate the future national and local policies to the candidates allocated in the party list. Hence, individual credibility (and preferences) may be used to counteract the party ideology. Yet, candidates differ also in their idiosyncratic quality, which in our model refers to their ability or expertise in problem solving.

Yet, the novelty of our approach is to concentrate on two crucial, yet not much studied, aspects: the role of the party in selecting politicians, and the role of political competition within electoral rules to promote selection. While there exists a growing literature on the selection of politicians (see Besley, 2005, for an early review), the focus has typically been on self-selection. Following the tradition of the citizen candidate model (see Besley and Coate, 1997, and Osborne and Slivinski, 1996), this literature has analyzed the determinants that bring individuals to enter the political market and to compete for election. A common theme has thus been how to attract “good” politicians. Caselli and Morelli (2004) argue that monetary rewards may have a role, as higher salaries tend to raise the average quality of the (self-selected) pool of politicians. Persson and Tabellini (2000) suggest that higher wages strengthen the reelection incentives thus inducing even low ability politicians to reduce their rents capturing and to provide higher performance. Besley (2004) acknowledges both the

discipline and the selection role by higher wages. However, this view that higher wages lead to higher quality of the politicians is not unanimously shared in the literature. For example, Mattozzi and Merlo (2008) argue that higher political remunerations lowers the average quality of citizens who choose to political careers, although it may help to retain high-ability incumbents in politics (see also Diermeier, Keane and Merlo, 2005). An additional argument by Besley (2005) has it that if public service is a strong motivations for being a politician, a higher remuneration lowers the relative attractiveness of politics for public-spirited individuals. Gagliarducci, Nannicini, and Naticchioni (2008) suggests instead allowing for outside income while in parliament may lead to positive sorting. Gagliarducci and Nannicini (2008) and Ferraz and Finan (2008) use a quasi-experimental setup and find that a higher remuneration can attract more skilled individuals into politics, enhancing both political selection and performance.

Our focus is instead on the role of the party in selecting candidates, whereas we largely abstract from career consideration by individual politicians, with the notable exception of section 2.7, where we analyze the effect of re-election incentives on the incumbent's political behavior. The choice of a political candidate by the party has been analyzed among others by Carrillo and Mariotti (2001) and Mattozzi and Merlo (2007), who focus respectively on the role of asymmetric information between party and voters on the candidate quality and on the competition between parties and lobbying firms in hiring political candidates.

The literature on the effects of political competition is equally large, but typically analyzes the impact of competition on policy outcome. For instance, Besley, Persson, and Sturm (2007) consider an exogenous variation in the degree political competition in some US states to find robust evidence that political competition has quantitatively important effects on state income growth, state policies, and the quality of Governors. Stromberg (2008) instead 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 states' number of electoral votes and forecast uncertainty.

Finally, our theoretical model is close in spirit to Alesina (1988), since our parties are partizan and their policies do not converge¹. This is consistent with the empirical results in Lee, Moretti and Butler (2004), who stress the difficulty for parties to commit to future

¹Notice however that their decisions on the share of experts and loyalists and on where to allocate them will coincide.

policies. This commitment issue, that in our model is solved through the parties decision of delegating to experts and loyals in the party list and the role of the district hetherogeneity in the electoral bias relate to work by Besley (2007) and Besley and Preston (2007).

The paper proceeds as follows. Section 2 introduces our theoretical framework and derives the main results regarding the selection and allocation of candidates by the party and the information acquisition and effort decision by the candidates. Section 3 describes the data and the estimation strategy. Section 4 presents the empirical results and section 4 the final remarks. All the proofs are in the appendix.

2 The Model

Our model is populated by three types of players: voters, candidates and parties. Two parties run for election in a pure majoritarian system in which one representative is elected in each district. Parties have different preferences over the state of the economy, which depends on a shock and on the policy response. Since policies are set by the winning party, parties (leaders) seek to win the election and to implement a suitable policy. Before the election, parties have to select the candidates to be allocated in each district. Candidates can be party loyals or experts. They are selected from a large pool, so that parties are assumed not to be supply constrained, for instance in being able to recruit experts. The decisions of how many loyals and experts to include in the party list, and of where to allocate them carry important implications for the policies implemented by the winning party after the election. Voters care about national and local policies. They can be of three types: supporters of either party or centrist, i.e., not aligned to any party. We embed the voting decision of the centrist voters in a standard probabilistic voting model. Hence, besides the (national and local) economic policy, these centrist voters care about a popularity shock to the two parties, and have also an idiosyncratic ideological component towards the two parties.

2.1 Parties and Candidates

We consider two parties, L and R , with different preferences over the state of the economy, as defined respectively by the following two utility functions:

$$U_L(y_i) = -(y_i - x + 1)^2 \tag{1}$$

$$U_R(y_i) = -(y_i - x - 1)^2 \tag{2}$$

where x represents the shock to the economy, and y_i is the policy chosen by party i if elected. The shock to the economy is distributed over a support $x \in [-\frac{1}{2}, \frac{1}{2}]$. Parties have equal expectations about this shock, $E(x) = 0$, which has variance σ_x^2 . The realization of the shock to the economy takes place after the election. However, parties – that is to be intended as party leaders – are unable to infer the true realization of the shock to the economy.

The main role of the party (leaders) is to select the candidates to be included in the party list and to allocate them into the different electoral districts. These decisions determine the national and local policies chosen by the winning party, after the realization of the state of the economy.

Candidates can be of two types: party loyalists (L) or experts (E). Party loyalists share the same utility function of the party they belong to – namely, eq. 1 for party- L loyalists and eq. 2 for party- R loyalists. In absence of information about the shock to the economy, their most preferred policies would hence be $y_L^L = -1$ and $y_R^L = 1$. Also the experts can be close either to party L or R , but they are less aligned to the party than the loyalists. The preferences over the state of the economy of experts close to party L or R are respectively:

$$U_L^E(y_i) = -(y_i - x + \alpha)^2 \quad (3)$$

$$U_R^E(y_i) = -(y_i - x - \alpha)^2 \quad (4)$$

where $\alpha \in [0, 1]$ represents the individual characteristic of an expert. Hence, experts are more moderate than loyalists. In absence of information about the shock, type- α experts' most preferred policies would be $y_L^E = -\alpha$ and $y_R^E = \alpha$. Notice that in selecting their experts, parties are unable to identify their exact individual characteristic, α , which is drawn from a distribution with support $[0, 1]$.

Loyalists and experts differ also in their ability to acquire information about the shock to the economy, x . To learn about the true realization of the shock, experts have to pay a cost c_E and loyalists a cost c_L , with $c_E < c_L$. Once the shock has been observed, the winning candidate can choose to respond to the shock with a policy that will be implemented in her district. Setting a policy requires an amount of effort by the politician, which depends on their type and on the magnitude of the shock to be absorbed. The effort cost functions are summarized by

$$e(y_i^l) = \gamma_l (y_i^l + z_i^l)^2 \text{ where } z_i^l \in Z = \begin{bmatrix} \alpha & 1 \\ -\alpha & -1 \end{bmatrix} \quad (5)$$

with $i = \{L, R\}$ indexing the rows and $l = \{L, E\}$ the columns of Z ; and $\gamma_E < \gamma_L$. In other words, the winning candidate exerts no effort if he mechanically sets up her most preferred policy in absence of information on the shock, f.e., $y_L^E = -\alpha$ for a party- L expert and $y_L^L = -1$ for a loyal. However, if the winning candidate chooses to counteract the shock, and thus deviates from her bliss point in absence of information, he faces an effort cost, which is increasing in the (absolute) size of the adopted policy. This formulation captures the idea that drafting a policy that responds to a large economic crisis can be very difficult and costly, in economic and political terms.

The national policy adopted by the winning party after the realization of the shock to the economy, x , depends on the party list – and thus on the selection of the candidates. In fact, the national policy, y_i , represents a combination of the policies adopted by the winning candidates included in the party list. Call μ_i the share of experts included by party i in the electoral list – and hence allocated to the electoral districts, and $1 - \mu_i$ the share of party i loyalists. We assume that the national policy adopted by the winning party i is

$$y_i = \mu_i y_i^E + (1 - \mu_i) y_i^L. \quad (6)$$

This formulation captures the idea that – before the election – parties (leaders) select candidates to delegate them the future national policy, which will thus depend on the information acquisition and effort level that the winning candidates will choose to have. The relative influence of the two types of candidates on the national policy is fixed ex-ante by the party (leaders) with the decision² of how many experts to have in the party list, μ_i .

