When are Politicians Incentivized to Vote? Evidence from individual-level panel data (2015-2023)*

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Abstract

When are politicians incentivized to vote? To answer this question, we examine politicians' electoral participation before, during and after their political career. Our dataset combines individual-level register data for all candidates in the 2015, 2019, and 2023 Norwegian local elections with population-wide turnout data. We show that politicians are significantly more likely to vote when they are running for office (relative to pre- *and* post-office electoral participation), particularly if placed in top-ranked list positions and running for parties with council representation. Candidates in 'contested' list positions appear to exhibit higher turnout than those in 'hopeless' positions, but this gap disappears when controlling for individual fixed effects. Finally, post-office electoral participation exceeds pre-office participation after accounting for individual fixed effects, suggesting some degree of persistence and habit-formation. Overall, these findings contribute to a better understanding of how candidates' personal ambitions and electoral incentives interact with institutional features to influence electoral behavior.

Keywords: Voter turnout, politicians, register data, Norway.

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1. Introduction

Politicians frequently feature in the media while casting their ballots on Election Day. Yet, although turnout rates among politicians tend to be much higher than among the general population, many politicians in fact do *not* cast their ballot on Election Day. As voting is among the least demanding forms of political participation, this raises the fundamental question: When are politicians (not) incentivized to vote? While a vast academic literature investigates individuals' entry into politics (for reviews, see Dal Bó et al. 2017; Gulzar 2021; Carnes and Lupu 2023) as well as the determinants of voter turnout (Smets and van Ham 2013; Cancela and Geys 2016), extant research offers little insight into politicians' electoral participation. This study aims to address the missing link between individuals' entry into politics and their electoral behavior, and thereby shines a light on an overlooked intersection between political candidacy and electoral turnout.

From a theoretical perspective, we extend the canonical rational voter model (Downs 1957; Riker and Ordeshook 1968; Geys 2006a) by accounting for considerations that apply specifically to politicians' electoral participation. For instance, politicians' benefits of turning out will be affected by the probability of gaining personal benefits – i.e. ego rents – associated with holding office (Rogoff 1990; Aidt et al. 2011; Friedrich 2013). Naturally, such benefits can only be obtained when politicians stand for election (for a party with a credible chance of gaining seats), which would be expected to raise their likelihood of turning out relative to when they are not yet running - or no longer running - for office. Among those running for office, the probability of obtaining ego rents is furthermore affected by one's placement on the party list. For instance, we hypothesize that in Norway's open-list proportional representation (PR) system candidates placed in marginal positions on the ballot have higher incentives to participate compared to those placed near the bottom of the list with little or no realistic chance of winning a seat. Furthermore, we argue that politicians face distinct costs of (not) voting related to intra-party career concerns as well as reputational costs among the broader electorate. These costs are again likely to be affected by whether one is running for office (or not) and one's placement on the party list – thus creating varying implications for politicians' electoral calculus. This extended rational voter model allows us to derive testable predictions about when politicians are most (least) incentivized to vote.

To assess these theoretical predictions, we construct an individual-level dataset containing all individuals who ran for office in Norwegian local elections in the period 2007–2023 (Fiva et

al. 2024). We convert this dataset into a balanced individual-level panel, and match it to administrative data on individuals' participation in local elections for the years 2015, 2019, and 2023.[1] We also add information on individuals' background characteristics, including age, gender, education level, immigrant background and so on. The panel structure of the resulting dataset allows us to track the electoral participation of *the same individuals* in election years prior to their standing for election, when they are running for office (in distinct positions on the party list), and after they have left politics.

Our main results indicate that, on average, approximately 10–15% of Norwegian local politicians abstain from voting in local elections. While this is far below the abstention rate observed in the general population (i.e. 35–40%), it clearly indicates that politicians do not always all turn out to vote. Standing for election is associated with a turnout boost of about 10 percentage points, compared to politicians' (already very high) turnout in elections where they are not yet featured on the party list. Additionally, a safe position at the top of the party list further increases electoral participation by 2–3 percentage points, while being on a 'contested' or 'hopeless' list position has no additional impact on turnout (when controlling for individual fixed effects). Running for office on a party list that never secures a council seat more than halves the turnout boost associated with standing for election. Using a more continuous measure of politicians' predicted election probability, we find a non-linear relationship with turnout that peaks at an election probability of circa 85%. Finally, politicians' electoral turnout is found to decrease with 'only' five percentage points when they no longer run for office, which suggests some degree of habit-formation relative to their turnout prior to standing for election. Overall, these results strongly suggest that both electoral incentives and intrinsic motivations shape politician's turnout decisions.

Our work contributes to the extensive empirical literature on voter turnout based on the rational voter model (Downs 1957; Riker and Ordeshook 1968). Existing studies have documented the effects on turnout of various macro-level variables (including party competition, population size, government budgets, or weather conditions; see Geys 2006b; Andersen et al. 2014; Cancela and Geys 2016; Frank and Martínez i Coma 2023) as well as micro-level characteristics (including income, age, education, or birth order; see Smets and

[1] Statistics Norway has collected individual-level data on electoral participation directly from the electronic voting systems from 2013 onwards. The high-quality nature of these administrative data presents significant advantages over survey data. Surveys are prone to overreporting of participation due to social desirability bias, the tendency of nonvoters to be less likely to participate in surveys, and the limited potential for tracking longitudinal changes (Dahlgaard et al. 2019).

van Ham 2013; Bratsberg et al. 2022; Schafer et al. 2022; Weinschenk and Dawes 2022). We contribute to these studies by focusing on the electoral participation of politicians, and analyzing the role of their electoral incentives. We also contribute to a strand of research investigating the effects of individual, monetary incentives on voting behavior, which commonly uses data from field experiments (Panagopoulos 2013; León 2017; Shineman 2018; Gonzales et al. 2022). Our study is unique in documenting substantial effects of *non*-monetary incentives in the political elite. Closely related, ego-rents refer to the exogenous, non-monetary utility derived from holding elected office; that is, the power, status, and prestige associated with election to political positions. We argue that our turnout-by-list-position evidence offers (one of) the most direct empirical manifestations of this concept to date, as it links a candidate's turnout decision to changes in their expected probability of election. Finally, our analysis relates directly to research on the relationship between electoral incentives and candidates' campaigning efforts. It thus contributes to recent work on how party leaders in PR-based electoral systems allocate candidates with different intrinsic motivations across the distinct positions on a party list (Cox et al. 2021; Buisseret et al. 2022; Crutzen et al. 2024).

