Public Employees as Politicians: Evidence from Close Elections

Supporting information
(For Online Publication Only)

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This document includes Online Appendices to paper "Public Employees as Politicians: Evidence from Close Elections". Appendix A includes descriptive statistics. We discuss various robustness and validity checks related to the results presented in the main text in Appendices B (main results), C (council and party size heterogeneity) and D (sectoral effects). In Appendix E report a battery of tests related to rent seeking. Finally, in Appendix F, we present validity checks for the instrument for female seat share, which is used as a control variable in various specifications.

Online Appendix A: Descriptive Statistics

Table A1. This table reports the descriptive statistics on the candidates in elections held between 1996 and 2008. These data are used to construct, e.g., the instrument and some control variables. To illustrate the differences between municipal employee and other candidates, we also split the sample in two by municipal employee status. Overall we have 161,263 candidate-election observations. The final candidate sample size is 152,987 as we omit 33 elections, because those municipalities underwent a merger during the election term. We also omit 2004 data for two merging municipalities due to ambiguities in the candidate-level election data. It seems that the ambiguity results from a popular candidate being disqualified. In Table A1, 5% of the municipal employees are classified as unemployed due to differences in survey timing and definitions between Statistics Finland unemployment status and our municipal employee status.

Table A1. Candidate characteristics.

	All			Municipal employees			Other		
Variable	N	Mean	Std. Dev.	N	Mean	Std. Dev.	N	Mean	Std. Dev.
Vote share	152 987	1.01	1.21	35 491	1.11	1.28	117 496	0.98	1.18
Party vote share	152 987	6.05	11.28	35 491	6.19	10.53	117 496	6.01	11.49
Number of votes	152 987	59.29	149.33	35 491	68.81	152.36	117 496	56.42	148.28
Female	152 987	0.39	0.49	35 491	0.56	0.50	117 496	0.34	0.47
Age	152 987	46.23	12.30	35 491	45.12	10.49	117 496	46.57	12.78
Incumbent	152 987	0.21	0.41	35 491	0.25	0.43	117 496	0.20	0.40
Wage income (€)	134 034	22 895	25 572	30 964	24 355	14 941	103 070	22 457	27 973
Capital income (€)	134 034	2 408	30 933	30 964	1 025	8 431	103 070	2 823	34 960
High professional	152 913	0.20	0.40	35 482	0.31	0.46	117 431	0.16	0.37
Unemployed	152 913	0.07	0.25	35 482	0.05	0.22	117 431	0.07	0.26
University degree	120 922	0.15	0.36	30 790	0.18	0.38	90 132	0.14	0.35
Coalition Party	152 987	0.19	0.39	35 491	0.17	0.37	117 496	0.19	0.40
Social Dem. Party	152 987	0.22	0.41	35 491	0.27	0.44	117 496	0.20	0.40
Center Party	152 987	0.28	0.45	35 491	0.26	0.44	117 496	0.28	0.45
True Finns	152 987	0.03	0.17	35 491	0.02	0.12	117 496	0.03	0.18
Green Party	152 987	0.04	0.20	35 491	0.05	0.22	117 496	0.04	0.20
Left Alliance	152 987	0.11	0.31	35 491	0.11	0.31	117 496	0.11	0.31
Swedish Party	152 987	0.04	0.19	35 491	0.04	0.19	117 496	0.04	0.19
Christian Dem. Party	152 987	0.04	0.20	35 491	0.04	0.20	117 496	0.04	0.21
Other parties	152 987	0.05	0.22	35 491	0.04	0.20	117 496	0.06	0.23

Notes: Income and education data are missing for some observations for all election years. More importantly, for the 1996 elections, income data are available only for the candidates who run also in 2000, 2004 or 2008 elections. We use 1995 occupation data for the elections held in 1996.

Table A2. This table reports the descriptive statistics at the municipality level, including both municipality and local council characteristics.

Table A2. Summary statistics for municipal and council data.