2.2 Voters

We consider three groups of voters. Voters in group L and R are supporters and always vote for party L and R . Voters in group C care about the state of the economy at the

²As it will become clear in section 2.6, the winning party has an incentive to renege ex post, that is, after the election, on this policy formation and to give more influence to the loyalists. Yet, after the election, the winning party (leaders) has, at least to some extent, lost its control on this issue, since (experts and loyalists) winning candidates now seat in the Parliament, and thus set the policy. Indeed, the winning party will feature more experts in the Parliament than in the party list. If the national policy is agreed upon in the Parliament, experts could thus claim more influence on these decisions. Alternatively, if policy decisions are taken by the government, which in turn needs the support of the Parliament, experts could use their overrepresentation to obtain more government positions, and thus more influence on the policy decisions. Here, we assume that experts keep their commitment to have an influence on the policy equal to their share in the party list, μ_i .

national and at a local level, that is, in their electoral district. Hence, political candidates play a double role for the voters. Besides affecting the national policy, they also provide constituency services, for instance by bringing the attention of the national government to local instances that affect their district. Group C voters' preferences are summarized by the following utility function:

$$V_C (y_i, y_i^l) = -\rho (y_i^l - x)^2 - (1 - \rho) (y_i - x)^2 \quad (7)$$

with $l = \{L, E\}$ and $i = \{L, R\}$, where y_i^l is the policy adopted by a type- l candidate of party i in the electoral district, y_i is the policy adopted by party i at national level and ρ measures the relative importance to the voters of the local versus the national state of the economy. These voters are thus *centrists*, as they have intermediate preferences over the state of the economy with respect to the two parties (see eq. 1 and 2).

Besides being centrist with respect to the state of the economy, these 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 viceversa. The distribution of ideology among centrist voters is assumed to be uniform, in particular, $s \sim U[-1/2, 1/2]$. The centrist voters' decision is also affected by a common popularity shock to the parties that occurs before the election and that may modify the perception, δ , 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, it is customary in this class of probabilistic voting models to assume that δ 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 expected utility obtained by the (national and local) policy adopted by party L is larger than the sum of the ideological idiosyncratic component, s , of the common shock, δ , and of the expected utility obtained by party R . That is, a centrist prefers party L if $E[V_C(y_L, y_L^l)] - E[V_C(y_R, y_R^l)] - s - \delta > 0$, where the expectations refer to the realization of the shock to the economy.

2.3 Timing of Events

To understand the choice of candidates selection and allocation taken by the parties before the election, and the information and effort decisions of the winning candidates, it is convenient to summarize the timing of events.

Parties move first. Before the election, they select the share of loyal and expert candidates to insert into the party list and allocate them into the different electoral districts. The two parties take decisions independently and simultaneously; and they know the distribution of the popularity shock and of the shock to the economy, but not their realizations. Furthermore, they know the distribution of the characteristic, α , of the experts that they are selecting, but are unable to pinpoint an expert with the desired α .

After the popularity shock has occurred, centrist voters decide who to support between the two candidates running in their electoral district. Centrist voters care about the national and the local policy.

After the realization of the shock to the economy, the winning candidates choose whether to acquire information about the shock and – if so – whether to exert effort to set up a local policy response. The national policy is determined by the winning party according to these decisions and to the share of experts and loyals in the party list.

2.4 Voters and Districts

The incentives for the party to select their candidate and to allocate them in the different districts depend largely on the behavior of the centrist voters. In fact, while each party (leader) has its own preferred national policy, which maximizes the expected utility at equations 1 and 2; to be able to set up the actual policy, a party needs to win the election, and thus ultimately to convince the centrist voters.

The distribution of the three groups of voters in the electoral districts determines the districts where the electoral race is more open, and those where instead one of the two parties have a substantial advantage. Call λ_k^j the share of type- j voters in district k with $j = \{L, C, R\}$. It is convenient to assume that the share of type- C (centrist) voters is constant across district, that is, $\lambda_k^C = \lambda^C \forall k$. Then, the degree of ex-ante contestability of every district k can be characterized by

$$\lambda_k = \frac{1}{2} \frac{\lambda_k^R - \lambda_k^L}{\lambda^C}. \quad (8)$$

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, $\lambda_k = 0$; 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 thus

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 district, we consider a continuum of districts, characterized by a degree of contestability, λ_k , that is uniformly distributed on an interval, $\lambda_k \sim U \left[-\frac{1-\lambda^C}{2\lambda^C}, \frac{1-\lambda^C}{2\lambda^C} \right]$. 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, $\tilde{s} = E[V_C(y_L, y_L^l)] - E[V_C(y_R, y_R^l)] - \delta$, and all centrist voters with ideology $s < \tilde{s}$ will support party L . To win district k , the sum of type- L voters (λ_k^L) and of the votes that party L obtains from the centrist voters has to exceed 50%, which occurs for $\tilde{s} > \lambda_k$. Thus, we have that the probability of party L winning district k – call it Π_L^k – can be expressed as a function of the popularity shock, δ , and of the district characteristic, λ_k :

$$\Pi_L^k = \Pr \{ \delta < E[V_C(y_L, y_L^l)] - E[V_C(y_R, y_R^l)] - \lambda_k = d_k \}. \quad (9)$$

where d_k can be interpreted as a measure of the ex-post contestability of district k , that is, after that the party lists – and hence the expected policies – are known to the voters. If the two parties converge to the same selection and allocation of candidates, their policies provide equal expected utility, and then $d_k = \lambda_k$. However, parties can use the selection of candidates to modify d_k , and thus their chances of winning district k . In fact, since the popularity shock is uniformly distributed with density ψ , we have that $\Pi_L^k = \frac{1}{2} + \psi d_k$.

Parties have two instruments to affect their winning probability in district k . They can modify the relative share of experts and loyalists, μ , and they can choose which candidate to allocate to district k . The selection decision affects the national policy, while the allocation affects the local policies. The difference in the centrist voters' expected utility can thus be written as

$$\begin{aligned} E[V_C(y_L, y_L^l)] - E[V_C(y_R, y_R^l)] &= -\rho \left[E(y_L^l - x)^2 - E(y_R^l - x)^2 \right] + \quad (10) \\ &\quad - (1 - \rho) \left[E(y_L - x)^2 - E(y_R - x)^2 \right] \end{aligned}$$

where the latter term on the right hand side of the eq.10 is not district specific and depends only on the national policy. It is useful to define this term as $D = - \left[E(y_L - x)^2 - E(y_R - x)^2 \right]$.

Before turning to the selection and allocation decisions by the two parties, we however need to analyze the choice of information acquisition and effort by the winning candidates.

2.5 Candidates' Policy Decisions

Once elected, party candidates have to choose whether to acquire information on the shock to the economy and – if so – how much effort to dedicate to conceive a policy that may counteract the economic shock. Loyals and experts differ in the cost of information acquisition, respectively c_L and c_E , with $c_L > c_E$; and in the cost of policy effort respectively γ_L and γ_E , with $\gamma_L > \gamma_E$ (see eq. 5). Elected candidates take their policy decisions in order to maximize their expected utility, which is given by their utility function (see equations 1 to 4), minus the effort cost and the cost of acquiring information. The next proposition summarizes the policy decisions by the elected experts and loyals.

Proposition 1 *If $c_L \leq \frac{\sigma_x^2}{1+\gamma_L}$, loyals acquire information on the shock to the economy and set policies $y_L^L = \frac{x}{1+\gamma_L} - 1$ and $y_R^L = \frac{x}{1+\gamma_L} + 1$; otherwise they acquire no information and set $y_L^L = -1$ and $y_R^L = 1$. If $c_E \leq \frac{\sigma_x^2}{1+\gamma_E}$, type- α experts acquire information and set policies $y_L^E = \frac{x}{1+\gamma_E} - \alpha$ and $y_R^E = \frac{x}{1+\gamma_E} + \alpha$; otherwise they acquire no information and set $y_L^E = -\alpha$ and $y_R^E = \alpha$.*

The lower cost of information acquisition and of effort that characterizes the experts makes them more willing to learn about the shock and then to take actions to counteract it. In the remaining of the paper, we will assume that $c_E < \frac{\sigma_x^2}{1+\gamma_E}$ and $c_L > \frac{\sigma_x^2}{1+\gamma_L}$, so that experts acquire information – and respond to the shock, while loyals do not³.

