The Gatekeeper's Dilemma: Political Selection or Team Effort*

Jon H. Fiva† Federica Izzo‡ Janne Tukiainen§

December 14, 2023

Abstract

Political parties play a crucial gatekeeping role in elections, including controlling electoral resources, candidate recruitment, and electoral list compositions. In making these strategic choices, parties aim to encourage candidates to invest in the campaign, while also trying to secure advantages for their preferred candidates. We study how parties navigate this trade-off using a specific feature of the Norwegian local electoral system in which parties can give advantaged positions to some candidates in an otherwise open list. Our theory reveals that parties' ex-ante electoral strength impacts their strategic decisions. Notably, the trade-off is weaker for more popular parties, allowing them to facilitate the election of their preferred candidates without compromising the party's overall performance. We show empirically that the moral hazard concern is real, and that larger parties are indeed more likely to use their power to make some candidates safe. The advantage of large parties extends further: safeguarding specific candidates enables parties to achieve disproportionately favorable outcomes in post-electoral bargaining. These findings reveal new insights for political representations, policy outcomes, and intra-party dynamics more broadly.

Keywords: Intra-party politics; flexible party lists; campaigning; moral hazard; seniority norms; bargaining. *JEL Classification:* C21, D72.

*We thank Ali Cirone, Benoit Crutzen, Ben Geys, Nikitas Konstantinidis, Carlo Prato, Rune Sørensen, Stephane Wolton for useful comments and Anna Ristilä for excellent research assistance. Fiva gratefully acknowledges financial support from the Norwegian Research Council (grant no. 314079). Tukiainen acknowledges funding by the European Union (ERC, INTRAPOL, 101045239). Views and opinions expressed are however those of the authors only and do not necessarily reflect those of the EU or the ERC. Neither EU nor ERC can be held responsible. Competing interests: The authors declare none.

†Department of Economics, BI Norwegian Business School. E-mail: jon.h.fiva@bi.no.

‡Department of Political Science, University of California San Diego. E-mail: fizzo@ucsd.edu.

§Corresponding author. Department of Economics, Turku School of Economics, Rehtorinpellonkatu 3, FI-20014 University of Turku; VATT Institute for Economic Research, Arkadiankatu 7, Helsinki FI-00101. E-mail: janne.tukiainen@utu.fi.

1. Introduction

Political parties are often considered as the cornerstone of democracy (Stokes, 1999). Among their vital roles is that of gatekeepers in the political selection process. Parties wield control over electoral resources and candidate recruitment, shape the composition of electoral lists, and influence the internal competition for seats, as well as the allocation of electoral rents.

In navigating these strategic choices, political parties face a dual objective. On one hand, party leaders aim to incentivize individual candidates' behavior, in order to get them to contribute to the party's goals and invest in costly campaign efforts (Invernizzi and Prato, 2021). On the other hand, parties may seek to exercise their gatekeeping power to secure advantages or positions for their preferred candidates (Buisseret and Prato, 2022). These objectives often present a challenging trade-off, as they may be hard to achieve at the same time.

This paper investigates how political parties resolve this trade-off. We study, both theoretically and empirically, under which conditions party leaders privilege maximizing the candidates incentives for effort and when instead they choose a strategy that emphasizes selection (of their preferred candidates). Our main contribution is to show that parties' ex-ante electoral strength crucially influences their strategic calculus in this domain. In particular, we uncover an important regularity. The aforementioned tradeoff is weaker for ex-ante more popular parties. These parties can adopt strategies that protect or advantage their preferred members, without compromising the party's collective performance. Thus, more popular parties can have their proverbial cake and eat it too.

Empirically investigating this trade-off and understanding how parties strategically address it presents numerous challenges. Political parties are often unwilling to disclose information about their internal dynamics, to the extent that political scientists have labeled parties' objectives and internal organization as the "black box" or "secret garden" of politics (Marsh et al., 1988; Field and Siavelis, 2008; Hazan and Rahat, 2010).

This paper circumvents this issue by capitalizing on a particular feature of the Norwegian local electoral system. In Norway, local elections are decided by a flexible list system, where voters can express their preference for individual politicians (as in open-list systems), but parties can choose to assign an advantaged position to some of their candidates (similarly to a closed-list system). The candidates that are placed in an advantaged spot receive a 'bonus' amount of personal preference votes. This boost is so large that it is extremely hard for a non-advantaged candidate to compete with the advantaged ones in the intra-party contest.

By strategically allocating advantaged positions, local parties can therefore regulate the intensity of the internal contest for seats. As such, parties may fall victim of the

trade-off that we discussed above. If this trade-off is binding, parties must choose between an allocation strategy that maximizes individual candidates' incentives to contribute to the party's collective performance and one that seeks to shield their favored candidates from competition. This context thus offers a unique opportunity for us to delve into the gatekeeper's dilemma.

To this aim, we first introduce a stylized model to study parties' strategic problem in this setting. Party leaders care about maximizing the number of seats won, but they also value the possibility to manage the political selection process by securing positions for specific candidates in the list. In the model, the allocation of seats *to* the party is a function of its ex-ante electoral strength, as well as individual candidates' effort. The assignment of seats *within* the party is a function of candidates' effort and the allocation of advantaged positions. Here, party leaders face a moral hazard problem, since individual candidates care solely about their own chances of winning a seat, rather than the party's overall performance. Crucially, the intensity of this problem will be endogenous to the party's strategic choice. In fact, the number of advantaged positions allocated by the leadership fundamentally alters the candidates' incentives to exert costly campaign effort in this setting.

Our analysis proceeds in two steps. First, our model confirms the existence of the gatekeeper's dilemma: while the leadership may want to strategically allocate advantages in order to insulate some candidates from competition and guarantee them a seat, the total amount of campaign effort is maximized when no advantaged positions are assigned. Thus, the party leader cannot both maximize incentives for effort and protect its preferred candidates at the same time.

Second, we show that ex-ante more popular parties have a strategic advantage in navigating this tradeoff. The intuition is as follows. When some candidates are insulated from internal competition (i.e., receive an advantage that guarantees them a seat), only the non-advantaged ones will have incentives to exert effort. If a party is electorally stronger, there is a higher chance that it may be able to win enough seats to distribute to the candidates that received no advantage. Thus, these candidates' effort increases with the party's electoral strength. A similar effect emerges under open-list, but there the marginal impact of increasing the party's strength is reduced by the fact that internal competition is more intense. As a consequence, ex-ante more popular parties can protect their preferred candidates without significantly dampening the other candidates' incentives to exert effort, and thus without sacrificing the party's overall electoral performance. Therefore the likelihood that, in equilibrium, a party assigns advantages to protect some of its candidates and guarantee them a seat increases in the party's initial electoral strength.

With these predictions at hand, we turn to the data. First, we verify that political can-

didates respond to the incentives arising under the different list structures as predicated in the model. We show that, as expected, candidates exert more effort, proxied by their personal vote share or media presence, when their advantaged status does not guarantee them a seat compared to when it does. This reassures us that the moral hazard problem we hypothesize is indeed empirically relevant. Next, we show that the data support our main prediction on the equilibrium allocation of advantaged positions. The likelihood of a party choosing an allocation that insulates some candidates from competition (at the expenses of effort and thus seats) is increasing in its ex-ante electoral strength. These results are robust to several controls and different empirical specifications. Importantly, further analysis also suggests that the hypothesized mechanism underlies these empirical patterns.

Next, we investigate how a party's ability to advantage their preferred candidates impacts the party's post-electoral outcomes. Naturally, we cannot directly compare post-electoral outcomes for parties employing different allocation strategies because this choice is endogenous to the party's initial strength. Instead, we identify specific candidate traits that political parties typically prioritize, but that don't align with voters' preferences. This enables us to examine how protecting candidates with these characteristics, who would otherwise face greater challenges in securing a seat, impacts a party's success in the post-electoral bargaining process.

We then proceed in two steps. First, by comparing voter preferences with parties' strategic allocation of advantages, we find that voters tend to be less inclined toward women candidates, but parties tend to prioritize these candidates when assigning advantageous positions. Furthermore, while both voters and parties tend to favor incumbents, the effect of incumbency and further seniority on the likelihood of securing an advantageous position within the party is more substantial than the effect on vote share.

Secondly, when examining the consequences of electing candidates with these particular traits, we discover that as the proportion of elected incumbents and women increases, political parties tend to achieve more influential nominations and positions in the municipal government. As such, these findings underscore that the ability to shield certain candidates from competition and ensure their election can significantly boost the party's influence in the post-electoral bargaining and policymaking process.

Even more broadly, our key finding that more popular parties are more likely to insulate some candidates from competition and secure them a seat has implications beyond the electoral realm. We know from a large empirical literature that the individual qualities of political leaders can have an important impact on municipalities' or countries' economic performance (Meriläinen, 2022; Carreri and Payson, 2023; Besley, Montalvo and Reynal-Querol, 2011). As such, parties' ability to advantage candidates with specific characteristics is far from inconsequential, particularly if larger parties are more inclined

to adopt this strategy (since their candidates are more likely to obtain positions of power). From a welfare perspective, this result presents a dual perspective. On one hand, if these more influential parties can more easily deviate from voter preferences in the selection process, this raises concern for substantive representation. On the other hand, if parties have better information on candidate quality and use their leverage to select leaders better able to govern (Buisseret et al., 2022), this may ultimately benefit voter welfare. Delving into these welfare questions and identifying conditions under which the net effect leans in one direction or the other represents a promising avenue for future research.

While this paper focuses on the strategies employed by political parties within flexible electoral systems, the theoretical insights we have uncovered hold broader relevance. Political parties wield their gatekeeping power across various domains. This power extends to controlling electoral resources, shaping the composition of electoral lists, managing internal competition for seats, and allocating electoral rents. For example, when deciding how to allocate electoral resources (Snyder, 1989), parties may opt for equal distribution among all candidates or choose to grant advantages selectively. In open-list systems, parties can tilt the balance in favor of their preferred candidates by constructing less competitive candidate lists, or they may seek a more balanced competition (Cheibub and Sin, 2020). Similarly, in closed-list systems, parties face a strategic choice of whether to position their strongest candidates at the top or in the middle of the list (Buisseret et al., 2022; Cox et al., 2021; Crutzen, Konishi and Sahuguet, 2021). All these decision points involve incentives similar to those captured in our model, transcending the specifics of any single electoral system and offering valuable insights into the broader dynamics of party politics.

In all these diverse contexts, our theory points to the strategic advantage of electorally stronger political parties. These parties can promote their preferred candidates without jeopardizing their overall electoral performance. This, in turn, potentially provides additional strategic advantages in the post-electoral process.

Our findings thus suggest a dynamic according to which ex-ante more popular parties effectively leverage their strength to further consolidate their influence within the political landscape. As such, and especially in relation to parties' tendency to protect incumbents, our results underscore a critical connection between the concentration of power within parties and its distribution across parties. Mitigating parties' gatekeeping power, for example by imposing opening the candidate selection process or list composition, or regulating electoral resources, is important not only as it improves intra-party democracy, but also to preserve the competitiveness of the system as a whole.

2. Related Literature

Our theory starts from the assumption that the party leadership faces a moral hazard problem vis-a-vis individual candidates. As such, our paper connects first and foremost to the literature on moral hazard in teams (Holmström, 1982), especially within the context of electoral competition (see Crutzen and Sahuguet (2023*a*) for a review). Crutzen and Sahuguet (2023*b*) analyze different electoral rules and demonstrate that the candidate selection process (e.g., a primary) is an important source of incentives to campaign, as in our case. They assume that parties care solely about maximizing effort. In contrast, our contribution is to study the trade-off between inducing effort and controlling political selection. Crutzen, Konishi and Sahuguet (2021) develop a model with a similar trade-off between selection and campaigning, but analyze closed-list PR, where parties must choose how to rank their candidates on the list. Their focus is specifically on how media coverage, candidates' desire to access post-electoral high offices, and polarization influence how parties rank candidates. In our case, parties choose the type of list, and we study how their electoral strength influences their strategic choice in navigating the trade-off.

Other related papers also consider settings where parties exercise their gate-keeping power and influence candidate selection. For example, in Galasso and Nannicini (2011) parties field loyal but less competent candidates in safe districts and competent but less loyal candidates in more competitive ones; in Buisseret et al. (2022) parties respond to strategic voters, and face a trade-off between maximizing votes and ensuring a high quality of governance. However, in these papers candidates have different types and take no strategic action. Our focus on candidates' effort choice complements these works.

Our paper also connects to the literature on endogenous electoral institutions (Aghion, Alesina and Trebbi, 2004; Leemann and Mares, 2014; Achury, Ramírez and Cantú, 2017), where the observation is that parties themselves make the rules under which they compete. Typically, all parties in the same system are subject to same rule. Instead, the specific context we focus on offers a rare opportunity, as each party chooses independently how much flexibility to embed in its electoral list (moving from a fully open list where no advantages are assigned, to an allocation that resembles closed lists with some candidates fully insulated from competition). Thus, we can observe a wide variation in parties' choices even within the same local context, allowing us to more easily approach 'all else equal' comparisons in our empirical analysis.

It is worth noting that our focus on list flexibility is in line with recent theoretical and empirical literature emphasizing how the ballot structure shapes electoral competition, the behavior of candidates, political selection, and intraparty politics (Buisseret and Prato, 2022; Buisseret et al., 2022; Carroll and Nalepa, 2020; Cox et al., 2021; Crutzen, Flamand and Sahuguet, 2020; Crutzen, Konishi and Sahuguet, 2021; Galasso and Nan-

nicini, 2011; Hangartner, Ruiz and Tukiainen, 2019; Kselman, 2020). Moreover, we provide evidence supporting the party politics literature view that control over the type of candidates elected is valuable to the parties (Bawn et al., 2012; Cohen et al., 2008; Eriksson and Vernby, 2021; McCarty and Schickler, 2018), as well as the recent works on seniority-based nomination norms in politics (e.g., McKelvey and Riezman, 1992; Epstein et al., 1997; Cox and Nowacki, 2023; Cirone, Cox and Fiva, 2021).

More broadly, previous literature regarding how election systems interact with the advantage of larger parties has focused mainly on the mechanical relationship between vote shares and seat shares and to what extent various election rules favor the larger parties (Benoit, 2000; Herron, Pekkanen and Shugart, 2018). Our insight that ex-ante more popular parties have a further advantage in managing political selection is to our knowledge novel.

3. Institutional Setting

Before delving into the analysis, it is important to provide further details on the institutional setting we will be considering in both our formal and empirical analyses.

The Norwegian population of about 5.4 million is divided into 356 municipalities (2020).[1] These municipalities (local governments) are important entities of the welfare state with responsibilities for many core public services, such as education and primary health care. In total, municipalities employ about 17% of the total labor force. Each local government is run by a municipal council of 11 to 77 members. Local elections take place every fourth year.[2]

The Norwegian list-based electoral system works as follows. Voters cast a ballot for one of the parties and, if they want, express their preferences for individual candidates. Voters can give a personal vote to as many candidates as they like.[3] Seats are allocated *across* parties based on the modified Sainte-Laguë method.[4] The allocation of seats

[1] A municipal amalgamation reform, passed by parliament in June 2015, lead to a reduction in the number of municipalities from 428 to 356 over the following four years. The local election in 2019 used the post-reform municipality structure in place from January 2020.

[2] Norwegian politics is dominated by seven political parties, which can be classified as left-leaning (*Labor Party* (A); *Socialist Left Party* (SV)), center (*Center Party* (SP); *Christian Peoples' Party* (KRF); *Liberal Party* (V)) or right-leaning (*Conservative Party* (H); *Progress Party* (FRP)). Appendix Table C.1 provides descriptive statistics at the municipality-level for these parties in the 2019 elections. The Labor Party and the Center Party are the largest parties, and present lists in almost all municipalities. On average, they win 28-29 percent of the seats in the municipalities where they run. With an average council size of about 26 members, this translates into about 7 seats.

[3] In the 2019 elections, which our empirical analysis focuses on, 46 percent of voters cast at least one personal vote.

[4] The principle of highest average methods, like modified Sainte-Laguë, is to distribute seats in consecutive rounds to the party that "most deserves" a seat. This is achieved by using a series of divisors, which depend on the seats granted to the party in prior rounds. Modified Sainte-Laguë uses the divisor series "1.4, 3, 5, 7, ...". The D'Hondt method, which was used in Norwegian local elections until 1999,

within parties is instead decided based on an index which depends on both voter and party choices. The election system allows parties to give some of their candidates a "head start" (*advantage*), that increments their personal vote-share by adding 25% of the total number of votes received by the party.[5] More precisely, denote as $Poll_{il}$ candidate i's advantage-adjusted personal preference vote-share. We have that:

$$Poll_{il} = \begin{cases} PersonalVotes_i & \text{if } i \text{ has no advantage} \\ PersonalVotes_i + 0.25 \cdot PartyVotes_l & \text{if } i \text{ has a advantage for list } l. \end{cases} \quad (1)$$

$Poll_{il}$ then determines the candidates' post-ballot ranking, and therefore, the order in which they are elected. In practice, the head-start is so large that it is extremely hard for non-advantaged candidates to compete with advantaged candidates.[6]

The maximum number of candidates that a party can give an advantage to depends on the size of the local council, although for the vast majority of party lists the restriction is not binding.[7] Parties can choose any number between zero and the maximum. The decision over how many advantaged positions to allocate, and to whom, is taken by local parties' nomination committees. The candidates with an advantage are listed in boldface on the top of the ballot. The initial ranking of candidates does not otherwise play any formal role, except if there is a tie. In our empirical analysis, we focus on the 2019 local elections, where the median number of advantaged candidates is two. However, there is considerable variation across municipalities for each party (Appendix Table C.1), as well as over time within municipalities.[8] Thus, the number of advantaged positions that parties give appears to be a real choice.

4. The Gatekeeper's Dilemma

In what follows, we introduce a stylized model to analyze parties' optimal allocation of advantaged positions. For ease of presentation, we will first focus on the candidates' campaign effort choice, fixing an allocation of advantaged positions. We will then define the party's objective function and characterize the equilibrium allocation strategy.

uses the divisor series "1, 2, 3, 4, ..." (Fiva and Folke, 2016).

