

Supporting Information to “Electoral Opportunism: Disentangling Myopia and Moderation”

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S1 Estimation of Election Probabilities	S2
S2 Survey Data on Local Politicians	S3
S3 Municipality-Level Panel Data	S5
S4 Supplementary Analyses	S7

S1 Estimation of Election Probabilities

Following Cronert and Nyman (2020), the approach for estimating the probability that the incumbent government will be re-elected into office involves four steps. In Step I, the *pre-electoral* uncertainty facing the involved parties is modeled. To this end, a forecasting model is estimated, which predicts the most likely seat share for each competing party in each local election, using data on prior local election results combined with party-specific data from national-level vote intention polls (Statistics Sweden 2018; Statistics Sweden 2020e). Because these polls are conducted annually, we can produce estimates referring specifically to November of each year—i.e., just around the time when the local tax rate and budget for the following year are decided by the local council.¹² Second, the uncertainty surrounding these estimates is simulated by means of a residual re-sampling technique performed 500 times.

In Step II, a model of *post-electoral* uncertainty is estimated, which predicts the probability that any given party or combination of parties—i.e., any *potential* government (Martin and Stevenson 2001)—will enter office after an election. The model is estimated based on the observed characteristics of the parties in the local councils observed between 1998 and 2018, among other things their seat shares, left–right positions, incumbency status, and historical co-governing patterns.

In Step III, the 500 sets of seat share predictions simulated in Step I are plugged into the model estimated on observed data in Step II. That way one retrieves, for each potential government resulting from each simulation in Step I, the predicted probability of entering office after the next election, based on the forecast vote shares of its constituent parties.¹³

Step IV calculates for each year the estimated probability that each incumbent party will be part of the next government, by summing up, for that year, the office probabilities for all simulated potential governments that include said party, and divide that sum by the number of simulated election outcomes. Lastly, to arrive at the final measure of the re-election probability of the incumbent government, p , the average re-election probability for the incumbent parties, weighted by their respective seat share is calculated.

¹²Here our approach deviates from that of Cronert and Nyman (2020), whose re-election probabilities refer to the month of May.

¹³To give the reader an idea about the amount of data involved in this procedure, consider that around 290 municipalities are observed annually for 20 years, and that in a standard eight-party local council there are 255 potential governments, for each of which the predicted seat share is simulated 500 times.

S2 Survey Data on Local Politicians

The survey data gathered for this study were collected through an anonymous web-based survey, approved by the Swedish Ethical Review Agency, which was managed using REDCap electronic data capture tools (Harris et al. 2009; Harris et al. 2019). The survey was distributed to all elected members of the local councils in the 290 municipalities for which an e-mail address could be retrieved either from the municipality’s web page or through correspondence with a municipal administrator.

A total of 12,262 local council members were invited, corresponding to 96.7 percent of the population as defined by the Swedish Election Authority. The invitees were randomly divided into 16 groups, each of which received the first invitation on a subsequent day. Two rounds of reminders were thereafter step-wise rolled out with new 16-day intervals. The data collection period ranged from November 10, 2020 to February 1, 2021. By that time, 3,925 individuals from 270 municipalities had participated in the survey, resulting in a response rate of 31.1 percent. 8 individuals participated twice, and in those cases we kept the occasion with the largest number of answered questions.

Data from the following survey questions were used in the study:

- 15: “Is your party currently part of the governing coalition?” [Yes – No – Difficult to answer – Do not know].
- 16: “How do you today assess the probability that your party will be part of the governing coalition after the local elections in 2022? Enter a probability between 0 and 100 percent.” Rated using a 0–100 slider.
- 19: “To the extent such a conflict exists, do you perceive that policy-making in your municipality is mainly based on what is best for the municipality in the long term, or on what the governing coalition can do to win the next election? If you have never experienced such a conflict, you may leave the question unanswered.” Rated on a five-level Likert item ranging between the two alternatives.
- 23: “Do you believe that the parties in the governing coalition would lose or gain votes if the following policies were implemented?” A set of items, including “policy is changed towards the political ‘center’” and “unfunded tax cuts are implemented”, were each rated on a five-level Likert item ranging from “lose many votes” to “win many votes”.
- 24: “Suppose that the current governing coalition feels tempted to adapt its policies in order to be re-elected in the next election. How do