2.6 Selection and Allocation of Candidates

If parties (leaders) were free from electoral constraints, they would select politicians – and hence policies – in order to maximize their expected utility respectively at equations 1 and 2. The share of experts would be the following

$$\hat{\mu} = \hat{\mu}_L = \hat{\mu}_R = \frac{\sigma_x^2 / (1 + \gamma_E)}{(1 - \bar{\alpha})^2 + \sigma_x^2 / (1 + \gamma_E)^2} \quad (11)$$

³In section 2.7, we introduce re-election incentives and show that this may lead also elected loyals to pay the (higher) information cost, learn about the shock, and exert some effort to respond to it.

thereby being increasing in the variance of the shock, σ_x^2 , and decreasing in the distance between the experts' average characteristic and party bias, $1 - \bar{\alpha}$. For $\sigma_x^2 < (1 - \bar{\alpha})^2$, that is, if the variance of the shock is not too large when compared to the average distance between the experts' and the party ideology, parties (leaders) prefer an electoral list with a majority of loyalists.

However, parties are entitled to set the policies only if they win the election. Since centrist voters care about the selection and allocation of political candidates, parties (leaders) will take their electoral decisions in order to maximize the following expected utility

$$\Pi_L EU_L(y_L) + (1 - \Pi_L) EU_L(y_R) \quad (12)$$

where Π_L represents party L probability of winning the election and $EU_L(y_i)$ is the expected utility defined at eq.1 when the policies are selected by party i . Equation 12 specifies the trade off that the parties (leaders) face in selecting and allocating their candidate. Up to a certain proportion ($\hat{\mu}$, see eq. 11), experts are welcome by the party leaders. Above this threshold, however, experts reduce the expected utility that the party (leaders) obtains if it wins the election, and hence sets the policies. If a party loses the election, however, policies are chosen by the opponent, and will provide a lower expected utility. Since centrist voters strongly value experts, parties will have an incentive to increase the share of experts above the threshold ($\hat{\mu}$) in order to increase their probability of winning the election.

To analyze the parties decisions over the selection of candidates, it is convenient to separate the problem in two stages. First, we consider a fixed number of experts in the party list, and examine their allocation in the different districts. Second, once the allocation of experts is determined, we characterize the share of experts in the party list that maximizes the expected utility at eq. 12. In analyzing these two stages, it is useful to remember that the two parties take their decisions simultaneously and independently.

2.6.1 Allocation of Candidates

Consider a fixed share of experts for parties L and R , respectively μ_L and μ_R . National policies by the two parties are defined according to eq. 6 and to the elected candidates decisions described in the previous section. Parties expected utilities (see equations 1 and 2) are automatically pinned down, and so is the difference in the expected utilities provided by the national policies of the two parties to the centrist voters – i.e., our variable D . Therefore,

parties can target this allocation decision exclusively to increasing their election probability.

Why are experts valuable? Because allocating an expert to a district k where the other party has sent a loyal candidate amounts to increase the utility of the centrist voters in that district by a wedge equal to

$$W = \rho \left[1 - \bar{\alpha}^2 + \sigma_x^2 \frac{1 + 2\gamma_E}{(1 + \gamma_E)^2} \right] \quad (13)$$

Hence, *ceteris paribus*, more centrist voters in that district will favor party L .

Winning the election requires winning more than 50% of the districts. Given μ_L and μ_R , and hence D , suppose that candidates in the districts are perfectly matched, that is, $y_L^l = y_R^l$ in all districts. According to eq.9, and using the previous definitions, party L wins a district k if $\delta < d_k = (1 - \rho)D - \lambda_k$. Moreover, as shown at figure 1, party L wins the elections – that is, more than 50% of the districts, if $\delta < d_0 = (1 - \rho)D$, in which case party L wins all the districts with $\lambda_k \leq 0$. Suppose now that party L sends an expert to the district with $\lambda_k = 0$ (henceforth, district zero, i.e., λ_0). Using eq.9, it is easy to see that party L will now win this district even for a worse (i.e., larger) realization of the shock, that is, for $\delta < (1 - \rho)D + W$. Define the district $\lambda_w = -W$, such that $d_w = (1 - \rho)D + W$. After the allocation of an expert to the most contestable district, λ_0 , the probability of winning this district is the same as the probability of winning district $\lambda_w < 0$, which is more favorable to party L , because there are more type- L than type- R voters. Therefore, by sending experts to the contestable districts between λ_w and λ_0 (indeed, also slightly below λ_0) party L increases its probability of winning the election. More specifically, it increases by the wedge W the ranges of the realization of the shock, δ , over which it prevails in at least 50% of the districts: from $\delta < (1 - \rho)D$ to $\delta < (1 - \rho)D + W$. Figure 2 provides a graphical interpretation of this effect. Clearly, the same logic applies, albeit symmetrically, to party R . Hence, we will also have a district $\lambda_W = W$, such that $d_W = (1 - \rho)D - W$.

Before we characterize the equilibrium allocation of candidates, it is convenient to define the mass of district included between λ_w and λ_W as $\eta = G(W) - G(-W) = 2 \frac{\lambda^c}{1 - \lambda^c} W$. Moreover, define the districts λ_l , λ_L , λ_r , and λ_R such that the share of experts are allocated symmetrically around the most contestable district, λ_0 , that is, $\mu_L = 2[G(\lambda_0) - G(\lambda_l)] = 2[G(\lambda_L) - G(\lambda_0)]$ and $\mu_R = 2[G(\lambda_0) - G(\lambda_r)] = 2[G(\lambda_R) - G(\lambda_0)]$.

Proposition 2 *For $\eta < \min(\mu_L, \mu_R)$, both parties will allocate their experts symmetrically*

around the most contestable district λ_0 . Thus, $y_L^l = y_R^E$ for $\lambda_k \in [\lambda_l, \lambda_L]$ and $y_L^l = y_L^l$ otherwise; and $y_R^l = y_R^E$ for $\lambda_k \in [\lambda_r, \lambda_R]$ and $y_R^l = y_R^l$ otherwise.

According to this proposition, if the mass of contestable districts that can be swayed with the allocation of an expert is lower than the share of experts in the party lists, both parties will concentrate their experts around the most contestable district, that is, where the electoral relevance of the centrist voters is higher. In other words, experts are assigned to the pivotal districts. The next corollary follows directly from Propositions 1 and 2.

Corollary 3 *Candidates elected in contestable districts exert weakly more effort than candidates elected in safe districts*

This difference in effort is entirely due to the contestable districts being filled with experts, who exert more effort than loyals, who are instead assigned to safe districts.

2.6.2 Selection of Candidates

Once we know how candidates are allocated across districts, we can turn our attention to the selection of the relative share of experts and loyals. The objective of party L (leaders) is to maximize the expected utility at eq. 12, and analogously for party R . The selection of experts plays a double role. First, it affects the national (and local) policy (see eq. 6), and thus the party (leaders) expected utility in case of victory (see eq. 1 and 2). Second, it modifies the probability of winning the election.

Given the allocation of the candidates described in Proposition 2, we can now examine the role of the experts in winning the elections. Consider a symmetric environment in which $\mu_L = \mu_R$, so that candidates are matched in all districts⁴. In this case, districts can be defined according to our measure of the ex-post contestability as $d_k = (1 - \rho) D - \lambda_k$, where λ_k is the intrinsic contestability of district k , and D depends only on the parties national policies, that is, on the share of experts and loyals.

Party L wins the election if it obtains at least 50% of the districts. Given the allocation of the candidates, this will occur if the popularity shock is such that it wins the most contestable district (λ_0), that is, if $\delta < d_0 = (1 - \rho) D$. Given the uniform distribution of the popularity

⁴Notice that experts are certainly matched in all districts between λ_w and λ_W , while loyals are certainly matched in all districts $\lambda_k > \max\{\lambda_L, \lambda_R\}$ and $\lambda_k < \min\{\lambda_l, \lambda_r\}$.

shock, party L probability of winning the election is thus

$$\Pi_L = \frac{1}{2} + \psi(1 - \rho)D \quad (14)$$

It is worth noticing that, if party L objective in choosing the share of experts were exclusively to maximize the probability of winning the election, Π_L , then all candidates should be experts. Maximizing the expected utility in case of victory would instead yield a share $\hat{\mu}_A < 1$, as shown at eq. 11. Define $\bar{\sigma} = \sigma_x^2 / (1 + \gamma_E)^2$, the next proposition characterizes the selection decision by the two parties.