Variable	Mean	Std. dev.
Municipality characteristics		
Total expenditures (€ per capita)	5,564	999
Health care expenditures (€ per capita)	1,699	409
Other expenditures (€ per capita)	3,865	822
Population	12,912	36,999
Young inhabitants %	17.7	3.52
Old inhabitants %	19.5	4.90
Council composition		
Council size	29.1	11.3
Municipal employees %	26.4	12.3
Municipal health care workers %	7.02	5.11
Municipal non health care workers %	19.40	11.43
Incumbents %	56.9	9.22
Women %	33.9	8.93
High professionals %	20.9	11.9
University educated %	12.6	9.9
Unemployed %	3.54	4.02
Center Party seat share %	40.5	21.2
Coalition Party seat share %	16.3	10.9
Social Democratic Party seat share %	19.6	11.3
Green party seat share %	1.88	3.52
Left Alliance seat share %	7.82	8.01
Swedish Party seat share %	5.33	18.1
True Finns seat share %	1.75	4.13
Christian Democrats seat share %	2.99	3.94
Other parties seat share %	3.87	9.05

Notes: Unit of observation is a municipality *m* in election period *t*. Number of observations is 1544. Municipality characteristics are calculated as means over the four year council term. Young inhabitants refer to the age group of 0-17 year old and old to 64+ year old.

Online Appendix B: Robustness and Validity of the Total Expenditures Effect

Figures B1 and B2. These figures illustrate that the variation in the instrument increases as the bandwidth increases. The shape of the distribution remains symmetric, implying valid randomization.

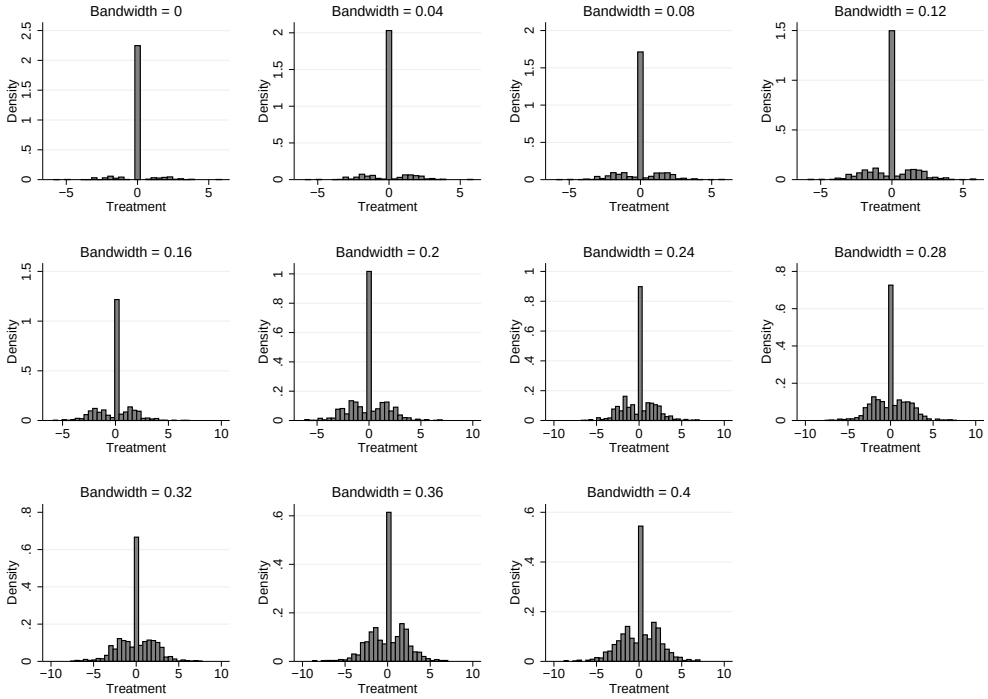


Figure B1. Distribution of T_{mt} .