2. Theoretical background and hypotheses

Our theoretical framework builds on the classic rational voting model originally developed by Downs (1957) and Riker and Ordeshook (1968) (for reviews, see Dhillon and Peralta 2002; Geys 2006a). Let *B* represent the benefit to a (potential) voter of having the policy of one's preferred party implemented instead of the policy of another party. Since this benefit B is a public good that accrues equally to all individuals who align with the party's policy platform, it can be assumed as independent of whether individuals are actively running for office (or not), whether they are elected (or not), or their position on the party list (when running).[2] Yet, in any individual voter's calculus, the benefit B has to be weighted by their expected influence over the election outcome. As our empirical case concerns a country with a Proportional Representation electoral system, the benefit B is more likely to come about when the seat share of one's preferred party increases.[3] Hence, B is weighted by the difference in

[2] One might contend that party programs provide only broad policy guidelines and that elected representatives – particularly those serving in executive roles – influence the day-to-day administration of public policy. We think that such benefits are more appropriately conceptualized as part of the ego rent available to politicians (see below) rather than as distinct policy gains.

[3] Research on PR-based electoral systems suggests that marginal shifts in a party's representation can significantly

the party's seat share when a (potential) voter casts a ballot (π^1) and when they do not (π^0) (Owen and Grofman 1984). Finally, let *D* denote the "intrinsic" or "expressive" benefits of voting (Riker and Ordeshook 1968; Fiorina 1976), and C represent the costs of participating in the election. The expected utility of voting versus abstaining for any individual *i* – irrespective of being a politician – can therefore be written as:

$$\mathrm{E(U)} = \left(\pi^1 - \pi^0\right) B + D - C \tag{1}$$

We extend this baseline model to account for two additional electoral considerations relevant to politician-voters. The first of these relates to what politicians can personally gain from obtaining elected office, regardless of their party's election outcome. Let *R* describe this personal gain or 'ego rent' that candidates receive from holding office (Rogoff 1990; Aidt et al. 2011; Friedrich 2013). While we assume that this ego rent is exogenously determined and fixed (Coate and Morris 1999; Garrì 2010), individuals naturally have to stand for election to have a non-zero likelihood of collecting ego rents. Moreover, conditional on standing for election and the party's seat share exceeding zero (i.e. $\pi > 0$), the likelihood of achieving ego rents (p_j^k) increases when individuals are on a safer position on the list. For simplicity, the subscript *j* is assumed to take on one of four levels: j=N for candidates who are not running, j=S for candidates running in a safe seat (i.e. with virtually guaranteed election), j=M when running in a marginal seat (i.e. where a few votes could sway the outcome), and j=H when running in a 'hopeless' seat (i.e. with negligible likelihood of being elected). We expect that $1 \approx p_S > p_M > p_H > p_N = 0$. Finally, as with the influence of individual-level turnout on achieving benefit B, superscript $k = \{0,1\}$ captures the difference in the probability of the politician-voter obtaining one of their party's seats when voting (p_j^1) and not voting (p_j^0). Consequently, the expected ego rents will tend to increase as individuals run for election, are positioned on a higher place in the party list, and their party achieves a larger seat share.

Our second extension relates to the potential costs of abstention for politician-voters. Information and shoe-leather costs are often deemed to play a central role for citizens' decision to turn out (Downs 1957). Yet, politicians may face additional credibility and integrity costs when they fail to cast a ballot while running for office. These costs of *not* voting – or, equivalently, benefits of turning out – are captured by A_j. Politicians require credibility to induce their supporters to turn out on Election Day, and extant scholarship

impact policy decisions, irrespective of the party gaining a seat majority (e.g., Fiva et al. 2018).

suggests that "credibility can be obtained by voting" (Geys 2006a, p. 23; see also Schram 1991; Overbye 1995; Bufacchi 2001). This creates a self-interest pathway towards higher electoral participation that is independent of one's party gaining seat share or gaining elected office for oneself. Politicians may furthermore feel honor-bound to turn out to vote when they stand for election, especially when placed higher on the party list. While these reputational and integrity costs of abstention are minimal when one does not stand for election (such that we can normalize $A_N = 0$ without loss of generality), they are likely to be increasing in the prominence of one's position on the party list. Hence, we assume that $A_S > A_M > A_H > 0$, all else equal.

Finally, politician-voters' costs of (not) turning out may be affected by intra-party career concerns. From this perspective, turnout may signal one's willingness to 'work' for the party, which can help build one's reputation and standing within the party. As such, it may increase one's likelihood to become selected to stand for office (again) during future elections (Cox et al., 2021; Buisseret et al., 2022; Crutzen et al., 2024). Although party leaders cannot easily observe who voted/abstained (as turnout is not public information), it is reasonable to assume that any intra-party reputational considerations are independent of one's position on the party list *in the current election*. The reason is that all politicians who care about (potentially) running again in the future have an incentive to build and/or maintain their reputation within the party. Hence, we can capture the expected value of such dynamic considerations in our expanded turnout model via the cost of (not) voting C.[4]

These arguments imply that the expected costs and benefits of turning out to vote for politician-voters can be written as:

$$\pi^1 B + \pi^1 p_j^1 R + D - C \qquad \text{with j = \{S, M, H, N\}} \qquad (2a)$$

While their expected costs and benefits of *not* turning out to vote is given by (remember that A_j captures a *cost* of not voting):

$$\pi^0 B + \pi^0 p_j^0 R - A_j \qquad \text{with j = \{S, M, H, N\}} \qquad (2b)$$

Hence, the expected utility of voting versus abstention for politician-voters is reflected in the difference between equations (2a) and (2b):