Proposition 4 *For $\frac{2\lambda^C}{1-\lambda^C} < \frac{\bar{\sigma}(1+\gamma_E)}{\rho[(1-\bar{\alpha})^2 + \bar{\sigma}]^2}$, the equilibrium share of experts chosen by both parties is $\tilde{\mu} \in (\hat{\mu}, 1]$, with $\hat{\mu} > \eta$.*

Since both parties face the same maximization problem, they choose the same share of experts, $\tilde{\mu}$. The condition in the above proposition characterizes in terms of exogenous parameters $(\lambda^C, \rho, \bar{\alpha}, \bar{\sigma}, \gamma_E)$ the condition in Proposition 2 and guarantees that the allocation of experts to electoral districts is as described at Proposition 2. In words, this condition requires the electoral relevance of the centrist voters not to be too large relatively to the role of the experts, where this is measured by the importance of the shock, $\bar{\sigma}$, vis-a-vis their average bias of the experts $(1 - \bar{\alpha})$. In this case, the share of experts is sufficient to cover all the contestable districts, $\tilde{\mu} > \eta$, that can be swayed with the allocation of an expert, $\lambda_k \in [\lambda_w, \lambda_W]$, and experts are allocated in the more contestable electoral districts. Finally, since the parties (leaders) face a trade off between maximizing their expected utility in case of victory and improving their chance of winning the election, we have $\tilde{\mu} > \hat{\mu}$. Indeed, this trade-off could lead the party (leaders) to choose only experts for their party list. However, if the pivotal districts around λ_0 are not too relevant⁵, the party lists include some loyalists too, i.e., $\tilde{\mu} < 1$.

Simple comparative statics suggests that an increase in the variance of the economic shock, σ_x^2 , increases the equilibrium share of experts. An increase in $\bar{\alpha}$, i.e., the average closeness of the experts to the party preferences, has instead opposite effects on the share of experts. On one hand, it reduces the cost of the experts to the party (leader); on the other hand, it reduces their appeal with the centrist voters, but decreases also the expected utility

⁵In particular, we have $\tilde{\mu} < 1$ for $\psi < \frac{(1-\bar{\alpha})^2 - \gamma\bar{\sigma}}{8\bar{\alpha}(1-\rho)[(1-\bar{\alpha})\bar{\alpha} + \gamma\bar{\sigma}]}$, that is, if the density of the popularity shock is not too large.

that a party obtains from the policy set by the opposite party. The overall effect is thus indeterminate.

2.7 Electoral Incentives

So far, we concentrated our attention on the issue of political selection. Yet, the political behavior of the elected candidates – that is, whether they choose to acquire information and to exert effort – may depend also on their career concerns, and hence on the political incentives. If politicians obtain some rents (monetary or else) from being in office, incumbents may modify their information and effort decisions with respect to the results described at Proposition 1, particularly when the re-election incentives are particularly strong, e.g., in more contestable districts.

To analyze the role of incentives in the incumbents’ political decisions while in office, we introduce a simple dynamic version of our theoretical model. We consider that elections take place every period, and hence that parties have to form party lists, i.e., select candidates and allocate them to electoral districts, every period. In the first period, and hence before the first election, the distribution of contestable districts is as specified at section 2.4. In the second period, however, a permanent mutation of this distribution takes place. A small share of contestable districts is randomly replaced by an equal share of safe district, and viceversa. We consider a symmetric mutation process. A share of constable yet favorable to party L districts, i.e., $\lambda_k \in [-U, -u]$ with $1/2 > U > u$ is randomly switched with an equal share of safe pro-party L districts, i.e., $\lambda_k \in [-S, -s]$ with $S > s > 1/2$, where $G(-u) - G(-U) = G(-s) - G(-S) = \frac{\lambda^C}{1-\lambda^C} \varepsilon$, for ε small enough. And symmetrically for party R . Figure 3 provides a graphical representation of this random replacement process. In the following periods, the distribution of districts remains unchanged.

The existence of these re-election possibilities modifies the incentives for office-motivated politicians. Winning candidates allocated to contestable districts before the first election know that they will face re-election unless their district is replaced and becomes safe. If the share of districts being replaced is small enough (ε small), so that that the probability of a district changing its electoral contestability status is small, incentives will only matter for the contestable districts. After the random replacement, however, some of the safe districts have become – and will remain – contestable. Incumbents in these initially safe districts will hence face re-election incentives.

To model the re-election incentives for the incumbents, we assume that candidates enjoy a rent B_l from being re-elected in their district, with $l = \{L, E\}$ and $B_L \geq B_E$, so that loyalists obtain a (weakly) higher rent from office than experts⁶. Hence, a party L loyal incumbent in district k will maximize the sum of the utility at eq. 1 and of the expected rent $\Pi_L^k B_l$, while a party L expert incumbent considers the sum of the utility at eq. 3 and $\Pi_L^k B_l$; and symmetrically for party R candidates.

How do party (leaders) select and allocate candidates in this new, dynamic environment? The novelty for the party (leaders) is to consider that the probability of re-election may modify the behavior of the candidates in contestable districts. In the first period (or election), parties (leaders) will thus have to consider this additional effect on the candidates policy decisions. In the second period, due to the random mutation of districts, a former safe district will become contestable, thereby modifying the incumbent's incentive to be re-elected. To simplify the analysis, we consider that parties (leaders) have full discretionality in selecting and allocating candidates in the first period, but do not have the power to remove or to reallocate an incumbent from his original district. To understand the parties' choices, we have first to analyze the candidates behavior when re-election is possible.

Consider a loyal incumbent in a contestable district. The existence of a rent from being re-elected may induce this candidate to acquire information and exert effort. Since the same incentives (and optimization problem) apply in the future, voters consider the incumbent's current behavior as a perfect predictor of his future information and effort decisions. In other words, his current choice of y_L^L affects Π_L^k , as the voters expect the same y_L^L in the future periods. And analogously for an expert in a contestable district. It is now convenient to define the following terms: $\Lambda_l = \frac{1+B_l\psi\rho}{1+B_l\psi\rho+\gamma_l} \left(1 - \frac{\gamma_l B_l \psi \rho}{1+B_l\psi\rho+\gamma_l}\right) < \frac{1}{1+\gamma_l}$, $\Gamma_l = \frac{(1+\gamma_l)(B_l\psi\rho)^2}{(1+B_l\psi\rho+\gamma_l)^2}$, with $l \in \{L, E\}$, and the probability that a party- L loyal wins a nonsafe district k when matched with a party- R expert as $\widehat{\Pi}_{LE}^k = \frac{1}{2} - \psi\rho \left[\left(\frac{(\gamma_L)^2}{(1+B_L\psi\rho+\gamma_L)^2} - \frac{(\gamma_E)^2}{(1+B_L\psi\rho+\gamma_E)^2} \right) \sigma_x^2 + \frac{(1+\gamma_L)^2}{(1+B_L\psi\rho+\gamma_L)^2} - \frac{(1+\gamma_E)^2 \bar{\alpha}^2}{(1+B_L\psi\rho+\gamma_E)^2} \right] < \frac{1}{2}$.

The next proposition summarizes the policy decisions by an incumbent expert or loyal in a contestable district when re-election concerns are present.

Proposition 5 *If $c_L < \sigma_x^2 \Lambda_L - \Gamma_L + \widehat{\Pi}_{LE}^k B$, a party- L loyal acquires information on the shock to the economy and sets a policy $\widehat{y}_L^L = \frac{1+B\psi\rho}{1+B\psi\rho+\gamma_L} x - \frac{1+\gamma_L}{1+B\psi\rho+\gamma_L}$, and analogously for*

⁶This difference may be driven by the experts have better outside option in the non-political sector. The qualitative results however do not change if we consider equal rents.

a party-R loyal; otherwise they acquire no information and set $y_L^L = -1$ and $y_R^L = 1$. If $c_E < \sigma_x^2 \Lambda_E - \Gamma_E + B/2$, a party-L expert acquires information and sets a policy $\hat{y}_L^E = \frac{1+B\psi\rho}{1+B\psi\rho+\gamma_E}x - \frac{1+\gamma_E}{1+B\psi\rho+\gamma_E}\alpha$, and analogously for a party-R loyal; otherwise they acquire no information and $y_L^E = -\alpha$ and $y_R^E = \alpha$.