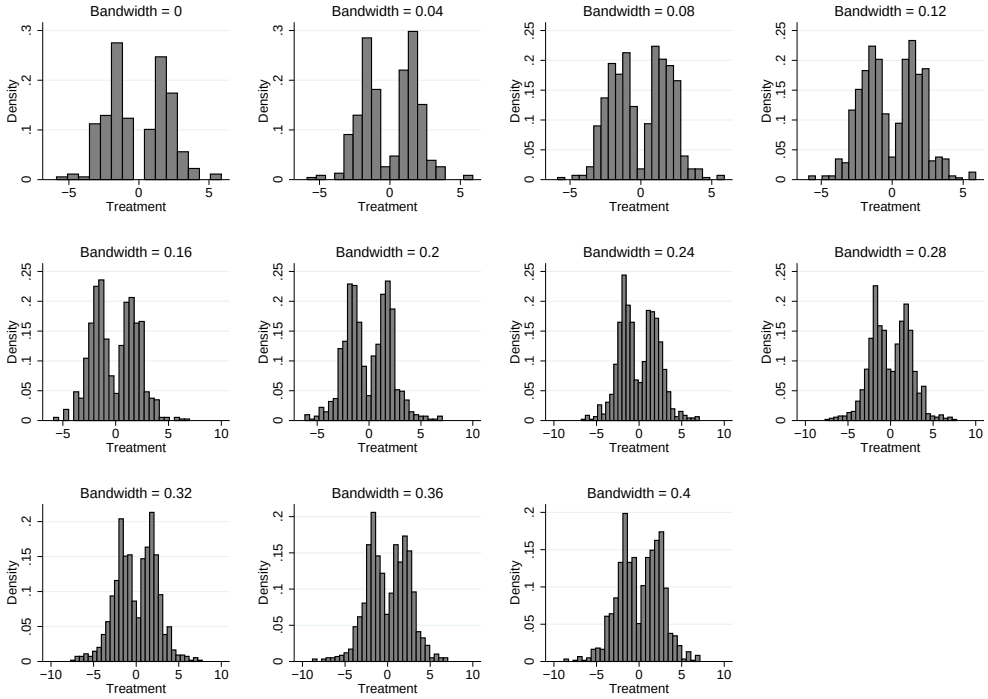


Figure B2. Distribution of T_{mt} (excluding zeros).

Figure B3. We use this figure to explore whether our aggregation procedure produces a correct municipality level instrument. We can do so by running the first stage of IV and checking whether the coefficient of the instrument T_m (ϕ) is indeed one. This regression can also be used to test for the power of our instrument for various bandwidth sizes. In Figure B3, we present estimates of ϕ for various bandwidths (ε), first controlling only for the year fixed effect (the figure on the left) and then for all the municipality controls (the figure on the right). As can be seen, the coefficient is below unity when the instrument is calculated using only the lotteries in the data (i.e., those ties that are actually solved using a lottery), though we cannot reject the null hypothesis that it is unity. However, when using larger bandwidths the point estimate is close to unity, as it should be. The anomaly in the "lottery sample" may simply be a small sample statistical fluke: In particular, the first stages for the instruments for health care employees or females do not contain this anomaly (see Figures D1 and F1).

The first stage is fairly precisely estimated for bandwidths larger than 0.04 (i.e., 4 votes out of ten thousand). The control variables do not increase precision substantially. The "lottery sample" ($\varepsilon = 0$) produces noisier results, but the precision increases as we increase the bandwidth. For a bandwidth of 0.04 the *F*-test statistics for the instrument is around 10 and for the larger bandwidths it is substantially larger than 10 (e.g. for the 0.4 bandwidth with the controls, the *F*-test statistic is 60). From the perspective of statistical power, we should rely on the results that use bandwidths of about 0.08 or larger.

