

# Moral Hazard in Electoral Teams\*

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February 19, 2020

## Abstract

How do parties motivate candidates to exert effort in closed-list elections? If each candidate's primary goal is winning a seat, then those in safe and hopeless list positions have weak incentives to campaign. We present a model in which (i) candidates care about both legislative seats and the higher offices available when their party enters government; and (ii) parties commit to allocating higher offices monotonically with list rank. This model predicts that the volume and geo-diversity of candidates' efforts will increase as their list rank improves. Using new data covering Norwegian parliamentary candidates' use of mass and social media during the 2017 election, we find clear support for this prediction. As their list rank increases, candidates shift from intra-district to extra-district media exposure—which cannot help them win their own seats; but can improve their party's chance of entering government, and thus their own potential share of the spoils.

*Keywords:* party lists; cabinet promotion; Gamson's law; proportional representation; voter mobilization.

*JEL Classification:* D72

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\*We are grateful to Thomas Däubler, Olle Folke, Max Goplerud, Simon Hix, Federica Izzo, Johanna Rickne, Ken Shepsle, and Janne Tukiainen, as well as various workshop audiences, for useful comments. We thank Mafalda Pratas Fernandes, Knut Gaukerud, Kristoffer Sanner, Helen Simpson, and Reidar Vøllo for excellent research assistance. Fiva and Sørensen gratefully acknowledge financial support from the Norwegian Research Council (grant nr. 281191). Smith thanks the Weatherhead Center for International Affairs at Harvard University for financial support.

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# 1. Introduction

Scholars have long recognized that parties in closed-list proportional representation (PR) elections may have trouble motivating their candidates to exert effort during campaigns. The intuition is straightforward: in closed-list PR systems, list placement—not individual campaign effort—is the most important factor determining election outcomes for individual candidates. If each candidate’s primary motivation is to win a seat, then those whose nominations place them in either “safe” or “hopeless” list positions will have little incentive to work hard during the campaign. Only candidate(s) in the “hot spots,” the list positions on the cusp of either winning or losing, should be motivated to exert effort. Yet, such a situation will obviously be suboptimal from a seat-maximizing party’s perspective, which will wish to harness both collective and individual resources into the competition for votes.

Eliciting campaign effort from candidates on closed lists is an example of a more general problem that Holmström (1982) calls moral hazard in team production. A team, as defined by Holmström (1982, p. 324-325), is any group whose members’ individual inputs combine to produce a collective output that they can then share. Moral hazard within teams refers to the problem of getting agents (team members) to supply the appropriate amounts of productive inputs, given that team leaders may be unable to observe or contract for these inputs directly.

We examine moral hazard within political parties, which can be conceptualized as “teams of [candidates] seeking to control the governing apparatus by gaining office in a duly constituted election” (Downs, 1957, p. 25). We argue that parties can reduce shirking by candidates on closed lists by exploiting their desire to obtain high offices, such as ministerial and junior ministerial posts, that become available when their parties participate in government. In particular, a party can reduce shirking by committing to allocate high offices (when it participates in government) among its candidates monotonically with their list ranks. Since high offices become available for distribution to candidates only

if their parties participate in government, the contract just described induces candidates in safe list positions to value their party’s participation in government. In other words, candidates in safe list positions campaign hard because doing so increases their party’s chance of participating in government and the party has committed to allocating cabinet posts and other spoils in proportion to list rank.<sup>1</sup>

We introduce a formal model to show that, after announcing a rank-based compensation schedule, (1) parties have an incentive to allocate list spots to their candidates in order of their “quality;” and (2) candidates have an incentive to increase the volume and geo-diversity of their campaign efforts as their list ranks improve. The first of these hypotheses can also be derived in a model highlighting each party’s complementary desire to optimize its legislative performance (Buisseret et al., 2019).

We provide evidence bearing on our predictions that a candidate’s expected share of high offices will increase with list rank (for governing parties); and that candidates will be ranked on each list in order of their quality. The bulk of our empirical work focuses on our main new prediction about candidates’ electoral campaign efforts. In particular, we exploit unusually detailed information on candidates’ use of mass and social media during the 2017 Norwegian parliamentary elections to show that they systematically shift from intra-district to extra-district media exposure as their list rank increases. Extra-district exposure cannot help candidates win their own seats; but it can improve their party’s chance of participating in government and thus their own share of the spoils. This incentive can be strong enough, we argue, that likely winners on closed lists will exert significantly more extra-district effort than likely winners on open lists.

Our work relates to three important strands of research on party organization and elite electoral behavior. First, we contribute to an emerging literature on how parties allocate nominations and valuable internal posts among their members. Much of this literature focuses on electoral cues—such as primary election results, first-round election results

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<sup>1</sup>We assume that the party leadership can credibly commit to a rank-based allocation because violations would trigger a reduction in the rank and file’s effort levels. For a fuller discussion of parties’ ability to commit to following rules, see Hollyer, Klašnja and Titunik (2018) and Cirone, Cox and Fiva (2020).

(Pons and Tricaud, 2018*b*), or preference votes (Folke, Persson and Rickne, 2016)—that can help parties decide how to distribute posts and promotions.<sup>2</sup> Here, we examine closed and semi-closed list PR systems in which such cues are wholly or largely absent. How do parties allocate list positions and internal promotions absent direct observation of their candidates' electoral performance? We argue that, just as ambition for higher office might counteract free riding problems *in the legislative arena* owing to individual-level incentives to break party discipline in candidate-centered electoral contexts (e.g., Martin, 2014; Cox, 1987, ch. 7), so can it also ameliorate moral hazard problems *in the electoral arena* owing to individual-level incentives to shirk campaign effort in party-centered electoral contexts.

Second, we contribute to a growing stream of work on Gamson's Law (Gamson, 1961). This law has most often been applied to parties seeking to form coalition governments—in which case it states that cabinet portfolios will be allocated in proportion to each party's contribution of seats to the coalition—and the empirical evidence for this relationship is abundant (e.g., Browne and Franklin, 1973; Warwick and Druckman, 2001; Verzichelli, 2008). However, Gamsonian allocations have also been documented across parties within pre-electoral coalitions (Carroll and Cox, 2007), across factions within parties (Leiserson, 1968; Mershon, 2001*a,b*; Ono, 2012; Ceron, 2014), and across regional branches within parties (Ennsner-Jedenastik, 2013).

Building on this literature from the perspective of mitigating moral hazard in electoral teams, we argue that a would-be governing coalition should commit to allocating high offices in proportion to electoral contributions at all levels of aggregation. The coalition's component parties should be promised proportional rewards. But then, for the same reason (to encourage optimal effort), the parties should award portfolios to their component factions and individuals in proportion to their electoral contributions. Thus, Gamson's Law should apply at the party, faction, and individual levels. We consider a model in which parties allocate posts to their MPs in proportion to their list ranks, which

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<sup>2</sup>Other studies providing evidence of rank-based decision-making in politics include Anagol and Fujiwara (2016), Meriläinen and Tukiainen (2018), Pons and Tricaud (2018*a*) and Fujiwara and Sanz (2020). A broader literature focuses on the biographical characteristics (either demographic or related to experience) that correlate with promotion (e.g., Dowding and Dumont, 2015; Smith and Martin, 2017).

in equilibrium correspond to their expected contributions to the party’s electoral success.

Finally, our analysis provides new insight into an enduring puzzle in the literature on list type and turnout. Many scholars argue that allocating seats in order of personal votes won, as under open-list PR, will improve incentives to mobilize voters, relative to closed-list PR, since each candidate’s fate will hinge directly on their own efforts (e.g., Carey and Shugart, 1995; Karvonen, 2004; Hangartner, Ruiz and Tukiainen, 2019); however, the empirical evidence for this proposition is mixed (e.g., Tavits, 2009; Robbins, 2010; Söderlund, 2017).<sup>3</sup> The Gamsonian promotion rule we posit, and our empirical evidence on intra-district and extra-district campaigning behavior, suggest a possible explanation for why turnout tends to be high in closed-list PR systems: candidates who are likely to benefit from the spoils of office if their party enters government will work hard in behalf of the party across districts, while marginal candidates will work hard to mobilize local votes within their own districts.

## 2. Theory: Candidate Effort and Party Rewards

As of 2017, 69 democracies used PR electoral rules with closed or semi-closed lists to conduct national legislative elections (Scartascini, Cruz and Keefer, 2018).<sup>4</sup> The incentives of candidates on closed lists, we argue, are similar to those in team production models (Holmström, 1982). The seats won by any particular list will depend, at least in part, on the campaigning efforts of all its candidates. Yet, if they care only about winning seats for themselves, then candidates listed in either safe or hopeless spots will have little incentive to exert effort—as recognized by, for example, Persson, Tabellini and Trebbi (2003), André, Depauw and Martin (2015), and Crutzen, Flamand and Sahuguet (2020).

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<sup>3</sup>Crutzen, Flamand and Sahuguet (2020) consider an “egalitarian rule” (under which every candidate has an equal chance of winning one of the list’s seats), analyzing when such a rule improves the overall performance of the list relative to the usual rule of allocating seats in order of appearance on the list.

<sup>4</sup>Closed lists allow voters to vote for parties as a whole but not to affect the party-supplied order in which candidates on the list are elected. Open lists allow voters to vote directly for candidates. While the overall number of seats a list wins depends on the sum of its candidates’ votes, the order in which candidates on the list are elected is determined by their personal votes. Of the range of intermediate cases, semi-closed lists are those that more closely approximate closed than open lists.

In this section, we consider a model in which (i) candidates care about both legislative seats and the higher offices that become available to them when their party gets into government; and (ii) parties commit to allocating high offices in proportion to an indicator of each candidate’s campaign contribution.

## 2.1 *Candidates choosing efforts*

We begin by describing candidates’ attributes and how each candidate decides how much effort to devote to campaigning. We assume that each candidate  $j$  has a known “quality,”  $q_j$ . Quality can reflect a combination of campaigning ability, governing ability (e.g., the qualifications needed to be a competent minister), and other valence characteristics. Let  $r_j$  denote the list rank that candidate  $j$  receives, where  $r_j = 1$  means that  $j$  is ranked first (highest) on the list, and so forth.

We classify campaign effort by its target audience, rather than elements of style or technology used. In particular, each candidate  $j$  can target either a national audience, an audience contained within  $j$ ’s home district (we call this “local” effort), or an audience contained within some other district (“non-local” effort). Let  $e_{j,nat}$  represent  $j$ ’s nationally-targeted effort. One interpretation is that  $e_{j,nat}$  denotes the number of national campaign events (of unit size) that candidate  $j$  stages. Let  $e_{j,loc}$  represent  $j$ ’s efforts (or unit events) in his or her home district. Finally, let  $e_{j,nonloc}$  represent  $j$ ’s efforts (or unit events) targeting districts other than his or her home district. For convenience, we ignore events that affect (parts of) several districts but fall short of affecting the whole nation.

Given quality  $q_j$  and rank  $r_j$ , candidate  $j$  will choose  $\mathbf{e}_j = (e_{j,nat}, e_{j,nonloc}, e_{j,loc})$  in order to maximize the following payoff:

$$U_j(\mathbf{e}_j, \mathbf{e}_{-j}) \equiv S_j(\mathbf{e}_j, \mathbf{e}_{-j})[b + P_{gov}(S_{\bullet}(\mathbf{e}_j, \mathbf{e}_{-j}))b_{j,gov}(r_j)\pi] - c(\mathbf{e}_j) \quad (1)$$

Here,  $S_j(\mathbf{e}_j, \mathbf{e}_{-j})$  is the probability that  $j$  wins a seat, given both  $j$ ’s effort ( $\mathbf{e}_j$ ) and the effort exerted by all other candidates, including those from other parties ( $\mathbf{e}_{-j}$ ). A

candidate's chance of winning a seat depends on other factors, notably list rank, but we simplify our notation by leaving this dependence implicit. The value of winning a seat, given in the square brackets, consists of a consumption value ( $b$ ), plus  $j$ 's expected share of high offices. The probability that  $j$ 's party enters government ( $P_{gov}(S_{\bullet}(e_j, e_{-j}))$ ) increases as the party's expected number of seats,  $S_{\bullet}(e_j, e_{-j})$ , increases.<sup>5</sup>  $\pi$  represents the expected value of the pie of high offices that becomes available to  $j$ 's party when it enters government, while  $b_{j,gov}(r_j)$  represents  $j$ 's expected share of that pie as a function of his or her list rank ( $r_j$ ). Finally,  $c(e_j)$  represents  $j$ 's cost of effort.

On the one hand, if  $P_{gov} = 0$  ( $j$ 's party has no chance of entering government) or  $\pi = 0$  ( $j$  does not value portfolios), then candidate  $j$ 's motivation reduces to maximizing his or her probability of winning a seat. On the other hand, as  $b$  approaches zero, seats become worthless relative to portfolios and candidate  $j$  is motivated solely by the prospect of gaining high offices.

We let  $e_j^*(q_j, r_j) = (e_{j,nat}^*(q_j, r_j), e_{j,nonloc}^*(q_j, r_j), e_{j,loc}^*(q_j, r_j))$  denote candidate  $j$ 's optimal efforts, given quality  $q_j$  and rank  $r_j$  (and explain how these terms enter the model below). We assume that  $b_{j,gov}(r_j) > 0$  for winning candidates; and impose the following **Monotonicity Assumption**: If  $r < r'$ , then  $b_{j,gov}(r) > b_{j,gov}(r')$ . In other words, each candidate's share of the pie of higher offices increases in expectation as his or her list rank improves.

We do not rule out the possibility that some candidate actions are observable, and hence contractible. For example, it seems likely that a party's (sitting or shadow) Minister of Agriculture would be expected to appear on national TV shows to defend the party's agricultural policies, if and when they became an issue. We assume that, aside from some directly contractible aspects, candidate effort is not fully observable to party leaders, so that a significant moral hazard problem remains.

We also adopt the following **Cost Assumption**:  $c(e_j) = p_{nat}e_{j,nat} + p_{nonloc}e_{j,nonloc} +$

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<sup>5</sup>We use bullets to indicate summation over the subscript:  $S_{\bullet}(e_j, e_{-j}) = \sum_{i \in P(j)} S_i(e_i, e_{-i})$  where  $P(j)$  is the set of candidates in  $j$ 's party. We do not consider parties whose probability of entering government would improve were they to lose votes.

$p_{loc}e_{j,loc}$ , with  $p_{nonloc} = p_{loc} = wp_{nat}$  for some  $w < 1$ . The notion here is that district-specific events all cost the same to stage, regardless of which district they are staged in; and that district-specific events are less expensive to stage than national events.

### 2.1.1 Safe spots

Election is virtually assured for candidates listed high enough on the list, meaning that their goal reduces approximately to maximizing their expected share of high offices, net of costs:

$$\max_{e_j} U_j(e_j, e_{-j}) \approx P_{gov}(S_{\bullet}(e_j, e_{-j}))b_{j,gov}(r_j)\pi - c(e_j) \quad (2)$$

Since vote shares translate smoothly into seat shares in PR systems, we can simplify by substituting the party’s vote share ( $V_{\bullet}(e_j, e_{-j})$ ) for its seat share ( $S_{\bullet}(e_j, e_{-j})$ ) in Equation (2);<sup>6</sup> and assuming that effort translates linearly into vote shares:

$$V_{\bullet}(e_j, e_{-j}) = V_{\bullet}(0, e_{-j}) + (e_{j,nat} + we_{j,nonloc} + w\beta_{loc}e_{j,loc})q_j \quad (3)$$

The notion behind Equation (3) is that a given number of unit national events ( $e_{j,nat}$ ) yields a per-event mobilizational impact that depends on the quality of the candidate ( $q_j$ ). Similarly, the impact of a given number of unit events in non-home districts ( $e_{j,nonloc}$ ) depends on the quality of the candidate ( $q_j$ ). Since events targeted to specific districts cover smaller areas, however, their effect is discounted by the factor  $w < 1$  representing how much smaller districts are than the nation as a whole.<sup>7</sup> Finally, the impact of a given number of unit events in a candidate’s home district ( $e_{j,loc}$ ) depends on the quality of the candidate ( $q_j$ ), on a home-district bonus ( $\beta_{loc} > 1$ ) reflecting “friends and neighbors” voting, and on the size of the area covered ( $w$ ).

Since  $P_{gov}(V_{\bullet}(e_{j,nat}, e_{j,nonloc}, e_{j,loc}, e_{-j}))$  is limited to the  $[0,1]$  interval, it must (under

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<sup>6</sup>Such a substitution is fully justified only under “perfect PR.”

<sup>7</sup>By using the same  $w$  here as in the Cost Assumption, we implicitly assume that the cost per vote of a district-specific event equals the cost per vote of a national event. This assumption, which is not necessary but does simplify the exposition, would hold if candidates allocated their effort in order to maximize their party’s votes.



fairly general conditions) become a concave function of  $j$ 's effort over some range. We assume that it is concave over the range in which  $e_{j,nat} \geq 0$ ,  $e_{j,nonloc} \geq 0$  and  $e_{j,loc} \geq 0$ . This would make sense, for example, if the focal party were in a dead heat with another party for being the largest party nationwide, and constitutional norms gave the largest party the opportunity to lead negotiations to form a government—consistent with evidence in Fujiwara and Sanz (2020).<sup>8</sup>

Given our assumptions, there will exist quality thresholds at which any given candidate first begins to exert each type of effort—local, non-local, and national. To identify the threshold for local effort, consider the net marginal benefit of exerting local effort. Differentiating  $U_j$  with respect to  $e_{j,loc}$ , and evaluating at  $\mathbf{e}_j = (0, 0, 0)$ , we get

$$\frac{\partial U_j(0, 0, 0, \mathbf{e}_{-j})}{\partial e_{j,loc}} = P'_{gov} w \beta_{loc} q_j b_{j,gov}(r_j) \pi - p_{loc} \quad (4)$$

This payoff will be non-positive whenever  $q_j$  is at or below a threshold  $Q_{loc}(r_j)$ . Specifically, if  $q_j \leq Q_{loc}(r_j) \equiv \frac{p_{loc}}{P'_{gov} w \beta_{loc} b_{j,gov}(r_j) \pi}$ , then  $j$ 's optimal effort will be nil:  $e_{j,loc}^* = 0$ .

Proceeding similarly with respect to non-local effort, we find that

$$\frac{\partial U_j(0, 0, 0, \mathbf{e}_{-j})}{\partial e_{j,nonloc}} = P'_{gov} w q_j b_{j,gov}(r_j) \pi - p_{nonloc} \quad (5)$$

and thus the non-local threshold  $Q_{nonloc}(r_j) \equiv \frac{p_{nonloc}}{P'_{gov} w b_{j,gov}(r_j) \pi} > Q_{loc}(r_j)$ . In other words, any candidate will begin to exert local effort before they begin to exert non-local effort—because local effort is more effective ( $\beta_{loc} > 1$ ) and identically priced ( $p_{loc} = p_{nonloc}$ ).