[5]Candidates with a head start are listed at the top of the ballot paper in boldface. Appendix Figure C.1 provides an example.

[6]In 2019, only 2% of non-advantaged candidates received personal votes amounting to 25% of the total number of votes received by the party, which is the *minimum* to overtake a candidate with a head start (see Appendix Figure C.2). Only 0.2% of non-advantaged candidates beat a candidates with a head start (excluding open lists) in 2019.

[7]In councils with fewer than 23 members, parties can give an advantage to a maximum of 4 candidates. For councils with 23 to 53 members, the maximum is 6, and for councils with more than 53 members, 10 is the limit (Fiva and Røhr, 2018). In our sample, 8 percent of party lists are at the maximum allowed.

[8]For municipalities that were not involved in any mergers between 2015 and 2019, we find a correlation between the number of advantaged candidates at the list-level of 0.49.

4.1 *The Candidates' Effort Choice*

Consider the game between n candidates belonging to the same party, that only care about their own individual success (i.e., their probability of winning a seat). Each candidate's strategic choice is the amount of costly campaign effort to exert $e_i \in [0, 1]$. Formally, each candidate i's utility is $U_i = \mathbb{I}_i R - \frac{e_i^2}{2}$, where $\mathbb{I}_i$ takes value 1 if candidate i obtains a seat and 0 otherwise.[9] The individual candidates' campaign effort influences the party's overall electoral performance. We model this electoral process in a reduced-form. The number of votes received by the party (V) is a function of the n candidates' effort choices ($\sum_{i=1}^{n} e_i$), the party's ex-ante electoral strength (S),[10] and a random shock ($\delta \sim U[-\frac{1}{2\phi}, \frac{1}{2\phi}]$):

$$V = \sum_{i=1}^{n} e_i + S + \delta. \tag{2}$$

The allocation of seats *to* the party is proportional to its vote-share. Specifically, for each x, there is a threshold $x \cdot K$ that the votes obtained by the party must surpass to win x seats. Thus, the party obtains 1 seat if $V \in [K, 2K)$, 2 seats if $V \in [2K, 3K)$ etc.

The allocation of the seats *within* the party is a function of two elements: each candidate's effort choice, and the allocation of advantaged positions by the party leadership. Each seat that the party wins is allocated to the set of advantaged candidates first. Only after all the advantaged candidates have obtained a seat, the residual seats are allocated to the non-advantaged candidates. Suppose, for example, that the party assigns an advantaged position to 3 candidates, and wins a total of $\sigma > 3$ seats. Then, 3 seats are allocated to the advantaged candidates and $\sigma - 3$ to the non-advantaged ones. Suppose instead that the party assigns an advantaged position to 3 candidates, and wins a total of $\sigma \leq 3$ seats. Then, all the seats are allocated to the advantaged group.

Within each group (advantaged and non-advantaged), each candidate's probability of obtaining a seat is increasing in their effort choice, and decreasing in the effort choice of the other candidates in the same group. Formally, seats are allocated as a result of a (sequential) Tullock contest, as in Crutzen, Flamand and Sahuguet (2020). For example, suppose that the party wins a single seat, and allocates an advantaged position to $n_a > 1$ candidates.[11] Then, for each advantaged candidate i_a, the probability of obtaining a seat is:

$$Q_{i_a}(1) = \frac{e_{i_a}}{\sum_{i_a} e_{i_a}}. \tag{3}$$

[9] We impose $R < 1$ to ensure interior solutions.

[10] As a function, for example, of the voters' ideological leaning or the value of the party brand.

[11] Abusing notation, n_a will denote both the set of advantaged candidates and the cardinality of this set.

Suppose instead that the party wins a total of two seats and allocates an advantaged position to $n_a > 2$ candidates. Then each advantaged candidate's probability of obtaining the first seat is as above ($Q_{i_a}(1)$). The candidate that obtains this first seat is then excluded from the contest for the second. Each advantaged candidate i_a's probability of obtaining a seat is therefore

$$Q_{i_a}(2) = \frac{e_{i_a}}{\sum\limits_{i_a} e_{i_a}} + (1 - \frac{e_{i_a}}{\sum\limits_{i_a} e_{i_a}}) \frac{e_{i_a}}{\sum\limits_{i_a \neq w_1} e_{i_a}}, \tag{4}$$

where w_1 denotes the candidate that won the first seat. If the party wins more seats than the number of advantaged candidates, the allocation within the non-advantaged group follows an analogous process.[12]

4.2 *Analysis*

We use this model to formally characterize the candidates' equilibrium effort choices under various allocations of advantaged positions. The specific calculations, which will be crucial in determining which allocation maximizes total effort, are relegated to Appendix A. However, it's important to highlight an intuitive property of the candidates' equilibrium choices here.

Denote $\underline{N}$ the minimum number of seats the party is guaranteed to obtain, i.e., the number of seats the party expects to win thanks to its ex-ante electoral strength (even if all candidates exert 0 effort, and the shock δ takes its smallest value). $n_a \in [0, n]$ indicates the number of advantaged candidates in the list. Then, we have:

Remark 1. *Suppose that candidates with an advantaged status are guaranteed a seat (i.e., $\underline{N} \geq n_a > 0$). Then, these candidates exert no effort in equilibrium.*

In the model, candidates care solely about their individual success. As such, even if the party's collective performance depends on the members' individual contributions, a candidate will not find it worthwhile to invest in costly effort if they are always guaranteed

[12] Formally, denote as χ the number of seats won by the party and allocated to the set of advantaged candidates (notice that $\chi = min \in \{\sigma, n_a\}$). The probability that each of the advantaged candidates wins a seat is:

$$Q_{i_a}(\chi) = q_1 + \sum_{j=2}^{m_a} q_j (\prod_{s=1}^{j} (1 - q_s)),$$

where

$$q_j = \frac{e_{i_a}}{e_{i_a} + \sum\limits_{k \neq i_a} e_k},$$

for all $i_a, k \in n_a \setminus \{w_{j-1}\}$. w_{j-1} denotes the set of advantaged candidates that won the first $j-1$ seats. In an analogous way, we can define $\xi = max \in \{0, \sigma - \chi\}$, and the probability of winning a seat for a candidate that does not receive an advantage as $Q_{i_{na}}(\xi)$.

a seat. This situation occurs when the party assigns fewer advantaged positions than the minimum number of seats it anticipates winning, i.e., when $\underline{N} \geq n_a > 0$. We refer to these cases as **lists with bottom competition**, indicating that only candidates without an advantage (listed at the bottom) are subject to internal competition for seats.

In contrast, if the party assigns $n_a > \underline{N}$, advantaged status doesn't ensure a seat, and even the advantaged candidates are subject to intraparty competition. We will refer to lists in which $n_a > \underline{N}$ as **lists with top competition** to signify that even the advantaged candidates (listed at the top in bold) must compete with their fellow party members to secure a seat.[13]

Remark 1 highlights two important aspects of the strategic problem faced by the party leadership. First, the leadership faces a moral hazard problem vis-à-vis the candidates: the overall success of the party hinges on the individual candidates' effort choices (as detailed below), yet each candidate has an incentive to exert effort only to the extent necessary to secure a seat. Secondly, through the decision to allocate advantaged status to some of the candidates, the party leadership holds the power to fundamentally reshape the structure and intensity of competition within the list, thereby influencing the candidates' incentives for effort.

4.3 *Empirical Evidence on Candidates' Effort Choice*

Before moving to analyze the party's optimal allocation, we turn to the data. We aim to verify that, in our setting, candidates respond to incentives as posited in our model. In particular, we seek to validate Remark 1, i.e., the claim that when candidates are insulated from internal competition (because their advantaged status guarantees them a seat), they will have lower incentives to exert costly campaign effort, even if this means damaging the party's collective performance.

We consider the candidates running for office in the 2019 local election (54,244 candidates) (Fiva, Sørensen and Vøllo, 2021). We exclude the 1,551 candidates running in Oslo and Bergen, since these two municipalities have chosen a parliamentary system. We also exclude candidates running for non-standard lists (i.e. joint lists of the main parties, party-independent lists, and minor party lists) (10,584 candidates), candidates running for office in municipalities involved in mergers (11,601 candidates), and candidates that have any missing data from the administrative registers (2,940 candidates). This leaves us with a sample of 29,312 candidates running at 1,626 lists. In order to classify party lists as adopting either bottom or top competition, we consider the minimum number of seats the list won in the last four elections, corresponding to the parameter $\underline{N}$ in the

[13] In top-competition lists both advantaged and non-advantaged candidates have incentives to exert effort, as long as the number of advantages is not larger than the maximum number of seats the party may ever hope to win. If that instead is the case, non-advantaged candidates are hopeless and only advantaged ones exert positive effort in equilibrium.

model. Then, lists with bottom competition are lists in which the number of advantages is weakly lower than $\underline{N}$, while lists with top competition are lists in which the number of advantages is higher than $\underline{N}$.

We do not have a direct measure of campaign effort. Instead, we rely on a proxy: candidates' within-list personal vote-shares. In the Appendix, we present the results using an alternative proxy: candidates' within-list share of media hits in the six weeks leading up to election day.[14] Of course, a candidate's vote-share (or share of media hits) is not solely a function of their effort choice. The candidates' personal characteristics as well as features of the party will also have an impact, above and beyond campaigning effort. As such, we cannot simply compare candidates with and without an advantaged status, since this is likely to be correlated with a host of relevant individual characteristics. Similarly, we cannot simply compare candidates from different parties, some where the advantage guarantees a seat (bottom competition) and others where it does not (top competition). Parties strategically choose their list type, therefore the choice of bottom versus top competition is likely to be endogenous to features of the party that also impact our outcomes of interest. It is also possible that parties adopting different list structures systematically select different types of candidates.

To circumvent these issues, we estimate the following regression model:

$$Y_{ipm} = \alpha Top_{pm} + \beta A_{ipm} + \delta Top_{pm} \cdot A_{ipm} + \eta_p + \boldsymbol{\lambda}' \mathbf{X_{ipm}} + u_{ipm}. \tag{5}$$

For ease of illustration, we estimate the model separately for lists that have two, three, four, or five to six advantaged candidates.[15] Here Y_{ipm} denotes the share of personal votes that candidate i gets in party list p in municipality m. Top_{pm} denotes lists with top competition ($n_a > \underline{N}$), and captures the baseline effect of different party (or candidate) characteristics associated with this list structure. A_{ipm} is a dummy equal to one if i holds an advantaged position, and captures the baseline effect of different individual characteristics associated with advantaged status. The parameter of interest, δ, captures the interaction between these two variables, i.e., the difference between the effect of being in a top versus bottom competition list for advantaged candidates, net of the difference for non-advantaged ones. This interaction approach allows us to control for differences in individual level characteristics between candidates in different list types, as well as the differences between advantaged and non-advantaged candidates in the same list. Furthermore, the regression controls for the choices that the party makes, that is,

[14] The data come from the media archive *Atekst*, which has comprehensive coverage of news stories appearing in Norwegian newspapers on the web and in print, as well as stories in radio and TV. This database has previously been used by Cox et al. (2021) to construct measures of campaign effort for candidates' participating in the 2017 national election.

[15] We do not study cases with more than 6 advantaged as they are rare.

the list type, the candidates' rank and their advantage status. We expect top competition to motivate advantaged candidates at the top of the list to put in more effort ($\delta > 0$).

In Equation (5), we also include party fixed-effects η_p (thus leveraging variation within party across municipalities), as well as a battery of individual-level covariates $\mathbf{X_{ipm}}$.[16] Adding these additional candidate characteristics is potentially relevant since it is possible that there is selection specifically into safe seats. That is, even when accounting for average differences across lists, parties that choose bottom competition (i.e., $n_a \leq \underline{N}$) may systematically select different advantaged candidates than parties adopting top-competition lists, where advantaged positions are not secure (i.e., $n_a > \underline{N}$).

We start by providing a graphical illustration of the raw data. In Figure 1 we plot candidates' vote shares by pre-election ballot rank and list type (top or bottom competition).[17] The results are striking and systematic. When candidates are facing intra-party competition at the top of the list, they tend to receive more personal votes.[18] For example, looking at lists with two advantaged candidates, a first-ranked candidate gets about nine percentage points higher personal vote share when the advantage does not insulate him or her from internal competition. We find a corresponding effect of about four percentage points for the second-ranked candidates. For lower-ranked candidates, where none are insulated from competition, there are no clear discernible differences between the two types of allocation structures.

In Table 1 we provide the corresponding regression results. In line with the graphical evidence, we estimate δ to be 7.6 percentage points for lists that give an advantage to two candidates. This estimate corresponds to the average difference between the two lines for rank $1-2$ in Figure 1 (first difference) and the two lines for ranks lower than 2 (second difference), after netting out individual-level characteristics and national party fixed effects. For lists with an advantage given to 3, 4, and 5-6 candidates, we find similar results.[19] The somewhat smaller estimated δ of $3.6-5.0$ percentage points partly reflect

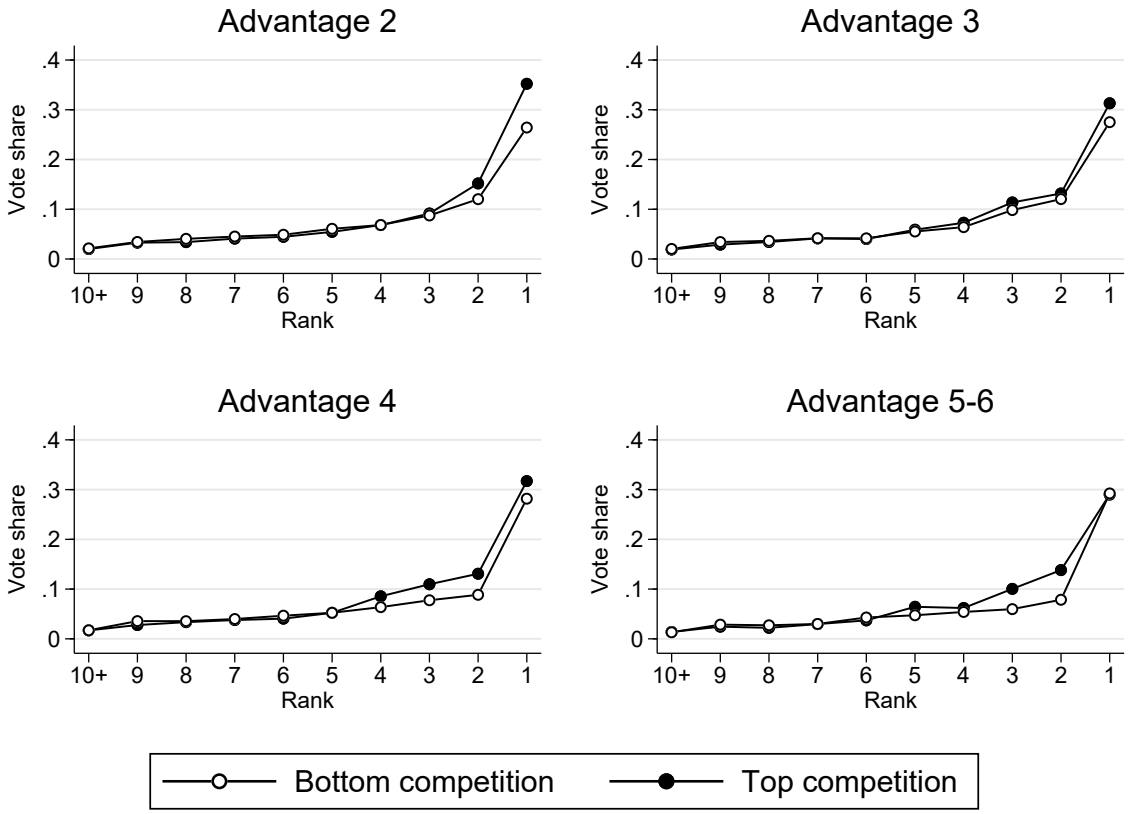
[16]For the time-varying individual characteristics, we use data from 2018, the year before the election. Appendix Table C.2 provides descriptive statistics for the main variables in our empirical analysis

[17]We pool candidates ranked lower than 10 in a "10+" category. The average list length is 18.6, 19.7, 22.3, and 31.4 for lists that give an advantage to 2, 3, 4, and 5-6 candidates.

[18]The only exception to the result is candidates that are ranked first, for whom personal vote shares are more similar under the two allocation structures for the cases when many advantaged positions are given (typically larger parties). Crucially, parties typically place the mayoral candidate in the top-ranked position. Thus, especially in the larger parties, top-ranked candidates have more incentives to campaign in order to increase their party's overall performance, and thus, the chances of winning the mayoral position, even if their own seat in the council is safe (Cox et al., 2021).

[19]In Appendix Table C.3, we investigate the possibility that there is systematic selection into safe spots. We find that candidates that have prior experience as councillors or mayors are more likely to obtain an advantage in a bottom competition list. However, these imbalances are unlikely to drive our results. Candidates with previous political experiences likely attract more personal votes, regardless of their effort choice. If anything, this would lead to a downward bias in our main estimates absent controls. This may explain why, in fact, our results are even stronger where we include individual-level controls (compare Table 1 with controls, and the top-left panel of Appendix Table C.3 without controls).