[4] We are grateful to an associate editor and anonymous reviewer for helping us to further develop some of these arguments.

$$E(U) = \left(\pi^1 - \pi^0\right)B + \left(\pi^1 p_j^1 - \pi^0 p_j^0\right)R + D - C + A_j \qquad \text{with j} = \{S, M, H, N\} \qquad (3)$$

Equation (3) allows us to derive a number of empirically testable implications. The first relates to the difference in turnout incentives between politician-voters who are and are not running for election. From equation (3), it follows that the expected utility from voting when a politician runs for office is:

$$E(U)^e = \left(\pi^1 - \pi^0\right)B + \left(\pi^1 p_j^1 - \pi^0 p_j^0\right)R + D - C + A_j \qquad \text{with j} = \{S, M, H\} \qquad (4a)$$

Not running for election offers no prospect of collecting ego rents (as $p_N = 0$) and involves no costs of abstention ($A_N = 0$). Hence, the expected utility from voting for politicians who are *not* standing for election is:

$$E(U)^o = \left(\pi^1 - \pi^0\right)B + D - C \qquad (4b)$$

Comparing (4a) and (4b) shows that the expected utility from voting is larger for politician-voters standing for election when:

$$\left(\pi^1 p_j^1 - \pi^0 p_j^0\right)R + A_j > 0 \qquad \text{with j} = \{S, M, H\} \qquad (5)$$

Note that the prospect of collecting ego rents is strictly positive when standing for election for a party obtaining at least one seat (i.e. $\pi > 0$; see also below) and voting (i.e. $p_j^1 > p_j^0$, with j = {S, M, H}). This implies that one route through which standing for election induces higher levels of turnout among politicians is the prospect of obtaining ego rents. Moreover, politicians' credibility and integrity costs of not voting are strictly positive and increasing in their position on the party list ($A_j > 0$, with j = {S, M, H}). Consequently, a second route through which standing for election induces higher levels of turnout among politicians lies in the desire to avoid the credibility and integrity costs from abstention.

Comparison of (4a) and (4b) likewise suggests that ego rents (R) and abstention costs (A) tend to strengthen candidates' incentives to turn out on Election Day when running in increasingly safe positions on the party list. Note, however, that casting a vote no longer has a bearing on the probability of obtaining ego rents when running in a perfectly safe seat (since $p_S^1 = p_S^0 = 1$). This is not the case for marginal candidates since $p_M^k < 1$ (for $k = \{0,1\}$). Given fixed ego rents R and credibility and integrity costs A, a marginal candidate thus can be expected to have a stronger participation incentive than a perfectly safe candidate. A similar

argument holds in relation to individuals in 'hopeless' seats since $p_H^1 \approx p_H^0 \approx 0$, which indicates that marginal candidates also may have a stronger turnout incentive compared to such candidates. Hence, politicians' participation incentives will generally increase as they are placed on increasingly safer seats, but are hypothesized to reach a peak at some point (just) below the perfectly safe top position(s) on the list.

Finally, we can use equation (3) to assess the difference in turnout incentives between politicians running for office on party lists that do and do not secure council representation. For party lists that never secure a council seat, $\pi^1 = \pi^0 = 0$, and the expected utility from voting reduces to $D - C + A_j$ (with j = {S, M, H, N}). Given the positive values for B and R, this clearly falls below the expected utility from voting when one's party has a non-zero seat share (for all positions on the party list). Hence, running for office on a party list that never secures a council seat is predicted to undermine individuals' personal incentives for electoral participation (relative to running for a party that does gain representation). We assess these propositions empirically in the remainder of this article.

3. Institutional setting and data

3.1 Institutional setting

Elections in Norway are held every four years at both the national and local government levels (i.e., county and municipality), albeit with a two-year gap between them. Norwegian citizens aged 18 years or older are eligible to vote, and are automatically included in the Election Roll upon reaching this age threshold. Voter turnout stood at 77.2% in the most recent national elections in 2021, while it reached 62.4% in the most recent local elections in 2023. Hence, turnout rates in Norwegian elections are relatively high by international standards at both the national and local levels. While there is no compulsory voting, Norway operates a very generous system for early voting that allows voters to start casting their ballot approximately one month before the actual Election Day. Municipal governments are responsible for organizing all elections, including compiling and reporting results to the Election Directorate via an electronic system.

In our analysis, we focus on the municipal council elections (not the county council or the national elections). At the municipal government level, Norway uses an open-list proportional representation electoral system, which allows both local party elites and voters to influence

the final selection of candidates. While party elites rank the candidates on the list and can award a set of 'cumulated' candidates a bonus equal to 25% of their total votes (these candidates appear at the top of the ballot paper in boldface), voters can cast both party list and personal candidate votes.[5] The combination of a candidate's pre-advantage status and the number of personal votes they receive defines their personal poll, which is used for the within-party distribution of seats. Only in cases where there is a tie in the personal poll among candidates, the initial ranking on the ballot paper determines the elected candidate (Fiva and Røhr 2018, p.144). Although only about 10% of all politicians standing for office in the municipal elections receive a pre-advantage, about 50% of all elected candidates had been provided with a pre-advantage. This reflects the fact that the pre-advantage of 'cumulated' candidates is large enough to overcome a (very) significant disadvantage in personal votes.

Legislation guiding Norwegian municipal elections allows both registered political parties and independent local groups to submit candidate lists in each municipality. To appear on the ballot, list proposals must be submitted to the municipal election board by the end of March in the election year. Each list must include a heading with the party or group name, the electoral district, election year, a ranked list of candidates, and the names of a principal party representative and a deputy. Lists must contain at least seven candidates and may not exceed the number of council seats plus six. These candidates must be eligible voters *and* registered residents of the municipality on Election Day. Parties with national representation require only two board-member signatures to validate a list, while other groups' electoral lists must be accompanied by signatures from at least 1% of the local electorate. All documents submitted by the party/group are reviewed by the municipal election board, which must approve or reject the list proposal.