Finally,

$$\frac{\partial U_j(0, 0, 0, \mathbf{e}_{-j})}{\partial e_{j,nat}} = P'_{gov} q_j b_{j,gov}(r_j) \pi - p_{nat} \quad (6)$$

and thus the national threshold  $Q_{nat}(r_j) \equiv \frac{p_{nat}}{P'_{gov} b_{j,gov}(r_j) \pi}$ . Since  $\frac{p_{nat}}{p_{nonloc}} = \frac{1}{w}$ , it follows that  $Q_{nat}(r_j) = Q_{nonloc}(r_j)$ . Thus, any candidate will begin to exert local effort before they begin to exert national effort—because local effort is more effective ( $\beta_{loc} > 1$ ) and

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<sup>8</sup>More generally, all that we require is that when effort is locally non-profitable at zero, it is globally non-profitable.

prices reflect the markets reached ( $\frac{p_{nat}}{p_{loc}} = \frac{1}{w}$ ). Since national and nonlocal events have the same threshold, we combine them into a single category of “external” events. Formally, let  $e_{j,ext}^*(q_j, r_j) \equiv e_{j,nonloc}^*(q_j, r_j) + e_{j,nat}^*(q_j, r_j)$  denote the optimal number of “external” events staged by candidate  $j$ ; and let  $Q_{ext}(r_j) \equiv Q_{nonloc}(r_j) = Q_{nat}(r_j)$ . Then, we get the following **Effort Composition Hypothesis**: For any given safe rank  $r_j$ ,

1.  $q_j \leq Q_{loc}(r_j) \rightarrow e_{j,loc}^*(q_j, r_j) = e_{j,ext}^*(q_j, r_j) = 0$ .
2.  $Q_{loc}(r_j) < q_j \leq Q_{ext}(r_j) \rightarrow e_{j,loc}^*(q_j, r_j) > 0$  and  $e_{j,ext}^*(q_j, r_j) = 0$ .
3.  $Q_{ext}(r_j) < q_j \rightarrow e_{j,loc}^*(q_j, r_j) > 0$  and  $e_{j,ext}^*(q_j, r_j) > 0$ .

In other words, for any given rank, the composition of candidates’ effort will shift according to the quality stratum in which they fall. Candidates in the lowest quality stratum will exert no effort. Those in the next lowest stratum will exert only local effort. Those in the highest stratum will exert both local and external effort.

### 2.1.2 Hot spots

Candidates in hot spots have two motivations to exert effort: (1) to improve their own chance of winning a seat, and (2) to improve the party’s chance of entering government. That said, the latter motivation will be weaker than it is for higher-ranked candidates (since  $b_{gov}$  increases with rank). Hot spot candidates should thus, relative to safe spot candidates, concentrate more of their efforts within the district since local effort is the most effective way of furthering their own chances at election.

Hot spot candidates should also obey the effort composition hypothesis. That is, low-quality candidates will exert no effort. As their quality improves, candidates will first exert local effort, then external effort.

### 2.1.3 Hopeless spots

Candidates in hopeless spots have neither a seat-maximizing nor a government-optimizing incentive to exert effort, since they are virtually sure to lose regardless of their effort. That

is,  $S_j(\mathbf{e}_j, \mathbf{e}_{-j}) \approx 0$  for all  $\mathbf{e}_j$  that are not prohibitively expensive.<sup>9</sup> We thus expect that candidates motivated only by the prospect of winning seats or high offices will exert relatively low levels of effort.

There are some caveats to register, however. First, in some countries, such as Norway, elected MPs appointed to cabinet must resign their seats and are then replaced by the non-winning candidates next in line on the party’s list. These sorts of “resignation and replacement” rules can mean that some hot-spot candidates are in fact safe and some hopeless candidates are in fact in hot spots. For example, if a party list is likely to win one seat in a district and the winner of that seat is likely to enter cabinet, then the candidate listed second is likely to get a seat (eventually), so they are safe rather than in a hot spot; and the candidate listed third is in the hot spot.

Second, there are several ways that parties might motivate even truly hopeless candidates. For example, parties might promise a higher list placement in future elections, conditional on good effort in the current election.<sup>10</sup> Another tactic is to rely on “electoral synergies.” An example would be a local town mayor who accepts a hopeless spot on his or her party’s parliamentary list. By campaigning for parliament in his or her home area, a mayor can improve his or her chances of re-election.

We assume that promises of future promotions and exploitations of electoral synergies for local office incentives are what primarily motivate local effort. Thus, hopeless candidates, too, should obey the effort composition hypothesis.

#### 2.1.4 Discussion

We have so far argued that the main motivation to exert campaign effort—for candidates placed in safe positions on closed or semi-closed lists—is to improve their chance of securing high offices that become available only if their parties enter government. Can-

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<sup>9</sup>If  $p_{nat}e_{j,nat} + p_{nonloc}e_{j,nonloc} + p_{loc}e_{j,loc} > S_j(\mathbf{e}_j, \mathbf{e}_{-j})[b + b_{j,gov}(r_j)\pi]$  for all  $\mathbf{e}_j$  such that  $S_j(\mathbf{e}_j, \mathbf{e}_{-j}) > 0$ , then winning is “prohibitively expensive.”

<sup>10</sup>André et al. (2017) provide evidence that parties in Belgium, the Czech Republic, and Slovakia pursue this strategy, and similar evidence has been documented for parties in Norway (Fiva and Røhr, 2018), Finland (Meriläinen and Tukiainen, 2018), and Sweden and Brazil (Folke, Persson and Rickne, 2016).

didates in hot spots have a mixed motivation, since their effort can affect both their chance of winning a seat and their chance of securing high offices. Finally, candidates in hopeless spots are typically motivated neither by the prospect of winning a seat nor by the prospect of securing high offices. Instead, such candidates have various smaller motivations to exert effort.

Given their motivations, our analysis suggests that the composition of candidate effort should vary systematically with their campaigning ability. In particular, as their quality increases, candidates should undertake local effort first, followed by external effort. Two key assumptions underpin this result on effort composition. First, following Key (1949), we assume that candidates benefit from a “friends and neighbors” effect ( $\beta_{loc} > 1$ ).<sup>11</sup> Second, we assume that candidate quality is a complementary input in mobilizing voters. The higher the candidate’s quality, the more vote-productive a given amount of effort becomes. This idea, that campaign activity is beneficial in proportion to the quality of the “product” being advertised, is routinely assumed in discussions of marketing in general and of campaign effects in particular.

## 2.2 *Parties allocating list positions*

The final component of our theory pertains to parties’ strategies in allocating list positions to its candidates. We assume that parties allocate list positions to candidates in order to maximize the party’s vote share (and hence its seat share, given PR), which leads to the following **Rank Order Hypothesis**: If winning a marginal seat substantially affects a party’s chance of getting into government, then in the limit as  $b$  approaches zero, parties will allocate list positions to their candidates according to their quality ranks. In other words, if candidate  $j$  has the  $k$ th highest quality in the district, then he or she will receive the  $k$ th position on the district list. Proof: For any given list spot,  $r_j$ , effort weakly increases with quality. That is, if  $q_{hi} > q_{lo}$ , then  $e_{j,nat}^*(q_{hi}, r_j) \geq e_{j,nat}^*(q_{lo}, r_j)$ ,

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<sup>11</sup>Fiva, Halse and Smith (2019) document that local representation matters for voting outcomes in subsequent elections in the closed-list PR setting of Norway. Examples of studies that document the value of local ties in generating votes in other electoral contexts include Marsh (1987), Blais et al. (2003), Meredith (2013) and Fiva and Smith (2017a).

$e_{j,nonloc}^*(q_{hi}, r_j) \geq e_{j,nonloc}^*(q_{lo}, r_j)$ , and  $e_{j,loc}^*(q_{hi}, r_j) \geq e_{j,loc}^*(q_{lo}, r_j)$ . This means that the party gets the biggest vote contribution from any given slot by allocating it to the highest-quality candidate still available.<sup>12</sup>

Now suppose the party allocates slots in order of quality. Could it profit by, say, switching the first and second listed candidates, putting the second-highest quality candidate in the top spot and highest-quality candidate in the second spot? What prevents this being profitable is that  $b_{j,gov}$  increases strictly with rank. Each candidate's incentive to work is an interactive function of their expected share of high offices ( $b_{j,gov}$ ) and their quality ( $q_j$ ), so the party wants to match these complements in order to elicit the highest possible effort. If a party's chances of getting into government are insensitive to winning a marginal seat, and candidates value seats per se, then their motivation to seek high office can be small relative to their incentive to ensure their own election. In this case, a party may wish to put its best candidates in its hot spots. However, under the conditions assumed above, higher office-seeking dominates seat-seeking incentives and the party accordingly ranks candidates on the list in order of their qualities. QED.

Combining the rank order hypothesis with the effort composition hypothesis, we get an empirically testable set of predictions. First, very low-ranked candidates should exert negligible effort on average. (When they do exert effort, it is due to promises of future promotion, to electoral synergies, or to other incentives that are small relative to the incentives to win a seat or secure a share of high offices.) Second, as a candidate's rank increases, one should first see his or her local effort increase, followed by external effort. As we will describe shortly, we use coverage of Norwegian election candidates by media outlets with varying levels of geographic coverage (district-specific or national) to provide a noisy measure of targeted campaign efforts (local, non-local, and national).

Note that while the model we have presented sets up clear and testable predictions, there are two reasons worth noting that we might observe deviations from these predic-

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<sup>12</sup>Buisseret et al. (2019) derive a similar rank order hypothesis. However, they explain why higher-quality candidates get higher ranks in terms of the parties' incentives to optimize their legislative productivity, whereas we focus on the complementary goal of optimizing electoral performance.

tions. First, vote-maximizing parties may put emphasis on other candidate characteristics besides quality—such as geographic ties, gender, age, and occupation in order to create balanced lists or attract support from particular subgroups of voters—and accommodating these criteria may lead parties to deviate from the quality ranking of candidates.<sup>13</sup> Second, party leaders may in some contexts have limited control over candidate rankings. In the case of Norway, candidate nominations and rank positions are formally determined by party conventions at the district (regional) level, which might affect candidates’ campaigning incentives.<sup>14</sup> For example, safe candidates who do not expect to win a cabinet post (e.g., because their geographical or occupational background overlaps with other high-ranking candidates in the party) might continue to concentrate effort within their districts in order to build greater support from the local party organization for future nomination decisions. This shift in where the principal resides (national or regional party) may partially influence the effort composition for some of its agents, a possibility upon which our empirical analysis will shed some light.

### 3. Evidence that parties obey Gamson’s Law internally

Our formal model assumes that the share of high offices a candidate expects to receive increases monotonically with his or her list rank. To provide some initial evidence on this score, Figure 1 plots the share of candidates with rank  $r$  who received a cabinet portfolio (focusing on candidates of governing parties), for parties from three Western European countries employing closed-list PR elections: Norway (1957-2013), Portugal (2005-2015),

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<sup>13</sup>Beginning in the 1970s, for example, Norwegian parties (with the exception of the Progress Party and the Conservative Party) have used gender quotas requiring men and women to have alternating list ranks. It isn’t necessarily the case, however, that this kind of requirement would force tradeoffs in campaigning ability or other forms of quality. If anything, quotas have been shown (at least for the case of Sweden) to induce the replacement of lower quality men (Besley et al., 2017).

<sup>14</sup>This feature is rooted in legislation going back to the 1920s, which granted public reimbursement for party members’ travel expenses for attending the nomination meetings. Local and regional party organizations therefore historically played a key role in the nomination process, and have continued to do so even after this regulatory framework was abolished in 2002 (Strøm and Narud, 2003, pp. 529-530).

and Italy (2006-2013).<sup>15</sup> In line with our theory, receipt of cabinet portfolios is generally monotonic in list rank, although the relationship is noisy in Portugal (where we have fewer observations).

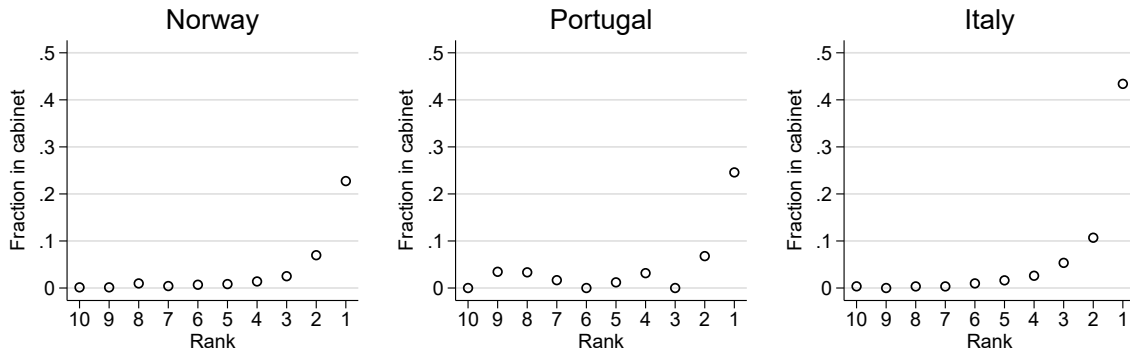


Figure 1: Promotion to cabinet by list rank

*Note:* Cabinet is a dummy equal to 1 for candidates where a (i) cabinet spell starts during the following election term, or (ii) it started before, but continues into the following election term. The Norwegian data cover the 1957-2013 period, the Portuguese data cover the 2005-2015 period, and the Italian data cover the 2006-2013 period. All samples are limited to candidates running for parties that are part of any cabinet following the election.

If cabinet portfolios constitute *all* the most important posts, then one might expect an even sharper relationship between list rank and entry into the cabinet than that illustrated in Figure 1.<sup>16</sup> In particular, if  $n$  candidates on a particular list receive cabinet portfolios, then they should be the top  $n$  candidates on that list.

We can test whether this strict allocation rule is obeyed using data from Norway, 1957-2013. First, let  $N_j$  denote the number of candidates on candidate  $j$ 's list who receive cabinet positions. Define candidate  $j$ 's "cabinet rank security" as  $C_j = N_j - r_j$ , where  $r_j$  is  $j$ 's list rank. For example, if two candidates from a particular list make it into government, then the cabinet rank securities for the first three candidates on that list

<sup>15</sup>Technically, voters in Norway may indicate desired alterations to party ballots when they cast their votes; however, these only go into effect if a majority of voters make the same change, which has never happened. Data for each case come from the national parliament's data archives.

<sup>16</sup>This is a consequential assumption, since the most valuable offices that parties allocate among their members are not necessarily all cabinet portfolios. In some cases, party leadership posts also count among the most coveted spots, as in the case of the Japanese Liberal Democratic Party's "Big Three" positions of Party Secretary General, Chair of the Policy Affairs Research Council, and Chair of the Executive Council (Ramseyer and Rosenbluth, 1993).

will be 1, 0 and  $-1$ , respectively. If our theory holds and all the top prizes are cabinet portfolios, then we should find that the relationship between cabinet rank security and entry into the cabinet is a step function, equal to zero for  $C_j < 0$  and to one for  $C_j \geq 0$ .

In Figure 2, we plot the proportion of candidates at each cabinet rank security who actually entered Norway’s cabinet over the period 1957-2013 (restricting the analysis to governing parties). As can be seen, the relationship is nearly a step function. Overall, 69% of all cabinet appointments were consistent with the joint hypothesis stated above. Further investigation suggests that the violations of the rule arise because some high-ranked candidates preferred other posts to taking a position in the cabinet; or were planning to retire and thus deferred to junior colleagues.

Former Prime Minister Trygve Bratteli’s career serves as an illustrative example. Bratteli first ran for parliament in 1949 ranked fourth on the Labor Party ballot in Oslo. He was elected, and subsequently reelected seven times, serving until 1981. He served as Prime Minister in 1971–1972 and 1973–1976, before being succeeded by another Labor Party leader, Odvar Nordli, in 1976. In his final election (1977) after serving as prime minister, Bratteli was top-ranked at the ballot (with a seat rank security of 5, as we will define in the next section) and acted as parliamentary leader (a non-cabinet position) following the election.<sup>17</sup>

## 4. Evidence for the rank order hypothesis

Buisseret et al. (2019) have already provided evidence supporting the rank order hypothesis for the case of Sweden. Here, we apply the approach they use to the case of Norway. In particular, we seek to identify the portion of each candidate’s income that is due to their “quality,” after flexibly allowing different age-earnings profiles across demographic

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<sup>17</sup>Another example is Jo Benkow, who first ran for the Conservatives in a hopeless spot in the 1961 election. In 1965, he was elected for the first time (from a hot spot). In the six following elections he held the top-ranked position for the Conservatives in Akershus. After the Conservatives came to power in 1981, Benkow did not get promoted to cabinet, but acted as parliamentary leader. In the 1985-1993 period, he was the Storting president.