Figure 1: Vote shares by rank and nature of competition



Note: This figure displays candidates' personal vote share (within party list) by pre-election ballot rank and nature of competition. We split the sample by the number of advantaged candidates (given in the title of each sub-panel). We pool cases where the advantage is given to 5-6 candidates because of few observations.

that lists with more advantaged candidates tend to be longer (as reflected in the mean of the outcome variable). In all sub-samples, the estimated δ is statistically significant. We interpret these results as evidence that the candidates' campaigning effort responds to the incentives induced by the party leadership's advantage allocation strategy in the expected way.[20]

Table 1: Candidates insulated from intraparty competition receive fewer personal votes

	(1) Advantage 2	(2) Advantage 3	(3) Advantage 4	(4) Advantage 5-6
Top competition	0.002	0.004*	0.002	-0.003
	(0.002)	(0.002)	(0.002)	(0.002)
Advantage	0.127***	0.104***	0.074***	0.060***
	(0.004)	(0.005)	(0.004)	(0.003)
Top competition X Advantage	0.076***	0.037***	0.050***	0.036***
	(0.006)	(0.006)	(0.006)	(0.007)
Mean of outcome var.	0.055	0.053	0.046	0.033
R-squared	0.58	0.55	0.53	0.50
Observations	10606	4458	4071	3025

*Notes: The outcome variable is the candidates' personal vote share (within party list). The baseline sample is all the candidates running for one of the seven main parties in the 2019 local election. We drop all lists where we fail to match any candidates with administrative data from Statistics Norway. We split the sample by the number of advantaged candidates (given in the title of each column). We pool cases where the advantage is given to 5-6 candidates because of few observations. We control for various candidate characteristics and national party fixed effects (see Equation 5). Appendix Table C.4 provides the full regression results. Standard errors are clustered at the municipal level and reported in parentheses. * denotes 10% statistical significance, ** 5% and *** 1%.*

4.4 *The Party's Optimal Choice*

Under the reassurance that the moral hazard problem we hypothesize is empirically relevant in our setting, we now proceed to analyze the optimal number of advantaged positions for the party leadership to allocate.

Building on the literature emphasizing that parties place a premium on the ability to influence political nomination processes (Cohen et al., 2008; McCarty and Schickler, 2018), we assume that the party leadership cares about seats (and, thus, maximizing campaign effort), but also values the possibility to protect some of its candidates. Recall

[20]Appendix Table C.5 provides the regression results for our alternative proxy for effort, the share of media hits. We find that top candidates facing intra-party competition receive about 3 percentage points more media hits in the six weeks preceding the elections. Because media hits are more unequally distributed across candidates than personal votes, as some candidates get lot of hits and most none, the estimated δ are less precise. However, in all four sub-samples, the estimated effects are statistically distinguishable from zero at least at the ten percent level.

that n_a indicates the number of advantaged positions allocated by the party, and $\underline{N}$ is the minimum number of seats the party expects to win. Denote σ the total number of seats won by the party. Then, we have that the leadership's utility U_l is:

$$U_l = \begin{cases} W\sigma + B, & \text{if } 0 < n_a \leq \underline{N} \\ W\sigma, & \text{otherwise} \end{cases} \tag{6}$$

Thus, W is the value of each additional seat. Recall that when $n_a \leq \underline{N}$, the advantaged candidates are always guaranteed a seat. As such, B captures in a reduced-form the payoff premium that the leadership obtains from insulating specific candidates from competition.[21] Substantively, insulating some candidates from competition may be valuable for the party leadership in and of itself (because the leadership wants to ensure its preferred candidates get to office), or because this represents a prize or reward the leadership allocates within the context of a larger dynamic intra-party bargaining process. Adopting a reduced-form approach, we black-box the question of why parties want to protect some candidates, and simply focus on the potential trade-off between selection (i.e., protecting some candidates) and effort.

Before proceeding to the analysis, it is important to emphasize that we do not explicitly consider candidates with different characteristics in the model. This is not to say that we assume all candidates are the same: individual heterogeneity is precisely why the party leadership may value managing the selection. Instead, here we take a stylized approach, which allows us to abstract from the issue of which types parties prefer, and focus on the tradeoff between incentivizing effort and gatekeeping selection.[22]

Hereafter, we will assume that $n = 4$ and $\underline{N} = 1$, i.e., the party list includes 4 candidates and the party is always guaranteed at least 1 seat.[23]

Analysis. First, it is important to establish what is the allocation strategy that maximizes campaign effort in our setting:

Lemma 1. *Total campaign effort (and thus expected number of seats) is maximized when the party allocates zero advantaged positions ($n_a = 0$).*

A fully open list, meaning a list where no candidate enjoys a special advantage, maximizes total effort and therefore the party's collective performance. Intra-party competition is heightened under an open list, which ensures that *all* candidates can have an

[21] Our key results from Proposition 1 are unchanged if we allow the party to also obtain a premium from *excluding* some candidates from competition (i.e., from choosing $n_a \geq \overline{N}$).

[22] An important caveat is that this approach relies on the assumption that the marginal cost of effort is not a function of candidates' characteristics.

[23] These assumptions ensure the analysis is tractable, while also guaranteeing that all allocation strategies (open list, bottom competition, and top competition) are available to the party leadership.

(equal) chance of winning a seat[24] and are therefore incentivized to exert costly campaign effort.[25]

This illuminates the gatekeeper's dilemma. If the party leadership was interested solely in maximizing the candidates' campaign effort (which then translates into seats), it should never allocate any advantaged position, so as to intensify internal competition. However, the party also values selection, and obtains a benefit from using advantaged positions so as to protect its preferred candidate(s).

Here, we are interested in understanding under which conditions the party leadership chooses to protect some candidates, at the expenses of its collective electoral success (i.e., number of seats). Given our setup, it is straightforward to see that we can always find a B large enough that the party finds it optimal to strategically allocate advantaged positions to protect some of its candidates, rather than maximizing incentives for effort. Less straightforwardly, our analysis shows that the value of B that induces a party to adopt this strategy is a function of its ex-ante electoral strength (S): the stronger the party, the lower this threshold. This yields the following result:

Proposition 1. *The likelihood (in the sense of set inclusion) that the party leadership allocates advantaged positions to insulate some candidates from competition (i.e., chooses bottom competition) is increasing in the party's ex-ante electoral strength S.*

Notice that Lemma 1 implies that, in equilibrium, the party will either assign no advantaged positions at all, in order to maximize effort, or choose bottom competition ($0 < n_a \leq \underline{N}$), in order to select its preferred candidates.[26] Under $0 < n_a \leq \underline{N}$, the advantaged candidates are always guaranteed a seat, therefore only the non-advantaged ones will ever have incentives to exert effort. Such candidates are competing for the few seats that the party may win, and that would remain open after all advantaged candidates have secured a position. As the party's ex-ante electoral strength increases (and the party's chances improve), winning the intra-party conflict therefore becomes more relevant for the candidates at the bottom. Thus, campaign effort increases. A similar effect emerges under open-list ($n_a = 0$), but there the marginal impact of increasing party

[24]Notice that the party can achieve this either by assigning no advantages, or by assigning advantages to all the members of the list. However, in the Norwegian context there is an exogenous upper bound to the number of advantages parties can allocate, therefore it is typically unfeasible to assign advantaged statuses to all candidates on the list. We maintain this assumption in the model, although our results from Proposition 1 would remain robust upon relaxing this restriction.

[25]All candidates in the list can have incentives to exert effort even if some advantages are assigned, as long as $n_a > \underline{N}$. Under this allocation, competition is segmented between top and bottom of the list, but even advantaged candidates have to compete with each other to obtain a seat. However, our analysis reveals that this allocation strategy is inefficient for the party, as both groups of candidates have lower incentives to exert effort than under a fully open list.

[26]If we allow the party to also obtain a premium from excluding some candidates from competition (as in Footnote 21), this list structure will sometimes be chosen in equilibrium, but our predictions from Proposition 1 remain unchanged.

strength is reduced by the fact that internal competition is more intense. In other words, the difference in equilibrium effort under the two allocation structures is decreasing in S. Thus, if S is too low, protecting some candidates comes at a high cost for the party. In contrast, when S is high, parties can secure seats for their preferred candidates without sacrificing collective performance. Therefore, electorally stronger parties experience a weaker trade-off, and can get the best of both worlds.

4.5 *Robustness and Extensions*

Before proceeding with our empirical analysis, it is important to discuss whether our theoretical results are robust to altering the model in some intuitive ways. One assumption adopted in the model is that candidates only care about being elected, and therefore are only motivated to exert effort insofar as it is necessary to obtain seat. However, it's plausible that individual candidates may harbor additional motives for investing in the campaign. For example, they might seek visibility to bolster their chances in future elections or have a desire to maximize personal votes to enhance their standing within the party.

In Appendix B, we analyze a version of the model with this feature. We show that, while the individual candidates' effort choices may differ from the baseline model, our main prediction of interest (Proposition 1) remains robust. The intuition is as follows. Under specific conditions, candidates' eagerness to gain exposure might be so pronounced that all are willing to invest the maximum effort, regardless of their advantaged status or their prospects of being elected. In such cases, any allocation strategy from the party leadership yields an identical total effort from the candidate list. However, when this is not the case, and the candidates are incentivized to exert more effort when it is instrumental in winning a seat, the party experiences the exact same trade-off we described in the baseline model. The party leadership may want to assign advantages to protect its preferred candidates, but total effort is higher under open list. However, the difference between effort under open-list and effort in bottom-competition lists decreases as S increases, mirroring the logic in the baseline model. Thus, ex-ante more popular parties face a weaker trade-off, and are better positioned to use advantages strategically. Averaging across all cases, our prediction remains unchanged: the likelihood that, in equilibrium, the party leadership chooses to use advantaged status to secure a seat for its preferred candidates increases in the party's ex-ante electoral strength.

Looking instead at the party's motives, in the baseline model we assume that the parties obtain the benefit B when assigning advantages in a way that completely insulates certain candidates from competition. However, it is possible that in addition to the strategic value of securing a seat for these candidates, parties may obtain a benefit from assigning advantages more generally. For example, parties may want to use advantages

as a reward for candidates' past behavior, or within the context of a broader bargaining process with the members. In Appendix B, we analyze an extension of the baseline model where, in addition to the value of isolating their preferred candidates from internal competition, parties obtain a benefit that is a function (either decreasing or increasing) of the number of advantaged positions they allocate. Our prediction from Proposition 1 remains robust. Depending on the parameter values, parties may sometimes want to adopt an open-list, while other times prefer to assign advantages to one or multiple members of the list. However, the likelihood that they choose an allocation strategy that fully insulates some candidates from competition is increasing in their ex-ante popularity with the electorate.

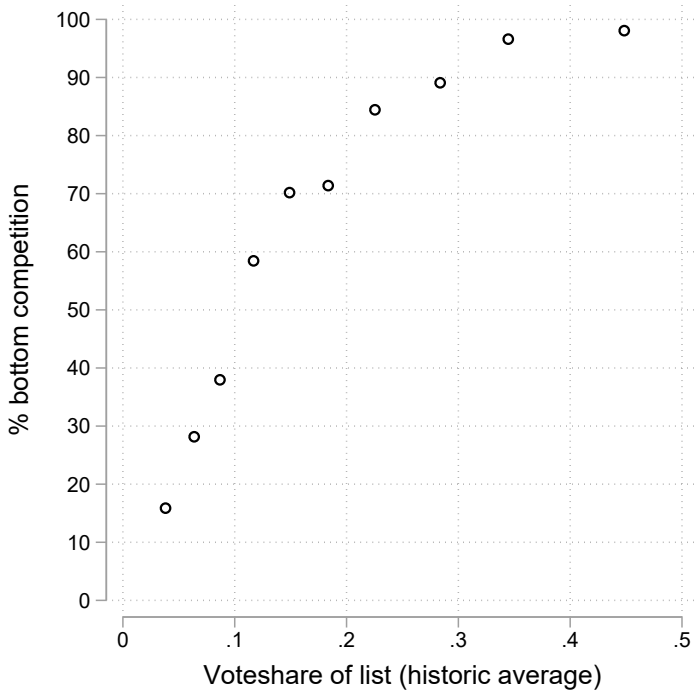
4.6 *Empirical Evidence on Optimal Choice and Ex-Ante Electoral Strength*

We now return to the data to investigate the validity of the predictions from Proposition 1 in our setting. We use the party's average historic performance as a proxy for its ex-ante electoral strength (S) (Fiva, Halse and Natvik, 2023). More precisely, focusing on parties' strategic behavior in the 2019 elections as dependent variable, we measure ex-ante strength using the average of each party's vote share in all prior local elections since 2003. Figure 2 displays the raw data, while Table 2 reports the regression result.[27] We find that, in line with our theoretical results, the likelihood that a party chooses to protect some candidates from competition by assigning them an advantaged status increases with the party's ex-ante electoral strength. Specifically, a 10%-point increase in the party's prior vote share is associated with about a 20%-point increase in the likelihood of the party adopting bottom competition, on average.

This relationship is robust to including several controls. In column (2), we control for the number of re-running incumbents in the party. This addresses the possibility that due to a seniority norm, parties need to allocate advantaged positions to their re-running incumbents who demand them, rather than thinking about this choice strategically. Ex-ante stronger parties are likely to have more re-running incumbents, therefore this may confound our results. This also controls for the possibility that, since bold characters tend to attract the voters' attention, parties may decide to have their more popular politicians (e.g., the ones who previously won election) in advantaged position to exploit this nudge in the electoral booth. While our coefficient of interest slightly decreases in size the substantial effect remains comparable and the coefficient remains highly statistically significant. In column (3), we include party fixed effect, and leverage variations within parties across municipalities. This addresses the potential concern that specific parties, who are stronger across municipalities *and* for perhaps idiosyncratic reasons tend to

[27] In the Appendix, we repeat the analysis using the local party vote share in the preceding national elections as an alternative proxy (see Appendix Table C.6 and Appendix Figure C.3).

Figure 2: The likelihood that a party chooses bottom competition ($0 < n_a \leq \underline{N}$) increases with electoral strength measured by the local party historic vote share



Note: The figure shows the fraction of local party lists choosing $0 < n_a \leq \underline{N}$ *(denoted on the y axis as the party choosing 'bottom competition') in the 2019 election as a function of the local party historic vote share.*

adopt bottom-competition lists, would drive the results. Our findings indicate this is not a significant concern in our setting. Again, our coefficient of interest remains highly significant and large. In column (4), we include municipalities fixed effect, leveraging variation within municipalities across parties. Because we only look at the 2019 elections, these fixed effect perfectly control for features such as the size of the council, the intensity of competition across parties, differences in the pool of potential candidates, etc. In Column (5), we drop from the sample those local parties that chose the maximum possible number of advantages, since this constrained optimum may not align with their choice absent the upper bound. In column (6) and (7), respectively, we drop those local parties for whom $\underline{N}$ is equal to zero, and $\underline{N}$ is larger than the maximum number of advantages a party can assign in the municipality, since the choice for these parties is mechanical. In all of these specifications, our results remain robust and strongly in line with our theoretical predictions.

Thus, while our design does not allow us to make causal claims on the effect of parties' popularity on their strategic choice when it comes to allocating advantages positions, the

Table 2: Relationship between bottom competition ($0 < n_a \leq \underline{N}$) and electoral strength measured by the local party historic vote share

	(1) All	(2) All	(3) All	(4) All	(5) $A < A\_max$	(6) $0 < \underline{N}$	(7) $\underline{N} < A\_max$
Voteshare (historic average)	1.993***	1.733***	1.396***	1.863***	1.785***	1.721***	3.068***
	(0.080)	(0.110)	(0.141)	(0.133)	(0.144)	(0.133)	(0.292)
Number of incumbents		0.022***	0.016***	0.024***	0.034***	0.021***	0.021*
		(0.006)	(0.006)	(0.006)	(0.008)	(0.006)	(0.012)
Mean of outcome variable	0.607	0.607	0.607	0.607	0.615	0.643	0.492
R-squared	0.25	0.26	0.30	0.31	0.29	0.26	0.20
Observations	1387	1387	1387	1387	1256	1309	1030
Party FE	No	No	Yes	No	No	No	No
Municipality FE	No	No	No	Yes	Yes	Yes	Yes

*Notes: We estimate a linear probability model (OLS). Standard errors are clustered at the municipal level and reported in parentheses. * denotes 10% statistical significance, ** 5% and *** 1%.*

correlation is remarkably robust and strongly in line with our theoretical prediction.

Furthermore, we provide some suggestive evidence that the specific mechanism underlying our theoretical prediction is also at play in our empirical results. In our model, political parties face a trade-off between maximizing effort (by adopting an open list) and protecting their preferred candidates (by adopting bottom-competition lists). This tradeoff emerges for two reasons: first, advantaged candidates in a bottom-competition list have no reason to exert costly effort; second, assigning the certainty of a seat to the advantaged candidates depresses incentives for effort for the non-advantaged candidates as well, since there are less prizes available for them to win. Our prediction in Proposition 1 emerges because this second effect is dampened for ex-ante more popular parties. Thus, if our hypothesized mechanism is correct, we should observe a higher effort choice from non-advantaged candidates in bottom competition lists as the party's ex-ante strength increases.

Indeed, this is exactly what the results in Table 3 suggest. Limiting the sample to bottom-competition lists, we find that the share of personal votes obtained by the non-advantaged candidates in the list (over the advantaged ones) increases in the party's ex-ante electoral strength. This holds even after controlling for the length of the list, whether a previous mayor is in the list, the number of advantages allocated by the party, and party/municipality fixed effects. The relationship is also robust to using the local party's vote-share in the previous national election as alternative proxy for electoral strength (Appendix Table C.7).

Table 3: Non-advantaged candidates in bottom-competition lists increase with the party's electoral strength (S)

	(1)	(2)	(3)	(4)	(5)
Voteshare (historic average)	0.278***	0.239***	0.314***	0.231***	0.125***
	(0.035)	(0.032)	(0.033)	(0.039)	(0.048)
Length of list		0.005***	0.005***	0.005***	0.008***
		(0.001)	(0.001)	(0.001)	(0.001)
List with mayor			-0.056***	-0.073***	-0.063***
			(0.009)	(0.009)	(0.010)
Mean of outcome variable	0.624	0.624	0.624	0.624	0.624
R-squared	0.39	0.45	0.47	0.51	0.44
Observations	842	842	842	842	842
Advantage (count) FE	Yes	Yes	Yes	Yes	Yes
Party FE	No	No	No	Yes	No
Municipality FE	No	No	No	No	Yes

*Notes: We limit the sample to bottom competition, and regress the share of personal votes to non-advantaged candidates on the party's ex-ante electoral strength, S. The unit of analysis is a list in a municipality. * denotes 10% statistical significance, ** 5% and *** 1%.*

5. Electorally Strong Parties, the Gatekeeper's Dilemma and Post-electoral Outcomes

In our earlier sections we established, theoretically and empirically, that ex-ante more popular parties are more likely to insulate their preferred candidates from competition. The mechanism is that, although all parties face a trade-off between effort and selection, this trade-off is less pronounced for electorally stronger parties. In essence, these parties appear to enjoy a strategic advantage, as they can safeguard their preferred candidates without significantly compromising incentives for the other members of their list to exert costly campaign effort.