While these formal requirements on list proposals are codified in law, the nomination of candidates is left entirely to the parties/groups themselves. This process is commonly organized through a nomination committee appointed at the previous annual meeting, typically about a year in advance. The committee asks for candidate proposals, consults with incumbent politicians, and prepares a draft list following informal vetting. The final list is adopted at a formal nomination meeting of the party/group, where elected delegates from

[5] Parties are not permitted to offer candidates a pre-advantage in the county council elections. Candidates who have received personal votes from at least eight percent of the party's/list's voters move up higher than candidates who have not received as many personal votes. In practice, this means that personal votes have minimal effects in county council elections. Voters likewise have no influence on candidate selection in the national elections, which rely on a closed-list proportional representation system (Fiva et al. 2025).

local branches approve candidates by majority vote. The list is then signed by authorized party/group officials, and submitted for registration to the municipal election board.

Finally, it is important to note that casting a ballot in Norwegian local elections can be influential for the election outcome. For instance, Bangum et al. (2025) simulate the impact on the final party seat allocation of successively assigning 10 additional votes to each party list in the 2019 local elections. Their analysis reveals that such changes in vote totals across the parties in the election would have altered the party seat allocation in 156 out of 356 municipalities. A limited number of votes can likewise often have an important impact on the seat distribution *within* the party – particularly among candidates without a pre-advantage. In our sample, for instance, approximately 35% of marginal winners secured their seat with a vote margin of less than 0.01 (i.e. 2,345 out of 6,692 marginal winners), highlighting the potential importance of turning out to vote in our setting (see also Fiva et al. 2018).

3.2 Data

We use two main sources of data. The first is a dataset covering all candidates running for the municipal council elections in the years 2007, 2011, 2015, 2019 and 2023 (Fiva et al. 2025). This dataset includes detailed background information on all candidates, including a personal identifier, election years, municipality, party list, list votes, personal votes, cumulated list position ('pre-advantage'), ex-ante and ex-post list positions, and whether the candidate was elected or not. We extract all individuals from this dataset who ran for office in Norwegian local elections in the period 2007–2023, and use this information to construct a balanced panel of individuals over the same time period. This allows us to track whether and when individuals were (not) running for local office. For ease of reference, we henceforth refer to these individuals as politician-voters.

Our second dataset contains individual-level register data on electoral participation. Statistics Norway has collected individual-level data on electoral eligibility and vote participation using information from the electronic voting systems since 2013. We obtained access to data from the 2015, 2019 and 2023 local elections. The data identify whether or not the person cast a vote in the local elections, but not whether he or she gave a personal vote to a particular candidate.[6] The dataset includes the complete Election Roll for 27 larger municipalities in

[6] The data shows whether the person voted in *either* the municipal council *or* the county council election. These are not documented separately. Still, survey data from the Norwegian Local Election Surveys highlight that the municipal council elections are much more salient, and that less than 1% of the population votes only in the county council elections (Bangum et al. 2025).

2015, and extends to full national coverage in 2019 and 2023. As such, the 2015 data provide information on voter turnout for 48.8% of the eligible population, while the 2019 and 2023 includes the entire electorate (see Online Appendix Table A.1).

Both data sources were merged using individuals' unique personal identifier, and the resulting combined dataset allow us to observe politician-voters' electoral participation in the years they are running for office, before they stand for election, and after they have left politics. Using the same using personal identifier, we also introduce additional Statistics Norway administrative data, including politician-voters' residential municipality, birth-year, gender, education level and immigration background.

Table 1. Summary statistics

	2015		2019		2023	
	Mean	Std.dev.	Mean	Std.dev.	Mean	Std.dev.
Politician-voters in all election years irrespective of running:						
Vote (=1)	0.854	0.353	0.895	0.307	0.887	0.317
Pre-candidacy (=1)	0.291	0.454	0.105	0.307	-	-
Post-candidacy (=1)	0.438	0.496	0.554	0.497	0.691	0.462
Age	47.3	16.5	53.0	15.8	55.9	15.7
Woman (=1)	0.439	0.496	0.437	0.496	0.441	0.497
Immigrant categories	1.321	1.002	1.212	0.826	1.22	0.839
Education levels	5.063	1.68	4.691	1.64	4.78	1.635
(N)		(18,227)		(164,989)		(161,317)
Politician-voters in years when they are standing for election:						
Vote (=1)	0.955	0.207	0.960	0.195	0.954	0.209
Pre-advantage (=1)	0.091	0.288	0.109	0.311	0.114	0.318
Safe position	0.107	0.216	0.172	0.259	0.261	0.33
Marginal position	0.122	0.199	0.198	0.251	0.222	0.242
List never elected (=1)	0.103	0.304	0.057	0.232	0.066	0.249
List rank	21.27	15.773	14.534	11.776	13.552	11.064
(N)		(4,304)		(51,762)		(49,909)

Notes. The upper section of the table displays summary statistics (means and standard deviations) for politician-voters including their pre-candidacy, candidacy, and post-candidacy election years. *Immigrant categories* is a classification variable with six categories where Category 1 refers to individuals born in Norway to two native-born parents (see: https://www.ssb.no/en/klass/klassifikasjoner/82). *Education levels* is a classification variable with nine categories (see: https://www.ssb.no/en/klass/klassifikasjoner/36). To preserve space, we display the complete frequency distributions of immigrant and education level categories in Online Appendix Tables A.5 and A.6. The lower section of the table presents summary statistics for politician-voters in election years when they are running for office. *Safe position* measures the likelihood of being located on a safe position, while *Marginal position* is the probability of being placed on a party list rank with a 50% likelihood of election. We detail the construction of these indicators in Section 3.3 below. (N) indicates the number of candidates.

The top panel of Table 1 displays summary statistics for the dataset, including information on politician-voters' while they are standing for election as well as in their pre- and post-candidacy years. This shows that the average turnout among politician-voters is 85-89%, which is well above a municipal turnout rate of approximately 65% in recent elections. Most politician-voters in our sample are middle-aged Norwegian males with a relatively high education level. The bottom half of Table 1 furthermore indicates that turnout among those standing for election is even higher at 95-96%, and that roughly 9-11% is provided a pre-advantage by their party.