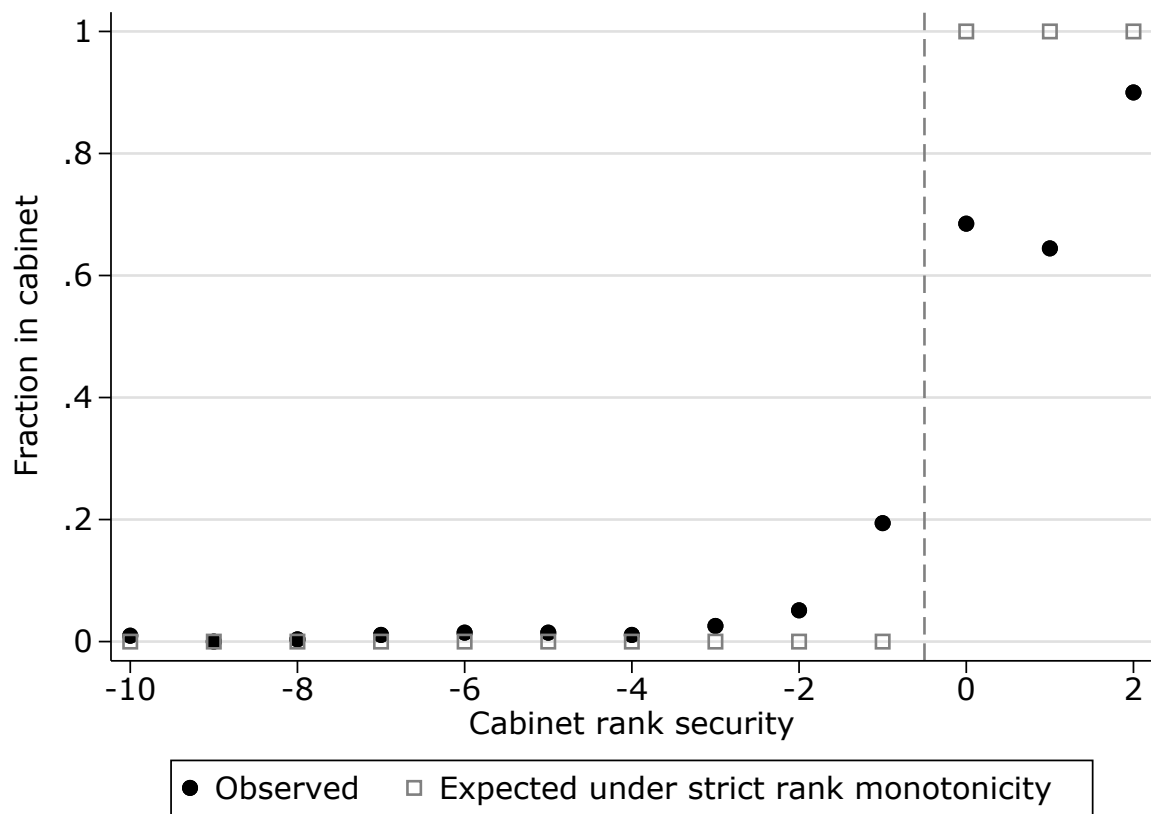


Figure 2: Promotion to cabinet by cabinet rank security

*Note: Cabinet is a dummy equal to 1 for candidates who are (i) appointed to cabinet in term following the election, or (ii) reappointed, continuing on from the prior term. The sample is limited to the 1957-2013 period and candidates running for lists that are part of any cabinet following the election. A candidate's cabinet rank security is defined as the number of candidates promoted to cabinet from his/her party list, minus the candidate's rank on the list. The x-axes are censored at -10 and +2.*

groups, following the procedures first used by Besley et al. (2017) and Dal Bó et al. (2017). We estimate the required Mincer equations using detailed individual-level data from Statistics Norway on the characteristics of candidates in the 2017 election. The result of this step of our analysis is an estimate of each candidate’s “earnings score,” after accounting for age, gender, education, immigration background, and municipality of residence.<sup>18</sup>

We then examine how earnings scores vary by (a transformation of) list rank. In particular, we define each candidate’s *seat rank security* as the number of seats the candidate’s party won in his or her district in the prior election, minus the candidate’s list rank in the current election. So, the top-listed candidate of a party that won 5 seats in the last election would have a rank security of 4, indicating that he or she was 4 spots above the “hot spot” in the current election. A rank security of zero indicates the last seat won by the party in the previous election, while negative rank security values indicate list positions that failed to win a seat in the last election.<sup>19</sup>

Candidates’ seat rank security strongly predicts electoral outcomes. For example, in the 2017 data, not one of the 2,168 candidates we classify as *hopeless* (seat rank security  $< -1$ ) was elected. Among the 261 candidates we classify as *semi-hot* (seat rank security of  $-1$ ) or *hot* (seat rank security 0), 91 were elected. Finally, among the 79 candidates we classify as *safe* (seat rank security  $> 0$ ), all but one were elected.<sup>20</sup>

The left-hand panel of Figure 3 shows the average earnings score of candidates at each seat rank security level. The sample is limited to candidates running for one of the main nine parties in the 1997-2017 period.<sup>21</sup> Earnings scores are standardized to have zero mean and standard deviation one in the population.

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<sup>18</sup>The procedure for estimating the earnings score is described further in Appendix A.

<sup>19</sup>Appendix Figure B.1 provide histograms for rank and seat rank security for our main empirical case.

<sup>20</sup>Candidates next in line to be elected one seats-winning lists are designated as deputy MPs. The number of deputies from such lists equals the number of seats won plus three. As a consequence, many high-ranking hopeless candidates receive deputy status, and may serve in parliament if regular MPs are indisposed or promoted to cabinet. Appendix Figure B.2 plots the fraction of candidates elected and the fraction of candidates with deputy status by seat rank security. Appendix Figure B.3 plots the fraction of candidates elected by seat rank security for each of the nine main parties.

<sup>21</sup>In Appendix Figure B.4 and B.5 we display the relationship separately for each election. The pattern is similar across each year, but noisy at the top where we have few observations.

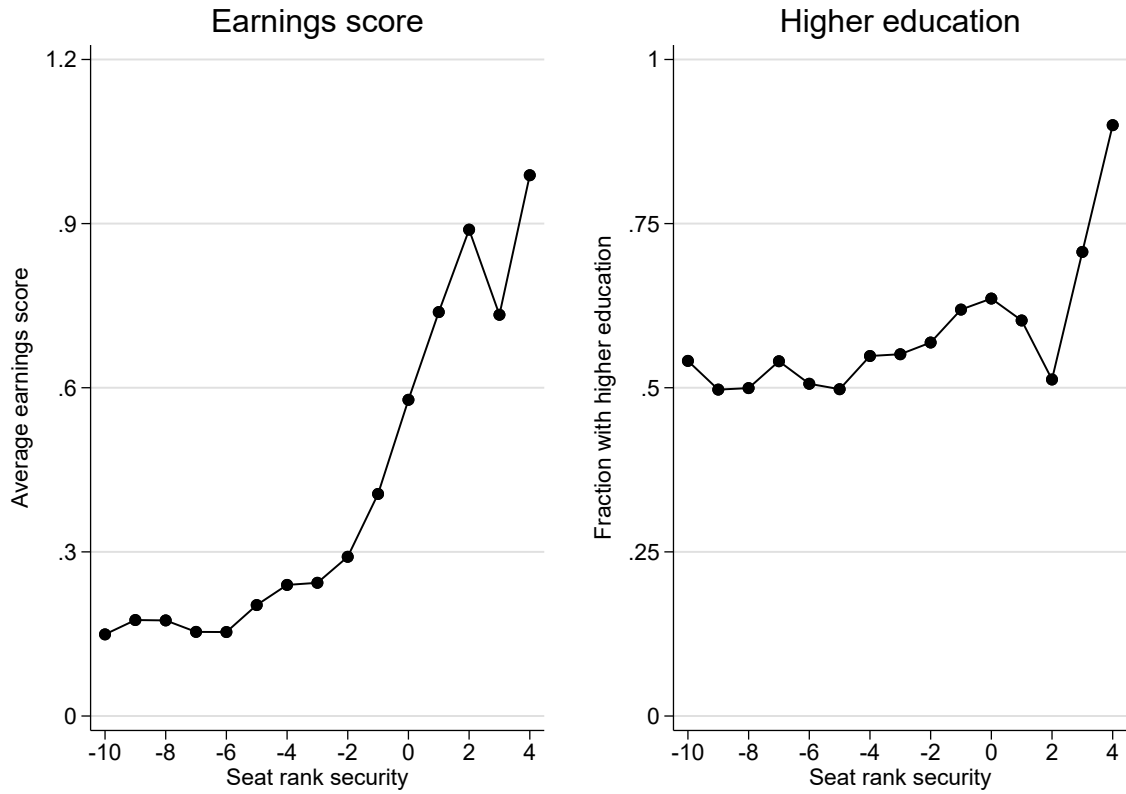


Figure 3: Candidates' quality increases with seat rank security

*Note: The left-hand panel plots the average earnings scores against candidates' seat rank security. The right-hand panel plots the fraction of candidates with higher education against candidates' seat rank security. The sample is limited to candidates running for one of the nine main parties in the 1997-2017 period. For previously unelected candidates, we use data from the year before the relevant election. For previously elected candidates (including candidates elected as the first deputy MP) we use data from the year before their first successful election. A candidate's seat rank security is defined as the number of seats won by his or her party in the last election (in a given district), minus the candidate's rank on the list in the current election. Seat rank securities of less than -10 and more than 4 are grouped with -10 and 4, respectively.*

Across all seat ranks the average earnings score is positive, suggesting that candidates running for office are positively selected, as in Sweden (Dal Bó et al., 2017). In line with the rank order hypothesis, we observe that the earnings score is moderate, and only weakly increasing, for candidates nominated to hopeless positions, but then increases substantially in hot spots (rank security of -1 and 0) and safe spots (positive rank security). Candidates in safe spots have an earnings score that is about one population standard deviation higher than the population.

As an alternative measure of candidate quality, we rely on each candidate's highest obtained level of education. The right-hand panel of Figure 3 plots the fraction of candidates at each seat rank security level with more than a high-school education. This measure also indicates that the best candidates are at the top of the lists.

## 5. Evidence for the effort composition hypothesis

Of the various hypotheses we have derived, the most difficult to test is the effort composition hypothesis. In this section, we present evidence from the 2017 Norwegian parliamentary elections that bears on this hypothesis, using a dataset on individual candidates' activity on traditional and social media surrounding this election.<sup>22</sup>

### 5.1 *The Norwegian case*

The main divide in Norwegian politics is between the left-leaning socialist and the right-leaning conservative blocs. The 2017 election result ensured that Prime Minister Erna Solberg's Conservative-Progress coalition could continue in office. The conservative bloc retained a majority of seats (88 of 169), although they did not get a majority of the votes. In the 2013-2017 period, the Solberg minority cabinet relied on parliamentary support from the Liberal Party and the Christian Democratic Party. These parties later (in 2018 and 2019, respectively) entered government, making the Solberg government a majority

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<sup>22</sup>Appendix B explains the sources and procedures we used in compiling this dataset.

coalition. In January 2020, after a series of conflicts among the coalition partners, the Progress Party withdrew from the Solberg cabinet.

Parliamentary seats are allocated in two rounds. First, 150 seats are allocated at the district level using the Modified Sainte-Laguë method. Second, 19 adjustment seats (one in each district) are given to parties that are underrepresented nationally after the first-tier seats have been allocated, provided that those parties reach an electoral threshold of 4% (Fiva and Smith, 2017b).

## 5.2 *Measuring targeted campaign effort*

As an operational measure of targeted candidate effort, we shall use different kinds of media counts. In particular, we assume the number of mentions that  $j$  receives in mass media with a national reach (e.g., national newspapers and TV stations) is a noisy measure of  $e_{j,nat}$ . Similarly, we take the mentions that  $j$  receives in non-national media with coverage outside of  $j$ 's district as a noisy measure of non-local campaign effort ( $e_{j,nonloc}$ ). Finally, we use the mentions that  $j$  receives in home-district-specific media as a noisy measure of local campaign effort ( $e_{j,loc}$ ).<sup>23</sup>

## 5.3 *The changing composition of media exposure*

Figure 4 displays the median number of mentions in mass media received by candidates at each seat rank security, along with the 25th and 75th percentiles at each. The figure on the left tracks intra-district mentions in the mass media, while that on the right tracks extra-district mentions. Even candidates listed 10 slots, or lower, below the expected last winning spot for their party receive some local media attention. The median level of attention remains negligible until about three spots below the expected last winning spot (i.e., rank security of -3), at which point it begins trending upward. In contrast, the median extra-district exposure of candidates is negligible until they reach one spot below

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<sup>23</sup>Together with the media consultancy firm *Retriever* (<http://www.retriever.no>) we compiled a dataset on individual candidates' activity in traditional media (online and print newspapers, radio, TV) and social media (Facebook, Twitter) surrounding the election. We provide a detailed explanation of the data and how we code media exposure in Appendix C.

the expected last winning spot, at which point the trend turns upward. The later onset of external relative to local coverage is consistent with the effort composition hypothesis.

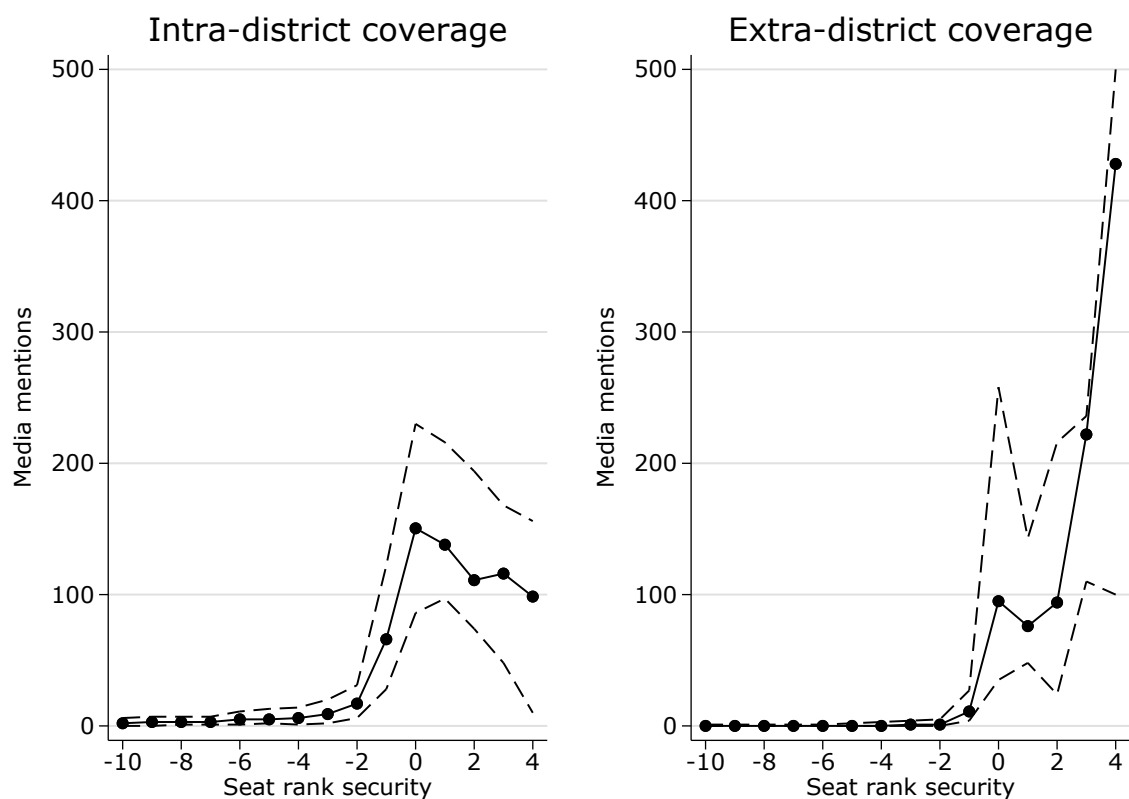


Figure 4: Intra-district and extra-district mass media attention by seat rank security  
*Note: Sample restricted to the hundred days leading up to election day. The figure displays the first quartile, second quartile, and third quartile, by candidates' seat rank security. A candidate's seat rank security is defined as the number of seats won by his or her party in the last election (in a given district), minus the candidate's rank on the list in the current election. The x-axes are censored at  $-10$  and  $+4$ .*

Another way to show how the composition of effort changes with rank is to plot the mean share of all coverage that is local (on the vertical axis) against list rank (on the horizontal axis). We do this in Figure 5 for the two parties that won enough seats so that they had candidates with adjusted ranks of at least  $+4$ .<sup>24</sup> The mean share of coverage that is local shows no trend until an adjusted rank of  $-1$ , when it begins to trend sharply

<sup>24</sup>Appendix Figure 5 shows that the pattern is basically unaltered if we use all parties. Appendix Figure B.7 shows the average within-district media coverage by candidate's list rank separately for each party. Similarly, Appendix Figure B.8 shows the average within-district media coverage by candidate's list rank separately for each district.

downward. Only very safe candidates (with adjusted ranks of 3 or higher) have a portfolio of media exposure that falls mostly outside their own districts.

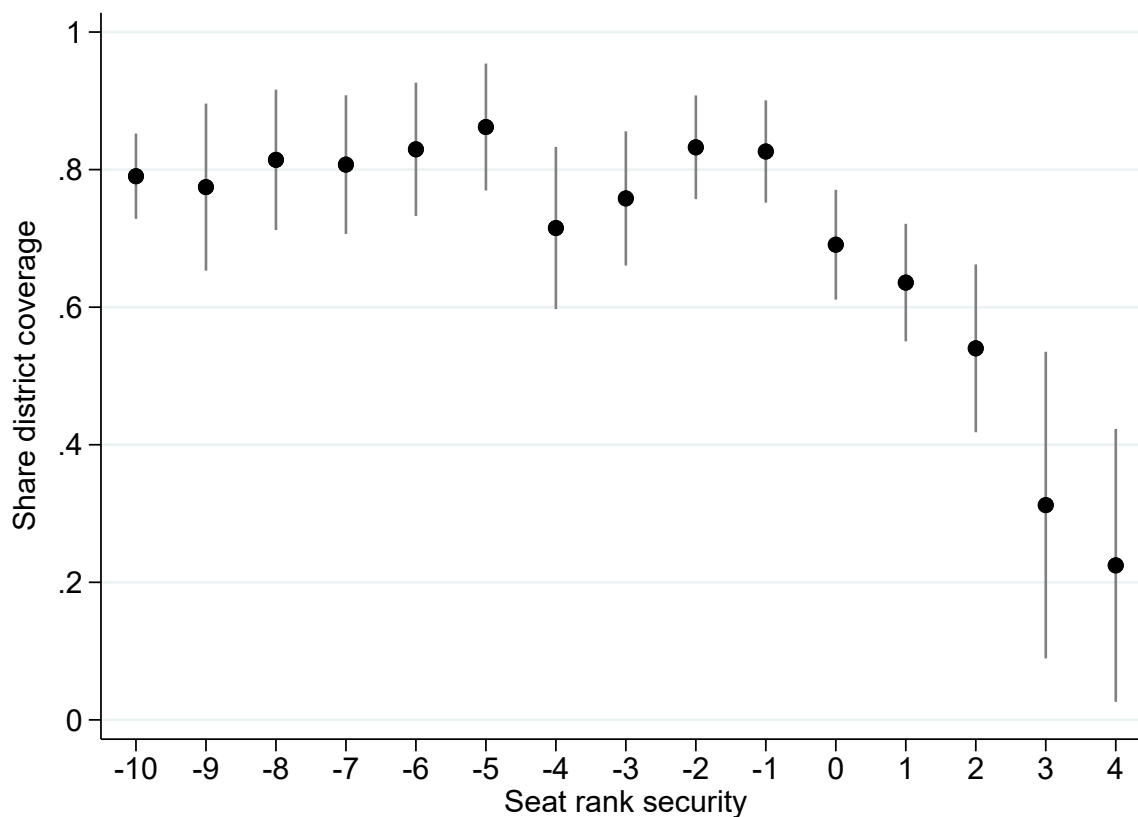


Figure 5: Mean share of mass media coverage that is within-district, by list rank  
*Note: Sample restricted to the hundred days before election day and to candidates ( $N=564$ ) running for one of the two largest parties (Labor and Conservatives). A candidate's seat rank security is defined as the number of seats won by his or her party in the last election (in a given district), minus the candidate's rank on the list in the current election. The x-axes are censored at  $-10$  and  $+4$ .*

#### 5.4 *The incentives of mass media organizations*

We have focused on candidates' demand for media exposure. But perhaps the patterns documented in Figures 4 and 5 can be explained by media outlets' incentives to supply coverage. For example, media organizations may be more likely to cover higher-ranked candidates, all else equal.