In what follows, we assume that $\frac{\sigma_x^2}{1+\gamma_L} < c_L < \sigma_x^2 \Lambda_L - \Gamma_L + \hat{\Pi}_{LE}^k B$, so that loyals are only willing to acquire information and exert effort if re-election considerations are in place; and that $c_E < \sigma_x^2 \Lambda_E - \Gamma_E + B/2$, so that experts always choose to be informed. In this dynamic environment, both loyals and experts choose to acquire information and exert effort if running in a contestable district. Does the party allocation of candidates into districts change with respect to the previous analysis? Not really. The allocation into districts for a given share of experts and loyals follows the same reasoning as before: the experts are to be sent in the most contestable districts. This is because even when both candidates type prefer to acquire information, experts have an incentive to counteract the shock more effectively than the loyals, since their effort cost is lower; furthermore, they are less alligned to the party than the loyals. Hence, they remain more appealing to the centrist voters. Thus, as in Proposition 2, even in this case, the more contestable districts around λ_0 are filled with experts. Analogously, the choice of the share of experts by the party (leaders) responds to the same logic as before.

In the second election, after the symmetric mutation process, parties may modify the allocation of those candidates who were not elected in the previous election, but are unable to remove or even to reshuffle the incumbents. Therefore, some incumbents, who were elected in previously safe districts, found themselves in a contestable environment. As discussed in the previous proposition, these loyal incumbents respond to the new electoral incentives by acquiring information and exerting effort in an attempt to please the voters, and thus to increase their probability of winning the election. On the other hand, some incumbent experts, who were elected in contestable districts, may found themselves in a safe district. The next corollary establishes the different behaviour of the two types of incumbents when running in a safe or contestable district, which will be addressed in the empirical analysis.

Corollary 6 For $\frac{\sigma_x^2}{1+\gamma_L} < c_L < \sigma_x^2 \Lambda_L - \Gamma_L + \hat{\Pi}_{LE}^k B$ and $c_E < \min \left[\sigma_x^2 \Lambda_E - \Gamma_E + B/2, \frac{\sigma_x^2}{1+\gamma_E} \right]$, we have that (1) experts running in a contestable district respond to the shock more effectively (the unanswered portion of the shock is respectively $\frac{\gamma_E}{1+\gamma_E}$ in a safe and $\frac{\gamma_E}{1+B\psi\rho+\gamma_E}$ in a

contestable district), and adopt a policy that is less biased towards the party; (2) only loyals running in contestable districts respond to the shock (the unanswered portion of the shock is respectively 100% in a safe and $\frac{\gamma_L}{1+B\psi\rho+\gamma_L}$ in a contestable district), and adopt a policy that is less biased towards the party.

3 Institutional Setup and Data

In order to test the main empirical implications of the theoretical model presented in the previous section, we use data about the members of the Italian parliament (House of Representatives and Senate) from 1994 to 2006, including legislative terms XII (1994-96), XIII (1996-2001), and XIV (2001-06).⁷ During the sample period, Italy had a two-tier 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-list party lists at the regional level (House) or from the best losing candidates in the majoritarian districts (Senate). Following the breakdown of the old party system and the electoral reform in 1994, the political arena figured two major coalitions (center-right against center-left) competing for the government, with the former winning in 1994 and 2001, and the latter in 1996.

The dataset contains the following information on each 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); number and type of bills as main sponsor (e.g., geographic area covered by the bill);⁸ 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, and national level); local government experience (mayor, city councillor, president of a region, etc.); system of election,

⁷The dataset was collected by Gagliarducci, Nannicini, and Naticchioni (2008a, 2008b). The original sources used to collect the data include: the Annals of the Italian Parliament (*La Navicella*) for demographic and professional information; the online archive of bills for the legislative activity; and the Italian Parliament Statistical Office for data on individual attendance.

⁸Bills are classified using the TE.SE.O. system (*TEsauro SENato per l'Organizzazione dei documenti parlamentari*), consisting of 3,668 hierarchical terms (e.g., from “art” to “urban architecture”) and 9,602 geographical places (single entities, like a museum, included). For each bill, the Documentation Center of the Italian Parliament reports each region, province, or city presenting any affinity with the bill.

electoral district, and vote share.

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

The distribution of the observed margin of victory in each single-member district—expressed in percentage points—is positively skewed (see Figure 4); in about 29% of the districts, the lagged margin of victory was lower than 5, while in about 49% it was lower than 10. Table 1 shows that, in 25% of the districts, the center-left coalition won every election, while in 34% the center-right always won. 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 contestability of the district: if a certain coalition won by 30 percentage points, for example, it is 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 ($Safe2$). All of these measures, based on the lagged margin of victory, should be good predictors of the swinging probability of a district, but could suffer of an endogeneity problem with respect to candidates' characteristics in the case of incumbents. Furthermore, they are not available for the XII legislative term, because the majoritarian districts were first introduced in this term.

To address the above issues, we construct an additional measure of contestability by using the district-specific vote shares of different parties at the previous European elections (held either in 1994 or 1999). In particular, we estimate the share of voters ideologically loyal to the center-left (L) or center-right coalition (R), under the plausible assumption that, in the European elections, voters act sincerely rather than strategically. Our new measure of safeness ($Safe3$) is then equal to one if

$$\frac{1 - L - R}{|L - R|} \leq 1.$$

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. As a matter of fact, in 1996 the rightist party *Lega Nord* quit the center-right coalition because of alleged divergences over government policy, and the same happened when the leftist party *Rifondazione Comunista* quit the center-left coalition in the 2001 election. These alliance breakdowns originated from the *proportionalistic* incentive of the two small parties to keep up their votes and developed around struggles between national leaderships. As a result, these national shocks altered the degree of contestability of some districts in a way that can be interpreted as sufficiently exogenous with respect to the characteristics of politicians in single-member districts.

Table 3 shows that all of 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.

The above measures of political competition can be seen as the treatment of interest. We want to evaluate whether increasing the intensity of such a treatment affects the patterns of political selection. In other words, we want to assess whether political parties allocate candidates with different *ex-ante* characteristics according to the degree of contestability of the district. Table 4 summarizes the preelection characteristics of the politicians in our sample. 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 in safer districts.

Table 5 summarizes information on the *ex-post* behaviors and appointments of the members of parliament in the sample. Politicians elected in nonsafe districts tend to work harder both in parliament and for their constituency: that is, they display a lower absenteeism rate in electronic votes and a higher share of bills proposed on behalf of their electoral district. It is worth noticing that politicians elected in nonsafe districts have a higher probability to enter the government (if their coalition won the general election), although they have less government experiences than politicians running in safe districts (see Table 4), which is con-

sistent with the view that these candidates are more skilled than the others, or that they end up being rewarded for winning tough races.

4 Empirical Results

4.1 The Impact of Political Competition on Selection

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

$$S_{ijt} = \delta_t + \gamma Z_j + \beta X_{ijt} + \eta_{ijt},$$

where regional dummies Z_j control for geographical factors correlated with both political competition and political selection, δ_t for time fixed effects, and the error terms η_{ijt} are clustered at the individual level. When S_{ijt} is a dummy, we estimate a Probit model; when it is continuous, we use OLS. These estimations can be seen as a test of Proposition 2 in the theoretical model, for they want to assess whether experts (according to available observable characteristics) are more likely to be allocated to nonsafe districts.

The estimation results are reported in Table 6. To control for the endogeneity problem between S_{ijt} and X_{ijt} in the case of incumbents, which arises when S_{ijt} is based on the lagged margin of victory, we also restrict the sample to no incumbents only. To evaluate the effect of preelection income, we further restrict the sample to freshmen, as only for them preelection income refers to private activity and can thus be interpreted as market skills (controlling for the previous 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 swing (nonsafe) district. In other words, the harsher political competition, the higher the probability that political parties rely on high-quality candidates, that is, 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, seen as “filters” for politicians’ quality in a federal system (Cooter, 2002). 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, while the other indicators—based on the lagged margin of victory—turn significant only when we

restrict the sample to incumbents or freshmen, consistently with the endogeneity concern discussed above.