3.3 Safe, marginal or hopeless? Predicting candidates' election probabilities

To assess which politician-voters are placed in safe, marginal or hopeless positions on the party list, we estimate their likelihood of being elected from a given position on a given party list in a given municipality using historical vote results. The empirical specification takes the following form:

$$Elected_{i,m,t} = Party_{i,m,t} * Rank_{i,m,t} * Adv_{i,m,t} + \varphi_m * \gamma_t + \varepsilon_{i,m,t} \qquad (6)$$

The response variable ($Elected_{i,m,t}$) is a dummy variable for election (1) / non-election (0) of politician i in municipality m during election year t. The set of independent variables consists of two parts: a) party fixed effects ($Party_{i,m,t}$) interacted with list rank ($Rank_{i,m,t}$) interacted with pre-advantaged seat dummy ($Adv_{i,m,t}$), and b) municipality fixed effects (φ_m) interacted with election years (γ_t). The former allows for different election success probabilities for party list positions across distinct parties, which captures the fact that varying party sizes and list selection strategies may result in party-rank specific success probabilities. Municipality-year fixed effects capture any influence specific to a municipality and a specific year that affects all participants in the local election equally (e.g., more/less lists running for election,

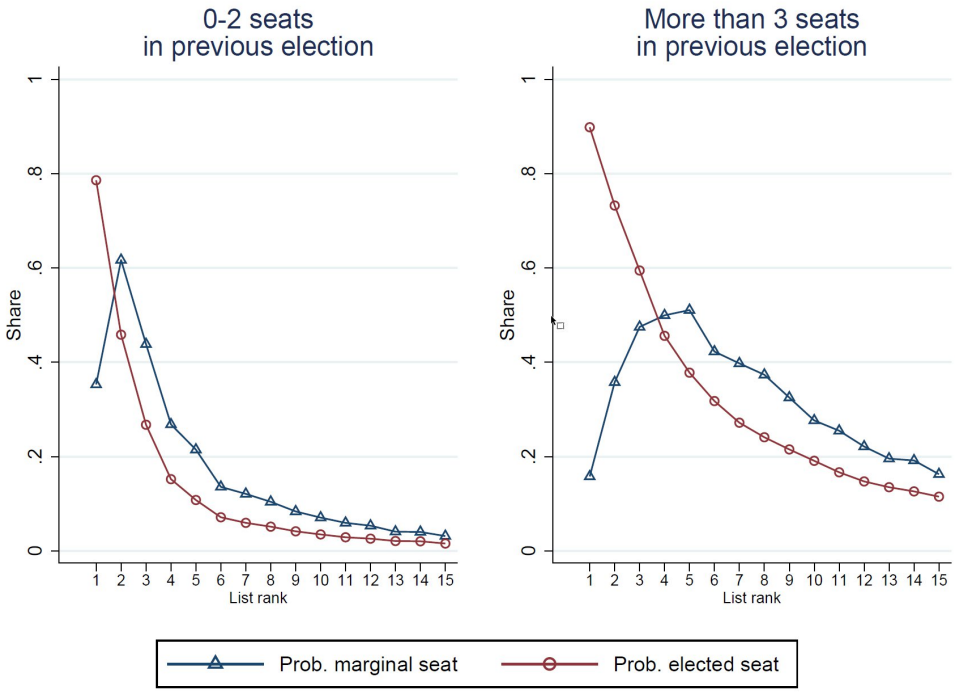
council size, and so on). This model is estimated using data for the two municipal council elections prior to the election for which we predict election probabilities. For instance, we use data for the 2007 and 2011 municipal elections to predict the likelihood of a candidate's election in the 2015 municipal election (and similarly for the prediction of election probabilities in the 2019 and 2023 elections). The regression diagnostics are shown in Columns (1), (3), and (5) of Table A.3.[7]

Using equation (6), we predict election probabilities for politicians running for election on a specific party list in a certain list position in a given municipality ($\widehat{Elected}_{i,m,t}$). This probability can be interpreted as the likelihood that a candidate *i* is located on a safe seat in municipality *m* during election year *t* ($Safe_{i,m,t}$) since a high predicted election probability reflects a high likelihood of being on a safe seat. Next, defining marginal (or contested) seats as those with a 50% probability of election, we calculate for each list rank in each party in each municipality-year the probability of being placed on such a marginal seat as: $Marginal_{i,m,t} = 1 - |0.5 - Safe_{i,m,t}|$. In other words, $Marginal_{i,m,t}$ represents the probability of being on a party list position that gives politician *i* in municipality *m* during election year *t* an expected 50% chance of being elected.

In Figure 1, we display the estimated average election probabilities as well as marginal probabilities conditional on list rank. As would be expected, individuals placed higher on the list are more likely to be on 'safe' positions, while those somewhat lower down the list are more likely to be in a 'marginal' position. The bottom half of Table 1 indicates that politicians-voters running for election on average have a 12-26% probability of being on a 'safe' position, and a 12-22% probability of being on a 'marginal' position. The remaining politician-voters are located on 'hopeless' positions or run on a party list that never achieves any seats in the municipal council.

[7] While equation (6) is estimated using a linear probability model, similar results are obtained when using a logistic regression model. In both cases, we ensure that predicted values do not fall outside the 0-1 range. Note also that politician-voters living and/or running in municipalities affected by the 2019 municipality mergers are excluded from the analyses. The reason is that we are unable to estimate predicted election probabilities for these individuals due to the change in municipal boundaries.

Figure 1. Predicted election probabilities and marginal seat probabilities



Notes. The figure shows the estimated probabilities of running on a safe seat (circles) and running on a marginal seat (triangles) conditional on party list rank. The left diagram shows distributions for party lists obtaining 0-2 seats in the previous election, and the right diagram shows distributions for lists obtaining 3 or more seats in the previous elections.