To address this sort of concern, we provide several kinds of evidence. First, in Figure 6 we show that mass media attention increases during the campaign period and then tails

off rapidly once the election ends, regardless of list rank. One might argue that media outlets have a higher incentive to supply stories about *competitive* candidates as election day nears. But it is less obvious that their supply of stories about *safe* candidates should follow the electoral cycle. Yet, as evident in Figure 6, media attention to safe and hot-spot candidates exhibit very similar over-time patterns. This is consistent with the notion that some portion of media coverage is due to candidates' efforts to attract attention rather than to media outlets' efforts to identify and cover newsworthy events.

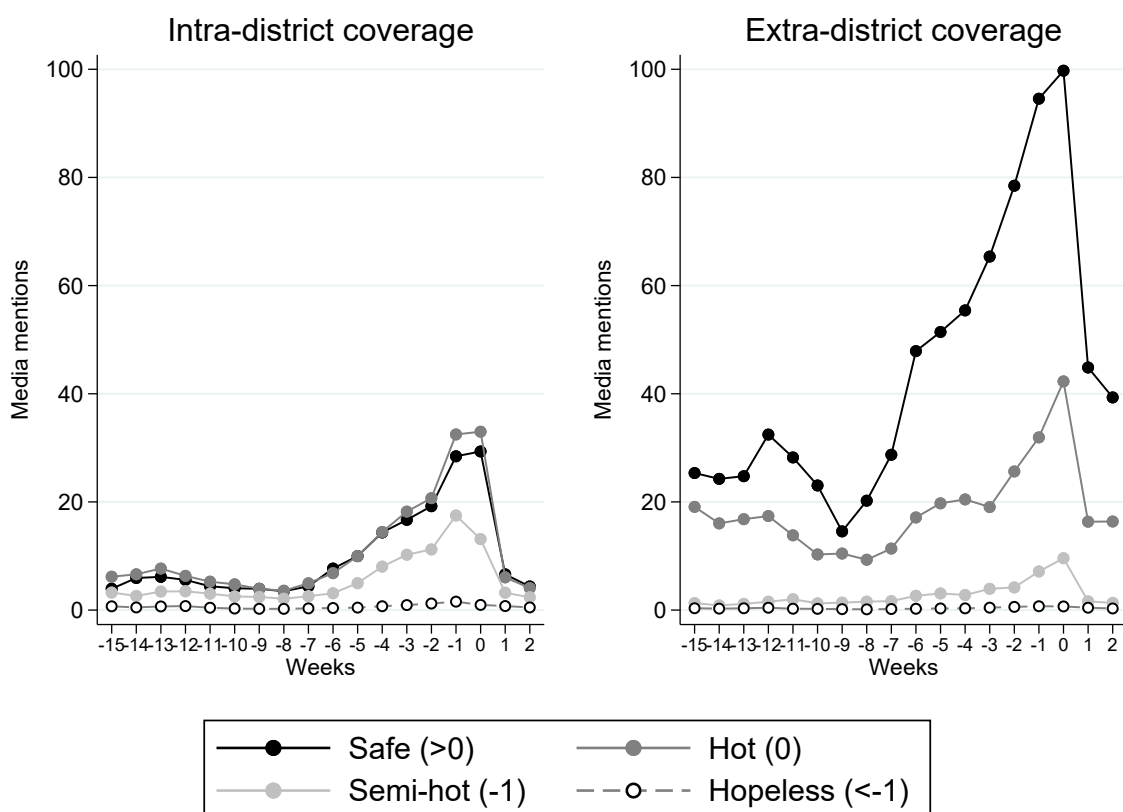


Figure 6: Mass media coverage over the campaign period, by candidates' seat rank security

*Note: This figure displays mass media coverage of candidates over an extended campaign period using four categories: Safe (seat rank security > 0); Hot (seat rank security 0); semi-hot (seat rank security of -1) and hopeless (seat rank security < -1). Election day = 0.*

We can also explore types of candidate effort that they decide unilaterally (unlike media coverage). First, in Figure 7 we show how candidates' social media activity evolves



over the campaign period.<sup>25</sup> Since Facebook and Twitter posts are entirely at individual candidates’ discretion, they provide a pure measure of their demand for exposure. The figure shows that social media posts increase during the campaign period and then tail off rapidly once the election ends—regardless of list rank. This is consistent with candidates’ incentives: they want more attention as election day nears.<sup>26</sup>

Travel during the electoral campaign constitutes a second type of effort that potentially attracts media attention, and over which MPs can exert some discretion. We use data on reimbursement claims made to Parliament, in order to track candidates’ campaign travels. Panel A of Figure 8 plots the number of travel reimbursement claims made by four types of MPs during the 2017 electoral cycle. As before, we distinguish between candidates running in safe (N=47) and hot spots (N=49), but since few incumbents run in low-ranked positions, we collapse semi-hot and hopeless incumbent candidates into one category (N=4). The fourth category comprises incumbents not running for re-election (N=44). Panel A displays a familiar pattern for incumbents running in viable positions: trips per week increase up until the week before election day, but then taper off.<sup>27</sup> Their travel behavior stands in striking contrast to incumbents who were not running as (viable) candidates in the 2017 election.

Do visits by incumbent  $i$  in district  $d$  lead to more mentions of incumbent  $i$  by media located in district  $d$ ? The fine-grained media and travel data, both varying at the daily level, allow us to investigate this question. We estimate a model using candidate-district fixed effects and provide the main results in Panel B of Figure 8.<sup>28</sup> The coefficient plot

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<sup>25</sup>The social media data only covers the nine-week period from July 30 to September 30. The traditional media data covers the eighteen-week period from May 28 to September 30. The social media data was not successfully collected for all days leading up to the campaign (see Appendix B). For these cases we interpolate the data.

<sup>26</sup>Appendix Figure B.9 shows that safer candidates are more likely to have an open Facebook or Twitter account. Appendix Figure B.10 shows that safe candidates also receive more mentions (by other Facebook users) than other candidates. While candidates *own* social media posts spike the week before the election (Figure 7), other people’s mentions of the candidates spike the week of the election (Appendix Figure B.10).

<sup>27</sup>The fall after election day does not follow mechanically. The 2017-2021 parliament was not constituted until about four weeks after election day.

<sup>28</sup>Because our media data only cover candidates (and not incumbents not running again), we base this analysis on a sample of 100 incumbents. Also, we restrict the sample to incumbents that maximally travelled once to a district in any fifteen-day period.

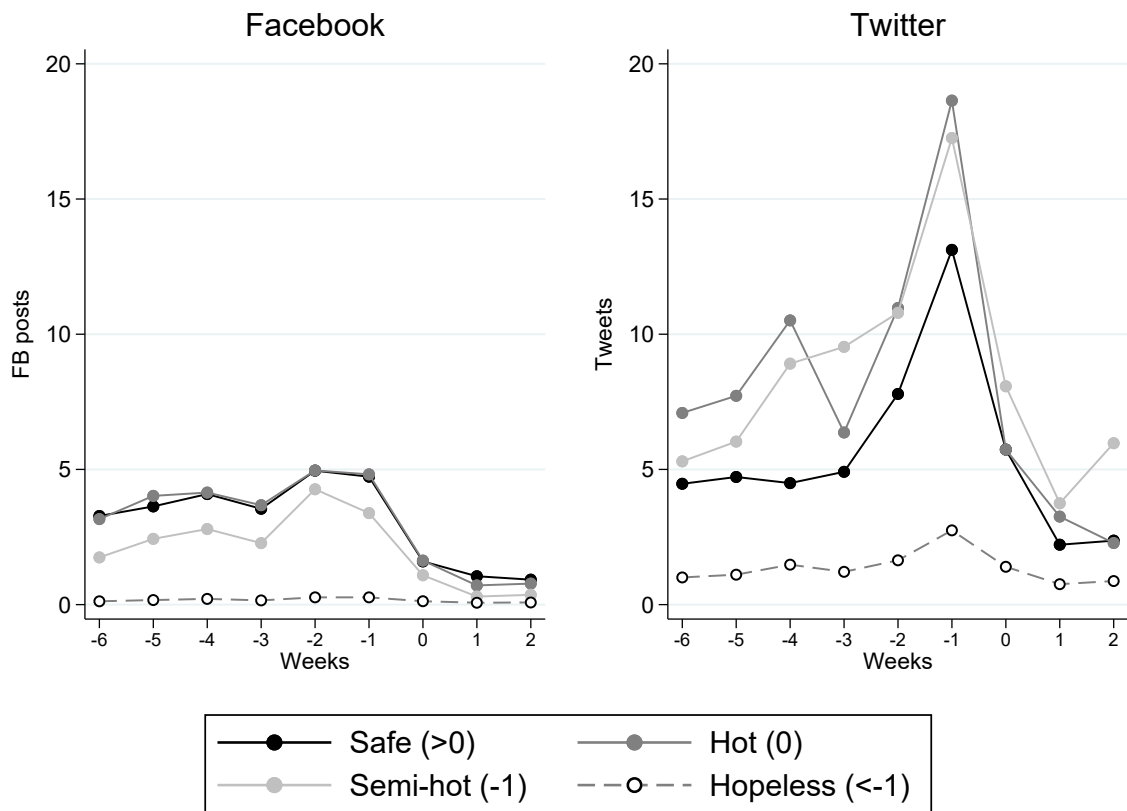


Figure 7: Social media activity over the campaign period, by candidates' electoral viability

*Note: This figure displays candidates' social media activity over the campaign period by candidates' electoral viability using four categories: Safe (seat rank security > 0); Hot (seat rank security 0); semi-hot (seat rank security of -1) and hopeless (seat rank security < -1). Candidates without open Facebook/Twitter accounts have zero posts. Election day = 0.*

suggests that visits by candidates stimulate media attention. Candidates receive more media coverage after (but not before) they make a visit to the district. There is some evidence that the effect begins to kick in the day prior to the visit. Such effects could materialize if candidates reach out to media before arriving in the district. In some cases, MPs might also write in to the newspapers themselves to stimulate interest prior to a visit.<sup>29</sup>

All told, we have provided evidence that several types of effort which are wholly at the candidates' discretion—tweets, Facebook posts, and trips—evolve over the campaign period as we would expect. For the last kind of effort (trips), moreover, we can show an association with media coverage. Cumulatively, this bolsters our confidence that the overtime trends in media coverage that we have documented are driven to an important extent by the candidates' own demand for coverage, rather than being driven solely by the media's incentives.

### 5.5 *Campaign effort and competition to form the government*

Our theory posits that the main reason for highly-ranked candidates to exert campaign effort is their desire to ensure that their party participates in government. If we had panel data, we could further explore this claim by examining how safe candidates allocate their effort as a function of the degree of bloc competition for majority status.<sup>30</sup> On the one hand, if it is a foregone conclusion that one bloc will win a majority and form the government, then safe candidates in all parties will (according to our theory) have relatively low incentives to campaign (either inside or outside their districts). On the other hand, if the two blocs are in close competition for a majority (as was the case in

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<sup>29</sup>For example, Abid Raja wrote a feature in the newspaper *Budstikka*, located in Akershus district, on September 2. The next day, he was knocking on doors in Akershus, according to his reimbursement claims.

<sup>30</sup>Similarly, we could explore if there are differences between the main government-seeking parties and smaller parties with low chances of participating in government. For example, the probability that the far-left party (Socialist Left Party, founded in 1961) and the far-right party (the Progress Party, founded in 1973) would enter government following an election used to be very low. However, both parties have recently been part of a cabinet (Socialist Left 2005-2013; Progress Party 2013-2020). In the 2017 election, all parties winning more than one seat in parliament had a reasonable chance to enter cabinet.

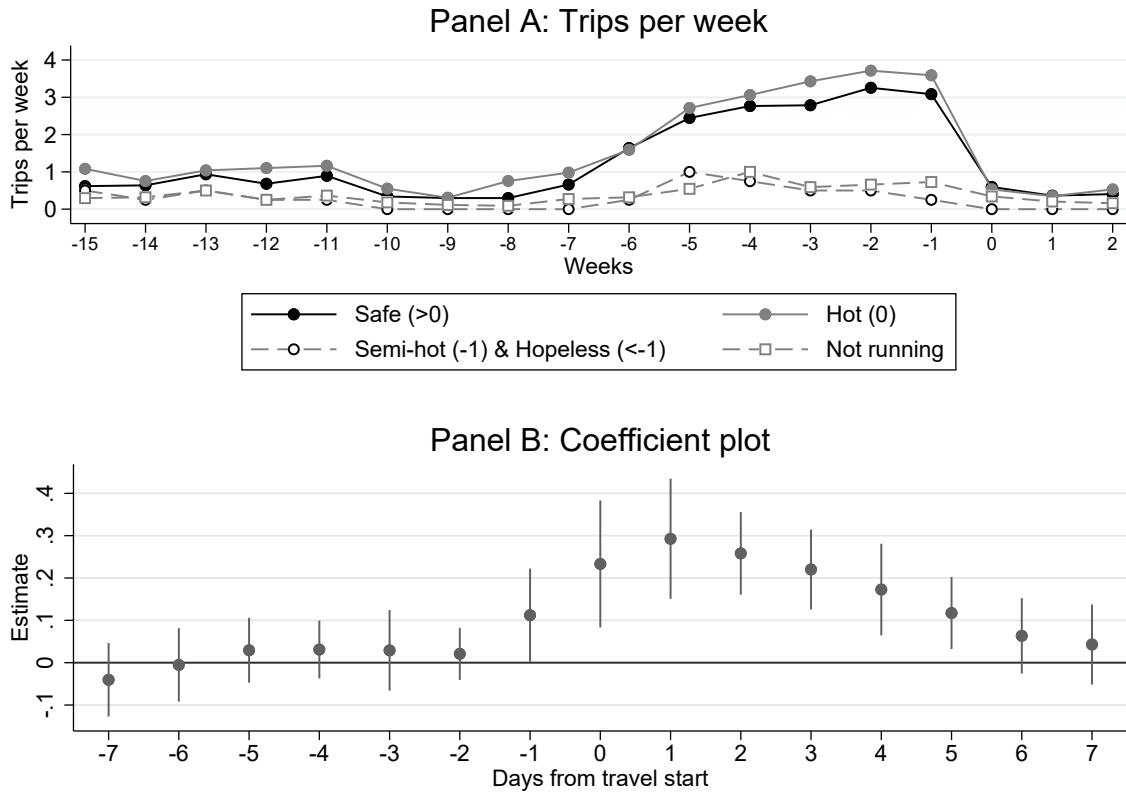


Figure 8: Incumbents' travel behavior over the campaign period and media coverage

*Note: The top-panel displays trips per week for incumbents over an extended campaign period using four categories ( $N=144$ ): Safe (seat rank security  $> 0$ ); Hot (seat rank security 0); semi-hot (seat rank security of  $-1$ ) and hopeless (seat rank security  $< -1$ ); and incumbents not running again. Trips is measured using data on reimbursement claims made to Parliament. The bottom-panel displays estimated coefficients and 95% error bars from a candidate-district fixed effect model. This model relates candidate trips to district  $d$  starting at day 0 to media coverage of the candidate in district  $d$  in a fifteen-day window surrounding the start of the trip ( $N=100$ ). Candidates from Oslo, as well as trips to Oslo (where the Storting is located) are excluded. Cabinet ministers are not included.*

Norway in 2017), then safe candidates in all parties will have relatively large incentives to campaign (focusing their efforts on wherever the vote return is highest, even if this is outside their own district). At present, we lack the data needed to pursue this sort of investigation. However, such a study would address a core claim of our theory and is worth keeping in mind for future research.

### 5.6 *Hopeless spots and local electoral synergies*

We have argued that the prospect of high office can motivate candidates in safe list positions to exert campaign effort, to the extent that the party allocates such offices in proportion to list rank. Yet, as we noted earlier, high offices cannot motivate candidates listed in hopeless spots. For such candidates, we have suggested two possible motivations—the promise of future promotion if they campaign hard; and spillover benefits (because campaigning for parliament will help them win local office).

Our data show that roughly 80% of all candidates listed in hopeless spots by Norway’s nine largest parties had recently run for local office, either at the municipal or county level. If list spots are allocated in order of candidate quality (per the rank order hypothesis), winning a local office is an indicator of quality, and a significant share of local office-holders *want* to get into parliament, then the percentage of candidates who had previously won a local election should increase with their rank on national lists. Figure 9 shows that this pattern indeed holds in Norway.<sup>31</sup> Parties appear to reward good performance at the local level(s)—that is, winning—with better opportunities on the parties’ national lists.

This finding resonates with several recent studies of incentives in electoral systems that allow candidates to earn personal votes. Pons and Tricaud (2018*b*) show that intra-bloc rankings in first-round French elections are used to determine who should withdraw in the second. Similar patterns prevailed in historical two-round elections in Norway, 1960-1918 (Fiva and Smith, 2017*a*). Folke, Persson and Rickne (2016) show that rankings on

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<sup>31</sup>National incumbents (elected in 2013) would not be able to participate in the 2015 local elections and are therefore excluded from this analysis. As a consequence, we have few observations in safe spots, and Figure 9 uses a x-axis right-censored at 0. We provide more detailed plots by governmental tier (municipality or county) and type of office (councillor or mayor) in Appendix Figure B.11.