Table S1: Descriptive statistics: survey data

	Mean	SD	Min	Max	Obs
Coalition member	0.55	0.50	0.00	1.00	3586
Election probability	68.48	24.34	0.00	100.00	3566
Long-term guides policy-making	2.96	1.24	1.00	5.00	3301
<i>Incumbent would gain votes if...</i>					
Policy is changed towards the center	-0.17	0.81	-2.00	2.00	3551
Unfunded tax cuts are implemented	-0.52	1.09	-2.00	2.00	3568
<i>When the incumbent is vote-maximizing...</i>					
Policy is changed towards the center	-0.32	1.01	-2.00	2.00	3509
Unfunded tax cuts are implemented	-0.91	1.28	-2.00	2.00	3521

The sample includes everyone who answered the survey question. For the exact wording of the items, see the adjacent page.

you think such an adaptation would be reflected in the municipality’s economic policy?” Items for the same policies as above were rated on a five-level Likert item ranging from “very unlikely” to “very likely”.

S3 Municipality-Level Panel Data

Descriptive statistics for the variables used in the models in Tables 1 and 2 in the paper are reported in Table S2. Definitions and sources are as follows:

- *Local tax rate.* The municipal income tax rate as determined by the local council. Expressed in percentages. Source: Statistics Sweden (2020d).
- *Electoral competitiveness.* Defined as 1 less the absolute distance of p from 50 percent ($1 - |p - 0.5|$), where p is the re-election probability of the incumbent government as estimated in the study.
- *Left-wing incumbent.* Dummy variable that scores 1 for local governments that include one or more of the left-of-center parties and no right-of-center party, and 0 for local governments that include one or more of the right-of-center parties and no left-of-center party. Cross-cutting coalitions and grand coalitions are excluded from the sample. Source: SKR (2018).
- *Budget balance.* Net profit/loss for the year as share of the municipality's estimated GDP. Source: Statistics Sweden (2020a) and Statistics Sweden (2020c).
- *Log. population.* Natural logarithm of the registered population as of December 31. Source: Statistics Sweden (2020f).
- *Log. population density.* Natural logarithm of population density per sq. km. as of December 31. Source: Statistics Sweden (2020g).
- *Share of young.* Population aged 0–19 as share of total population as of December 31. Source: Statistics Sweden (2020f).
- *Share of elderly.* Population aged 75 or above as share of total population as of December 31. Source: Statistics Sweden (2020f).
- *Employment rate.* Share of gainfully employed in the population aged 20–74. Source: Statistics Sweden (2020b) and Statistics Sweden (2020f).
- *Share with social assistance.* Claimants as share of total population, annually. Source: National Board of Health and Welfare (2020).

Table S2: Descriptive statistics: municipality-level data

	Mean	SD	Min	Max	Obs
Tax rate	21.33	1.29	14.90	23.95	3749
Electoral competitiveness	0.73	0.13	0.50	1.00	3750
Left-wing incumbent	0.52	0.50	0.00	1.00	3750
Budget balance	0.22	0.86	-4.72	29.37	3749
Log. population	9.82	0.93	7.79	13.71	3750
Log. pop. density	3.40	1.70	-1.61	8.48	3750
Share of young	23.73	2.59	16.65	31.41	3750
Share of elderly	9.87	2.28	3.45	16.98	3750
Employment rate	65.15	4.44	45.60	78.40	3750
Share with soc. assistance	4.31	1.91	0.20	15.80	3750
Opportunism	-0.02	1.01	-3.24	3.31	3482

The sample has been restricted to the observations used in the main analyses. Obviously, the means in the table refer to the situation before the variables were centered around their mean. After centering, all means become zero.