In this section, we explore the ramifications of this strategic advantage, specifically investigating how a party's capacity to secure seats for their preferred candidates shapes post-electoral outcomes. In an ideal experiment, we would randomly allocate the number of advantaged candidates in each party and compare post-election outcomes. Of course, this is impossible. Furthermore, our earlier results suggest that the decision to allocate advantaged statuses to shield specific candidates from competition is endogenous to the party's initial strength. Consequently, merely comparing outcomes across parties making different allocation choices offers no prospect of isolating the causal impact from potential confounders.

To address this challenge, we adopt a two-step approach, focusing on identifying the

type of candidates that parties tend to protect, and the consequences of such candidates being elected for post-electoral outcomes. First, we compare the individual traits that have a positive correlation with a candidate's personal vote-share and those that are positively associated with obtaining an advantaged status from the party. When certain characteristics are linked to an advantaged status but do not necessarily predict a higher vote-share, we interpret this disparity as indicative of features that parties value independently of voter preferences. Second, we therefore explore how the election of candidates possessing these valued characteristics impacts the party's post-electoral bargaining outcomes. This provides an indication of whether a strategic advantage in navigating the selection-control tradeoff generates further advantages for the party in other domains.

5.1 *Identifying Valuable Characteristics*

Our goal in this section is to identify candidate characteristics that parties value above and beyond their electoral appeal. For this purpose, we compare the results of two regressions. First, we estimate a linear probability model where we regress advantage status on a set of candidate-level characteristics and local party fixed effects. The results of this regression, reported in Appendix Table C.8, identify candidate characteristics that predict obtaining an advantaged position.[28]

Next, we study what candidate characteristics are positively associated with higher personal voteshare. We regress the candidates' personal votes on their characteristics, while controlling for the advantage status, pre-election rank fixed effects and local party fixed effects. The results are reported in Appendix Table C.11.[29]

By comparing the results of the two analyses, we see that most of the covariates that are positively associated with probability of obtaining an advantage are also positive predictors of personal vote-shares, and vice-versa. Furthermore, the substantive magnitude of the effects (standardized by the mean of the outcome variable) are similar in both regression. However, there is some disagreement. Notably, women are more likely to secure an advantaged position in the list, yet they tend to be less appealing to voters. Furthermore, while both voters and parties seem to favor previous incumbents, the effect of being an incumbent on the likelihood of securing an advantaged position is significantly larger than the effect on vote share.

[28]In Appendix C, we investigate potential heterogeneity in these results. Interestingly, the patterns do not seem to vary much across ideological blocs (Appendix Table C.9) or the nature of the inter-party competition as measured by how intensely they are competing for the mayoral seat (Appendix Table C.10).

[29]This analysis is related to our campaigning analysis reported in Table 1, but fundamentally distinct from it. There, candidate characteristics control for voters' preferences, and we study how being in a safe seat influences candidates' effort (proxied by their residualized vote-share). Here, we are instead interested in studying voters' preferences directly, and thus investigate how different individual characteristics predict votes, while controlling for advantaged status.

With this information at hand, we can therefore investigate how the ability to use gatekeeping power to select specific types of candidates, i.e., women and incumbents, influences parties' success in the post-electoral bargaining process.

5.2 *Women, Incumbents and Post-Electoral Bargaining*

We investigate the hypothesis that women and incumbents are valuable for political parties because electing such candidates secures a premium in the post-election bargaining process. In our setting, such bargaining advantage could result in the party obtaining a disproportionate share of the seats in the municipal board. The significance of these positions is substantial. As mentioned earlier, municipalities serve as crucial policy-making entities, overseeing vital social services such as primary healthcare and education. The municipal board, serving as the executive branch of local government, plays a pivotal role in decision-making processes.

The board is elected by the council at the beginning of each electoral period. While its composition should in principle reflect the seat-shares in the council, parties retain some leeway. If no councilor demands that the board members are selected via list-based proportional elections,[30] its composition is decided on via a negotiated agreement. Furthermore, even if no formal bargaining process takes place, there are fewer positions in the board than seats in the council, which creates a degree of disproportionality that the parties must resolve.

To investigate our hypothesis, we regress the share of board seats that a party p in a municipality m at time t gets ($Board\ share_{pmt}$) on the share of women ($Women\ share_{pmt}$) and the share of incumbents ($Inc\ share_{pmt}$) elected within the party.

$$Board\ share_{pmt} = \alpha + \beta\, Council\ share_{pmt} + \chi\, Women\ share_{pmt} + \gamma\, Inc\ share_{pmt} + \mu_{pmt}. \quad (7)$$

Despite close to one-to-one mapping between the council seat share ($Council\ share_{pmt}$) and board seat share, we see a statistically significant bargaining boost associated with electing more incumbents or women into the council. Table 4 shows that a 10%-points increase in incumbent share results in about 1.4%-points increase in the party's share of the executive. In turn, a 10%-points increase in the share of women results in a 1.1%-points increase in the parties share of the executive. Thus, selecting incumbents and women candidates tends to improve a party's chance of occupying strategic positions in the executive board, even controlling for the party's seat-share in the council and its

[30] In this case, each party (or groups of parties) puts forward a list of candidates for the board, including up to twice the number of names relative to the number of positions to be filled. Each list can only include elected council members, and should cover at least 40 percent candidates of each gender "as far as possible" (Local Government Act §7-5).

square. These results are robust to considering the share of incumbent and women both together and in separate regressions, as well as to the inclusion of municipal fixed effects.

Table 4: Post-electoral bargaining outcomes

	(1)	(2)	(3)	(4)	(5)
Seat share (percent)	0.983***	0.983***	0.981***	1.000***	0.999***
	(0.012)	(0.012)	(0.013)	(0.035)	(0.047)
Incumbents (percent)		0.014***		0.015***	0.019***
		(0.004)		(0.004)	(0.006)
Women (percent)			0.009*	0.011**	0.013**
			(0.005)	(0.005)	(0.006)
Seat share squared				-0.000	-0.001
				(0.001)	(0.001)
Mean of outcome variable	17.46	17.46	17.46	17.46	17.46
R-squared	0.839	0.840	0.840	0.841	0.847
Observations	1800	1800	1800	1800	1800
Municipality FE	No	No	No	No	Yes

*Notes: The sample consist of main party lists winning a seat in a local council in the 2019 election. The dependent variable is the party's percent of seats in the executive board. "Seat share" measure the percent of seats the party holds in the council. "Incumbents" measure the percent of re-elected incumbents among the elected candidates from the party. "Women" measure the percent of women among the elected candidates from the party. Standard errors are clustered at the municipal level and reported in parentheses. * denotes 10% statistical significance, ** 5% and *** 1%.*

In this setting, electing experienced candidates may be valuable for political parties because such candidates are better at navigating the post-election bargaining process (as in Meriläinen and Tukiainen (2022)). Of course this does not exclude the possibility that parties could tend to protect incumbents because these candidates themselves are members of the local elite deciding how to allocate advantaged status. Nonetheless, our results above suggest that selecting these experienced candidates provides an advantage to the party in the post-electoral negotiations. To interpret the results on women, we note that when the board is selected via list-based proportional elections, each list has to include at least 40% of candidates of each gender (see Footnote 30). Even when the board is instead formed via a negotiated agreement, each councillor can anticipate that, if he or she demands that the board is selected via proportional elections, the gender quota will have to be respected. This credible threat inevitably constrains the bargaining process. As such, these gender quotas may explain why female candidates are more valuable for parties in the post-election bargaining.

We note that these results on the prevalence of women and incumbents among can-

didates favored by political parties have substantial economic relevance, since electing candidates with these characteristics has been shown to impact policy and economic outcomes. Meriläinen (2022) demonstrates that increasing the proportion of incumbents in Finnish municipal councils positively influences fiscal sustainability outcomes. In Germany, mayors with prior office experience tend to reduce local public debt, lower total municipal expenditures, and decrease local taxes (Freier and Thomasius, 2016). Similarly, a plethora of studies consistently underscores the significance of female representation. Hessami and da Fonseca (2020) surveys the literature, indicating that in developing countries, increased female political representation improves provision of public goods (Chattopadhyay and Duflo, 2004; Clots-Figueras, 2011). In developed countries, evidence is more mixed, but female representation is linked, for example, to the expansion of public childcare (Baskaran and Hessami, 2023). Moreover, female representation also contributes to enhanced institutional quality by reducing corruption and rent extraction by those in power (Brollo and Troiano, 2016).

More broadly, to the extent that electorally stronger parties are better positioned to use their gatekeeping power to insulate their preferred candidates, our findings indicate that this strategic advantage may have a crucial effect on post-electoral outcomes, ultimately impacting the distribution of power and decision-making in the political arena. As we discuss further below, this dynamic can have far-reaching consequences, including the allocation of resources, policy decisions, and the overall direction of governance.

6. Discussion and Conclusion

In this paper, we have delved into the intricate dynamics of political parties and their strategic use of gatekeeping power. We have demonstrated that parties encounter a tradeoff between incentivizing list members to contribute to the party's collective performance and shielding preferred candidates from internal competition to secure them a seat. Our key contribution is to show, theoretically and empirically, that this tradeoff is less pronounced for more popular parties, granting them the ability to safeguard their preferred candidates without compromising their overall performance. Furthermore, our results suggest that this strategic advantage translates into a disproportional influence of these parties in post-electoral bargaining and policymaking processes.

While our focus has been on the case of Norway, the generalizability of our results may extend beyond this specific context. List Proportional Representation (PR) systems are used by 70 out of 199 countries, which makes such systems the most used across the world (Reynolds, Reilly and Ellis, 2008). In particular, flexible-list systems are used in many other countries in the world, such as in Austria, Belgium, the Czech Republic, Denmark, Estonia, Indonesia, Norway, Netherlands, Slovakia, and Sweden (Crisp et al.,

2013).

Furthermore, our key insights remain relevant outside the realm of these flexible-list systems. Regardless of the specific institutional setting they operate in, parties can in fact often face a tradeoff analogous to the one we investigate here. For example, under proportional representation with closed-list, political parties must choose how to rank different candidates in their list (Buisseret et al., 2022). Here, parties face a strategic choice of whether to position their strongest candidates at the top or in the middle of the list. Existing works study the effect of ideology and media exposure (Crutzen, Konishi and Sahuguet, 2021), consider how the choice of candidate ranking is linked to the distribution of post-electoral rents (Cox et al., 2021), or how strategic voting may generate distortions in the ranking chosen by the party (Buisseret et al., 2022). Our framework complements these works by highlighting how this choice may be influenced by the effort vs. selection tradeoff. Placing the strongest candidate in the middle of the list boosts the party's overall chances (as in the theories of Buisseret et al. (2022) and Crutzen, Konishi and Sahuguet (2021)), and thus the incentives for all candidates to exert more effort. Instead, placing the strongest candidate at the top of the list ensures they will obtain a seat, but reduces other candidates' hopes of ever winning a seat themselves and thus their motivation to invest costly effort.

In systems of open-list proportional representation, the candidates' ranking on the list is irrelevant. However, parties still control the list composition. As Cheibub and Sin (2020) highlight, this choice fundamentally alters the intensity of competition for seats within the party. As such, applying our theoretical framework, parties may choose to tilt the balance in favor of their preferred candidates by constructing less competitive candidate lists, or they may seek more balanced competition. The former strategy privileges selection at the expense of the party's collective performance, while the latter maximizes incentives for effort but fails to protect specific candidates. Additionally, in such systems parties also strategically determine how to allocate electoral and logistical resources. They may opt for equal distribution among all candidates or choose to grant advantages selectively. This choice is also relevant under first past the post, where parties must allocate resources across different districts (Snyder, 1989).

In sum, all these decision points involve incentives similar to those captured in our model, transcending the specifics of any single electoral system and offering valuable insights into the broader dynamics of party politics. Our findings suggest that, in all these varied settings, the tradeoffs involved in these strategic choices should be weaker for ex-ante more popular parties. These parties are better positioned to leverage their gatekeeping power to favor preferred candidates, resulting in strategic advantages post-election.

Furthermore, these results underscore a crucial link between the concentration of

power within and across parties. In our framework, this link emerges via two channels. First, parties with an advantage in the intra-party contest use this leverage to insulate their preferred candidates, concentrating advantages and resources within a select few. Secondly, our results on post-electoral outcomes depict a narrative where 'power begets power.' While more popular parties inherently enjoy a stronger position, these findings highlight that their strategic advantage in navigating the selection-control trade-off can reinforce this effect.

Indeed, while our analysis focuses on the post-electoral bargaining and decision-making process, it is plausible to speculate that the strategic advantage in this domain would resonate across other domains, further solidifying these parties' position. For example, it may allow advantaged parties to more effectively attract donations or campaign contributions. Research in various contexts has established that holding positions of power provides a strategic advantage in soliciting donations (Fouirnaies and Hall, 2014; Holbrook and Weinschenk, 2014). If the capacity to safeguard specific candidates translates into a disproportionate influence in the post-electoral process, we could anticipate a corresponding comparative advantage in the realm of political finance. Similarly, the credible promise of insulation from internal competition and further gains in the post-electoral process may yield a strategic advantage in recruiting high-quality candidates. Stronger political candidates tend to also have better outside options in the private market (Caselli and Morelli, 2002; Dal Bó, Dal Bó and Di Tella, 2006; Messner and Polborn, 2004). Consequently, parties may encounter challenges in recruiting such promising candidates for political office. By offering the assurance of a secure seat insulated from intra-party competition, along with additional rewards post-election, more popular parties may enjoy a privileged position in addressing this recruitment challenge. Of course, ex-ante more popular parties inherently have an advantage in navigating these challenges; our argument is that the possibility to more effectively navigate the selection versus effort tradeoff further amplifies this advantage (compared to a counterfactual world in which this tradeoff equally constrains all parties).

These implications highlight the importance of keeping parties' gatekeeping power in check. A recent body of scholarship analyzes the impact of inter-party competition on intra-party dynamics and organization (e.g., Invernizzi and Prato (2023); Invernizzi (2023)). Our findings contribute to this literature by emphasizing the significance of addressing both sides of the equation. In this context, reforms aimed at curbing parties' influence over the candidate nomination process (e.g., implementing open primaries, providing public funding for political candidates, establishing independent candidate support services, or introducing randomized ballot order) may not only promote intra-party democracy but also safeguard the competitiveness and impartiality of the entire political system.

References

Achury, Susan, Margarita Ramírez and Francisco Cantú. 2017. "Endogenous ballot structures: The selection of open and closed lists in Colombia's legislative elections." *Electoral Studies* 49:136–154.

Aghion, A. Alesina and F. Trebbi. 2004. "Endogenous Political Institutions." *Quarterly Journal of Economics* 119:565–611.

Baskaran, Thushyanthan and Zohal Hessami. 2023. "Women in Political Bodies as Policymakers." *Review of Economics and Statistics* forthcoming.

Bawn, Kathleen, Martin Cohen, David Karol, Seth Masket, Hans Noel and John Zaller. 2012. "A Theory of Political Parties: Groups, Policy Demands and Nominations in American Politics." *Perspectives on Politics* 10(3):571–597.

Benoit, Kenneth. 2000. "Which electoral formula is the most proportional? A new look with new evidence." *Political Analysis* 8(4):381–388.

Besley, Timothy, Jose G. Montalvo and Marta Reynal-Querol. 2011. "Do Educated Leaders Matter?" *The Economic Journal* 121(554):F205–227.

Brollo, Fernanda and Ugo Troiano. 2016. "What happens when a woman wins an election? Evidence from close races in Brazil." *Journal of Development Economics* 122:28–45.

Buisseret, Peter and Carlo Prato. 2022. "Competing Principals? Legislative Representation in List Proportional Representation Systems." *American Journal of Political Science* 66(1):156–170.

Buisseret, Peter, Olle Folke, Carlo Prato and Johanna Rickne. 2022. "Party Nomination Strategies in List Proportional Representation Systems." *American Journal of Political Science* 66(3):714–729.

Carreri, Maria and Julia Payson. 2023. "Local leaders and the pursuit of growth in US cities: the role of managerial skill." *Political Science Research and Methods* p. 1–17.

Carroll, Royce and Monika Nalepa. 2020. "The personal vote and party cohesion: Modeling the effects of electoral rules on intraparty politics." *Journal of Theoretical Politics* 32(1):36–69.

Caselli, Francesco and Massimo Morelli. 2002. "Bad Politicians." *The Quarterly Journal of Economics* 117(4):1369–1401.

Chattopadhyay, Raghabendra and Esther Duflo. 2004. "Women as Policy Makers: Evidence from a Randomized Policy Experiment in India." *Econometrica* 72(5):1409–1443.

Cheibub, José Antonio and Gisela Sin. 2020. "Preference vote and intra-party competition in open list PR systems." *Journal of Theoretical Politics* 32(1):70–95.

Cirone, Alexandra, Gary W. Cox and Jon H. Fiva. 2021. "Seniority-Based Nominations and Political Careers." *American Political Science Review* 115(1):234–251.

Clots-Figueras, Irma. 2011. "Women in politics: Evidence from the Indian States." *Journal of Public Economics* 95(7):664–690.

Cohen, Marty, David Karol, Hans Noel and John Zaller. 2008. *The Party Decides: Presidential Nominations Before and After Reform.* Chicago, IL: University of Chicago Press.

Cox, Gary W., Jon H. Fiva, Daniel M. Smith and Rune J. Sørensen. 2021. "Moral Hazard in Electoral Teams: List Rank and Campaign Effort." *Journal of Public Economics* 200:104457.

Cox, Gary W and Tobias Nowacki. 2023. "The Emergence of Party-Based Political Careers in the United Kingdom, 1801–1918." *The Journal of Politics* 85(1):178–191.

Crisp, Brian F., Santiago Olivella, Michael Malecki and Mindy Sher. 2013. "Vote-earning strategies in flexible list systems: Seats at the price of unity." *Electoral Studies* 32(4):658–669.