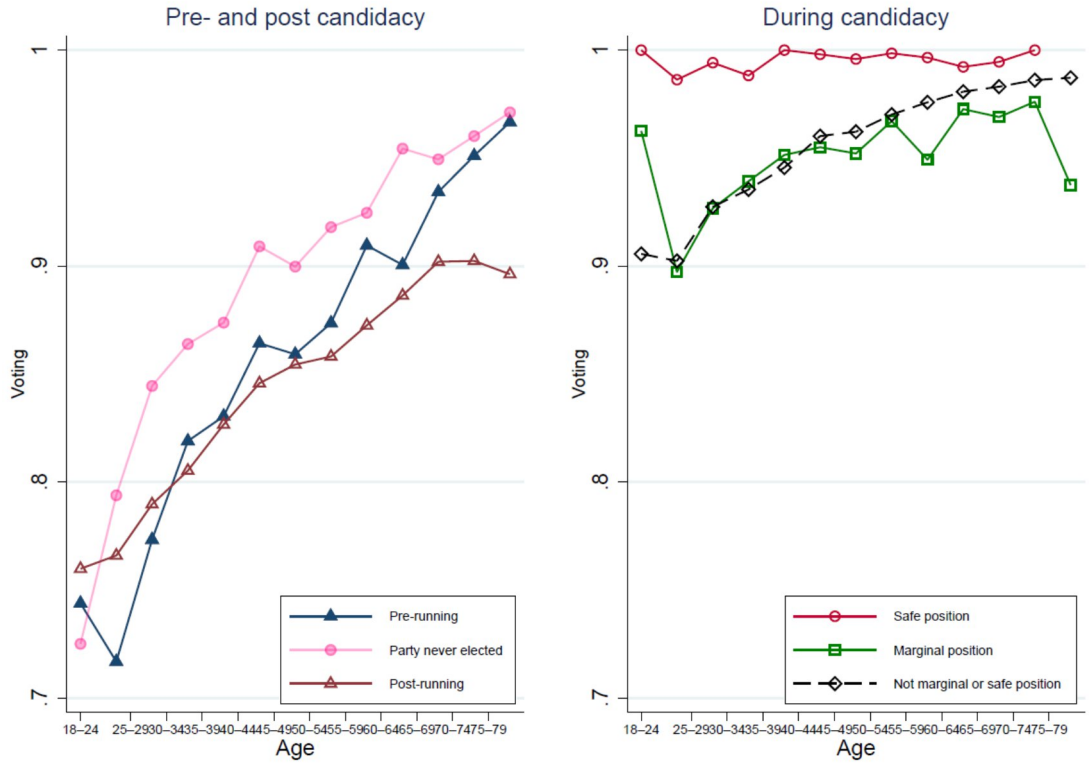
Before we proceed, it is important to illustrate that the predictions from our model in equation (5) are sufficiently accurate. To do so, we estimate a regression model where the dependent variable is a dummy variable equal to 1 if politician *i* in municipality *m* during election year *t* was elected (0 otherwise). The main independent variable is the predicted election probability for that same politician based on our prediction model in equation (6), controlling only for party affiliation. Ideally, the actual and predicted election status should be as similar as possible. This is confirmed in Columns (2), (4), and (6) of Appendix Table A.3, which highlight a near one-to-one relationship between our predicted probabilities and actual election outcomes. This validates our prediction model and supports the accuracy of its predictions.

4. Descriptive analysis

We start our empirical analysis with a descriptive assessment of politician-voters' turnout. In Figure 2, we display average electoral participation rates conditional on age and candidacy

status. In the left-hand plot, we present turnout levels of politician-voters before and after they run for office as well as those running for a party that never achieves any council representatives. In the right-hand plot, we display turnout levels of politician-voters while they run for office, and differentiate between those placed on safe, marginal or other positions. For ease of presentation, we thereby define safe positions as those having a predicted probability of election larger than 0.9, while a marginal position is defined as having a value of $Marginal_{i,m,t}$ exceeding 0.9 (i.e. politicians with a predicted 40-60% chance of being elected).

Figure 2. Voter turnout among politician-voters



Notes: The figure shows voter turnout among candidates who ran for election in at least one election between 2007 and 2023. Participation rates are shown by age for the years 2015, 2019, and 2023. In the left-hand plot, we present turnout levels of politician-voters before and after they run for office as well as those running for a party that never achieves council representation. In the right-hand plot, turnout rates are presented separately for candidates in safe list positions (probability of election greater than 0.9), marginal list positions (probability of marginality greater than 0.9), and other positions (neither marginal nor safe). Note that our large sample size leads to narrow confidence intervals for most age-position combinations (except, for instance, young politicians in safe positions). Since adding confidence intervals clutters up the figure, we refer to the full regression results with standard errors in Table 2 for a sense of the uncertainty in our findings.

Figure 2 illustrates that voter turnout peaks during the election in which politician-voters stand for election, highlighting the strong influence of personal electoral incentives.

Somewhat surprisingly, participation rates appear to decline substantially when politician-voters no longer stand for election, and generally even fall *below* pre-candidacy levels (particularly among the middle-aged and older individuals included in our sample). One might have expected their prior political engagement to give these individuals a stronger party identification, and a continued willingness to participate in elections in support of their party. We return to this observation below.

Unsurprisingly, candidates in safe list positions at or near the top of their party's candidate list consistently show the highest turnout, while politician-voters in marginal and other party list positions participate at considerably higher rates than politician-voters not running for election. More surprisingly, however, candidates in marginal positions do not appear more likely to vote than those in other list positions. If anything, Figure 2 suggests the reverse pattern among older age cohorts.

While these descriptive patterns are interesting, it is important to keep in mind that they do not control for any potential idiosyncrasies and heterogeneities across individuals, parties, municipalities, and time. Moreover, some of the datapoints in Figure 2 are based on a limited number of observations. For instance, very young individuals are not very common among those located on the safest list positions or among those in the post-running phase of their political 'career'. Similarly, there are few old politician-voters in the pre-running phase of their political career. This should be taken into account when interpreting the patterns displayed in Figure 2.