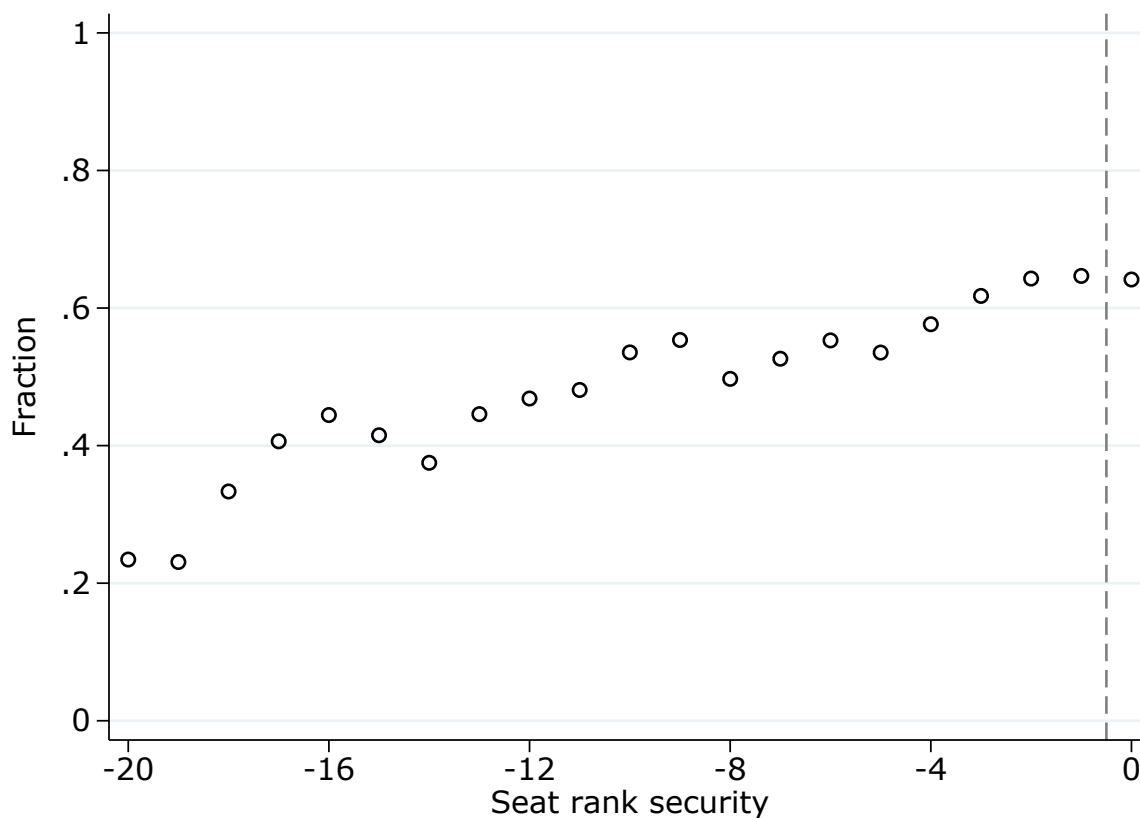


Figure 9: Fraction of national candidates recently elected to local office by seat rank security

*Note: This figure shows the fraction of candidates who won a seat in a municipal or county council in the 2015 local elections against the seat security of the candidate in the 2017 national election. Of the 2,487 main party candidates participating in the 2017 national elections, we exclude 147 candidates who had previously won a seat in parliament. A candidate's seat rank security is defined as the number of seats won by his or her party in the last election (in a given district), minus the candidate's rank on the list in the current election. The x-axis are censored at -20 and 0.*

Sweden’s open lists affect candidates’ future promotions at the local level. Our findings suggest that Norwegian parties use local electoral success to help them decide how high on their national parliamentary lists each candidate will be placed, a point that is further documented by Cirone, Cox and Fiva (2020).

## 6. List type, turnout, and locations of campaign effort

As noted in the introductory section, many scholars argue that open lists motivate greater candidate effort during campaigns (e.g., Carey and Shugart, 1995; Karvonen, 2004; Hangartner, Ruiz and Tukiainen, 2019). However, these analysts typically view candidates as single-mindedly seeking to win *seats*. If candidates care about *higher offices* too, then closed lists may generate stronger party-wide mobilizational efforts than open lists.

In particular, candidates in safe spots on closed lists have a substantially greater incentive to exert extra-district and national effort than do likely winners on open lists. To explain, we shall assume that candidates must win a seat in order to get any higher offices (as is true in many polities). In this case, all candidates need to win a seat in order to get any payoff. In closed-list systems, however, safe-spot candidates can engage in more extra-district campaigning, at the expense of less intra-district campaigning, with almost no impact on their personal chance of victory. Moreover, safe-spot candidates *benefit* from extra-district campaigning, because it helps their party get into government and their party allocates portfolios monotonically with list rank (as shown above).<sup>32</sup>

The situation looks different in open-list systems. Even if parties allocated cabinet posts in order of their candidates’ personal vote totals, those candidates would still face a trade-off. If they increased their extra-district campaigning, at the expense of reducing their intra-district campaigning, they would lower their chance of winning enough votes to qualify for a share of their party’s portfolios.

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<sup>32</sup>It is possible that this extra-district campaigning might also contribute to the low variance in turnout observed across districts under closed-list PR, as documented by Cox, Fiva and Smith (2016).

All told, we expect candidates on closed lists will exert substantially more effort in extra-district (and national) campaigning than candidates on open lists. The more valuable a cabinet portfolio is relative to a seat, moreover, the more likely it is that closed-list systems will induce a stronger partywide mobilizational effort than open-list systems. Thus, our analysis may help explain why turnout tends to be higher under closed than open lists (Tavits, 2009; Robbins, 2010; Söderlund, 2017).<sup>33</sup> We are not aware of any evidence bearing on whether open-list candidates concentrate more of their campaigning within their own districts than do safe-spot candidates on closed lists. However, this is an area worth exploring in future, since our theory provides a clear prediction.

## 7. Conclusion

Gamson's Law can be viewed as a solution to the moral hazard problem that besets teams of politicians seeking to get into government. Consistent with this perspective, the previous literature has shown that Gamson's Law is closely followed when multiple units have agreed to cooperate during an election campaign and to govern together, should they win enough seats. In some cases, the cooperating units are parties and the agreements are pre-electoral pacts (Carroll and Cox, 2007). In other cases, the units are intra-party factions and the agreements take the form of party norms regulating the allocation of portfolios (Leiserson, 1968; Mershon, 2001*a,b*; Ono, 2012; Ceron, 2014). In still other cases, the units are regional branches of a given party and the agreements again take the form of party allocative norms (Ennsner-Jedenastik, 2013).

The counterfactual in each of these cases is that, had the units not entered into an agreement, they would have been less likely to allocate the spoils of governance among themselves in proportion to their seat contributions to the overall coalition. There is

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<sup>33</sup>For the moment, we take this cross-sectional finding at face value. The main finding to the contrary is based on regression discontinuity effects in extremely small town council elections using a multiple non-transferable vote (MNTV) system (Sanz, 2017). One might reasonably conjecture that the effects at this particular discontinuity do not generalize to large national elections, since the scale of the mobilization problem that candidates face is vastly larger and the technology (mass and social media) differs as well.



observational evidence consistent with this expectation in the case of multiparty governing coalitions: coalitions of parties that did not conclude pre-electoral pacts depart substantially from Gamson's Law when allocating portfolios (Carroll and Cox, 2007).<sup>34</sup>

In this paper, we have taken the individual candidates in a given party as the potentially cooperating units. When candidate quality is observable, we argue that a Gamsonian agreement can be approximated by following two simple rules: allocating list spots in order of candidate quality; and allocating larger expected shares of high offices to higher list ranks. We provide empirical evidence that parties in several countries follow these rules.

If Gamsonian promotion rules are in place, we show that candidates' campaign efforts will increase in volume and geo-diversity as their list rank improves. Exploiting detailed data on the volume and location of media coverage of Norwegian candidates in the 2017 parliamentary election, we show that these patterns hold empirically. Thus, we have documented another instance in which units that have committed to governing together also commit to allocating high offices in proportion to each unit's contribution of resources to the encompassing coalition.

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<sup>34</sup>Were a particular faction to exit a party and begin competing against the remaining portion of the party in elections, one would expect that Gamson's Law would be followed more closely before the break-up than after. Thus far, however, no studies of this particular kind have been undertaken. Consistent with our general logic, there is some observational evidence that turnout is higher in the presence of pre-electoral pacts (Tillman, 2015), although it is uncertain whether this is due to less uncertainty on the part of voters or on the part of candidates exerting effort.

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## Appendix A: Estimating the Mincer earnings score

The earnings scores are estimated using individual-level data for the entire Norwegian population, taken from the registers of Statistics Norway. The data are comprised of individuals born in 1999 or earlier, reaching the eligible age of 18 in 2017. We analyze annual personal wage income and net firm revenues, using data each fourth year in the period from 1972 to 2016.

The Mincer model specification includes variables capturing individuals' age (in 5-year intervals), gender, highest level of education (six categories<sup>35</sup>), and municipality of residence. We enter a complete set of age-gender-education interactions to the regression model, and include immigrant background defined by six categories.<sup>36</sup> We allow for geographic variations by including municipality fixed effects, and define separate categories for a limited number of individuals with missing observations on income, education level and residential municipality. Like Dal Bó et al. (2017), we standardize residuals to have zero mean and standard deviation one in each income year, and use them to measure candidate quality.

We separately estimate the earnings scores for candidates of the nine major political parties in each election from 1997 to 2017. We use income data from the year before the election takes place to avoid conflating returns to office with candidates' quality. For example, we use the average earnings score from the 1996 Mincer regressions to measure the quality of candidates running for office in 1997. In cases where candidates were previously elected (either as regular members or first-ranked deputies), we rely on Mincer scores from the year before they entered parliament (either as regular MPs or first-ranked deputies). Table A.1 displays summary statistics for the candidates' earnings scores, as well as match rates with the administrative registers.

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<sup>35</sup>“Lower secondary education”, “upper secondary education”, “tertiary vocational education”, “short higher education”, “long higher education”, and, “unknown or no completed education”.

<sup>36</sup>Immigrant backgrounds are defined by the following classification: persons born in Norway with two parents born in Norway; first-generation immigrants without Norwegian background; persons born in Norway with immigrant parents; persons born abroad with one Norwegian-born parent; persons born in

Table A.1: Summary statistics on earnings score for candidates

<b>Election year</b>	<b>Mean</b>	<b>Standard deviation</b>	<b>Candidates (N)</b>	<b>Population (N)</b>	<b>Match rate w/ Statistics Norway</b>
1997	0.178	0.784	1,460	2,448,421	70%
2001	0.205	0.775	1,568	2,682,730	78%
2005	0.219	0.675	1,809	2,931,966	88%
2009	0.279	0.940	2,146	3,237,700	100%
2013	0.291	0.995	2,174	3,610,508	100%
2017	0.261	0.965	2,455	4,017,677	100%

*Note: The table displays summary statistics for the earnings scores. The scores derive from annual Mincer regressions on personal income levels (wage incomes plus net firm revenues) estimated on the entire population (aged 18 and above). The earnings scores are measured as standardized residuals with a population-wide mean of 0 and a standard deviation of 1. Candidates are individuals who were running for one of the nine main parties in the relevant parliamentary election. For previously unelected candidates, we use data from the year before the relevant election. For previously elected candidates (including candidates elected as the first deputy MP) we use data from the year before their first successful election. Earnings scores for candidates are defined by the average scores in years before candidates were elected to parliament. The match rate indicates the percentage of candidates identified with earnings scores in the register data.*

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Norway with one parent born abroad; persons born abroad with two Norwegian-born parents.

## Appendix B: Supplementary analyses

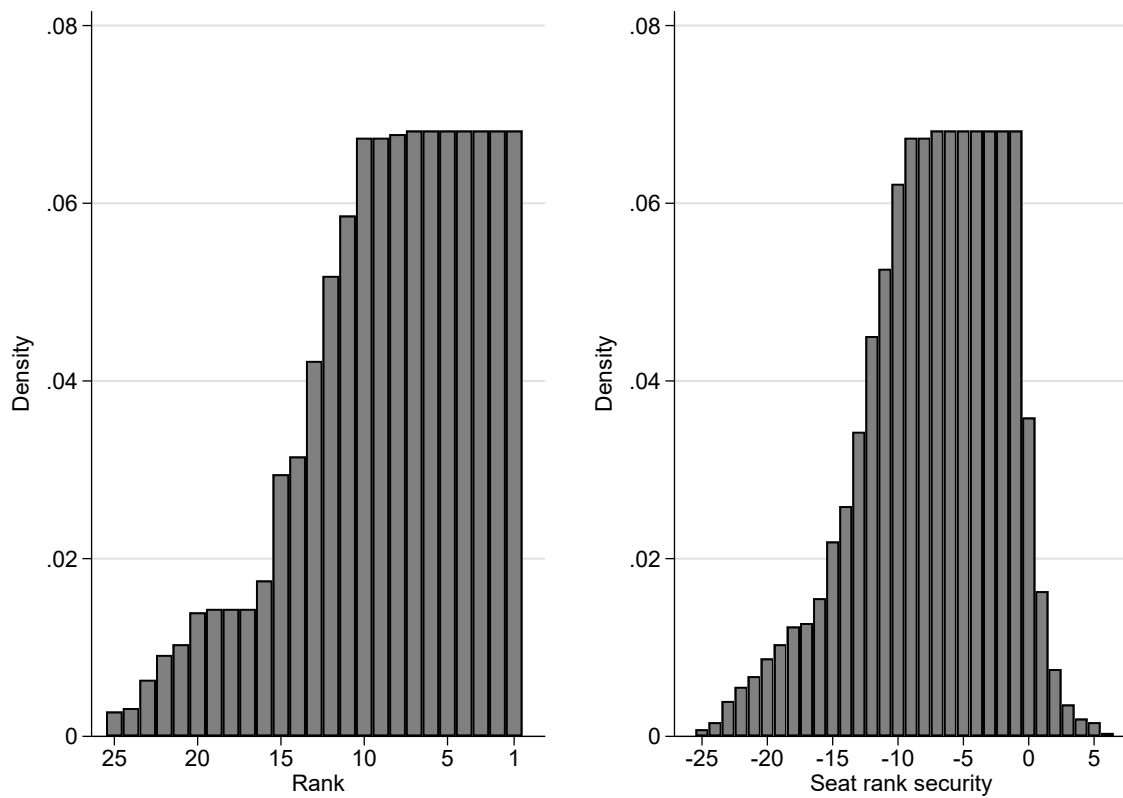


Figure B.1: Histograms for rank and seat rank security

*Note: The sample is limited to the nine main parties participating in the 2017 Norwegian Parliamentary election ( $N=2,487$ ). A candidate's seat rank security is defined as the number of seats won by his or her party in the last election (in a given district), minus the candidate's rank on the list in the current election.*



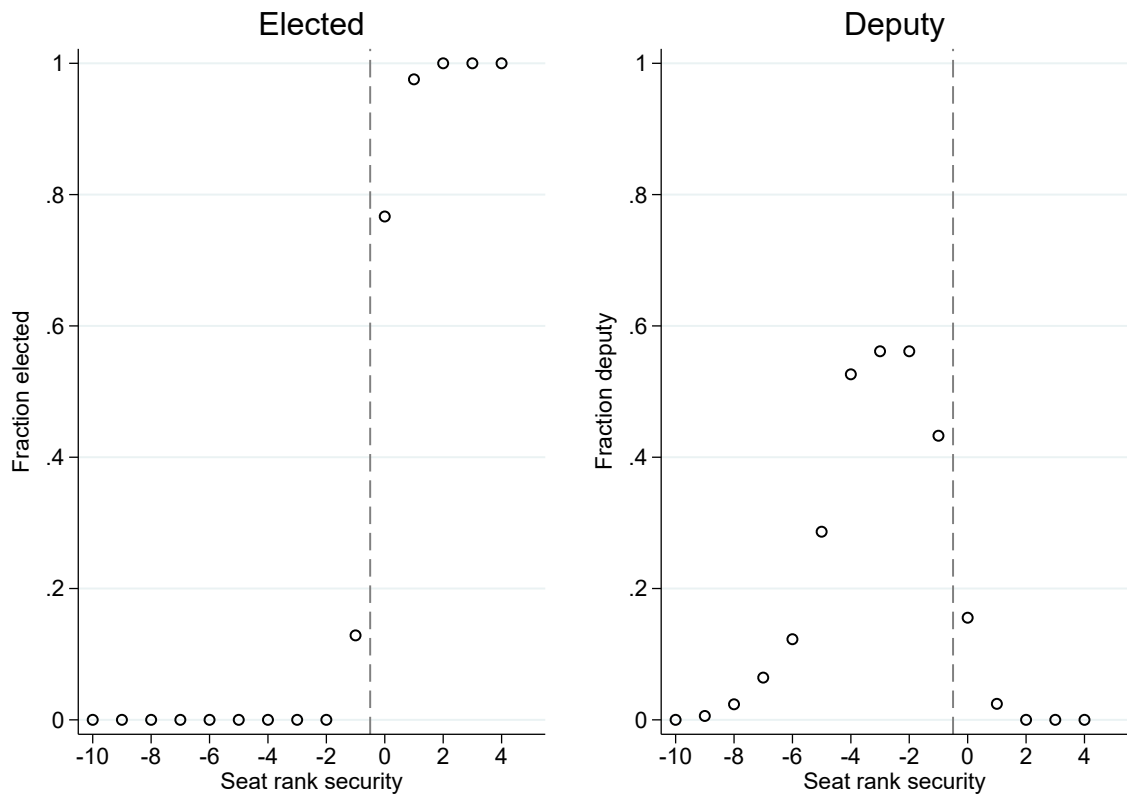


Figure B.2: Election outcomes by seat rank security

*Note: The left-hand panel (right-hand panel) displays the fraction of candidates elected (elected as deputy) by candidate's seat rank security. A candidate's seat rank security is defined as the number of seats won by his or her party in the last election (in a given district), minus the candidate's rank on the list in the current election. The x-axes are censored at  $-10$  and  $+4$ .*