- *Opportunism*. Standardized average of the responses by all politicians in the municipality to the following question in our survey: “To the extent such a conflict exists, do you perceive that policy-making in your municipality is mainly based on what is best for the municipality in the long term, or on what the governing coalition can do to win the next election?” The item was rated on a five-level Likert item ranging between the two alternatives, and inverted before averaging so that higher ratings indicate a higher level of electoral opportunism. Data are available for 268 municipalities.

S4 Supplementary Analyses

This section of the Supporting Information reports a number of tables containing additional regression output. First, Tables S3 and S4 report the longer output of the models in Tables 1 and 2 in the paper.

Table S5 addresses the potential objection that it would be more straightforward to test for policy myopia by using outcome variables that are less ideologically contested than the tax rate. Considering that both deficits and under-investment are commonly mentioned as symptoms of policy myopia, the two sets of models replicate the main models in Table 1 for two additional outcomes: the budget balance and the proportion of public investments (as share of local GDP). Models 1–3 report small and insignificant effects of competitiveness on the budget balance. More interestingly, Models 4–6 reveal a large and statistically significant *positive* effect of competitiveness on public investments, indicating that governments on average invest *more* as competitiveness increases. As discussed in the paper, the fact that fiscal policy in Swedish municipalities is governed by a “golden rule”, might be one possible explanation for this result.

Studies on the effects of electoral competitiveness in multi-party systems sometimes base their explanatory variables on the degree of competitiveness facing the largest party or the party of the chief executive rather than the government as a whole (e.g., Aidt, Veiga, and Veiga 2011; Abou-Chadi and Immergut 2019). To check whether our results are robust to that choice, the three models in Table S6 replicate those in Table 1 in the paper but instead include indicators of electoral competitiveness that are based on the probability p that the largest incumbent party will be re-elected into the government. Reassuringly, the results for both myopia and moderation are very similar to those reported in the main analysis.

As another robustness check, Table S7 reports three models run on the full range of incumbent re-election probabilities, including the 13 percent of observations for which $p < 0.5$. To account for the conflicting theories about whether incumbents’ opportunistic behavior is triggered by the *electoral vulnerability* ($1 - p$) or the *electoral competitiveness* ($1 - |p - 0.5|$) that it faces, these models include both these variables and their interactions with left-wing incumbency. Accordingly, in these specifications, the hypotheses for myopia and moderation each corresponds to two different parameters, one for competitiveness and one for vulnerability.

The conclusions from this exercise are in line with those from the main analysis, indicating that the moderating effect of competitiveness is the dominant expression of electoral opportunism. As for myopia, the coefficients

of competitiveness and vulnerability are both low and point in different directions. For moderation, both interaction terms have the expected negative coefficients, but it the Left-wing \times competitiveness that is the largest and the one that reaches statistical significance.

Table S3: Effects of electoral competitiveness on the tax rate: Control output

	(1)	(2)	(3)
Competitiveness	-0.199** (0.077)	-0.094 (0.073)	-0.089 (0.071)
Left-wing \times Competitiveness	-0.541** (0.233)	-0.723*** (0.213)	-0.901*** (0.226)
Log. population		-0.759 (0.516)	0.289 (0.984)
Log. pop. density		-0.069 (0.331)	-1.519 (0.930)
Share of young		-0.029 (0.019)	-0.069 (0.044)
Share of elderly		0.001 (0.022)	-0.044 (0.053)
Share with soc. assistance		0.011 (0.007)	-0.033 (0.031)
Employment rate		-0.005 (0.006)	0.018 (0.017)
Budget balance		-0.002 (0.003)	-0.034 (0.027)
Regional average tax rate ($t + 1$)		0.785*** (0.046)	0.766*** (0.048)
Observations	3,750	3,749	3,749
Within-period R^2	0.006	0.165	0.174
Mean of dep. variable	21.4	21.4	21.4
Municipality-term and year FE	Yes	Yes	Yes
Additional controls	No	Yes	Yes
Additional interactions	No	No	Yes