5. Empirical strategy

Let $V_{i,m,t}$ equal 1 if individual *i* living in municipality *m* in election year *t* participated in the local election, and 0 otherwise. We then estimate the following regression model to empirically assess the theoretical propositions derived in section 2:

$$V_{i,m,t} = \beta_1 Pre_{i,m,t} + \beta_2 Safe_{i,m,t} + \beta_3 Marginal_{i,m,t} + \beta_0 NeverRep_{i,m} + \beta_4 Post_{i,m,t} \left[+ Controls_{i,m,t}\right] + \varphi_m + \gamma_t \left[+ \theta_i\right] + \varepsilon_{i,m,t} \quad (7)$$

Where $Pre_{i,m,t}$ and $Post_{i,m,t}$ equal 1 for politician-voters in their pre- and post-candidacy election years, respectively, and 0 otherwise. $Safe_{i,m,t}$ indicates the probability that a politician-voter is running on a safe list position (as predicted by our prediction model in

equation (6), while $Marginal_{i,m,t}$ is the probability of running on a marginal position (as calculated via $1 - |0.5 - Safe_{i,m,t}|$; see above). In both cases, these variables are set to 0 for years in which the politician-voter is not running for election. Finally, we include a dummy variable labelled $NeverRep_{i,m}$, which is set equal to 1 for politician-voters who run on lists that never obtained a single representative in the municipality council in the 2007-2023 period. The omitted reference group therefore are those politician-voters who are placed on hopeless list positions. In light of our theoretical discussion, we expect β_1,$\beta_4 \leq 0$ and β_2,$\beta_3 > 0$.

The variables included in $Controls_{i,m,t}$ are fixed effects for age (in one-year intervals), gender, education level (using eight categories), immigrant status (using six categories), party, and list rank. In specifications including these controls, we estimate our effects of interest by comparing different politician-voters who are similar in terms of observable characteristics. Even so, individuals assigned to safe and marginal list positions could differ in terms of unobservable traits – such as their quality or willingness to contribute to the party's election success. Assuming that these are stable traits, we also estimate the regression model in equation (7) while including a full set of individual-fixed effects θ_i (and excluding the $NeverRep_{i,m}$ indicator to avoid perfect multicollinearity). This alternative specification means that we compare the *same* politician-voters across different states: i.e. pre-candidacy, post-candidacy, as well as marginal and safe positions (with all other positions as the reference category). This *within*-person comparison over time should bring us considerably closer to the estimation of causal effects.

6. Empirical results

6.1 Politician-voters' electoral participation and preference votes

Before we present our main regression results, remember that roughly 35% of marginal winners secure their seat with a vote margin of less than 1 percentage point (see above). Due to this extreme closeness of many (within-party) election victories of the marginally elected candidates, politician-voters can be expected to often gain a strong personal incentive to turn out and vote. Their own vote – and/or those stimulated within their social networks by their own electoral participation (Cox et al. 2024) – could indeed tilt the election outcome in favour of them obtaining a seat in the municipal council. This is important from a theoretical

perspective, since it implies that the difference in the probability of the politician-voter obtaining elected office when voting (p_j^1) and not voting (p_j^0) could become large enough to tilt the calculus of voting in favour of participation.

To provide an empirical assessment of this possibility that one's own electoral participation matters for the election outcome, we estimate a regression model where the dependent variable is a politician-voter's personal votes as a share of their party's total number of personal votes (which is the quantity determining whether or not one is awarded one of their party's seats; see section 3.1). The independent variable is an indicator variable equal to 1 if the politician-voter voted, 0 otherwise. The resulting point estimate indicates the extent to which an individual's own electoral participation affects their share of personal votes within the party. We estimate this model first with fixed effects for election year, municipality, party, list rank, and whether the candidate had a pre-advantage. Next, we also exploit within-candidate variation by including a full set of individual fixed effects, which may be important since some candidates do not vote in every election they contest.

The results, presented in Appendix Table A.2, indicate that a candidate's own vote is on average associated with a 0.7 to 1.1 percentage point increase in their share of their party's personal votes. Importantly, these findings do not conclusively demonstrate causal effects, nor do they necessarily indicate that this association results from the individual's *own* vote (rather than, say, those triggered by their electoral participation). Yet, and crucially, the uncovered point estimate is roughly the same size as the margin of victory of about 35% of marginal winners (see above). Hence, these findings suggest that politician-voters in closely contested races can improve their electoral prospects by personally participating in the election.

6.2 Politician-voters' electoral participation

Table 2 reports the results from estimating equation (6) using a balanced dataset of politician-voters for the municipal election years 2015, 2019 and 2023. Column (1) controls for municipality, year and age fixed effects, while Column (2) adds further controls for gender, education, party list and list rank. The latter are important to control for all stable rank position and party characteristics (e.g., the fact that candidates from large parties are probably different from those of parties who never get elected). Column (3) displays regression

estimates when including individual fixed effects (which also absorb fixed party characteristics since candidates stick to their party label across elections).

Table 2. Electoral incentives and candidate turnout

	(1)	(2)	(3)
Pre candidacy (=1)	-0.108***	-0.0972***	-0.0988***
	(0.00459)	(0.00398)	(0.00549)
Safe position	0.0186***	0.0158***	0.0293***
	(0.00304)	(0.00258)	(0.00633)
Marginal position	0.0303***	0.0274***	0.00610
	(0.00277)	(0.00272)	(0.00684)
List never elected (=1)	-0.0681***	-0.0501***	
	(0.00725)	(0.00559)	
Post candidacy (=1)	-0.105***	-0.102***	-0.0511***
	(0.00218)	(0.00197)	(0.00318)
Observations	350,701	349,923	339,550
R-squared	0.043	0.072	0.675
F-test (Safe =Marginal)	7.492	8.589	4.085
Prob>F	0.00651	0.00360	0.0440
Municipality FE	Yes	Yes	No
Year FE	Yes	Yes	Yes
Age FE	Yes	Yes	Yes
Gender	No	Yes	No
Education level FE	No	Yes	No
Political party/list FE	No	Yes	No
List rank FE	No	Yes	No
Individual FE	No	No	Yes

Notes. The table shows regression estimates showing the impact of electoral incentives on candidate vote participation. The sample includes all candidates running for election in the 2019 and 2023 elections as well a sample of candidates running in specific municipalities in the 2015 election. Municipalities affected by the 2019 mergers are excluded from the sample. The F-test statistics shows F-values and significance probabilities of safe list positions have the same effect on electoral participation as marginal list positions. The standard errors are clustered on municipalities. Significance levels: *** p<0.01, ** p<0.05, * p<0.1