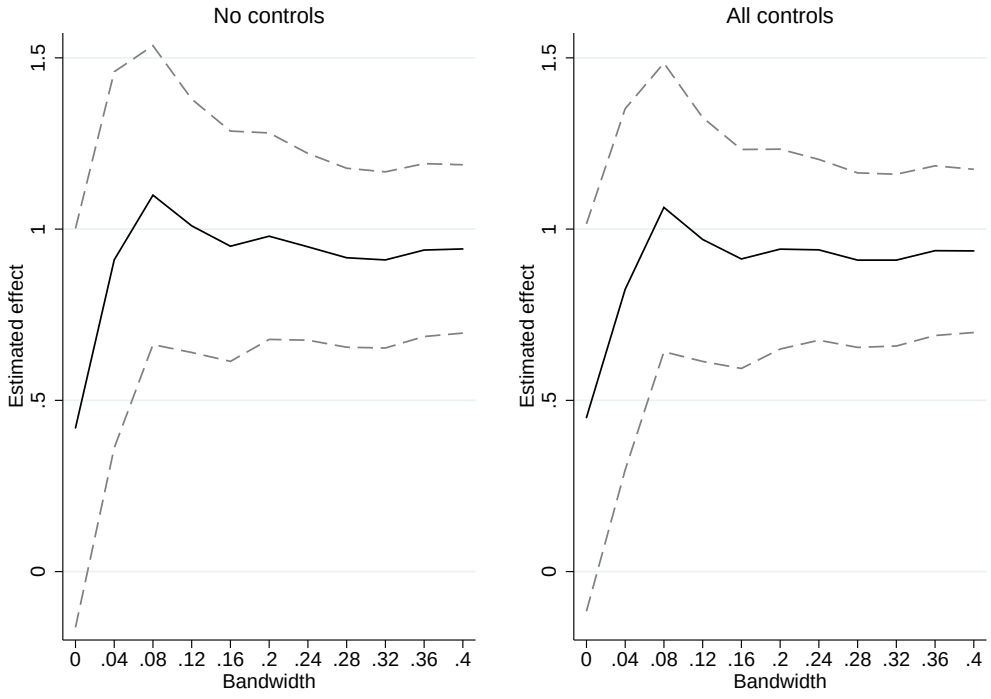


Figure B3. First stage of IV for municipal employees.

Notes: The solid line represents the first stage point estimates and the dotted lines the 95% confidence interval. The left hand graph includes only the year dummies as controls. The right hand graph includes year dummies, parties' lagged seat shares, municipality population, squared population and shares of young and old citizens (all lagged). Standard errors are clustered at the municipality level.

Table B1. This table shows the pre-treatment covariate balance. We divide the data into two groups, based on the seat share of municipal employees exceeding ($T_{mt} > 0$) or falling short of ($T_{mt} < 0$) its expectation and test whether the difference in means is statistically significant. To this end, we employ a simple *t*-test, adjusting for clustering at the municipality level. The number of observations varies because we do not observe some of the pre-treatment variables for the 1996 election term. For example, we do not have the 1992 individual level election data. Furthermore, due to a structural data break in 1997, we do not have comparable expenditure measures for 1993–1996. Only in one case out of 48, we find one difference being statistically significant at 10 % level. Therefore, this table provides support for our instrument capturing truly random variation.

We also test covariate balance using regression that controls for year fixed effects (not reported). When $\varepsilon = 0.4$, the null hypothesis of balance is rejected only for two variables (Coalition Party seat share and Council size) at the 5% significance level. Due to multiple testing, this cannot be taken as a sign of imbalance: the number of rejections is no more than would be expected at the chosen level of significance.

Table B1. Pre-treatment covariate balance at municipality-level.