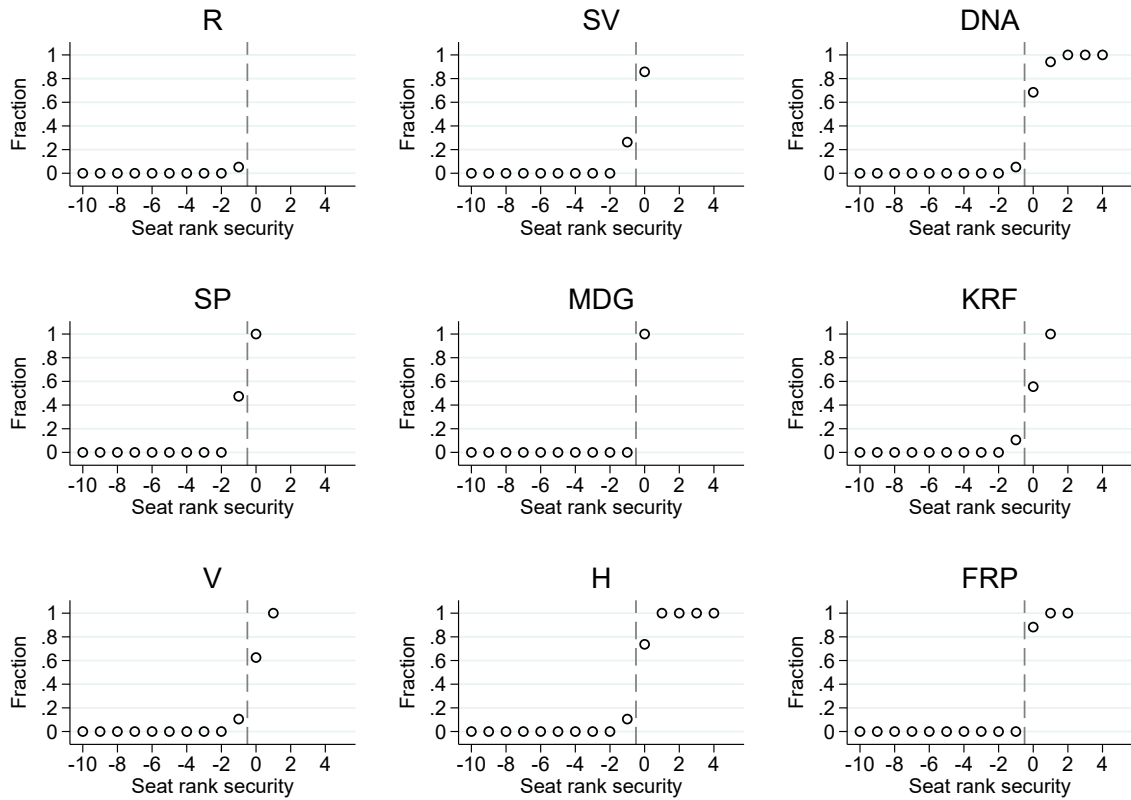


Figure B.3: Fraction of candidates elected by seat rank security and party

*Note: For each of the nine main parties, this figure plots the fraction of candidates elected by seat rank security ( $N=2,487$ ). A candidate's seat rank security is defined as the number of seats won by his or her party in the last election (in a given district), minus the candidate's rank on the list in the current election. The nine main parties are the Red Party (R), the Socialist Left Party (SV), the Labor Party (DNA), the Center Party (SP), the Green Party (MDG), the Christian Peoples' Party (KRF), the Liberal Party (V), the Conservative Party (H), and the Progress Party (FRP). The x-axes are censored at  $-10$  and  $+4$ .*

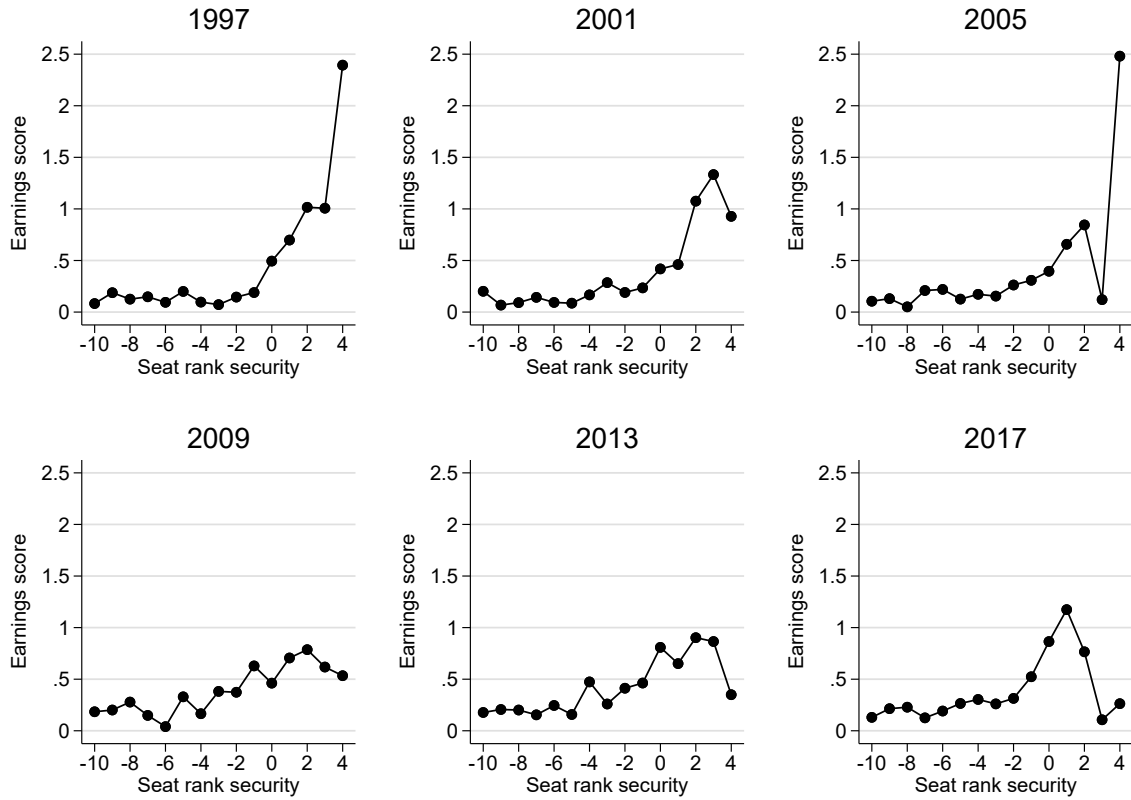


Figure B.4: Average labor market earnings scores plotted against seat rank security separately for each election

*Note: This figure plots average earnings scores against candidates' seat rank security separately for each election year (1997-2017). For previously non-elected candidates, we use data from the year before the relevant election. For previously elected candidates (including candidates elected as the first deputy MP) we use data from the year before their first successful election. A candidate's seat rank security is defined as the number of seats won by his or her party in the last election (in a given district), minus the candidate's rank on the list in the current election. Seat rank securities of less than -10 and more than 4 are grouped with -10 and 4, respectively.*

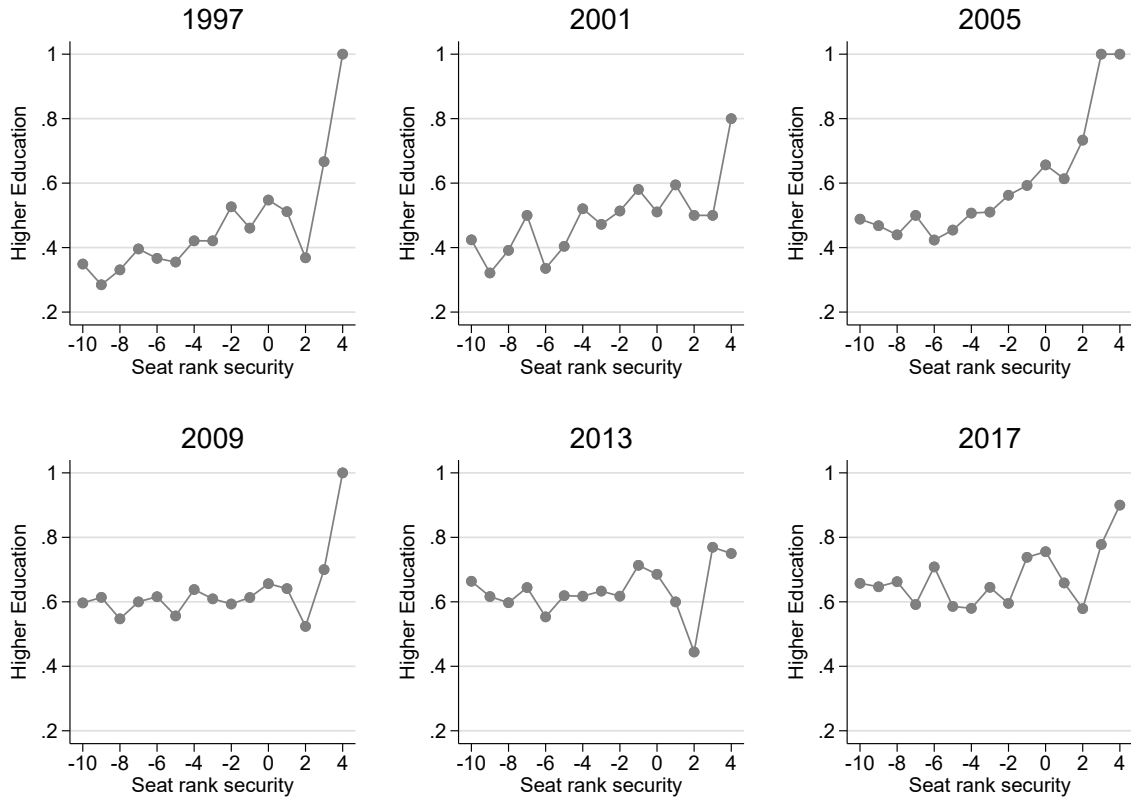


Figure B.5: Fraction of candidates with higher education plotted against seat rank security separately for each election

*Note: This figure plots the fraction of candidates with higher education against candidates' seat rank security separately for each election year (1997-2017). For previously non-elected candidates, we use data from the year before the relevant election. For previously elected candidates (including candidates elected as the first deputy MP) we use data from the year before their first successful election. A candidate's seat rank security is defined as the number of seats won by his or her party in the last election (in a given district), minus the candidate's rank on the list in the current election. Seat rank securities of less than -10 and more than 4 are grouped with -10 and 4, respectively.*

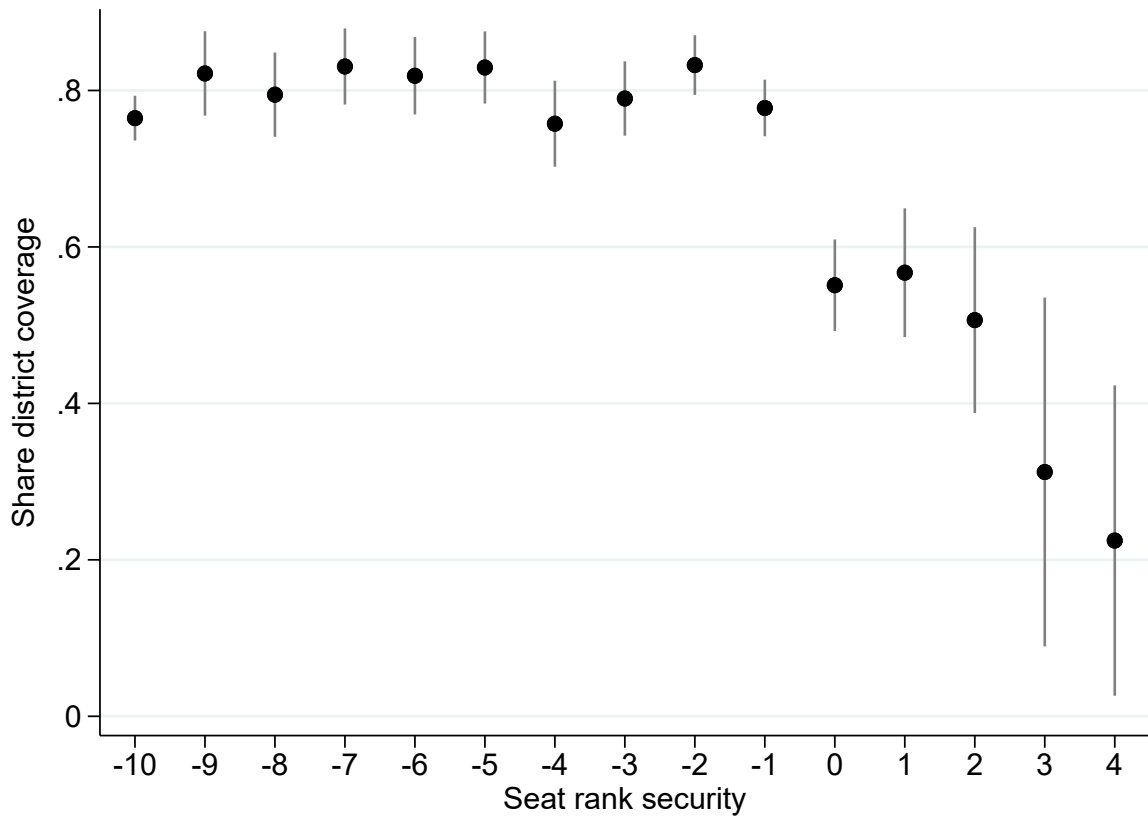


Figure B.6: Mean share of mass media coverage that is within-district, by candidate's seat rank security: All parties included

*Note: Sample restricted to the hundred days before election day and to candidates ( $N=2,487$ ) running any of the nine main parties. A candidate's seat rank security is defined as the number of seats won by his or her party in the last election (in a given district), minus the candidate's rank on the list in the current election. The x-axis are censored at  $-10$  and  $+4$ .*

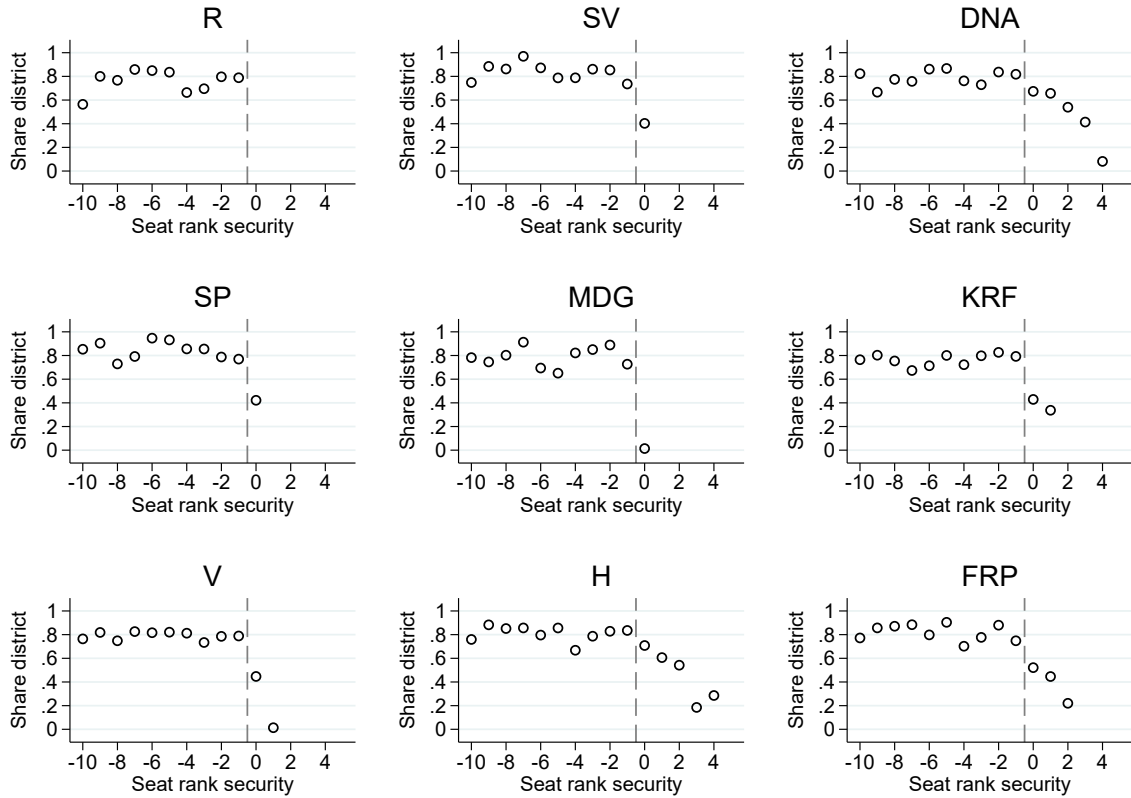


Figure B.7: Within-district media coverage by party and seat rank security

*Note:* For each of the nine main parties, this figure plots the mean share of mass media coverage that is within-district by seat rank security ( $N=2,487$ ). A candidate's seat rank security is defined as the number of seats won by his or her party in the last election (in a given district), minus the candidate's rank on the list in the current election. The nine main parties, with number of hot/safe candidates in parentheses, are the Red Party (R; 0), the Socialist Left Party (SV; 7), the Labor Party (DNA; 55), the Center Party (SP; 10), the Green Party (MDG; 1), the Christian Peoples' Party (KRF; 10), the Liberal Party (V; 9), the Conservative Party (H; 48), and the Progress Party (FRP; 29).