Three main findings stand out in Table 2. First, the coefficients on pre- and post-candidacy are both negative, substantial, and statistically significant at conventional levels throughout Table 2. The point estimate on pre-candidacy consistently indicates that turnout is about 10 percentage points lower in the election(s) before a politician-voter runs for office (compared to when they are on the ballot in a non-safe and non-marginal list position; the omitted reference category). Similarly, when an individual is no longer a candidate, their likelihood of voting is observed to be five percentage points lower (in the preferred model with individual fixed effects). These findings are consistent with the theoretical proposition that standing for election in and of itself is strongly associated with voting—even when one has no realistic prospect of winning a seat for oneself. This naturally also indicates that ego rents alone

cannot fully account for the higher levels of observed turnout among politician-voters. Social obligations to participate – such as those arising from credibility and integrity costs vis-à-vis voters and the media, and/or feeling honor-bound to turn out when standing for election – thus also matter in politician-voters' participation calculus.

Second, the estimates show that seat (in)security shapes incentives to vote. Increasing the probability of being on a safe seat from 0 to 1 (the two extremes), is linked to an increase in electoral participation by 2-3 percentage points. This confirms our expectation that anyone occupying a safe position on the party list is statistically significantly more likely to vote than those in non-safe and non-marginal positions. Politician-voters in such positions indeed face both a higher likelihood of obtaining ego rents and an increase in the expected abstention costs (see section 2). Reversely, running for office on a party list that never secures a council seat ("List never elected") displays a large negative coefficient in Models (1) and (2). This indicates that running under a party label with virtually no chance of winning seats undermines the incentive to cast a ballot, in line with theoretical predictions. This arises presumably because such parties offer no credible opportunity to realize ego rents, nor affect policy outcomes.[8]

Third, when one's place on the party list is more likely to be a contested or marginal position, electoral turnout is found to increase in models (1) and (2). Still, the latter result disappears in the individual-fixed effects framework of model (3). This shift implies that once individual characteristics are kept fixed, moving into a more contested list position has little to no positive connection to voter turnout (while being in a 'safer' seat continues to boost turnout). These results suggest that the estimated effect of marginal list placement on electoral participation in Columns 1 and 2 is at least partially driven by the types of candidates who tend to occupy these contested spots. Some candidates—arguably of higher intrinsic 'quality'—exert substantial effort regardless of their list position. Others, by contrast, appear responsive primarily when they are in more vulnerable, contested positions. In the latter case, these 'lesser-quality' candidates step up their participation efforts only if their personal election is perceived to be at risk. Once individual (candidate) fixed effects are introduced, however, the comparison is limited to each candidate's own behavior across different list placements. This reveals that what initially appeared to be an effect of marginal placement largely reflects unobserved differences between candidates.

[8] Note that this indicator variable ("List never elected (=1)) cannot be included in the individual fixed effects model (column (3)) as candidates stick to their party label across elections.

Finally, our theoretical discussion in section 2 suggested that politician-voters' participation incentives need not linearly increase in their probability of being in a safer seat (as is implicitly imposed on the models in Table 2). In effect, voter turnout is likely to peak before the perfectly safe top position(s) on the list. To assess this possibility, we re-estimate equation (7) by including the predicted probability of election as a continuous variable in both linear and quadratic forms. Based on the first-order condition of the quadratic model, this specification allows us to calculate the election probability associated with the highest likelihood of turnout. The results in Appendix Table A.4 show that the estimated optimum occurs at a predicted election probability of approximately 0.6 (when excluding individual fixed effects) to 0.84 (when including individual fixed effects). In all cases, an F-test strongly rejects that turnout is maximized at a predicted election probability equal to 1 (i.e. perfectly safe positions). As such, these findings suggest that some degree of electoral uncertainty may be important to motivate higher electoral participation among politician-voters.

7. Conclusion

Using individual-level panel data from Norwegian municipal elections, this paper provides, to the best of our knowledge, the first empirical evidence of variations in politicians' electoral participation before, during and after their political career. We show that politician-voters are, unsurprisingly, significantly more likely to vote in elections where they themselves are on the ballot. This increase in turnout appears driven both by personal ambition in terms of ego rents, and by the perceived costs of abstention when standing for election. Higher turnout arises particularly when politician-voters are on top-ranked positions on the list, while any positive effect of being in more marginal positions disappears in models with individual fixed effects (suggesting a key role for underlying individual differences in motivation). Finally, we find that post-office electoral participation exceeds pre-office participation after accounting for individual fixed effects, suggesting some degree of persistence and habit-formation.

While these results are consistent with predictions arising from an extension of the standard rational calculus-of-voting model, they also suggest several opportunities for further research. First, future scholarship could examine network spillovers from politicians' voting behavior (not merely from their candidacy itself, cf. Cox et al. 2024) to assess whether a politicians' own electoral participation influences turnout among peers, family members, or party supporters. While several theoretical frameworks predict such social effects (e.g., Schram

1991; Overbye 1995; Bufacchi 2001), we are unaware of any direct tests of this proposition. Second, it would be valuable to investigate the generalizability of our findings across distinct electoral systems, and across electoral setting where the incentives for, and visibility of, voting may differ substantially. Do similar patterns emerge in closed-list proportional systems, majoritarian electoral systems, or high-stakes national elections? Third, future research could explore heterogeneity in the effect of electoral incentives across 'types' of politicians. For example, do ego rents play a larger role for politicians with lower levels of education or income, or do they play a smaller role among those with higher levels of pro-social preferences (or 'Public Service Motivation'; Ritz et al. 2016)?

Data availability

Data subject to third party restrictions: The original data was obtained from Statistics Norway register data is subject to confidentiality.

Supplementary Information

Below is the link to the electronic supplementary material.
https://www.runesorensen.org/_files/ugd/8ada19_ff471ab4e8264100b5907fabd7a8290d.pdf

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