According to the estimates in Table 6, if we look at the *Safe1* indicator, two more years of schooling—equal to the standard deviation of this variable—decrease the probability of running in a safe 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 safeness indicators. In particular, if we look at *Safe2*, an increase in preelection income equal to its 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 increase of 100,000 euros produces a sizable effect of 8.4 percentage points.

4.2 The Impact of Political Competition on Effort

To evaluate whether politician i running for election in district j at time t exerts more effort after election depending on the degree of contestability of the district (S_{ijt}), we run the following set of regressions (depending on the measure used to capture contestability):

$$Y_{ijt} = \delta_t + \rho Z_j + \tau S_{ijt} + \alpha_1 X_{ijt} + \alpha_2 P_{ijt} + \epsilon_{ijt}$$

where X_{ij} are the predetermined characteristics, P_{ij} additional postelection characteristics affecting the outcome (e.g., belonging to the majority coalition), Z_j regional dummies, and the error terms ϵ_{ij} are corrected for clustering at the individual level. These estimations can be seen as a test of Corollary 1 in the theoretical model, for they want to assess whether politicians elected in more contestable district (where experts are over-represented) also exert more effort once in office.

Table 7 and Table 8 summarize the results for the available measures of parliamentary effort: that is, absenteeism rate and bills targeted to the district of election. The former is a measure of shirking or rent-extraction (because it only includes absences without any legitimate reason); the latter is a proxy for constituency services. In the specification with the absenteeism rate as dependent variable, it is also important to control for preelection income (in the subsample of freshmen), as it has been shown to be a good predictor of outside income

and then shirking in parliament activity (Gagliarducci, Nannicini, and Naticchioni, 2008b).

The empirical evidence shows that politicians elected in safe districts carry out fewer bills for their electoral district and display a higher absenteeism rate in electronic votes. If we look at the *Safe1* indicator in the subsample with no incumbents, running in a safe district increases the *ex-post* absences by 5 percentage points (that is, by about 16% with respect to the average). Similarly, running in a safe district reduces the share of constituency services by 3.2 percentage points (that is, by about 29%).

The last findings are consistent with the presence of an additional *ex-post* accountability effect of political competition. That is, in order to gain reelection, politicians facing tougher political competition might be forced to exert higher effort and reduce rent-seeking. The higher productivity of politicians elected in contestable districts, however, might be entirely driven by the selection of better politicians rather than different reelection incentives. To disentangle the two channels and empirically test Corollary 2 in the theoretical model, we exploit the (exogenous) changes in national coalitions discussed in Section 3, which altered the degree of contestability of certain districts from an election to the next. Consistently with the theoretical predictions, in Table 9, we find that incentives matter only for low-quality candidates: that is, if a safe district turns contestable, politicians tend to exert more effort (by 6 percentage points, about 19%). But the opposite does not hold: politicians elected in nonsafe districts show a high productivity even if their district turns safe.

5 Conclusion

In this paper we address a recurring question in political economy: is electoral competition as quality enhancing for political candidates as economic competition is for goods and services? Our suggestion is that not only the answer is positive, but there actually are at least two channels through which political competition can be beneficial. Hence, the existence of a double dividend of political competition.

Our theoretical model provides a crucial role to the parties in selecting and allocating politicians to the different electoral districts. Hence, we disregard the type of self-selection by individual studied in the citizen candidate model and analyze the effect of political competition on party selection. Our ideological parties face a trade-off in their selection decision between party loyalists and experts, who are highly valued by the swing voters so that their

presence in the party list increases the probability of winning the election. Political competition pushes the political parties to select more experts and to allocate them in more contestable districts. As suggested by Besley (2005), the selection of (expert) candidates serve also as a commitment device on future policies. The second dividend of political competition comes through the stronger re-election incentives that induce the incumbents in contestable districts to acquire costly information about the economic shock and to exert more effort. This incentive effect hits particularly for the low quality incumbents.

The ground field to test these theoretical implications is the Italian majoritarian political system between 1994 and 2001. And the empirical evidence confirms these predictions. Ex-ante quality, as measured for instance by years of schooling, previous market income, and local government experience, decrease the probability of running in a safe district. Politicians elected in safe districts have also worse level of ex-post quality, as measured by the number of bills carried out for their constituency, or by their degree of absenteeism in parliament. Since this effort effect could be driven both by selection of better politicians or by re-election incentives, we exploit exogenous variations in national coalitions, which altered the degree of contestability of some districts, to disentangle the two channels. Interestingly, re-electoral incentives only seem to matter for low-quality candidates: if a safe district turns contestable, politicians tend to exert more effort. Yet good politicians, elected in contestable districts, do not reduce their level of ex-post productivity even if their district turns safe.

References

- Besley, T., 2004. Paying Politicians: Theory and Evidence. *Journal of the European Economic Association* 2, 193–215.
- Besley, T., 2005. Political Selection. *Journal of Economic Perspectives* 19, 43–60.
- Caselli, F., Morelli, M., 2004. Bad Politicians. *Journal of Public Economics* 88, 759–782.
- Cooter, R.D., 2002. Who Gets On Top in Democracy? Elections as Filters. *The Selected Works of Robert Cooter*, available at: http://works.bepress.com/robert_cooter/52.
- Diermeier, D., Keane, M., Merlo, A., 2005. A Political Economy Model of Congressional Careers. *American Economic Review* 95, 347–373.
- Ferraz, C., Finan, C., 2008. Motivating Politicians: The Impacts of Monetary Incentives on Quality and Performance. *IZA Discussion Paper* 3411.
- Gagliarducci, S., Nannicini, T., 2008. Do Better Paid Politicians Perform Better? Disentangling Incentives from Selection. *IGIER Discussion Paper* 346.
- Gagliarducci, S., Nannicini, T., Naticchioni, P., 2008a. Electoral Rules and Politicians' Behavior: A Micro Test. *IZA Discussion Paper* 3348.
- Gagliarducci, S., Nannicini, T., Naticchioni, P., 2008b. Outside Income and Moral Hazard: The Elusive Quest for Good Politicians. *IZA Discussion Paper* 3295.
- Keane, M., Merlo, A., 2007. Money, Political Ambition, and the Career Decisions of Politicians. *PIER Working Paper* 07-016.
- Mattozzi, A., Merlo, A., 2008. Political Careers or Career Politicians. *Journal of Public Economics* 92, 597–608.
- Messner, M., Polborn, M., 2004. Paying Politicians. *Journal of Public Economics* 88, 2423–2445.
- Persson, T., Tabellini, G., 2000. *Political Economics*. MIT Press.