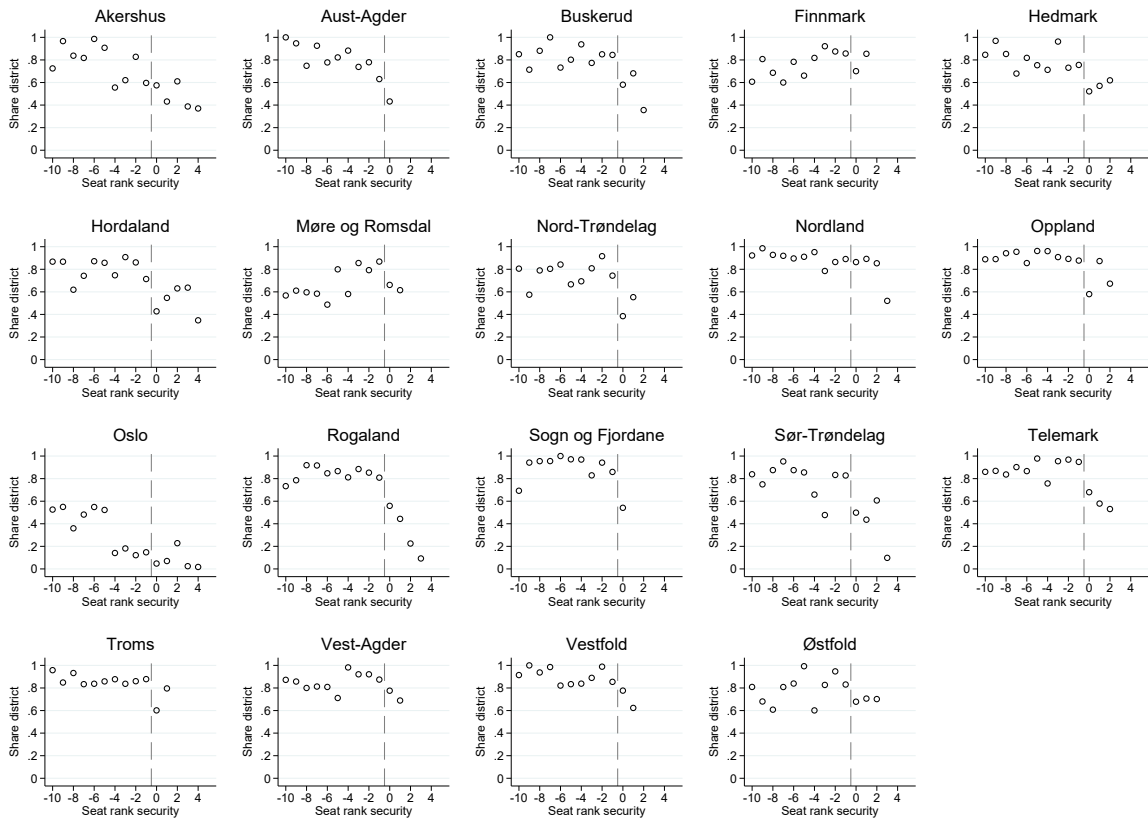


Figure B.8: Within-district media coverage by district and seat rank security

*Note: For each of the nineteen districts, this figure plots the mean share of mass media coverage that is within-district by seat rank security ( $N=2,487$ ). A candidate's seat rank security is defined as the number of seats won by his or her party in the last election (in a given district), minus the candidate's rank on the list in the current election.*

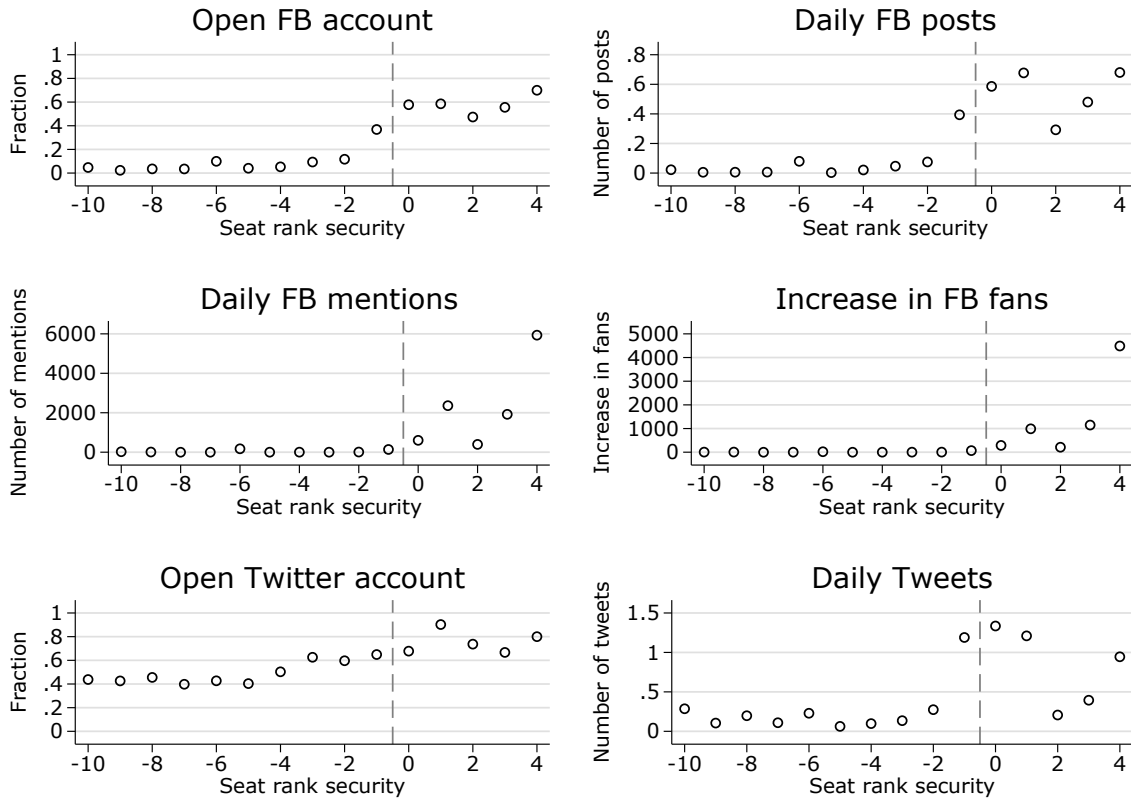


Figure B.9: Supplementary social media outcomes by candidate electoral viability

*Note:* Sample restricted to the hundred days before election day and to candidates ( $N=2,487$ ) running any of the nine main parties. A candidate's seat rank security is defined as the number of seats won by his or her party in the last election (in a given district), minus the candidate's rank on the list in the current election. The x-axes are censored at  $-10$  and  $+4$ .



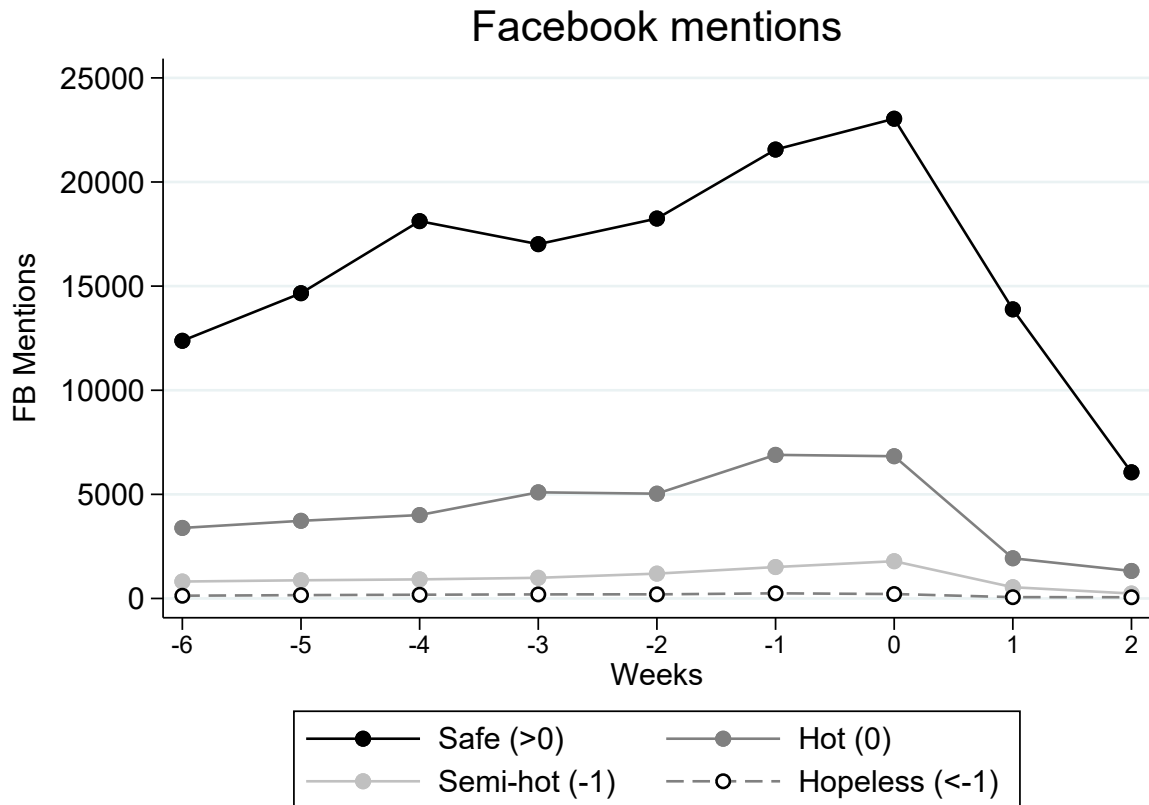


Figure B.10: Facebook mentions over time by candidate electoral viability  
*Note: This figure displays candidates' Facebook mentions over the campaign period by candidates' electoral viability using four categories: Safe candidates (seat rank security > 0); Hot (seat rank security 0); semi-hot (seat rank security of -1) and hopeless (seat rank security < -1). Candidates without open Facebook accounts have zero mentions.*

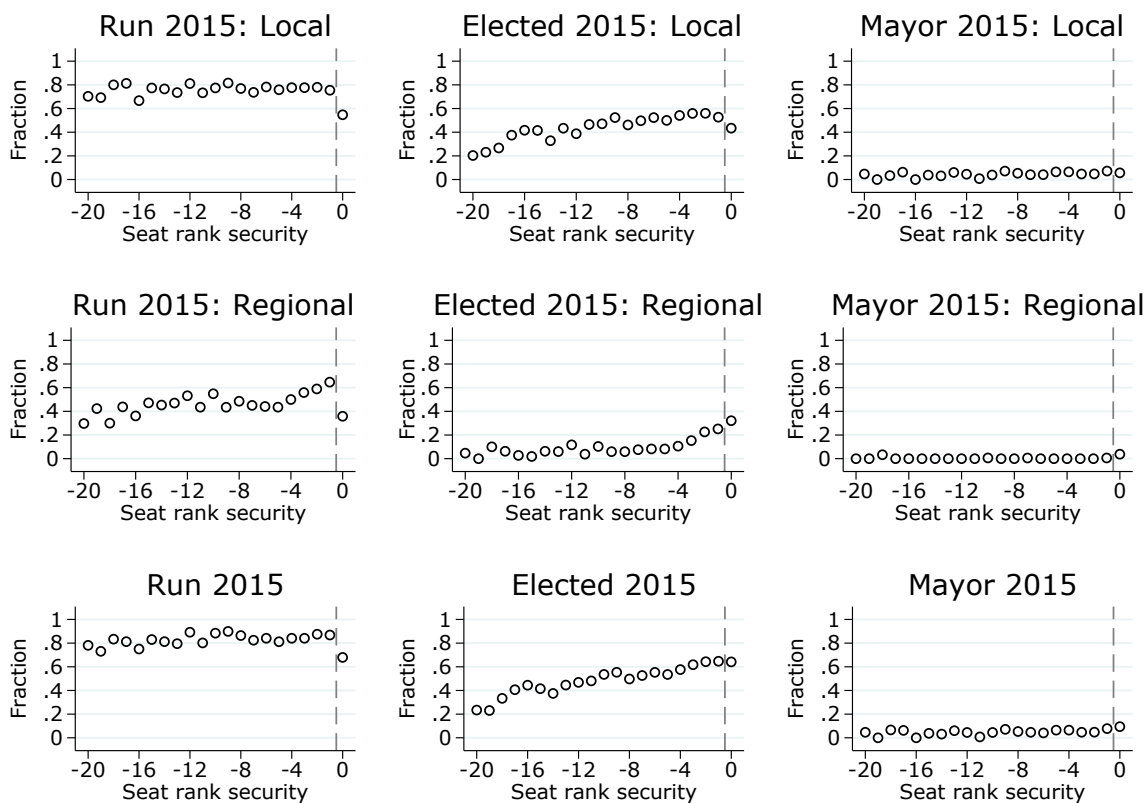


Figure B.11: Local election outcomes (2015) plotted against seat rank security (2017)  
*Note: This figure plots various outcome variables, given in each sub-panel heading, against the seat security of the candidate in the 2017 national election. Of the 2,487 main party candidates participating in the 2017 national elections, we exclude 147 that in any previous election have won a seat in parliament. A candidate's seat rank security is defined as the number of seats won by his or her party in the last election (in a given district), minus the candidate's rank on the list in the current election. The x-axes are censored at -20 and 0.*

## Appendix C: Traditional and social media data

By international standards, Norway has a high newspaper penetration,<sup>37</sup> and local newspapers remain a key source of information on local candidates. While print subscriptions have declined, digital subscriptions have increased.<sup>38</sup> Survey data from 2017 show that 81% of respondents use Facebook, 50% use Snapchat or Instagram, and 30% use Twitter.<sup>39</sup> The 2017 National Election Surveys show that traditional media remains the main source of information during national election campaigns, and that social media only plays a small role.<sup>40</sup>

The political parties in Norway are required to have their electoral lists completed by March 31 of the election year. The party lists include information on candidates' list position, name, and place of residence. Together with the media consultancy firm *Retriever* (<http://www.retriever.no>) we generated a dataset on individual candidates' activity on traditional and social media platforms surrounding the most recent Storting election, held September 11, 2017.

### *Social media*

With the help of research assistants, we identified publicly accessible Twitter and Facebook accounts for candidates running for any of the nine main parties (N=2,487).<sup>41</sup> Using this information, Retriever established a search engine to collect the relevant activities in each social media account. The social media data cover the nine-week period from Sun-

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<sup>37</sup>For documentation, see <https://www.nationmaster.com/country-info/stats/Media/Newspapers-and-periodicals/Circulation/Daily/Per-capita>

<sup>38</sup>For further information on media and digital subscriptions, see <http://www.digitalnewsreport.org/survey/2017/norway-2017/>

<sup>39</sup>For further information on the survey, see <https://www.statista.com/statistics/738948/social-media-usage-in-norway-by-platform/>

<sup>40</sup>For further documentation, see the online analysis facility at NSD – Norwegian Center for Research Data, <https://nsd.no/nsd/english/>.

<sup>41</sup>We exclude candidates from minor lists, none of which have won any seats in parliament since 2000 (1,930 candidates). We also exclude the Liberal Party in *Vest-Agder* and *Aust-Agder*, because they run with an identical list of candidates in these districts. The nine main parties, ordered along the left-right dimension, are: *Rødt* (R), the *Socialist Left Party* (SV), the *Labor Party* (DNA), the *Center Party* (SP), the *Greens* (MDG), the *Christian Democratic Party* (KrF), the *Liberal Party* (V), the *Conservative Party* (H), and the *Progress Party* (FrP).

day, July 30, to Saturday, September 30. The dataset includes information on whether the candidate had a publicly accessible Twitter account, the daily number of likes, followers, tweets, and retweets. Similarly, the dataset includes information on whether the candidate had a publicly accessible Facebook account, the daily number of post, likes, fans, and mentions. Due to some data issues at Retriever, we lack social media data for the periods August 22-25, August 30-September 6, and September 8-9. For these periods, we interpolate the data.

### *Traditional media*

Retriever has access to an (extended) version of the media archive *Atekst*. The database has comprehensive coverage of all news stories appearing in newspapers on the web and in print, as well as stories in radio and TV.<sup>42</sup> Using the names and party affiliations of candidates, Retriever generated a dataset on daily media appearances for all candidates in each outlet. These data cover the eighteen-week period from Sunday, May 28, to Saturday, September 30, and include information on the headquarter locations of the various media (we manually supplement the data in instances where this information is missing).

In our time window, there are 943 outlets mentioning any candidate (31% print; 62% web; 4% radio; and 3% TV). Across outlets, the average number of overall candidate mentions is 276 (standard deviation = 485). We follow Retriever’s classification of media outlets with a local vs. national reach, and supplement this classification wherever necessary. In Table C.1 we provide a list of the media outlets included in our analyses with a total of at least 100 hits in our sample window (n=451).

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<sup>42</sup>For documentation, see <https://web.retriever-info.com/services/archive.html>

Table C.1: List of media outlets with at least 100 candidate mentions in our sample window (May 28 - September 30, 2017)

Media outlet	Type	Hits	District
Dagsavisen Moss Dagblad	web	284	Østfold
Demokraten	print	616	Østfold
Demokraten	web	152	Østfold
Fredriksstad Blad	print	690	Østfold
Fredriksstad Blad	web	695	Østfold
Fredriksstad Blad Pluss	web	650	Østfold
Halden Arbeiderblad	print	542	Østfold
Halden Arbeiderblad	web	196	Østfold
Halden Arbeiderblad Pluss	web	360	Østfold
Moss Avis	print	1118	Østfold
Moss Avis	web	305	Østfold
Moss Avis Pluss	web	558	Østfold
NRK Østfold	web	157	Østfold
NRK1 Østfoldsnytt	video	179	Østfold
Rakkestad Avis	print	314	Østfold
Rakkestad Avis	web	107	Østfold
Rakkestad Avis Pluss	web	222	Østfold
Sarpsborg Arbeiderblad	print	740	Østfold
Sarpsborg Arbeiderblad	web	277	Østfold
Sarpsborg Arbeiderblad Pluss	web	228	Østfold
Smaalenenes Avis	print	1067	Østfold
Smaalenenes Avis	web	192	Østfold
Smaalenenes Avis Pluss	web	595	Østfold
Akershus Amtstidende	print	1882	Akershus
Akershus Amtstidende	web	148	Akershus
Akershus Amtstidende Pluss	web	256	Akershus
Budstikka	print	889	Akershus
Budstikka	web	767	Akershus
Eidsvoll Ullensaker Blad	print	371	Akershus
Eidsvoll Ullensaker Blad	web	324	Akershus
Indre Akershus Blad	print	223	Akershus
Indre Akershus Blad	web	155	Akershus
Indre Akershus Blad Pluss	web	189	Akershus
Oppegård Avis	web	103	Akershus
Raumnes	print	263	Akershus
Romerikes Blad	web	304	Akershus
Romerikes Blad Pluss	web	886	Akershus
Varingen	print	183	Akershus
Vestby Avis	print	138	Akershus
Vestby Avis	web	124	Akershus
Vestby Avis Pluss	web	180	Akershus
Ås Avis	print	144	Akershus
Ås Avis Pluss	web	181	Akershus
Østlandets Blad	print	442	Akershus
Østlandets Blad	web	139	Akershus
Østlandets Blad Pluss	web	301	Akershus
Groruddalen	web	224	Oslo
Khrono	web	359	Oslo
NRK Østlandssendingen	web	262	Oslo
NRK1 Østlandssendingen	video	134	Oslo
Nordre Aker Budstikke	web	129	Oslo
Nordstrands Blad	print	168	Oslo
Nordstrands Blad	web	157	Oslo
Vårt Oslo	web	197	Oslo
Glåmdalen	print	1362	Hedmark
Glåmdalen	web	237	Hedmark
Glåmdalen Pluss	web	505	Hedmark
Hamar Arbeiderblad	print	1258	Hedmark
Hamar Arbeiderblad	web	635	Hedmark
Ringsaker Blad	print	276	Hedmark
Ringsaker Blad Pluss	web	219	Hedmark
Tynsetingen Pluss	web	110	Hedmark
Østlendingen	print	1350	Hedmark
Østlendingen	web	516	Hedmark

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Table C.1 – Continued from previous page