Crutzen, Benoit and Nicholas Sahuguet. 2023*a*. "Political Parties in Models of Political Economy, A Survey." Working Paper.

Crutzen, Benoit, Sabine Flamand and Nicolas Sahuguet. 2020. "A Model of Team Contest, with an Application to Incentives under List Proportional Representation." *Journal of Public Economics* 120.

Crutzen, Benoit SY, Hideo Konishi and Nicolas Sahuguet. 2021. "The Best at the Top? Candidate Ranking Strategies Under Closed List Proportional Representation.".

Crutzen, Benoît S.Y. and Nicolas Sahuguet. 2023*b*. "Comparative politics with intraparty candidate selection." *European Journal of Political Economy* 79:102445.

Dal Bó, Ernesto, Pedro Dal Bó and Rafael Di Tella. 2006. ""Plata o Plomo?": bribe and punishment in a theory of political influence." *American Political Science Review* 100(1):41–53.

Epstein, David, David Brady, Sadafumi Kawato and Sharyn O'Halloran. 1997. "A Comparative Approach to Legislative Organization: Careerism and Seniority in the United States and Japan." *American Journal of Political Science* 41(3):965–998.

Eriksson, Lina M. and Kåre Vernby. 2021. "Welcome to the Party? Ethnicity and the Interaction between Potential Activists and Party Gatekeepers." *The Journal of Politics* 83(4):1861–1866.

Field, Bonnie N and Peter M Siavelis. 2008. "Candidate selection procedures in transitional polities: A research note." *Party politics* 14(5):620–639.

Fiva, Jon H., Askill Halse and Gisle James Natvik. 2023. "Local Government Dataset." Available at `www.jon.fiva.no/data.htm`.

Fiva, Jon H. and Helene Lie Røhr. 2018. "Climbing the Ranks: Incumbency Effects in Party-list Systems." *European Economic Review* 101:142–156.

Fiva, Jon H. and Olle Folke. 2016. "Mechanical and Psychological Effects of Electoral Reform." *British Journal of Political Science* 46(2):265–279.

Fiva, Jon H., Rune J. Sørensen and Reidar Vøllo. 2021. "Local Candidate Dataset." Available at `www.jon.fiva.no/data.htm`.

Fouirnaies, Alexander and Andrew B Hall. 2014. "The financial incumbency advantage: Causes and consequences." *The Journal of Politics* 76(3):711–724.

Freier, Ronny and Sebastian Thomasius. 2016. "Voters prefer more qualified mayors, but does it matter for public finances? Evidence for Germany." *International Tax and Public Finance* 23:875–910.

Galasso, Vincenzo and Tommaso Nannicini. 2011. "Competing on good politicians." *American Political Science Review* 105(01):79–99.

Hangartner, Dominik, Nelson A. Ruiz and Janne Tukiainen. 2019. "Open or Closed? How List Type Affects Electoral Performance, Candidate Selection, and Campaign Effort." VATT Institute for Economic Research Working Papers 120. Available at SSRN: `https://ssrn.com/abstract=3418767`.

Hazan, Reuven Y. and Gideon Rahat. 2010. *Democracy Within Parties: Candidate Selection Methods and Their Political Consequences*. Oxford, UK: Oxford University Press.

Herron, Erik S, Robert J Pekkanen and Matthew S Shugart. 2018. *The Oxford handbook of electoral systems*. Oxford University Press.

Hessami, Zohal and Mariana Lopes da Fonseca. 2020. "Female political representation and substantive effects on policies: A literature review." *European Journal of Political Economy* 63:101896.

Holbrook, Thomas M and Aaron C Weinschenk. 2014. "Money, candidates, and mayoral elections." *Electoral Studies* 35:292–302.

Holmström, Bengt. 1982. "Moral Hazard in Teams." *The Bell Journal of Economics* 13(2):324–340.

Invernizzi, Giovanna M. 2023. "Antagonistic cooperation: Factional competition in the shadow of elections." *American Journal of Political Science* 67(2):426–439.

Invernizzi, Giovanna Maria and Carlo Prato. 2021. "Power Sharing, Mobilization, and Party Organization." Available at SSRN: https://ssrn.com/abstract=3462071.

Invernizzi, Giovanna Maria and Carlo Prato. 2023. "Bending the Iron Law: The Distribution of Power within Political Parties." Working paper.

Kselman, Daniel M. 2020. "Public goods equilibria under closed-and open-list proportional representation." *Journal of Theoretical Politics* 32(1):112–142.

Leemann, Lucas and Isabela Mares. 2014. "The Adoption of Proportional Representation." *The Journal of Politics* 76(2):461–478.

Marsh, Michael et al. 1988. *Candidate selection in comparative perspective: The secret garden of politics*. Vol. 18 SAGE Publications Limited.

McCarty, Nolan and Eric Schickler. 2018. "On the Theory of Parties." *Annual Review of Political Science* 21(1):175–193.

McKelvey, Richard D. and Rayman Riezman. 1992. "Seniority in Legislatures." *American Political Science Review* 86:951–965.

Meriläinen, Jaakko and Janne Tukiainen. 2022. "The advantage of incumbents in coalitional bargaining." *Legislative Studies Quarterly* 47(4):921–957.

Meriläinen, Jaakko. 2022. "Political selection and economic policy." *The Economic Journal* 132(648):3020–3046.

Messner, Matthias and Mattias K Polborn. 2004. "Paying politicians." *Journal of Public Economics* 88(12):2423–2445.

Reynolds, Andrew, Ben Reilly and Andrew Ellis. 2008. *Electoral system design: The new international IDEA handbook*. Oxford, UK: International Institute for Democracy and Electoral Assistance.

Snyder, James M. 1989. "Election Goals and the Allocation of Campaign Resources." *Econometrica* 57(3):637–660.

Stokes, S. C. 1999. "Political Parties and Democracy." *Annual Review of Political Science* 2(1):243–267.

For Online Publication: Appendix A

The Model: preliminaries

Denote $p(x)$ the probability of the party winning exactly x seats. We have that $p(x) = p\Big(S \in [Kx, K(x+1))\Big)$, with $V = S + \sum_i^n e_i + \delta$ and $\delta \sim U \in [-\frac{1}{2\phi}, \frac{1}{2\phi}]$. Plugging in this distributional assumption, we can easily compute these probabilities.

Recall that we assume that the party always wins at least $\underline{N}$ seats, and never more than $\overline{N}$ (i.e. $p\left(V < K\underline{N}\right) = 0$ and $p\left(V \geq K\overline{N}\right) = 0$). These assumptions impose the following restrictions on the parameters:

- $S < min \in \{(\overline{N}+1)K - n - \frac{1}{2\phi}, \frac{1}{2\phi} + K(\underline{N}+1) - n\}$,
- $S > max \in \{\underline{N}K + \frac{1}{2\phi}, \overline{N}K - \frac{1}{2\phi}\}$
- $K < min \in \{\frac{1}{\phi(\overline{N}-\underline{N}-1)} - \frac{n}{\overline{N}-\underline{N}-1}, \frac{1}{\phi}\}$
- $K > max \in \{n, \frac{n}{\overline{N}+1-\underline{N}} + \frac{1}{\phi(\overline{N}+1-\underline{N})}\}$
- $\phi < \frac{1}{n(\overline{N}-\underline{N})}$

The candidates' maximization problem.

Next, consider the maximization problem of a candidate in an advantaged position (i_a). Denote $p(\chi)$ the probability that exactly χ seats are won by the party and allocated to the advantaged group (recall that this probability is a function of the candidates' effort choice). Further, denote $Q_{i_a}(\chi)$ the probability of an advantaged candidate obtaining a seat. Then, each advantaged candidate maximizes the same objective function:

$$R \sum_{\chi=\underline{N}}^{n_a} p(\chi) Q_{i_a}(\chi) - \frac{e_{i_a}^2}{2} \tag{A.1}$$

The associated FOC is:

$$R(\sum_{\chi=\underline{N}}^{n_a} p(\chi) \frac{\partial Q_{i_a}(\chi)}{\partial e_{i_a}} + \sum_{\chi=\underline{N}}^{n_a} \frac{\partial p(\chi)}{\partial e_{i_a}} Q_{i_a}(\chi)) - e_{i_a} = 0 \tag{A.2}$$

$p(\cdot)$ and $\frac{\partial p(\chi)}{\partial e_{i_a}}$ are computed in a straightforward way from the normal CDF. Further, notice that the maximization problem is identical for all candidates belonging to the same group (i.e., all advantaged candidates and all disadvantaged ones). This implies, straightforwardly, that all advantaged candidates exert the same effort in equilibrium.

Thus, the following holds in equilibrium:

$$Q_{i_a}(\chi) = \frac{\chi}{n_a} \tag{A.3}$$

and plugging this into (A.2) we obtain

$$\frac{\partial Q_{i_a}(\chi)}{\partial e^*_{i_a}} = \frac{1}{e^*_{i_a}}(1 - \frac{\chi}{n_a}) \sum_{j=1}^{\chi} \frac{1}{n_a - j + 1} \tag{A.4}$$

Finally, consider the problem of a candidate in a disadvantaged position i_{na}. Denote $p(\xi)$ the probability that exactly ξ seats are won by the party and allocated to the advantaged group (recall that this probability is a function of the candidates' effort choice). $Q_{i_a}(\xi)$ denotes the probability of an advantaged candidate obtaining a seat. Then, each non-advantaged candidate maximizes the same objective function:

$$R \sum_{\xi=1}^{\overline{N}-n_a} p(\xi) Q_{i_{na}}(\xi) - \frac{e^2_{i_{na}}}{2} \tag{A.5}$$

The associated FOC is:

$$R(\sum_{\xi=1}^{\overline{N}-n_a} p(\xi) \frac{\partial Q_{i_{na}}(\xi)}{\partial e_{i_{na}}} + \sum_{\xi=1}^{\overline{N}-n_a} \frac{\partial p(\xi)}{\partial e_{i_{na}}} Q_{i_a}(\xi)) - e_{i_{na}} = 0 \tag{A.6}$$

As above, we can verify that the following holds in equilibrium:

$$Q_{i_{na}}(\xi) = \frac{\xi}{n_{na}} \tag{A.7}$$

and

$$\frac{\partial Q_{i_{na}}(\xi)}{\partial e^*_{i_{na}}} = \frac{1}{e^*_{i_{na}}}(1 - \frac{\xi}{n_a}) \sum_{j=1}^{\xi} \frac{1}{n_{na} - j + 1} \tag{A.8}$$

Proofs of Lemmas and Propositions

Hereafter, we will assume that $n = 4$, $\underline{N} = 1$ and $\overline{N} = 3$. Further, we assume that the party cannot assign an advantaged position to all candidates on the list.[31]

[31]The party is always indifferent between assigning 0 advantaged position or assigning an advantage to all candidates, so this restriction amounts to an indifference breaking assumption.

Proof of Lemma 1

Using (A.1)-(A.8), we can easily compute candidates' equilibrium effort choice in each possible subgame.

Case 1: the party assigns one advantaged position. The advantaged candidate is guaranteed a seat. Therefore:

$$e^*_{i_a} = 0 \tag{A.9}$$

In contrast, each non-advantaged candidate exerts strictly positive effort:

$$e^*_{i_{na}} = \frac{1}{2}(\frac{3}{2}R\phi + \sqrt{\frac{9}{4}R^2\phi^2 + 4R(\frac{5}{36} + \frac{5}{18}\phi S - \frac{11}{18}\phi K)}) \tag{A.10}$$

Case 2: the party assigns two advantaged positions. Here, both advantaged and non-advantaged candidates will exert strictly positive effort. Specifically:

$$e^*_{i_a} = \frac{\sqrt{R(\frac{1}{2} + \phi(2K - 2e^*_{na} - S))}}{2} \tag{A.11}$$

$$e^*_{i_{na}} = \frac{R\phi + \sqrt{R^2\phi^2 + R(\frac{1}{2} - \phi(3K - 2e^*_a - S)}}{2} \tag{A.12}$$

Case 3: the party assigns three advantaged positions. The non-advantaged candidate has no hope of ever winning a seat, therefore:

$$e^*_{i_{na}} = 0 \tag{A.13}$$

Each advantaged candidate instead exerts effort:

$$e^*_{i_a} = \sqrt{R\frac{2}{9}(\frac{1}{2} - \phi S) + \phi K R\frac{13}{18}} \tag{A.14}$$

Case 4: the party assigns no advantaged position (i.e., open list). Each candidate in the list solves the same maximization problem, so each exerts the same amount of effort in equilibrium:

$$e^*_i = \frac{1}{12}(5R\phi + \sqrt{25R^2\phi^2 - 3R(7\phi K - 4\phi S - 11)}) \tag{A.15}$$

Next, we compare the total equilibrium effort under the different allocation structures. We proceed in three steps.

Claim 1. *Total effort under $n_a = 0$ is always higher than total effort under $n_a \geq \overline{N}$ (i.e., if the party assigns three advantaged positions).*

Proof. Total effort under $n_a = 0$ is

$$E_0^* = \frac{1}{3}(5R\phi + \sqrt{25R^2\phi^2 - 3R(7\phi K - 4\phi S - 11)}). \tag{A.16}$$

Total effort under $n_a \geq \overline{N}$ (i.e., if the party assigns three advantaged positions) is

$$E_3^* = 3\sqrt{R\frac{2}{9}(\frac{1}{2} - \phi S) + \phi K R\frac{13}{18}}. \tag{A.17}$$

Straightforwardly, sufficient condition to guarantee that $E_0^* > E_3^*$ is

$$\frac{1}{3}\sqrt{25R^2\phi^2 - 3R(7\phi K - 4\phi S - 11)} > 3\sqrt{R\frac{2}{9}(\frac{1}{2} - \phi S) + \phi K R\frac{13}{18}}, \tag{A.18}$$

which reduces to

$$25R\phi^2 - 3(7\phi K - 4\phi V - 11) - 9(1 - 2\phi V + \phi K\frac{13}{2}) > 0. \tag{A.19}$$

The LHS is increasing in S. Plugging in the lower bound $S = 3K - \frac{1}{2\phi}$, the above reduces to

$$25R\phi^2 + 9 + \frac{21}{2}\phi K > 0, \tag{A.20}$$

which is always satisfied. □

Claim 2. *Total effort under $n_a = 0$ is higher than total effort under $n_a \in (\underline{N}, \overline{N})$ (i.e., if the party assigns two advantaged positions).*

Proof. Total effort under $n_a \in (\underline{N}, \overline{N})$ is always lower than

$$E_2^{max} = R\phi + \sqrt{R^2\phi^2 + R(\frac{1}{2} - \phi(3K - 2 - S)} + \sqrt{R(\frac{1}{2} + \phi(2K - S))}. \tag{A.21}$$

Total effort under $n_a = 0$ is

$$E_0^* = \frac{1}{3}(5R\phi + \sqrt{25R^2\phi^2 - 3R(7\phi K - 4\phi S - 11)}). \tag{A.22}$$

To prove the claim, we proceed in three steps. First, notice that

$$\frac{5}{3}R\phi > R\phi. \tag{A.23}$$

Next, we can show that

$$\frac{1}{6}\sqrt{25R^2\phi^2 - 3R(7\phi K - 4\phi S - 11)} > \sqrt{R^2\phi^2 + R(\frac{1}{2} - \phi(3K - 2 - S))}. \quad \text{(A.24)}$$

The above reduces to

$$15 - 24\phi S + 87\phi K - 72\phi > 11R\phi^2. \quad \text{(A.25)}$$

Plugging in the upper bound $S = 4K - 4 - \frac{1}{2\phi}$, we have

$$27 - 9\phi K + 24\phi > 11R\phi^2 \quad \text{(A.26)}$$

Since $K < \frac{1}{\phi}$, $\phi < \frac{1}{8}$ and $R < 1$, the above is always satisfied.
Finally, we can show that

$$\frac{1}{6}\sqrt{25R^2\phi^2 - 3R(7\phi K - 4\phi S - 11)} > \sqrt{R(\frac{1}{2} + \phi(2K - S))}. \quad \text{(A.27)}$$

Sufficient condition for the above to hold is

$$-3(7\phi K - 4\phi S - 11) > 36[\frac{1}{2} + \phi(2K - S)], \quad \text{(A.28)}$$

which reduces to

$$15 + 48\phi S - 93\phi K > 0. \quad \text{(A.29)}$$

By assumption, $S > max \in \{K + \frac{1}{2\phi}, 3K - \frac{1}{2\phi}\}$. First, suppose that $K > \frac{1}{2\phi}$, and plug in binding upper bound $S = 3K - \frac{1}{2\phi}$. The above reduces to

$$51\phi K - 9 > 0, \quad \text{(A.30)}$$

which is always satisfied at $K > \frac{1}{2\phi}$.

Finally, suppose that $K < \frac{1}{2\phi}$, and plug in binding upper bound $V = K + \frac{1}{2\phi}$. The above reduces to

$$39 - 45\phi K > 0, \quad \text{(A.31)}$$

which is always satisfied at $K < \frac{1}{2\phi}$. □

Claim 3. *Total effort $n_a = 0$ is always higher than total effort under $0 < n_a \leq \underline{N}$ (i.e., if the party assigns one advantaged position).*

Proof. Denote E_1 the total effort under $0 < n_a \leq \underline{N}$. First, we can show that $\Delta = E_0^* - E_1^*$ is decreasing in S:

$$\frac{\partial \Delta}{\partial S} = \frac{2}{\sqrt{25R^2\phi^2 - 3R(7\phi K - 4\phi S - 11)}} - \frac{5}{6\sqrt{\frac{9}{4}R^2\phi^2 + \frac{5}{9}R + \frac{10}{9}R\phi S - \frac{22}{9}\phi K}}. \quad \text{(A.32)}$$

$\frac{\partial \Delta}{\partial S} < 0$ if and only if

$$144[\frac{9}{4}R^2\phi^2 + \frac{5}{9}R + \frac{10}{9}R\phi S - \frac{22}{9}R\phi K] < 25[25R^2\phi^2 + 33R + 12R\phi S - 21R\phi K)], \quad \text{(A.33)}$$

which is always satisfied given $K < \frac{1}{\phi}$ (by assumption).