Figures and Tables

Figure 1: Distribution of electoral districts by political contestability

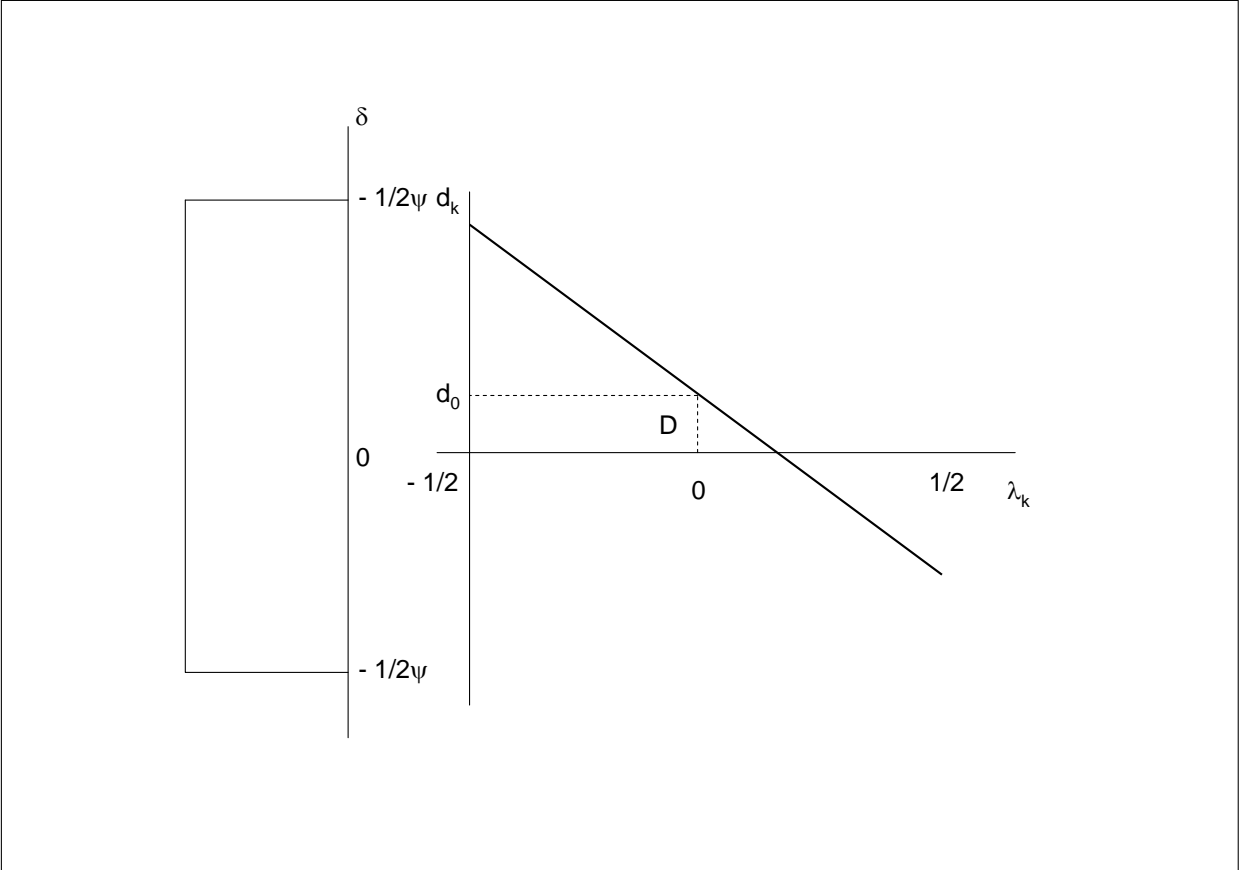


Figure 2: Electoral effect of allocating experts to contestable districts

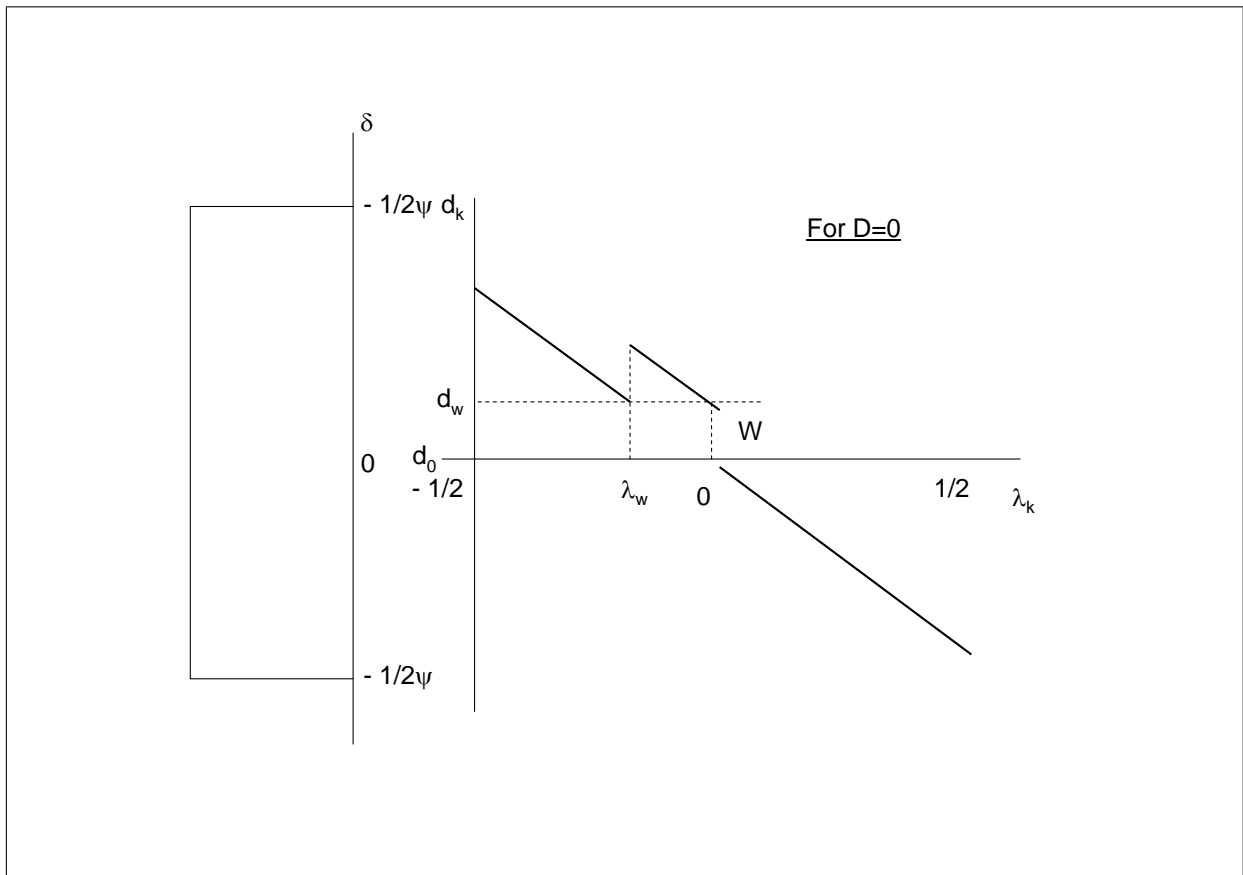


Figure 3: Random mutation of contestable and safe districts

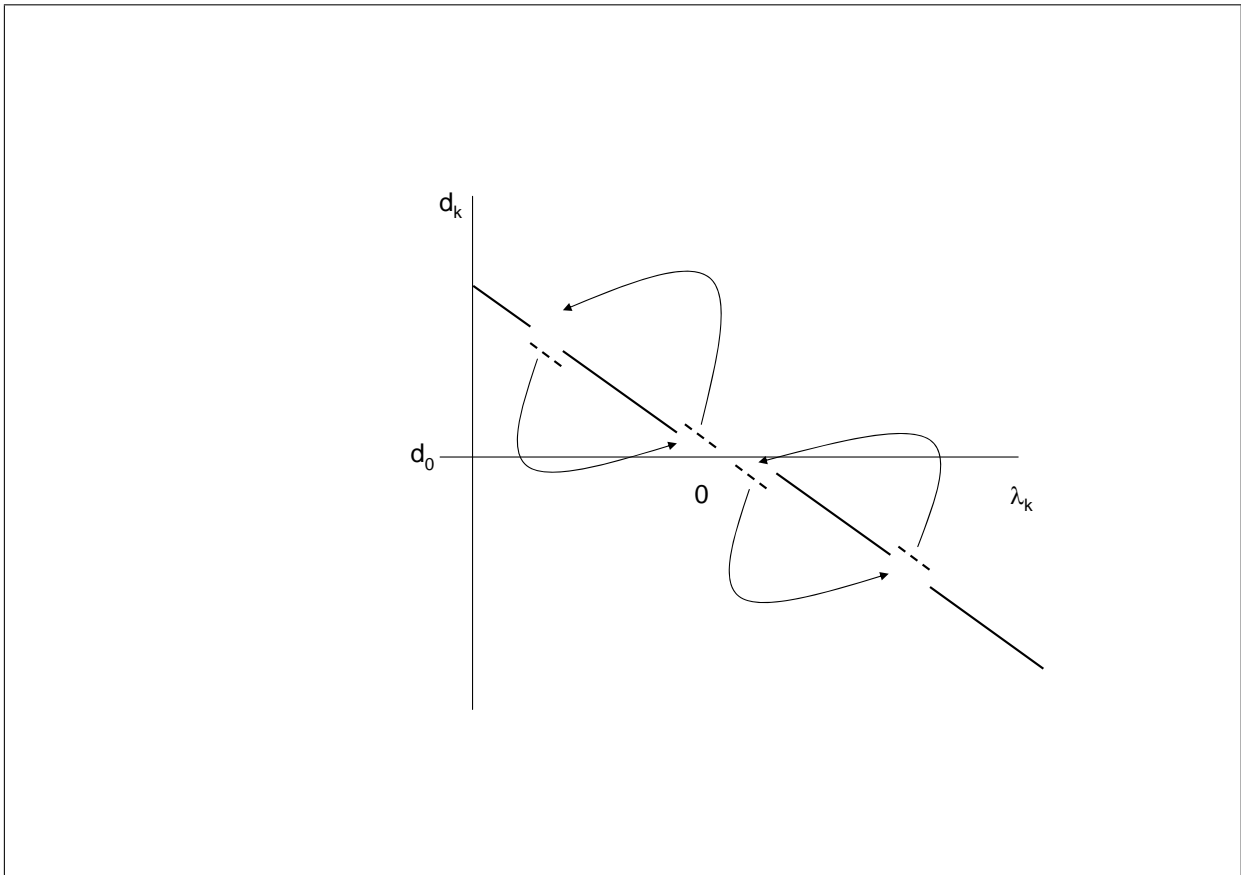
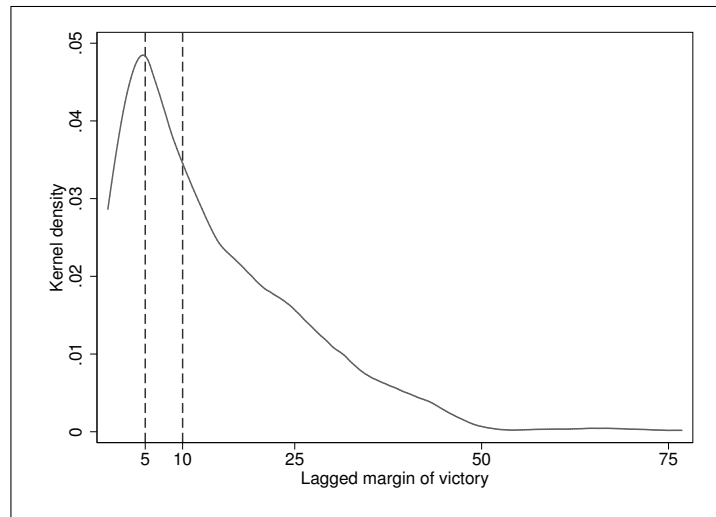