Identical to Table 1 in the paper. Sample restricted to election periods where the average re-election probability is 0.5 or higher and the incumbent government belongs to either the left or the right. Standard errors in parentheses, clustered at the election period (municipality \times election term) level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table S4: Heterogeneous effects analysis: Control output

	Opportunism		Election year	
	(1)	(2)	(3)	(4)
Competitiveness	-0.119 (0.073)	-0.109 (0.072)	-0.079 (0.075)	-0.051 (0.074)
Left-wing \times Competitiveness	-0.626*** (0.217)	-0.799*** (0.229)	-0.724*** (0.212)	-0.926*** (0.222)
Opportunism \times Competitiveness	-0.006 (0.093)	-0.000 (0.095)		
Left-wing \times Comp. \times Opportunism	-0.429** (0.193)	-0.461** (0.198)		
Election year \times Competitiveness			-0.080* (0.045)	-0.091** (0.045)
Left-wing \times Comp. \times Election year			0.273*** (0.095)	0.246*** (0.094)
Log. population	-0.513 (0.507)	0.345 (0.959)	-0.824 (0.532)	-0.506 (1.045)
Log. pop. density	-0.119 (0.327)	-1.332 (0.906)	-0.062 (0.337)	-1.275 (0.946)
Share of young	-0.030 (0.019)	-0.076* (0.045)	-0.029 (0.019)	-0.055 (0.044)
Share of elderly	0.002 (0.022)	-0.039 (0.054)	-0.001 (0.022)	-0.067 (0.053)
Share with soc. assistance	0.012 (0.007)	-0.020 (0.032)	0.011 (0.007)	-0.018 (0.030)
Employment rate	-0.008 (0.006)	0.018 (0.018)	-0.006 (0.006)	0.028 (0.017)
Budget balance	-0.001 (0.003)	-0.040 (0.027)	-0.002 (0.003)	-0.037 (0.027)
Regional average tax rate ($t + 1$)	0.804*** (0.047)	0.781*** (0.048)	0.780*** (0.046)	0.762*** (0.048)
Observations	3,481	3,481	3,749	3,749
Within-period R^2	0.180	0.194	0.168	0.184
Mean of dep. variable	21.3	21.3	21.4	21.4
Municipality-term and year FE	Yes	Yes	Yes	Yes
Additional controls	Yes	Yes	Yes	Yes
Additional interactions	No	Yes	No	Yes

Identical to Table 2 in the paper. Sample restricted to election periods where the average re-election probability is 0.5 or higher, and the incumbent government belongs to either the left or right. Standard errors in parentheses, clustered at the election period (municipality \times election term) level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table S5: Budget balance and public investments as share of local GDP

	Budget balance			Investments		
	(1)	(2)	(3)	(4)	(5)	(6)
Competitiveness	0.266 (0.195)	0.307 (0.218)	0.320 (0.273)	0.426** (0.194)	0.455** (0.193)	0.395** (0.197)
Left-wing \times Competitiveness	0.276 (0.710)	0.261 (0.743)	0.459 (0.824)	0.491 (0.537)	0.483 (0.533)	0.492 (0.582)
Log. population		-4.194** (1.889)	3.509 (8.006)		3.663** (1.632)	1.514 (3.413)
Log. pop. density		-0.241 (0.881)	-6.405 (7.126)		0.231 (1.149)	0.347 (3.005)
Share of young		0.024 (0.077)	-0.238 (0.146)		-0.014 (0.048)	0.092 (0.117)
Share of elderly		0.049 (0.118)	-0.186 (0.164)		0.021 (0.065)	0.143 (0.151)
Share with soc. assistance		-0.071** (0.034)	0.052 (0.129)		0.001 (0.026)	0.077 (0.094)
Employment rate		-0.029 (0.038)	-0.020 (0.069)		0.014 (0.018)	0.006 (0.046)
Budget balance		-0.277*** (0.061)	-0.034 (0.246)		0.019* (0.010)	-0.055 (0.052)
Regional average budget balance		0.081 (0.061)	0.077 (0.060)			
Regional average investments					-0.065 (0.090)	-0.075 (0.090)
Observations	3,750	3,749	3,749	3,607	3,606	3,606
Within-period R^2	0.000	0.086	0.098	0.002	0.013	0.021
Mean of dep. variable	0.228	0.228	0.228	1.017	1.017	1.017
Municipality-term and year FE	Yes	Yes	Yes	Yes	Yes	Yes
Additional interactions	No	No	Yes	No	No	Yes