Thus, it is sufficient to show that the claim holds at the upper bound $S = 2K - 4 + \frac{1}{2\phi}$, i.e.,:

$$\frac{1}{3}\left(5R\phi + \sqrt{25R^2\phi^2 - 3R[7\phi K - 4\phi(2K - 4 + \frac{1}{2\phi}) - 11]}\right) > \quad \text{(A.34)}$$
$$\frac{3}{2}\left(\frac{3}{2}R\phi + \sqrt{\frac{9}{4}R^2\phi^2 + 4R[\frac{5}{36} + \frac{5}{18}\phi(2K - 4 + \frac{1}{2\phi}) - \frac{11}{18}\phi K]}\right),$$

which reduces to

$$4\sqrt{25R^2\phi^2 + 3R\phi K + 39R - 48R\phi} > 7R\phi + 18\sqrt{\frac{9}{4}R^2\phi^2 + \frac{10}{9}R - \frac{2}{9}R\phi K - \frac{40}{9}R\phi}. \quad \text{(A.35)}$$

Plugging in the lower bound $K = \frac{4\phi+1}{3\phi}$, we have

$$4\sqrt{25R^2\phi^2 + 40R - 44R\phi} > 7R\phi + 18\sqrt{\frac{9}{4}R^2\phi^2 + \frac{27}{28}R - \frac{128}{27}R\phi}. \quad \text{(A.36)}$$

To show that the above condition is always satisfied, I proceed in two steps.

First, since $\phi < \frac{1}{8}$, notice that

$$\sqrt{25R^2\phi^2 + 40R - 44R\phi} > \sqrt{R}\sqrt{40 - \frac{44}{8}}, \quad \text{(A.37)}$$

and

$$7R\phi < \frac{7}{8}R. \quad \text{(A.38)}$$

Further, recall that $R < 1$, therefore $R < \sqrt{R}$. Thus, we have that

$$\frac{7}{8\sqrt{40-\frac{44}{8}}}\sqrt{R}\sqrt{40-\frac{44}{8}} \geq 7R\phi, \tag{A.39}$$

and

$$4\sqrt{25R^2\phi^2+40R-44R\phi} > \frac{7}{8\sqrt{40-\frac{44}{8}}}\sqrt{25R^2\phi^2+40R-44R\phi} > 7R\phi. \tag{A.40}$$

Next, it is easy to see that

$$\left(4-\frac{7}{8\sqrt{40-\frac{44}{8}}}\right)\sqrt{25R^2\phi^2+40R-44R\phi} > 18\sqrt{\frac{9}{4}R^2\phi^2+\frac{27}{28}R-\frac{128}{27}R\phi}. \tag{A.41}$$

Therefore

$$4\sqrt{25R^2\phi^2+40R-44R\phi} > 7R\phi+18\sqrt{\frac{9}{4}R^2\phi^2+\frac{27}{28}R-\frac{128}{27}R\phi}. \tag{A.42}$$

□

This concludes the proof of Lemma 1.

Proof of Proposition 1

Claim 3 shows that $\frac{\partial(E_0^*-E_1^*)}{\partial S} < 0$. Thus, there exist a unique threshold $\widehat{B}$, *decreasing* in S, s.t. the party finds it optimal to exercise control if and only if $B > \widehat{B}$. Therefore, the probability (in the sense of set inclusion) that the party allocates $0 < n_a \leq \underline{N}$ is increasing in S.

Appendix B: Model extensions

Here, we formally analyze the extensions to the model referenced in section 4.5.

Amending candidates' motivations

Consider an amended version of the baseline model where each candidate i's utility is

$$u_i = \mathbb{I}_i R + g(e_i) - \frac{e^2}{2}. \tag{B.1}$$

In contrast with the baseline, candidates obtain a benefit from exerting campaign effort, $g(e_i) \geq 0$, regardless of whether they win a seat or not. Higher campaign effort increases visibility and name recognition, or the personal votes attracted by the candidates (which may in turn be valuable to improve the candidate standing in the party). For tractability, we will be imposing the following functional form: $g(e_i) = \beta\frac{e_i^2}{2}$ In what follows, we show that Proposition 1 remains robust in this setting.

Proceeding as in the baseline case, we first characterize the effort choice of the individual candidates. Denote $\mathbb{P}_i(e_i, e_{-i})$ the probability that candidate i obtains a seat in equilibrium. Then, differentiating B.1 with respect to e_i, we obtain

$$\frac{\partial \mathbb{P}_i(e_i, e_{-i})}{\partial e_i} R + \beta e_i - e_i. \tag{B.2}$$

Here, we must consider two cases: $\beta \geq 1$ and $\beta < 1$. Recall that $\frac{\partial \mathbb{P}_i(e_i, e_{-i})}{\partial e_i} \geq 0$. Therefore, when $\beta \geq 1$ B.2 is always positive, even if $\frac{\partial \mathbb{P}_i(e_i, e_{-i})}{\partial e_i} = 0$ (i.e., even if candidate i is guaranteed a seat or knows for sure he can never win one). Thus, all candidates exert maximum effort in equilibrium, regardless of the allocation of advantaged statuses. Notice, this solves the moral hazard problem for the party leadership. If each candidate's *individual* motives to exert effort are sufficiently strong, regardless of the prospects of winning a seat, the party leadership does not have to worry about adopting the list structure that maximizes their incentives to contribute to the party's collective performance.

Suppose instead, $\beta < 1$. Here, the problem resembles the baseline. Consider a candidate whose advantaged status guarantees a seat. Then, B.2 reduces to $\beta e_i - e_i$, which is always negative. As such, these candidates exert no effort in equilibrium. A similar logic applies to candidates who can never hope to win a seat. Instead, candidates who are not completely insulated from competition will exert positive effort, and their choice will be a function of *both* the electoral incentives (i.e., their incentives to win a seat), and their post-electoral motives (i.e., β). Proceeding as for the proof of Lemma 1, we obtain:

Case 1: the party assigns one advantaged position. The advantaged candidate is guaranteed a seat. Therefore:

$$e_{i_a}^* = 0 \tag{B.3}$$

In contrast, each non-advantaged candidate exerts strictly positive effort. Recall that in the baseline the assumption that $R < 1$ is enough to guarantee interior effort. Here, this is no longer true (whenever $\beta > 0$), thus we have :

$$e_{i_{na}}^* = min\{\frac{1}{2(1-\beta)}(\frac{3}{2}R\phi + \sqrt{\frac{9}{4}R^2\phi^2 + 4R(1-\beta)(\frac{5}{36} + \frac{5}{18}\phi S - \frac{11}{18}\phi K)}), 1\} \tag{B.4}$$

Case 2: the party assigns two advantaged positions. Here, both advantaged and non-advantaged candidates will exert strictly positive effort. Specifically:

$$e_{i_a}^* = min\{\frac{\sqrt{R(\frac{1}{2} + \phi(2K - 2e_{na}^* - S))}}{2(1-\beta)}, 1\} \tag{B.5}$$

$$e_{i_{na}}^* = min\{\frac{R\phi + \sqrt{R^2\phi^2 + R(1-\beta)(\frac{1}{2} - \phi(3K - 2e_a^* - S)}}{2(1-\beta)}, 1\} \tag{B.6}$$

Case 3: the party assigns three advantaged positions. The non-advantaged candidate has no hope of ever winning a seat, therefore:

$$e_{i_{na}}^* = 0 \tag{B.7}$$

Each advantaged candidate instead exerts effort:

$$e_{i_a}^* = min\{\sqrt{\frac{R\frac{2}{9}(\frac{1}{2} - \phi S) + \phi K R\frac{13}{18}}{1-\beta}}, 1\} \tag{B.8}$$

Case 4: the party assigns no advantaged position (i.e., open list). Each candidate in the list solves the same maximization problem, so each exerts the same amount of effort in equilibrium:

$$e_i^* = min\{\frac{1}{12(1-\beta)}(5R\phi + \sqrt{25R^2\phi^2 - 3(1-\beta)R(7\phi K - 4\phi S - 11)}), 1\} \tag{B.9}$$

Next, we compare the total equilibrium effort under the different allocation structures, and we establish the following result, mirroring Lemma 1 in the baseline:

Lemma 2. *Suppose $\beta < 1$. Then, Total campaign effort (and thus expected number of seats) is maximized when the party allocates zero advantaged positions ($n_a = 0$).*

Proof. We proceed in three steps.

Claim 4. *Total effort under $n_a = 0$ is always higher than total effort under $n_a \geq \overline{N}$ (i.e., if the party assigns three advantaged positions).*

Proof. First, suppose effort is interior. Then, total effort under $n_a = 0$ is

$$E_0^* = \frac{1}{3(1-\beta)}(5R\phi + \sqrt{25R^2\phi^2 - 3R(1-\beta)(7\phi K - 4\phi S - 11)}). \tag{B.10}$$

Total effort under $n_a \geq \overline{N}$ (i.e., if the party assigns three advantaged positions) is

$$E_3^* = 3\sqrt{\frac{R\frac{2}{9}(\frac{1}{2} - \phi S) + \phi K R\frac{13}{18}}{(1-\beta)}}. \tag{B.11}$$

Straightforwardly, sufficient condition to guarantee that $E_0^* > E_3^*$ is

$$\frac{1}{3(1-\beta)}\sqrt{25R^2\phi^2 - 3R(1-\beta)(7\phi K - 4\phi S - 11)} > 3\sqrt{\frac{R\frac{2}{9}(\frac{1}{2} - \phi S) + \phi K R\frac{13}{18}}{(1-\beta)}}, \tag{B.12}$$

which reduces to

$$25R\phi^2 - 3(1-\beta)(7\phi K - 4\phi V - 11) - 9(1-\beta)(1 - 2\phi V + \phi K\frac{13}{2}) > 0. \tag{B.13}$$

The LHS is increasing in S. Plugging in the lower bound $S = 3K - \frac{1}{2\phi}$, the above reduces to

$$25R\phi^2 + 9(1-\beta) + \frac{21}{2}(1-\beta)\phi K > 0, \tag{B.14}$$

which is always satisfied.

The above also implies that effort under an open list will hit the corner sooner. Furthermore, the number of candidates exerting effort is higher under an open list. Therefore, even if effort is at the corner under one or both allocation, the claim remains valid. □

Claim 5. *Total effort under $n_a = 0$ is (weakly) higher than total effort under $n_a \in (\underline{N}, \overline{N})$ (i.e., if the party assigns two advantaged positions).*

Proof. First, suppose effort is interior. Suppose that Total effort under $n_a \in (\underline{N}, \overline{N})$ is always lower than

$$E_2^{max} = \frac{1}{1-\beta}\Big(R\phi + \sqrt{R^2\phi^2 + R(1-\beta)(\frac{1}{2} - \phi(3K-2-S)}\Big) + \sqrt{\frac{R(\frac{1}{2}+\phi(2K-S))}{1-\beta}}. \tag{B.15}$$

Total effort under $n_a = 0$ is

$$E_0^* = \frac{1}{3(1-\beta)}(5R\phi + \sqrt{25R^2\phi^2 - 3R(1-\beta)(7\phi K - 4\phi S - 11)}). \tag{B.16}$$

To prove the claim, we proceed in three steps. First, notice that

$$\frac{5}{3}R\phi > R\phi. \tag{B.17}$$

Next, we can show that

$$\frac{1}{6(1-\beta)}\sqrt{25R^2\phi^2 - 3R(1-\beta)(7\phi K - 4\phi S - 11)} > \sqrt{R^2\phi^2 + R(1-\beta)(\frac{1}{2} - \phi(3K-2-S)} \tag{B.18}$$

Notice that the LHS is increasing in β (as we will show below, $(7\phi K - 4\phi S - 11) < 0$), while the RHS is decreasing. Thus, as established in the baseline model, the condition is always satisfied.

Finally, we can show that

$$\frac{1}{6(1-\beta)}\sqrt{25R^2\phi^2 - 3R(1-\beta)(7\phi K - 4\phi S - 11)} > \sqrt{\frac{R(\frac{1}{2}+\phi(2K-S))}{(1-\beta)}}. \tag{B.19}$$

Sufficient condition for the above to hold is

$$-3(7\phi K - 4\phi S - 11) > 36[\frac{1}{2} + \phi(2K-S)], \tag{B.20}$$

which reduces to

$$15 + 48\phi S - 93\phi K > 0. \tag{B.21}$$

By assumption, $S > max \in \{K + \frac{1}{2\phi}, 3K - \frac{1}{2\phi}\}$. First, suppose that $K > \frac{1}{2\phi}$, and plug in binding upper bound $S = 3K - \frac{1}{2\phi}$. The above reduces to

$$51\phi K - 9 > 0, \tag{B.22}$$

which is always satisfied at $K > \frac{1}{2\phi}$.

Finally, suppose that $K < \frac{1}{2\phi}$, and plug in binding upper bound $V = K + \frac{1}{2\phi}$. The above reduces to

$$39 - 45\phi K > 0, \tag{B.23}$$

which is always satisfied at $K < \frac{1}{2\phi}$.

The above also implies that effort under an open list will hit the corner sooner. Therefore, even if effort is at the corner under one or both allocation, the claim remains valid. □

Claim 6. *Total effort $n_a = 0$ is always higher than total effort under $0 < n_a \leq \underline{N}$ (i.e., if the party assigns one advantaged position).*

Proof. Suppose effort is interior. Denote E_1 the total effort under $0 < n_a \leq \underline{N}$. First, we can show that $\Delta = E_0^* - E_1^*$ is decreasing in S:

$$\frac{\partial \Delta}{\partial S} = \frac{2}{\sqrt{25R^2\phi^2 - 3R(1-\beta)(7\phi K - 4\phi S - 11)}} - \frac{5}{6\sqrt{\frac{9}{4}R^2\phi^2 + (1-\beta)\Big(\frac{5}{9}R + \frac{10}{9}R\phi S - \frac{22}{9}\phi K\Big)}}. \tag{B.24}$$

$\frac{\partial \Delta}{\partial S} < 0$ if and only if

$$144\Big[\frac{9}{4}R^2\phi^2 + (1-\beta)\Big(\frac{5}{9}R + \frac{10}{9}R\phi S - \frac{22}{9}\phi K\Big)\Big] < 25\Big[25R^2\phi^2 + (1-\beta)\Big(33R + 12R\phi S - 21R\phi K\Big)\Big], \tag{B.25}$$

which is always satisfied given $K < \frac{1}{\phi}$ (by assumption).

Thus, it is sufficient to show that the claim holds at the upper bound $S = 2K - 4 + \frac{1}{2\phi}$, i.e.,:

$$\begin{aligned} &\frac{1}{3}\left(5R\phi + \sqrt{25R^2\phi^2 - 3R(1-\beta)[7\phi K - 4\phi(2K - 4 + \frac{1}{2\phi}) - 11]}\right) > \\ &\frac{3}{2}\left(\frac{3}{2}R\phi + \sqrt{\frac{9}{4}R^2\phi^2 + 4R(1-\beta)[\frac{5}{36} + \frac{5}{18}\phi(2K - 4 + \frac{1}{2\phi}) - \frac{11}{18}\phi K]}\right), \end{aligned} \tag{B.26}$$

which reduces to

$$4\sqrt{25R^2\phi^2 + (1-\beta)(3R\phi K + 39R - 48R\phi)} > 7R\phi + 18\sqrt{\frac{9}{4}R^2\phi^2 + (1-\beta)\Big(\frac{10}{9}R - \frac{2}{9}R\phi K - \frac{40}{9}R\phi\Big)}. \tag{B.27}$$

Plugging in the lower bound $K = \frac{4\phi+1}{3\phi}$, we have

$$4\sqrt{25R^2\phi^2 + (1-\beta)(40R - 44R\phi)} > 7R\phi + 18\sqrt{\frac{9}{4}R^2\phi^2 + (1-\beta)\Big(\frac{27}{28}R - \frac{128}{27}R\phi\Big)}. \tag{B.28}$$

To show that the above condition is always satisfied, I proceed in two steps.
First, since $\phi < \frac{1}{8}$ and $\beta + R < 1$ (for interior effort), notice that

$$\sqrt{25R^2\phi^2 + (1-\beta)(40R - 44R\phi)} > \sqrt{25R^2\phi^2 + R(40R - 44\frac{R}{8})} > R\sqrt{40 - \frac{44}{8}}, \tag{B.29}$$

and

$$7R\phi < \frac{7}{8}R. \tag{B.30}$$

Thus, we have that

$$\frac{7}{8\sqrt{40 - \frac{44}{8}}}R\sqrt{40 - \frac{44}{8}} \geq 7R\phi, \tag{B.31}$$

and

$$\frac{7}{8\sqrt{40 - \frac{44}{8}}}\sqrt{25R^2\phi^2 + (1-\beta)(40R - 44R\phi)} > 7R\phi. \tag{B.32}$$

Next, it is easy to see that

$$\left(4 - \frac{7}{8\sqrt{40 - \frac{44}{8}}}\right)\sqrt{25R^2\phi^2 + (1-\beta)(40R - 44R\phi)} > 18\sqrt{\frac{9}{4}R^2\phi^2 + (1-\beta)\Big(\frac{27}{28}R - \frac{128}{27}R\phi\Big)}. \tag{B.33}$$

Therefore

$$4\sqrt{25R^2\phi^2 + (1-\beta)(40R - 44R\phi)} > 7R\phi + 18\sqrt{\frac{9}{4}R^2\phi^2 + (1-\beta)\Big(\frac{27}{28}R - \frac{128}{27}R\phi\Big)}. \tag{B.34}$$

□

The above also implies that effort under an open list will hit the corner sooner. Furthermore, the number of candidates exerting effort is higher under an open list. Therefore, even if effort is at the corner under one or both allocation, the claim remains valid. □

Looking at the party leadership's choice, we then have:

Proposition 2. *The likelihood (in the sense of set inclusion) that the party leadership allocates advantaged positions to insulate some candidates from competition (i.e., chooses bottom competition) is increasing in the party's ex-ante electoral strength S.*

Proof. The proof of Claim 6 shows that $\frac{\partial(E_0^*-E_1^*)}{\partial S} \leq 0$ (where the inequality is strict as long as at least one of the equilibrium effort choices is interior). Thus, there exists a unique $\widehat{B}(S,\beta) \geq 0$ s.t. in equilibrium the party leadership adopts bottom competition if and only if $B > \widehat{B}(S,\beta)$, where $\widehat{B}(S,\beta \geq 1) = 0$, $\widehat{B}(S,\beta < 1) > 0$ and $\frac{\partial \widehat{B}(S,\beta)}{\partial S} \leq 0$ (where the inequality is strict whenever $\beta < 1$). Therefore, we have that the parameter region for which, in equilibrium, the party leadership adopts bottom competition is (weakly) increasing in S. □

Amending parties' utility

Here, we analyze an extension of the baseline model where, in addition to the value of insulating their preferred candidates from internal competition, parties obtain a benefit that is a function (either decreasing or increasing) of the number of advantaged positions they allocate.