Media outlet	Type	Hits	District
Østlendingen Pluss	web	510	Hedmark
Gudbrandsdølen Dagningen	print	1274	Oppland
Gudbrandsdølen Dagningen	web	564	Oppland
Gudbrandsdølen Dagningen Pluss	web	374	Oppland
Hadeland	print	593	Oppland
Hadeland	web	136	Oppland
Hadeland Pluss	web	698	Oppland
Lillehammer Byavis	print	109	Oppland
NRK Hedmark og Oppland	web	219	Oppland
Oppland Arbeiderblad	print	1322	Oppland
Oppland Arbeiderblad	web	548	Oppland
Oppland Arbeiderblad Pluss	web	542	Oppland
Valdres	print	529	Oppland
Valdres Pluss	web	302	Oppland
Bygdeposten	print	372	Buskerud
Bygdeposten	web	234	Buskerud
Bygdeposten Pluss	web	222	Buskerud
Dagsavisen fremtiden	web	366	Buskerud
Drammens Tidende	print	988	Buskerud
Drammens Tidende	web	570	Buskerud
Drammens Tidende Pluss	web	600	Buskerud
Eikerbladet	print	184	Buskerud
Eikerbladet	web	136	Buskerud
Eikerbladet Pluss	web	145	Buskerud
Eikernytt	web	118	Buskerud
Hallingdølen	print	1399	Buskerud
Laagendalsposten	print	705	Buskerud
Laagendalsposten	web	212	Buskerud
Laagendalsposten Pluss	web	452	Buskerud
Lierposten	web	157	Buskerud
NRK Buskerud	web	113	Buskerud
Ringerikes Blad	print	541	Buskerud
Ringerikes Blad	web	418	Buskerud
Ringerikes Blad Pluss	web	414	Buskerud
Røyken og Hurums Avis	print	224	Buskerud
Røyken og Hurums Avis Pluss	web	214	Buskerud
Gjengangeren	print	689	Vestfold
Gjengangeren	web	102	Vestfold
Gjengangeren Pluss	web	280	Vestfold
Jarlsberg	print	594	Vestfold
Jarlsberg Pluss	web	222	Vestfold
NRK Vestfold	web	105	Vestfold
NRK1 Østafjells	video	126	Vestfold
Sande Avis	print	112	Vestfold
Sande Avis Pluss	web	130	Vestfold
Sandefjords Blad	print	815	Vestfold
Sandefjords Blad	web	249	Vestfold
Sandefjords Blad Pluss	web	523	Vestfold
Tønsbergs Blad	print	1181	Vestfold
Tønsbergs Blad	web	480	Vestfold
Tønsbergs Blad Pluss	web	712	Vestfold
Østlands-Posten	print	793	Vestfold
Østlands-Posten	web	228	Vestfold
Østlands-Posten Pluss	web	390	Vestfold
Øyene	print	130	Vestfold
Bø Blad	print	279	Telemark
Kragerø Blad Vestmar	print	274	Telemark
Kragerø Blad Vestmar Pluss	web	135	Telemark
NRK Telemark	web	271	Telemark
Porsgrunns Dagblad	print	704	Telemark
Porsgrunns Dagblad	web	126	Telemark
Porsgrunns Dagblad Pluss	web	405	Telemark
Rjukan Arbeiderblad	print	289	Telemark
Rjukan Arbeiderblad Pluss	web	140	Telemark
Telemarksavisa	print	1497	Telemark
Telemarksavisa	web	250	Telemark
Telemarksavisa Pluss	web	540	Telemark
Telen	print	372	Telemark

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Table C.1 – Continued from previous page

Media outlet	Type	Hits	District
Telen Pluss	web	301	Telemark
Varden	print	1529	Telemark
Varden	web	140	Telemark
Vest-Telemark Blad	print	352	Telemark
Agderposten	print	1755	Aust-Agder
Agderposten	web	174	Aust-Agder
Arendals Tidende	print	183	Aust-Agder
Arendals Tidende	web	181	Aust-Agder
Aust Agder Blad	print	181	Aust-Agder
Aust Agder Blad Pluss	web	144	Aust-Agder
Birkenes Avis	print	123	Aust-Agder
Grimstad Adressetidende	print	325	Aust-Agder
Lillesands-Posten	print	617	Aust-Agder
Setesdølen	print	177	Aust-Agder
Tvedestrandsposten	print	397	Aust-Agder
Tvedestrandsposten Pluss	web	251	Aust-Agder
Agder Flekkefjords Tidende	print	1364	Vest-Agder
Avisen Agder	web	1818	Vest-Agder
Budstikka.com	web	126	Vest-Agder
Fædrelandsvennen	print	2173	Vest-Agder
Fædrelandsvennen	web	273	Vest-Agder
Fædrelandsvennen - Login	web	2149	Vest-Agder
Fædrelandsvennen Lokalsporten	web	212	Vest-Agder
Lindesnes	print	350	Vest-Agder
Lindesnes Pluss	web	417	Vest-Agder
Lister	print	506	Vest-Agder
Lyngdals Avis	print	142	Vest-Agder
Lyngdals Avis	web	106	Vest-Agder
N247.no	web	206	Vest-Agder
NRK Sørlandet	web	480	Vest-Agder
NRK1 Sørlandet	video	189	Vest-Agder
Søgne og Songdalen Budstikke	print	312	Vest-Agder
Søgne og Songdalen Budstikke - Login	web	294	Vest-Agder
Bygdebladet	print	139	Rogaland
Bygdebladet	web	101	Rogaland
Dalane Tidende	print	612	Rogaland
Dalane Tidende	web	166	Rogaland
Gjesdalbuen	print	102	Rogaland
Haugesunds Avis	print	868	Rogaland
Haugesunds Avis	web	451	Rogaland
Haugesunds Avis Pluss	web	478	Rogaland
Jærbladet	print	399	Rogaland
Jærbladet	web	156	Rogaland
NRK Rogaland	web	308	Rogaland
NRK1 Rogalandsnytt	video	147	Rogaland
Radio Haugaland	web	121	Rogaland
Rogalands Avis	print	818	Rogaland
Rogalands Avis	web	724	Rogaland
Sandnesposten	print	387	Rogaland
Sandnesposten	web	155	Rogaland
Solablaget	print	109	Rogaland
Solablaget	web	121	Rogaland
Stavanger Aftenblad	print	2113	Rogaland
Stavanger Aftenblad	web	620	Rogaland
Stavanger Aftenblad - Login	web	2450	Rogaland
Strandbuen	print	274	Rogaland
Askøyværingen	print	157	Hordaland
Askøyværingen Pluss	web	185	Hordaland
Avisa Nordhordland	web	112	Hordaland
Avisa Nordhordland Pluss	web	232	Hordaland
Bergens Tidende	print	1995	Hordaland
Bergens Tidende - Login	web	2045	Hordaland
Bergensavisen	print	1494	Hordaland
Bergensavisen	web	326	Hordaland
Bergensavisen Pluss	web	531	Hordaland
Bygdanytt	print	157	Hordaland
Bygdanytt Pluss	web	119	Hordaland
Bømlo-Nytt	print	267	Hordaland

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Table C.1 – Continued from previous page

Media outlet	Type	Hits	District
Fanaposten	print	181	Hordaland
Grannar	print	250	Hordaland
Hardanger Folkeblad	print	345	Hordaland
Hardanger Folkeblad Pluss	web	210	Hordaland
Hordaland	print	522	Hordaland
Hordaland	web	218	Hordaland
Hordaland Folkeblad	print	229	Hordaland
Kvinnheringen	print	153	Hordaland
Midtsiden	web	174	Hordaland
NRK Hordaland	web	373	Hordaland
NRK1 Nordland	video	202	Hordaland
NRK1 Vestlandsrevyen	video	153	Hordaland
Nordhordland	print	371	Hordaland
Os Fusaposten	print	314	Hordaland
Strilen	print	205	Hordaland
Strilen Pluss	web	261	Hordaland
Sunnhordland	print	392	Hordaland
Sunnhordland	web	190	Hordaland
Sydvesten	print	103	Hordaland
Sysla	web	105	Hordaland
Tysnes	web	110	Hordaland
Vaksdalposten	print	143	Hordaland
VestNytt	print	225	Hordaland
Vestnytt Pluss	web	228	Hordaland
Åsane Tidende	print	124	Hordaland
Firda	print	836	Sogn og Fjordane
Firda	web	233	Sogn og Fjordane
Firda Pluss	web	533	Sogn og Fjordane
Firda Tidend	print	524	Sogn og Fjordane
Firda Tidend	web	1249	Sogn og Fjordane
Firdaposten	print	434	Sogn og Fjordane
Firdaposten	web	135	Sogn og Fjordane
Firdaposten Pluss	web	329	Sogn og Fjordane
Fjordabladet	print	444	Sogn og Fjordane
Fjordabladet	web	912	Sogn og Fjordane
Fjordenes Tidende	print	681	Sogn og Fjordane
Fjordenes Tidende	web	228	Sogn og Fjordane
Fjordenes Tidende Pluss	web	305	Sogn og Fjordane
Fjordingen	print	401	Sogn og Fjordane
Fjordingen Pluss	web	127	Sogn og Fjordane
NRK Sogn og Fjordane	web	517	Sogn og Fjordane
Porten	web	339	Sogn og Fjordane
Sogn Avis	print	762	Sogn og Fjordane
Ytre Sogn Avis	print	255	Sogn og Fjordane
Aura Avis	print	358	Møre og Romsdal
Aura Avis	web	158	Møre og Romsdal
Aura Avis Pluss	web	157	Møre og Romsdal
Avisa Møre	web	1466	Møre og Romsdal
Driva	print	308	Møre og Romsdal
Driva	web	168	Møre og Romsdal
KSU 24/7	web	107	Møre og Romsdal
Møre-Nytt	print	344	Møre og Romsdal
NRK Møre og Romsdal	web	620	Møre og Romsdal
NRK1 Møre og Romsdal	video	117	Møre og Romsdal
Nordre	print	279	Møre og Romsdal
Nærnett	web	141	Møre og Romsdal
Romsdals Budstikke	print	1286	Møre og Romsdal
Romsdals Budstikke	web	2261	Møre og Romsdal
Romsdals Budstikke Pluss	web	485	Møre og Romsdal
Sunnmøringen	print	107	Møre og Romsdal
Sunnmøringen	web	1272	Møre og Romsdal
Sunnmørsposten	print	1070	Møre og Romsdal
Sunnmørsposten	web	1904	Møre og Romsdal
Sunnmørsposten Pluss	web	1080	Møre og Romsdal
Tidens Krav	print	1179	Møre og Romsdal
Tidens Krav	web	672	Møre og Romsdal
Tidens Krav Pluss	web	572	Møre og Romsdal
Vestlandsnytt	print	188	Møre og Romsdal

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Table C.1 – Continued from previous page

Media outlet	Type	Hits	District
Vikebladet Vestposten	print	249	Møre og Romsdal
Vikebladet Vestposten	web	125	Møre og Romsdal
Åndalsnes Avis	print	225	Møre og Romsdal
Åndalsnes Avis	web	123	Møre og Romsdal
Adresseavisen	print	2055	Sør-Trøndelag
Adresseavisen	web	2552	Sør-Trøndelag
Adresseavisen Pluss	web	1312	Sør-Trøndelag
Arbeidets Rett	print	518	Sør-Trøndelag
Arbeidets Rett	web	159	Sør-Trøndelag
Arbeidets Rett Pluss	web	208	Sør-Trøndelag
Avisa Sør-Trøndelag	print	465	Sør-Trøndelag
Avisa Sør-Trøndelag Pluss	web	304	Sør-Trøndelag
Fosna-Folket	print	366	Sør-Trøndelag
Fosna-Folket	web	180	Sør-Trøndelag
Fosna-Folket Pluss	web	323	Sør-Trøndelag
Hitra-Frøya	print	147	Sør-Trøndelag
Hitra-Frøya	web	122	Sør-Trøndelag
Malviknytt	web	132	Sør-Trøndelag
NRK Trøndelag	web	328	Sør-Trøndelag
NRK1 MidtNytt	video	112	Sør-Trøndelag
Nea Radio	web	283	Sør-Trøndelag
OPP	print	241	Sør-Trøndelag
Opdalingen	print	250	Sør-Trøndelag
Opdalingen	web	131	Sør-Trøndelag
Trønderbladet	print	379	Sør-Trøndelag
Trønderbladet	web	242	Sør-Trøndelag
Trønderbladet Pluss	web	157	Sør-Trøndelag
Ukeavisa OPP	web	112	Sør-Trøndelag
Universitetsavisa	web	102	Sør-Trøndelag
Bladet.no	web	226	Nord-Trøndelag
Bladet.no Pluss	web	198	Nord-Trøndelag
Inderøyningen	print	112	Nord-Trøndelag
Innherred	print	396	Nord-Trøndelag
Innherred Pluss	web	102	Nord-Trøndelag
Namdalsavisa	print	848	Nord-Trøndelag
Namdalsavisa	web	204	Nord-Trøndelag
Steinkjer-Avisa	print	149	Nord-Trøndelag
Stjørdalens Blad	print	587	Nord-Trøndelag
Trønder-Avisa	print	1559	Nord-Trøndelag
Trønder-Avisa	web	349	Nord-Trøndelag
Trønder-Avisa Ekstra	web	596	Nord-Trøndelag
Ytringen	print	132	Nord-Trøndelag
Andøyposten	print	280	Nordland
Avisa Nordland	print	1407	Nordland
Avisa Nordland	web	940	Nordland
Avisa Nordland Pluss	web	607	Nordland
Bladet Vesterålen	print	1358	Nordland
Bladet Vesterålen	web	719	Nordland
Bodø Nu	web	103	Nordland
Brønnøysunds Avis	print	420	Nordland
Brønnøysunds Avis	web	133	Nordland
Brønnøysunds Avis Pluss	web	232	Nordland
Fremover	print	613	Nordland
Fremover	web	264	Nordland
Fremover Pluss	web	357	Nordland
Helgelands Blad	print	590	Nordland
Helgelendingen	print	806	Nordland
Helgelendingen	web	301	Nordland
Helgelendingen Pluss	web	322	Nordland
Lofot-Tidende	print	111	Nordland
Lofotposten	print	909	Nordland
Lofotposten	web	262	Nordland
Lofotposten Pluss	web	455	Nordland
NRK Nordland	web	508	Nordland
Rana Blad	print	675	Nordland
Rana Blad	web	181	Nordland
Rana Blad Pluss	web	333	Nordland

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Table C.1 – Continued from previous page

Media outlet	Type	Hits	District
Saltenposten	print	274	Nordland
Vesteraalens Avis	print	288	Nordland
Vesterålen Online	web	969	Nordland
Vesterålen Online Pluss	web	286	Nordland
Bladet Tromsø	web	2514	Troms
Folkebladet	web	1941	Troms
Folkebladet Pluss	web	655	Troms
Framtid i Nord	print	384	Troms
Framtid i Nord	web	1212	Troms
Framtid i Nord Pluss	web	122	Troms
Harstad Tidende	print	1556	Troms
Harstad Tidende	web	1598	Troms
Harstad Tidende Pluss	web	384	Troms
NRK Troms og Finnmark	web	347	Troms
NRK1 Nordnytt	video	155	Troms
Nordlys	print	1254	Troms
Nordlys	web	211	Troms
Nordlys Pluss	web	815	Troms
Nordnorsk debatt	web	593	Troms
Nye Troms	print	532	Troms
Troms Folkeblad	print	1859	Troms
iTromsø	print	842	Troms
iTromsø Pluss	web	190	Troms
Altaposten	print	936	Finnmark
Altaposten	web	2045	Finnmark
Finnmark Dagblad	print	1129	Finnmark
Finmarken	print	1162	Finnmark
Hammerfestingen	print	145	Finnmark
NRK Finnmark	web	410	Finnmark
NRK Sámi Radio	web	204	Finnmark
Radio Nordkapp	web	224	Finnmark
Sør Varanger Avis	print	344	Finnmark
iAlta	web	167	Finnmark
iAlta Pluss	web	204	Finnmark
iFinnmark	web	747	Finnmark
iFinnmark Pluss	web	881	Finnmark
ABC Nyheter	web	2877	national
ANB siste.no	web	657	national
Aftenposten	print	2579	national
Aftenposten - Login	web	3545	national
Agenda Magasin	web	101	national
Aldri mer	web	156	national
Bondebladet	print	125	national
Byggeindustrien	web	364	national
Dag og Tid	print	155	national
Dagbladet	print	1475	national
Dagbladet	web	2900	national
Dagbladet Pluss	web	235	national
Dagen	print	1490	national
Dagen	web	868	national
Dagens Medisin	web	145	national
Dagens Næringsliv	print	317	national
Dagens Perspektiv	print	236	national
Dagsavisen	print	3182	national
Dagsavisen	web	2079	national
Dn.no	web	1091	national
Dn.no Pluss	web	284	national
Document.no	web	732	national
E24	web	398	national
Fagbladet	web	176	national
Finansavisen	print	466	national
Fiskeribladet Fiskaren	print	457	national
Fiskeribladet Fiskaren	web	362	national
Framtida	web	287	national
FriFagbevegelse.no	web	810	national
Hegnar.no	web	1074	national
Kampanje	web	186	national
Kapital	print	163	national

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Table C.1 – Continued from previous page

Media outlet	Type	Hits	District
Klar Tale	web	150	national
Klassekampen	print	2515	national
Klassekampen	web	463	national
Kommunal Rapport	print	339	national
Kommunal Rapport	web	704	national
Liberaleren	web	111	national
MSN	web	479	national
Medier24.com	web	240	national
Minerva	web	397	national
Morgenbladet	print	328	national
Morgenbladet	web	224	national
NA24	web	195	national
NRK	web	3000	national
NRK Dagsrevyen	video	358	national
NRK Kveldsnytt	video	177	national
NRK P1 Dagsnytt	audio	854	national
NRK P1 Her og nå	audio	257	national
NRK P2 Dagsnytt atten	audio	448	national
NRK P2 Nyhetslunsj	audio	272	national
NRK P2 Nyhetsmorgen	audio	342	national
NRK P2 Politisk kvarter	audio	176	national
NRK1 Dagsrevyen 21	video	177	national
NRK1 Nyheter	video	301	national
NRK1 Østnytt	video	103	national
NRK2 Dagsnytt atten	video	448	national
Nationen	print	2172	national
Nationen	web	1282	national
Nasjonen - Login	web	954	national
Nettavisen	web	2396	national
Norge IDAG	print	255	national
Norge IDAG	web	515	national
P4	audio	1023	national
P4	web	516	national
P5	web	327	national
P7 Klem	web	349	national
Radio Norge Norgesnyhetene	audio	906	national
Resett	web	213	national
TV2	web	2464	national
TV2 Nyhetene	video	542	national
Teknisk Ukeblad	web	229	national
Ukeavisen Ledelse	web	344	national
Utrop.no	web	116	national
VG	print	1799	national
VG Nett	web	2457	national
VG Nyhetsdøgnet	web	264	national
VG Pluss	web	1149	national
Vårt Land	print	1402	national
Vårt Land	web	416	national