Figure 4: Distribution of the lagged margin of victory



Notes. Kernel density of the lagged margin of victory in the single-member districts. Legislative terms XIII and XIV.

Table 1: Patterns of political victory in the 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 political coalition with respect to the incumbent. ISTAT geographic classification. Legislative terms XIII and XIV.

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

	No swing (percent)	Swing (percent)
<u>Margin of victory</u>		
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
<u>Safe1</u>		
No	59.31	40.69
Yes	77.16	22.84
<u>Safe2</u>		
No	57.96	42.04
Yes	85.83	14.17
<u>Safe3</u>		
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 European elections. Legislative terms XIII and XIV.

Table 4: *Ex ante* characteristics of the politicians in the sample

	<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 been president or vice president of the parliament, or of a single committee. *Government appointment* captures whether the politician has 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 last year before being elected (freshmen only). Job dummies refer to the preelection occupation and the omitted category includes blue collars and students. Legislative terms XIII and XIV.

Table 5: *Ex post* behaviors of the politicians in the sample

	<i>Safe2</i>		Difference	-diff95%	+diff95%
	No	Yes			
Absenteeism rate	0.228	0.363	-0.135	-0.162	-0.109
Future parl. appointment	0.146	0.156	-0.009	-0.047	0.028
Future govt. appointment	0.085	0.038	0.047	0.022	0.072
Targeted bills	0.149	0.127	0.022	0.000	0.045

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 during the legislative term. *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. *Targeted bills* is the percentage of bills targeted to the region of election over the total number of bills presented. Legislative terms XIII and XIV.

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												
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: 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]
Preelection 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 8: The impact of political competition on targeted bills

	All sample						No incumbents						Freshmen only		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)			
<i>Safe1</i>	-0.020 [0.014]				-0.032* [0.018]				-0.039 [0.025]						
<i>Safe2</i>		-0.009 [0.013]				-0.022 [0.016]				-0.034 [0.022]					
<i>MV</i>			-0.001 [0.001]				-0.001 [0.001]				-0.001 [0.001]				
<i>Safe3</i>				-0.029*** [0.009]				-0.038*** [0.011]				-0.033*** [0.014]			
Majority coalition	0.004 [0.012]	0.005 [0.012]	0.002 [0.012]	0.006 [0.009]	-0.015 [0.016]	-0.015 [0.016]	-0.015 [0.016]	-0.000 [0.011]	-0.043* [0.022]	-0.045** [0.023]	-0.041* [0.023]	-0.015 [0.015]			
Male	0.009 [0.019]	0.009 [0.019]	0.008 [0.019]	0.009 [0.014]	-0.024 [0.024]	-0.021 [0.024]	-0.023 [0.024]	-0.007 [0.016]	-0.038 [0.036]	-0.033 [0.036]	-0.036 [0.036]	-0.017 [0.023]			
Age	-0.001** [0.001]	-0.001** [0.001]	-0.001** [0.001]	-0.001 [0.000]	-0.000 [0.001]	-0.000 [0.001]	-0.000 [0.001]	-0.000 [0.000]	0.001 [0.001]	0.001 [0.001]	0.001 [0.001]	-0.000 [0.001]			
Married	0.013 [0.014]	0.014 [0.015]	0.014 [0.015]	0.018* [0.010]	0.019 [0.017]	0.021 [0.018]	0.020 [0.017]	0.020* [0.011]	0.017 [0.027]	0.020 [0.027]	0.020 [0.027]	0.029* [0.016]			
Years of schooling	0.004 [0.004]	0.004 [0.004]	0.004 [0.004]	0.004 [0.003]	0.005 [0.004]	0.005 [0.004]	0.005 [0.004]	0.005 [0.003]	0.008 [0.006]	0.008 [0.006]	0.008 [0.006]	0.007* [0.004]			
Parl. appointment	-0.019 [0.015]	-0.019 [0.015]	-0.019 [0.015]	-0.011 [0.012]	-0.023 [0.020]	-0.023 [0.020]	-0.023 [0.020]	-0.016 [0.013]	-0.052 [0.036]	-0.049 [0.036]	-0.053 [0.036]	-0.033* [0.019]			
Govt. appointment	-0.087** [0.026]	-0.087*** [0.026]	-0.087*** [0.026]	-0.061*** [0.018]	-0.070** [0.035]	-0.073** [0.035]	-0.070** [0.035]	-0.047** [0.021]	-0.014 [0.088]	-0.020 [0.088]	-0.018 [0.087]	-0.006 [0.048]			
Local govt. experience	0.048*** [0.013]	0.048*** [0.013]	0.048*** [0.013]	0.037*** [0.010]	0.067*** [0.016]	0.067*** [0.015]	0.067*** [0.016]	0.042*** [0.010]	0.070*** [0.022]	0.068*** [0.022]	0.070*** [0.022]	0.040*** [0.014]			
Preelection 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	1,566	531	531	531	978			

Notes. Dependent variable: percentage of bills targeted to the region of election. 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 targeted bills, disentangling incentives from selection

	(1)	(2)	(3)	(4)
	<i>Safe3</i> =0	<i>Safe3</i> =1	<i>Safe3-next</i> =0	<i>Safe3-next</i> =1
<i>Safe3-next</i>	-0.027 [0.046]	-0.060** [0.027]		
<i>Safe3</i>			0.028 [0.035]	-0.017 [0.037]
Majority coalition	0.012 [0.041]	-0.025 [0.029]	-0.029 [0.034]	0.020 [0.035]
Male	0.060 [0.046]	-0.004 [0.033]	0.026 [0.040]	0.041 [0.034]
Age	0.002 [0.002]	-0.001 [0.001]	0.001 [0.002]	-0.000 [0.001]
Married	0.064* [0.035]	0.013 [0.024]	0.046* [0.026]	0.026 [0.031]
Years of schooling	0.020** [0.009]	0.010* [0.006]	0.020*** [0.007]	0.005 [0.007]
Parl. appointment	-0.035 [0.050]	-0.003 [0.030]	-0.014 [0.034]	0.012 [0.039]
Govt. appointment	-0.075 [0.084]	-0.037 [0.045]	-0.053 [0.058]	-0.052 [0.051]
Local govt. experience	0.036 [0.037]	0.018 [0.023]	0.044 [0.028]	-0.003 [0.026]
Job fixed effects	yes	yes	yes	yes
Region fixed effects	yes	yes	yes	yes
Obs.	248	522	430	340

Notes. Dependent variable: percentage of bills targeted to the region of election during the last year of the legislative term. OLS estimations. *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). *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 ***.