Sample restricted to election periods where the average re-election probability is 0.5 or higher, and the incumbent government belongs to either the left or right. Standard errors in parentheses, clustered at the election period (municipality \times election term) level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table S6: Re-election probability of largest incumbent party

	(1)	(2)	(3)
Competitiveness	-0.170** (0.072)	-0.071 (0.067)	-0.065 (0.066)
Left-wing \times Competitiveness	-0.597*** (0.226)	-0.734*** (0.207)	-0.883*** (0.220)
Log. population		-0.767 (0.517)	0.381 (0.981)
Log. pop. density		-0.063 (0.332)	-1.580* (0.929)
Share of young		-0.028 (0.019)	-0.062 (0.040)
Share of elderly		0.001 (0.022)	-0.032 (0.048)
Share with soc. assistance		0.011 (0.007)	-0.025 (0.030)
Employment rate		-0.005 (0.006)	0.016 (0.016)
Budget balance		-0.002 (0.003)	-0.037 (0.026)
Regional average tax rate ($t + 1$)		0.785*** (0.047)	0.764*** (0.048)
Observations	3,750	3,749	3,749
Within-period R^2	0.006	0.165	0.173
Mean of dep. variable	21.4	21.4	21.4
Municipality-term and year FE	Yes	Yes	Yes
Additional interactions	No	No	Yes

Sample restricted to election periods where the average re-election probability is 0.5 or higher, and the incumbent government belongs to either the left or right. Standard errors in parentheses, clustered at the election period (municipality \times election term) level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table S7: Including low re-election probabilities

	(1)	(2)	(3)
Competitiveness	-0.244** (0.096)	-0.164* (0.099)	-0.168* (0.101)
Vulnerability	0.045 (0.089)	0.066 (0.091)	0.079 (0.094)
Left-wing \times Competitiveness	-0.402** (0.193)	-0.475** (0.200)	-0.484** (0.207)
Left-wing \times Vulnerability	-0.102 (0.240)	-0.209 (0.234)	-0.337 (0.245)
Log. population		-0.658 (0.497)	-0.521 (0.774)
Log. pop. density		-0.047 (0.320)	-0.607 (0.608)
Share of young		-0.032* (0.018)	-0.075* (0.041)
Share of elderly		-0.002 (0.021)	-0.037 (0.049)
Share with soc. assistance		0.009 (0.007)	-0.036 (0.030)
Employment rate		-0.005 (0.005)	0.013 (0.017)
Budget balance		-0.002 (0.003)	-0.022 (0.024)
Regional average tax rate ($t + 1$)		0.771*** (0.044)	0.754*** (0.046)
Observations	4,122	4,121	4,121
Within-period R^2	0.007	0.159	0.166
Mean of dep. variable	21.4	21.4	21.4
Municipality-term and year FE	Yes	Yes	Yes
Additional interactions	No	No	Yes

Sample restricted to election periods where the average re-election probability is 0.5 or higher, and the incumbent government belongs to either the left or right. Standard errors in parentheses, clustered at the election period (municipality \times election term) level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

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