Formally, denote σ the total number of seats won by the party. Then, we have that the leadership's utility U_l is:

$$U_l = \begin{cases} W\sigma + f(n_a) + \Delta, & \text{if } 0 < n_a \leq \underline{N} \\ W\sigma + f(n_a), & \text{otherwise} \end{cases} \tag{B.35}$$

Thus, if $f(n_a) > 0$ is increasing in n_a, the party leadership obtains more and more utility as they assign more advantaged positions (everything else being equal). In contrast, if $f(n_a) > 0$ is decreasing in n_a, the party leadership prefers to assign a lower number of advantages, everything else being equal. Δ represents the additional value from securing seats for some specific candidate in the list.

Here we show that, in both cases, our predictions from Proposition 1 remain robust.

Proposition 3. *The likelihood (in the sense of set inclusion) that the party leadership allocates advantaged positions to insulate some candidates from competition (i.e., chooses bottom competition) is increasing in the party's ex-ante electoral strength S.*

Proof. First, notice that the candidates' effort choices are as in the baseline model, since their strategic problem is unchanged. This implies that total effort is again maximized under open-list ($n_a = 0$), and $E_0^* - E_1^*$ is decreasing in S. Furthermore, if we compare A.10 and A.14, we can see that $E_3^* - E_1^*$ is also decreasing in S (recall that the subscript indicates the number of candidates who obtain an advantage).

With this, suppose first that $f(n_a)$ is increasing in n_a. Then, it must be the case that the party makes one of three choices in equilibrium: $n_a = 0$ to maximize effort, $n_a = 1$ to obtain Δ, or $n_a = 3$ to maximize $f(n_a)$.[32] Thus, there exists a $\widetilde{\Delta}(S)$ s.t. the party adopts bottom competition if and only if $\Delta > \widetilde{\Delta}(S)$, where $\widetilde{\Delta}(S) = max\{U_l(n_a = 0) - U_l(n_a = 1); U_l(n_a = 3) - U_l(n_a = 1)\}$. Recall that S enters these differences in the party's utility only via the candidates' effort choices. Because both $E_0^* - E_1^*$ and $E_3^* - E_1^*$ are decreasing in S, it must be the case that $\widetilde{\Delta}(S)$ is decreasing in S as well.

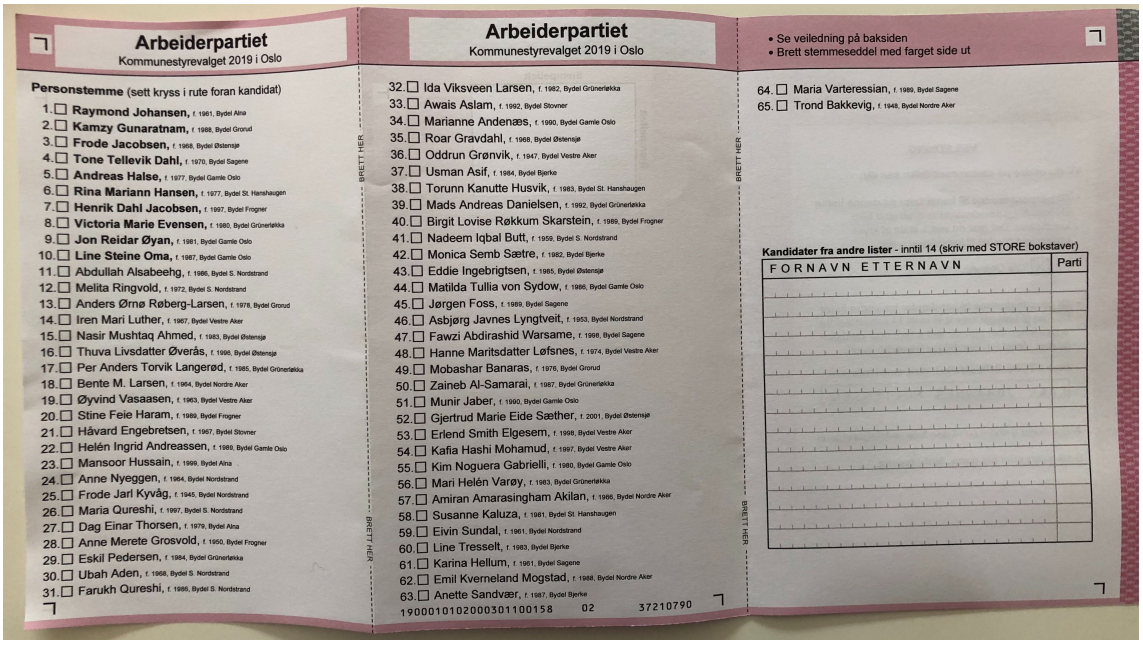
Next, suppose that $f(n_a)$ is increasing in n_a. Then, it must be the case that the party makes one of two choices in equilibrium: $n_a = 0$ to maximize effort, or $n_a = 1$ to obtain Δ *and* maximize $f(n_a)$. Thus, this case is equivalent to the baseline, and the result from Proposition 3 holds.

□

[32]Recall that we are assuming the party cannot assign an advantage to all the candidates in the list. However, relaxing this assumption would have no bearing on the results since the candidates incentives under $n_a = 0$ and $n_a = 4$ are identical, and thus $E_4^* = E_0^*$.

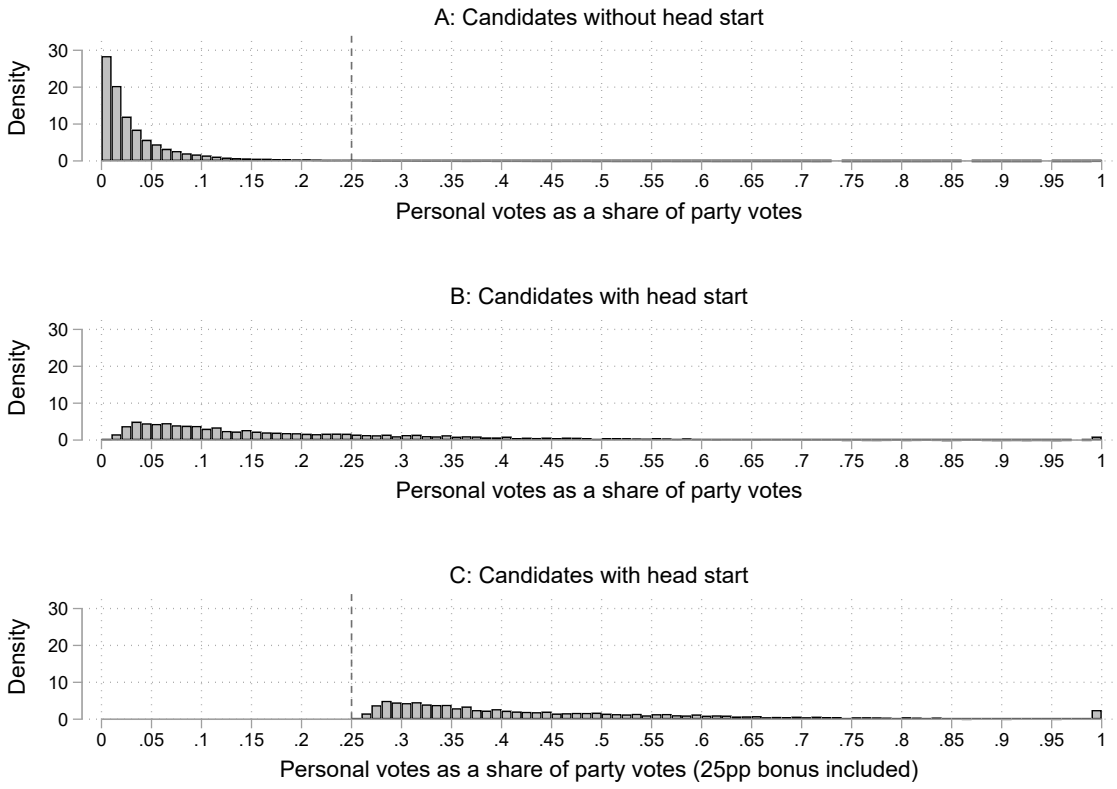
Appendix C: Additional figures and tables

Figure C.1: Example of ballot paper from the Labor Party in Oslo



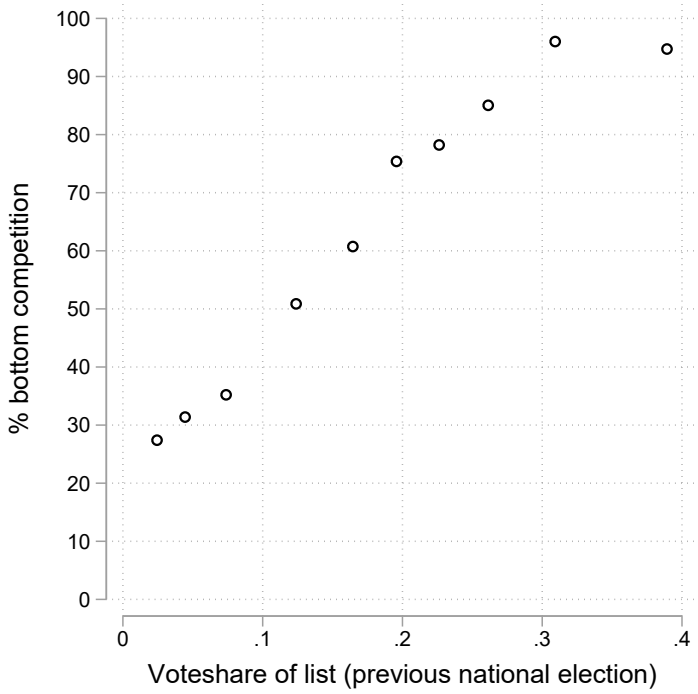
*Note: The figure shows the ballot paper from the Labor Party (*Arbeiderpartiet*) in Oslo for the 2019 election. The first ten candidates on the ballot have a head start and are listed in boldface.*

Figure C.2: Personal votes as a share of party votes for two types of candidates



Note: Panel A plots the density of observations as a function of personal votes as share of party votes for candidates without a head start. Similarly, Panel B plots the density of observations as a function of personal votes as share of party votes for candidates with a head start. Finally, Panel C, is identical to Panel B, but the 25 *percentage point bonus is included. Because voters can cast personal votes from candidates from other party lists, it is possible for a candidate's personal votes to exceed party votes. In the figure, we censor observations above* 1*. The sample is all candidates running for one of the seven main parties in the 2019 local election.*

Figure C.3: The likelihood that a party chooses bottom competition ($0 < n_a \leq \underline{N}$) increases with electoral strength measured by the local party vote share in the previous national election



Note: The figure shows the fraction of local party lists choosing $0 < n_a \leq \underline{N}$ *(denoted on the y axis as the party choosing 'bottom competition') in the 2019 election as a function of the local party vote share in the national election 2017.*

Table C.1: Municipality-level summary statistics for the main parties running in the 2019 local election

	Mean	SD	Min	Max	N
Share of votes					
Socialist Left Party (SV)	0.07	0.05	0.02	0.37	239
Labor Party (A)	0.29	0.11	0.07	0.67	346
Center Party (SP)	0.28	0.14	0.03	0.69	341
Liberal Party (V)	0.04	0.04	0.01	0.36	220
Christian Democratic Party (KrF)	0.07	0.06	0.01	0.40	222
Conservative Party (H)	0.16	0.09	0.02	0.58	309
Progress Party (FrP)	0.09	0.06	0.02	0.32	247
Seats in the local council					
Socialist Left Party (SV)	1.86	1.25	0	8	239
Labor Party (A)	7.38	3.70	1	19	346
Center Party (SP)	6.63	3.25	1	22	341
Liberal Party (V)	1.17	1.21	0	11	220
Christian Democratic Party (KrF)	1.84	1.74	0	8	222
Conservative Party (H)	4.72	3.54	0	24	309
Progress Party (FrP)	2.81	2.14	0	13	247
Seats in the executive board					
Socialist Left Party (SV)	0.58	0.57	0	2	239
Labor Party (A)	2.24	1.03	0	6	346
Center Party (SP)	2.00	0.98	0	5	341
Liberal Party (V)	0.33	0.52	0	3	220
Christian Democratic Party (KrF)	0.64	0.66	0	3	222
Conservative Party (H)	1.45	0.97	0	7	309
Progress Party (FrP)	0.76	0.74	0	3	247
Candidates with a pre-advantage					
Socialist Left Party (SV)	2.49	1.27	0	7	239
Labor Party (A)	3.17	1.81	0	10	346
Center Party (SP)	2.09	1.28	0	6	341
Liberal Party (V)	2.01	1.38	0	8	220
Christian Democratic Party (KrF)	1.87	1.09	0	6	222
Conservative Party (H)	2.59	1.80	0	10	309
Progress Party (FrP)	2.66	1.85	0	10	247

Table C.2: Individual-leve summary statistics for the main sample

	Mean	SD	Min	Max	N
Pre-advantage	0.12	0.33	0.00	1.00	29312
Personal votes (share of party total)	0.05	0.08	0.00	0.78	29312
New candidate	0.38	0.49	0.00	1.00	29312
Previously elected 2003-2015 (count)	0.38	0.85	0.00	4.00	29312
Mayor (any previous election)	0.01	0.11	0.00	1.00	29312
Age	49.23	14.48	18.00	94.00	29312
Woman	0.43	0.49	0.00	1.00	29312
Log (Income)	12.77	1.20	3.71	15.66	29312
Union member	0.51	0.50	0.00	1.00	29312
Donations (NOK 10000)	0.17	0.50	0.00	4.00	29312
Municipal employee	0.30	0.46	0.00	1.00	29312
High education	0.46	0.50	0.00	1.00	29312
Immigrant	0.08	0.27	0.00	1.00	29312

Table C.3: Comparing advantaged candidates in top and bottom competition lists

	(1) Adv 2	(2) Adv 3	(3) Adv 4	(4) Adv 5-6
Personal vote share	0.059***	0.021***	0.031***	0.022***
	(0.006)	(0.007)	(0.005)	(0.005)
Mean of outcome var.	0.055	0.053	0.046	0.033

	(1) Adv 2	(2) Adv 3	(3) Adv 4	(4) Adv 5-6
New candidate	0.160***	0.126***	0.145***	0.139***
	(0.029)	(0.038)	(0.038)	(0.039)
Mean of outcome var.	0.376	0.393	0.405	0.417

	(1) Adv 2	(2) Adv 3	(3) Adv 4	(4) Adv 5-6
Elected prev. (no.)	-0.644***	-0.449***	-0.362***	-0.356***
	(0.069)	(0.093)	(0.097)	(0.115)
Mean of outcome var.	0.363	0.351	0.426	0.470

	(1) Adv 2	(2) Adv 3	(3) Adv 4	(4) Adv 5-6
Previous mayor	-0.099***	-0.073***	-0.097***	-0.058***
	(0.011)	(0.015)	(0.015)	(0.014)
Mean of outcome var.	0.012	0.010	0.013	0.014

	(1) Adv 2	(2) Adv 3	(3) Adv 4	(4) Adv 5-6
Age (standardized)	-0.198***	-0.119*	0.003	0.037
	(0.059)	(0.063)	(0.069)	(0.073)
Mean of outcome var.	3.197	3.201	3.217	3.251

	(1) Adv 2	(2) Adv 3	(3) Adv 4	(4) Adv 5-6
Woman	-0.045*	-0.024	-0.034	-0.033
	(0.024)	(0.027)	(0.025)	(0.025)
Mean of outcome var.	0.440	0.430	0.426	0.431

	(1) Adv 2	(2) Adv 3	(3) Adv 4	(4) Adv 5-6
Log (income)	-0.162***	-0.154*	-0.188**	-0.442***
	(0.057)	(0.079)	(0.089)	(0.077)
Mean of outcome var.	12.770	12.782	12.774	12.806

	(1) Adv 2	(2) Adv 3	(3) Adv 4	(4) Adv 5-6
Union member	0.005	0.021	-0.045	-0.080*
	(0.028)	(0.040)	(0.037)	(0.042)
Mean of outcome var.	0.537	0.496	0.524	0.529

	(1) Adv 2	(2) Adv 3	(3) Adv 4	(4) Adv 5-6
Donations (NOK 10000)	-0.004	-0.002	-0.024	-0.049
	(0.033)	(0.037)	(0.028)	(0.037)
Mean of outcome var.	0.186	0.153	0.143	0.113

	(1) Adv 2	(2) Adv 3	(3) Adv 4	(4) Adv 5-6
Municipal employee	-0.094***	-0.038	-0.091**	-0.134***
	(0.029)	(0.035)	(0.035)	(0.041)
Mean of outcome var.	0.333	0.292	0.287	0.249

	(1) Adv 2	(2) Adv 3	(3) Adv 4	(4) Adv 5-6
High education	-0.058**	-0.026	-0.038	-0.071
	(0.029)	(0.040)	(0.038)	(0.052)
Mean of outcome var.	0.472	0.472	0.473	0.483

	(1) Adv 2	(2) Adv 3	(3) Adv 4	(4) Adv 5-6
Immigrant	0.011	0.026	0.024	0.047**
	(0.016)	(0.017)	(0.021)	(0.021)
Mean of outcome var.	0.077	0.079	0.089	0.106

Notes: In this table we analyze whether candidates obtaining an advantaged status in top and bottom competition lists differ in terms of their individual characteristics. To this aim, we use the empirical specification from Equation 5 (omitting $\boldsymbol{\lambda' \mathbf{X}_{ipm}}$*), but consider candidates' individual characteristics as the outcome variable. For each outcome variable, we run separate regressions and report the estimated interaction effect (Top competition X Advantage). For completeness, we also report results when using the personal vote share as outcome variable (thus, the top-left panel is the result of our analysis from the main body—Equation 5), but without controlling for individual characteristics). * denotes 10% statistical significance, ** 5% and *** 1%.*

Table C.4: Extended version of Table 1 with candidate characteristics coefficients reported

	(1) Advantage 2	(2) Advantage 3	(3) Advantage 4	(4) Advantage 5-6
Top competition	0.002	0.004*	0.002	-0.003
	(0.002)	(0.002)	(0.002)	(0.002)
Advantage	0.127***	0.104***	0.074***	0.060***
	(0.004)	(0.005)	(0.004)	(0.003)
Top competition X Advantage	0.076***	0.037***	0.050***	0.036***
	(0.006)	(0.006)	(0.006)	(0.007)
New candidate	0.000	0.000	0.002	0.000
	(0.001)	(0.001)	(0.001)	(0.001)
Elected one time before	0.029***	0.031***	0.023***	0.013***
	(0.002)	(0.004)	(0.003)	(0.003)
Elected two times before	0.037***	0.047***	0.034***	0.023***
	(0.003)	(0.006)	(0.005)	(0.006)
Elected three times before	0.052***	0.046***	0.050***	0.027***
	(0.005)	(0.008)	(0.010)	(0.007)
Elected four times before	0.053***	0.064***	0.056***	0.021**
	(0.008)	(0.014)	(0.013)	(0.008)
Mayor (any previous election)	0.060***	0.113***	0.131***	0.144***
	(0.009)	(0.019)	(0.020)	(0.020)
Age (standardized)	-0.007***	-0.006***	-0.007***	-0.005***
	(0.001)	(0.001)	(0.001)	(0.001)
Woman	-0.007***	-0.005***	-0.008***	-0.007***
	(0.001)	(0.002)	(0.002)	(0.002)
Log (Income)	0.003***	0.003***	0.002***	0.002***
	(0.000)	(0.001)	(0.001)	(0.001)
Union member	-0.002*	-0.005**	-0.004**	-0.004**
	(0.001)	(0.002)	(0.002)	(0.002)
Donations (NOK 10000)	0.003**	0.007***	0.008***	0.003
	(0.002)	(0.002)	(0.003)	(0.002)
Municipal employee	0.002*	0.004*	0.005***	0.009***
	(0.001)	(0.002)	(0.002)	(0.002)
High education	0.006***	0.008***	0.004**	0.002
	(0.001)	(0.002)	(0.002)	(0.002)
Immigrant	-0.005***	-0.005*	-0.002	-0.003
	(0.002)	(0.003)	(0.003)	(0.003)
Mean of outcome var.	0.055	0.053	0.046	0.033
R-squared	0.58	0.55	0.53	0.50
Observations	10606	4458	4071	3025

*Notes: The baseline sample is all the candidates running for one of the seven main parties in the 2019 local election. We drop lists from municipalities using a parliamentary systems, lists from municipalities involved in mergers, and lists where we fail to match any candidates with administrative data from Statistics Norway. We split the sample by the number of advantaged candidates (given in the title of each column). We pool cases where the advantage is given to 5-6 candidates because of few observations. Party fixed effects are included but not reported. Standard errors are clustered at the municipal level and reported in parentheses. * denotes 10% statistical significance, ** 5% and *** 1%.*

Table C.5: Candidates insulated from intraparty competition receive fewer media hits

	(1) Advantage 2	(2) Advantage 3	(3) Advantage 4	(4) Advantage 5-6
Top competition	0.006**	0.007**	0.007**	0.000
	(0.002)	(0.003)	(0.004)	(0.003)
Advantage	0.156***	0.109***	0.083***	0.059***
	(0.007)	(0.007)	(0.006)	(0.005)
Top competition X Advantage	0.032**	0.025*	0.032**	0.027***
	(0.015)	(0.014)	(0.012)	(0.010)
Mean of outcome variable	0.055	0.052	0.046	0.033
R-squared	0.31	0.26	0.28	0.25
Observations	10592	4450	4064	3025

*Notes:The outcome variable is the candidates' media hits share (within party list). The baseline sample is all the candidates running for one of the seven main parties in the 2019 local election. We drop all lists where we fail to match any candidates with administrative data from Statistics Norway. We split the sample by the number of advantaged candidates (given in the title of each column). We pool cases where the advantage is given to 5-6 candidates because of few observations. We control for various candidate characteristics and national party fixed effects. Standard errors are clustered at the municipal level and reported in parentheses. * denotes 10% statistical significance, ** 5% and *** 1%.*

Table C.6: Relationship between bottom competition ($0 < n_a \leq \underline{N}$) and electoral strength measured by the local party vote share in the previous national election

	(1) All	(2) All	(3) All	(4) All	(5) $A < A\_max$	(6) $0 < \underline{N}$	(7) $\underline{N} < A\_max$
Voteshare (2017 national election)	2.031***	1.674***	1.471***	1.522***	1.459***	1.355***	1.641***
	(0.091)	(0.126)	(0.160)	(0.148)	(0.157)	(0.149)	(0.217)
Number of incumbents		0.029***	0.020***	0.039***	0.046***	0.036***	0.042***
		(0.006)	(0.006)	(0.006)	(0.007)	(0.006)	(0.012)
Mean of outcome variable	0.587	0.587	0.587	0.587	0.594	0.631	0.469
R-squared	0.21	0.22	0.26	0.27	0.25	0.22	0.16
Observations	1626	1626	1626	1626	1479	1513	1220
Party FE	No	No	Yes	No	No	No	No
Municipality FE	No	No	No	Yes	Yes	Yes	Yes

*Notes: We use a linear probability model (OLS). Standard errors are clustered at the municipal level and reported in parentheses. * denotes 10% statistical significance, ** 5% and *** 1%.*

Table C.7: Repeating the analysis from Table 3 using the local party's vote-share in the previous national election as an alternative proxy for electoral strength (S)

	(1)	(2)	(3)	(4)	(5)
Voteshare (2017 national election)	0.400***	0.318***	0.403***	0.372***	0.261***
	(0.035)	(0.033)	(0.035)	(0.042)	(0.045)
Length of list		0.004***	0.005***	0.005***	0.007***
		(0.001)	(0.001)	(0.001)	(0.001)
List with mayor			-0.057***	-0.075***	-0.064***
			(0.009)	(0.009)	(0.010)
Mean of outcome variable	0.620	0.620	0.620	0.620	0.620
R-squared	0.40	0.45	0.47	0.52	0.45
Observations	954	954	954	954	954
Advantage (count) FE	Yes	Yes	Yes	Yes	Yes
Party FE	No	No	No	Yes	No
Municipality FE	No	No	No	No	Yes

Notes: The share of personal votes to non-advantaged candidates is the outcome variable. The key variable of interest is S. The unit of analysis is a list in a municipality.

Table C.8: Who gets the advantage?

	(1)	(2)	(3)	(4)
New candidate	-0.002	-0.001		-0.020***
	(0.003)	(0.003)		(0.004)
Elected one time before	0.217***	0.215***		0.206***
	(0.009)	(0.009)		(0.008)
Elected two times before	0.305***	0.291***		0.291***
	(0.012)	(0.012)		(0.012)
Elected three times before	0.349***	0.309***		0.316***
	(0.017)	(0.018)		(0.017)
Elected four times before	0.500***	0.417***		0.428***
	(0.023)	(0.024)		(0.023)
Mayor (any previous election)		0.311***		0.296***
		(0.026)		(0.026)
Age (standardized)			0.004*	-0.029***
			(0.002)	(0.002)
Woman			-0.004	0.013***
			(0.003)	(0.003)
Log (Income)			0.027***	0.018***
			(0.001)	(0.001)
Union member			-0.020***	-0.003
			(0.005)	(0.004)
Donations (NOK 10000)			0.003	0.000
			(0.004)	(0.004)
Municipal employee			0.049***	0.017***
			(0.006)	(0.005)
High education			0.046***	0.029***
			(0.005)	(0.004)
Immigrant			-0.037***	-0.022***
			(0.006)	(0.006)
Mean of outcome variable	0.122	0.122	0.122	0.122
Within R-squared	0.14	0.15	0.02	0.16
Observations	29312	29312	29312	29312
Local party FE	Yes	Yes	Yes	Yes

*Notes: The baseline sample is all the candidates running for any of the seven main parties in the 2019 local election. We drop all lists where we fail to match any candidates with administrative data from Statistics Norway. Standard errors are clustered at the municipal level and reported in parentheses. * denotes 10% statistical significance, ** 5% and *** 1%.*

Table C.9: Who gets the advantage? Heterogenous effects by party bloc

	(1) Left	(2) Center	(3) Right	(4) (1) - (2)	(5) (1) - (3)	(6) (2) - (3)
New candidate	-0.016**	-0.013**	-0.039***	-0.003	0.023**	0.026***
	(0.007)	(0.006)	(0.007)	(0.010)	(0.010)	(0.010)
Elected one time before	0.198***	0.222***	0.194***	-0.023	0.005	0.028
	(0.013)	(0.015)	(0.016)	(0.020)	(0.021)	(0.021)
Elected two times before	0.269***	0.318***	0.282***	-0.049*	-0.013	0.036
	(0.018)	(0.021)	(0.021)	(0.026)	(0.028)	(0.029)
Elected three times before	0.281***	0.328***	0.338***	-0.046	-0.056	-0.010
	(0.026)	(0.029)	(0.031)	(0.039)	(0.038)	(0.042)
Elected four times before	0.378***	0.468***	0.439***	-0.090*	-0.060	0.030
	(0.034)	(0.044)	(0.038)	(0.053)	(0.053)	(0.054)
Mayor (any previous election)	0.404***	0.227***	0.189***	0.178***	0.215***	0.038
	(0.037)	(0.048)	(0.057)	(0.061)	(0.069)	(0.076)
Age (standardized)	-0.039***	-0.021***	-0.030***	-0.017***	-0.009	0.009
	(0.004)	(0.003)	(0.005)	(0.005)	(0.006)	(0.005)
Woman	0.012**	0.000	0.030***	0.012*	-0.018**	-0.030***
	(0.005)	(0.005)	(0.006)	(0.007)	(0.008)	(0.008)
Log (Income)	0.018***	0.014***	0.022***	0.004	-0.004	-0.008**
	(0.002)	(0.002)	(0.003)	(0.003)	(0.004)	(0.004)
Union member	0.001	0.000	-0.012	0.001	0.013	0.012
	(0.007)	(0.006)	(0.008)	(0.010)	(0.011)	(0.010)
Donations (NOK 10000)	0.011	-0.002	0.000	0.014	0.011	-0.003
	(0.013)	(0.005)	(0.011)	(0.014)	(0.017)	(0.012)
Municipal employee	0.009	0.014*	0.037***	-0.006	-0.028**	-0.022*
	(0.007)	(0.007)	(0.011)	(0.010)	(0.013)	(0.013)
High education	0.026***	0.035***	0.024***	-0.009	0.002	0.012
	(0.007)	(0.006)	(0.008)	(0.010)	(0.011)	(0.010)
Immigrant	-0.037***	-0.007	-0.021*	-0.030**	-0.016	0.014
	(0.010)	(0.010)	(0.012)	(0.014)	(0.016)	(0.016)
Mean of outcome variable	0.128	0.106	0.137	0.117	0.132	0.119
Within R-squared	0.17	0.17	0.16	0.17	0.16	0.16
Observations	10135	11341	7836	21476	17971	19177
Local party FE	Yes	Yes	Yes	Yes	Yes	Yes

*Notes: The baseline sample is all the candidates running for one of the seven main parties in the 2019 local election. We drop all lists where we fail to match any candidates with administrative data from Statistics Norway. Standard errors are clustered at the municipal level and reported in parentheses. * denotes 10% statistical significance, ** 5% and *** 1%.*

Table C.10: Who gets the advantage? Heterogenous effects by list's previous success in winning mayoral office

	(1) Never	(2) Sometimes	(3) Always	(4) (1) - (2)	(5) (1) - (3)	(6) (2) - (3)
New candidate	-0.023***	-0.020***	-0.028**	0.003	-0.005	0.008
	(0.005)	(0.006)	(0.014)	(0.008)	(0.014)	(0.015)
Elected one time before	0.244***	0.167***	0.169***	-0.078***	-0.076***	-0.002
	(0.012)	(0.012)	(0.028)	(0.016)	(0.029)	(0.030)
Elected two times before	0.327***	0.272***	0.285***	-0.055**	-0.043	-0.013
	(0.018)	(0.017)	(0.035)	(0.024)	(0.038)	(0.039)
Elected three times before	0.383***	0.324***	0.322***	-0.059*	-0.061	0.002
	(0.026)	(0.025)	(0.042)	(0.036)	(0.048)	(0.048)
Elected four times before	0.546***	0.481***	0.412***	-0.064	-0.133**	0.069
	(0.032)	(0.034)	(0.059)	(0.046)	(0.063)	(0.067)
Age (standardized)	-0.031***	-0.025***	-0.042***	0.005	-0.011	0.017*
	(0.003)	(0.004)	(0.008)	(0.004)	(0.008)	(0.009)
Woman	0.007	0.018***	0.021**	0.011**	0.014	-0.002
	(0.004)	(0.004)	(0.009)	(0.006)	(0.011)	(0.010)
Log (Income)	0.016***	0.024***	0.025***	0.009***	0.010*	-0.001
	(0.002)	(0.002)	(0.005)	(0.003)	(0.005)	(0.005)
Union member	0.001	-0.018***	-0.017	-0.019**	-0.018	-0.001
	(0.006)	(0.006)	(0.018)	(0.009)	(0.019)	(0.019)
Donations (NOK 10000)	0.002	-0.003	-0.007	-0.005	-0.009	0.004
	(0.005)	(0.008)	(0.019)	(0.010)	(0.019)	(0.020)
Municipal employee	0.013*	0.027***	0.050***	0.014	0.037**	-0.023
	(0.007)	(0.007)	(0.016)	(0.009)	(0.017)	(0.018)
High education	0.027***	0.036***	0.028*	0.009	0.001	0.008
	(0.006)	(0.006)	(0.016)	(0.008)	(0.017)	(0.017)
Immigrant	-0.018**	-0.021**	-0.061***	-0.002	-0.042**	0.040*
	(0.008)	(0.010)	(0.018)	(0.013)	(0.020)	(0.020)
Mean of outcome variable	0.130	0.108	0.119	0.122	0.129	0.110
Within R-squared	0.14	0.17	0.19	0.15	0.15	0.18
Observations	17414	9995	1903	27409	19317	11898
Local party FE	Yes	Yes	Yes	Yes	Yes	Yes

*Notes: The baseline sample is all the candidates running for one of the seven main parties in the 2019 local election. We drop all lists where we fail to match any candidates with administrative data from Statistics Norway. Standard errors are clustered at the municipal level and reported in parentheses. * denotes 10% statistical significance, ** 5% and *** 1%. We drop municipalities involved in mergers during the 2003-2019 period.*

Table C.11: Personal vote determinants

	(1)	(2)	(3)	(4)	(5)	(6)
New candidate	0.005***	0.005***		-0.001	0.001*	0.001*
	(0.001)	(0.001)		(0.001)	(0.001)	(0.001)
Elected one time before	0.061***	0.060***		0.057***	0.017***	0.017***
	(0.002)	(0.002)		(0.002)	(0.001)	(0.001)
Elected two times before	0.087***	0.082***		0.082***	0.024***	0.024***
	(0.003)	(0.003)		(0.003)	(0.002)	(0.002)
Elected three times before	0.109***	0.092***		0.094***	0.028***	0.028***
	(0.005)	(0.005)		(0.005)	(0.003)	(0.003)
Elected four times before	0.144***	0.111***		0.113***	0.031***	0.031***
	(0.006)	(0.006)		(0.006)	(0.004)	(0.004)
Mayor (any previous election)		0.125***		0.119***	0.018***	0.018***
		(0.008)		(0.007)	(0.006)	(0.006)
Age (standardized)			-0.002***	-0.011***	-0.006***	-0.006***
			(0.000)	(0.000)	(0.000)	(0.000)
Woman			-0.011***	-0.006***	-0.005***	-0.005***
			(0.001)	(0.001)	(0.001)	(0.001)
Log (Income)			0.008***	0.005***	0.002***	0.002***
			(0.000)	(0.000)	(0.000)	(0.000)
Union member			-0.009***	-0.003***	-0.001**	-0.001**
			(0.001)	(0.001)	(0.001)	(0.001)
Donations (NOK 10000)			0.006***	0.006***	0.005***	0.005***
			(0.001)	(0.001)	(0.001)	(0.001)
Municipal employee			0.015***	0.006***	0.001	0.001
			(0.001)	(0.001)	(0.001)	(0.001)
High education			0.017***	0.012***	0.006***	0.006***
			(0.001)	(0.001)	(0.001)	(0.001)
Immigrant			-0.012***	-0.009***	-0.005***	-0.005***
			(0.002)	(0.001)	(0.001)	(0.001)
Advantage (head start)						0.006**
						(0.002)
Mean of outcome variable	0.053	0.053	0.053	0.053	0.053	0.053
Within R-squared	0.20	0.23	0.04	0.26	0.69	0.69
Observations	29312	29312	29312	29312	29312	29312
Rank FE	No	No	No	No	Yes	Yes
Local party FE	Yes	Yes	Yes	Yes	Yes	Yes

*Notes: The baseline sample is all the candidates running for one of the seven main parties in the 2019 local election. We drop all lists where we fail to match any candidates with administrative data from Statistics Norway. Standard errors are clustered at the municipal level and reported in parentheses. * denotes 10% statistical significance, ** 5% and *** 1%.*