	$T_{mt} > 0$			$T_{mt} < 0$			
ε = 0 (lotteries)	N	Mean	Std. Dev.	N	Mean	Std. Dev.	Difference
Total expenditures (€ per capita)	68	5 316	956	75	5 323	838	-7
Health care expenditures (€ per capita)	68	1 600	352	75	1 653	370	-53
Other expenditures (€ per capita)	68	3 716	795	75	3 670	663	46
Population	109	8 524	14 144	118	8 835	11 398	-311
Young inhabitants %	109	18.83	3.67	118	18.67	3.04	0.16
Old inhabitants %	109	18.05	4.61	118	18.02	4.61	0.03
Council size	109	27.75	9.32	118	27.88	10.05	-1.17
Municipal employees %	68	28.69	14.07	75	27.75	11.50	0.93
Instrument for municipal employees	68	0.00	0.08	75	-0.08	0.08	0.08
Municipal health care employees %	68	7.72	5.50	75	7.50	4.49	0.22
Municipal non-health care employees %	68	20.97	12.11	75	20.25	10.69	0.72
Incumbents %	68	56.65	7.57	75	57.11	9.40	-3.76
Women %	68	34.02	9.63	75	34.08	8.36	-0.06
High professionals %	68	18.73	11.42	75	19.56	10.11	-0.83
University educated %	68	11.65	7.43	75	10.57	7.62	1.08
Unemployed %	68	2.81	3.21	75	3.98	4.48	-1.17*
Center Party seat share %	109	40.49	20.08	118	40.53	19.50	-0.03
Coalition Party seat share %	109	16.13	9.63	118	16.07	10.17	0.06
Social Democratic Party seat share %	109	19.97	10.92	118	21.30	10.73	-1.33
Green party seat share %	109	1.89	3.22	118	1.53	3.43	0.36
Left Alliance seat share %	109	9.49	8.83	118	8.90	8.76	0.59
Swedish Party seat share %	109	3.25	13.82	118	3.79	15.75	-0.54
True Finns seat share %	109	2.33	4.70	118	2.11	4.08	0.22
Christian Democrats seat share %	109	3.01	3.89	118	2.73	3.62	0.28
ε = 0.4	N	Mean	Std. Dev.	N	Mean	Std. Dev.	Difference
Total expenditures (€ per capita)	404	5 334	828	406	5 327	818	7
Health care expenditures (€ per capita)	404	1 631	392	403	1 636	359	-5
Other expenditures (€ per capita)	404	3 703	679	403	3 691	654	12
Population	588	17 488	46 681	557	13 548	33 128	3 939
Young inhabitants %	588	18.67	3.29	557	18.63	3.26	0.04
Old inhabitants %	588	17.52	4.65	557	17.90	4.42	-0.38
Council size	588	31.91	11.81	557	30.55	10.80	1.35
Municipal employees %	404	28.38	13.49	403	27.69	12.99	0.70
Instrument for municipal employees	404	0.17	0.10	404	0.02	0.10	0.15
Municipal health care employees %	404	7.43	5.06	403	7.09	4.81	0.35
Municipal non-health care employees %	404	20.95	12.71	403	20.60	12.09	0.35
Incumbents %	404	58.12	8.54	403	57.20	9.06	0.92
Women %	404	33.69	9.02	403	33.12	8.45	0.57
High professionals %	404	23.07	12.84	403	21.79	11.90	1.28
University educated %	404	14.32	10.20	403	12.70	9.63	1.61
Unemployed %	404	3.81	3.79	403	3.58	4.03	0.23
Center Party seat share %	588	36.83	21.08	557	37.95	21.26	-1.11
Coalition Party seat share %	588	17.15	10.07	557	15.94	10.15	1.21
Social Democratic Party seat share %	588	21.70	11.83	557	21.55	11.56	0.15
Green party seat share %	588	2.40	3.94	557	1.92	3.52	0.48
Left Alliance seat share %	588	9.19	8.64	557	8.85	8.39	0.34
Swedish Party seat share %	588	4.54	16.16	557	5.70	18.47	-1.16
True Finns seat share %	588	1.84	3.92	557	1.63	3.77	0.20
Christian Democrats seat share %	588	3.04	3.65	557	3.08	3.61	-0.04

Notes: The statistical significance of the differences is tested using a *t*-test adjusted for clustering at the municipality-level. ***, ** and * denote statistical significance at 1 %, 5 % and 10 % level, respectively.

Table B2. This table shows the post-treatment covariate balance. The means are mostly balanced between the two groups. However, it should be noted that women's seat share is significantly larger in municipalities with a positive instrument. As we argue in the main text, this is not due to failed randomization but rather to the fact that most municipal employees are women (see also Table A1).

Table B2. Post-treatment council covariate balance for all municipal employees.

	$T_{mt} > 0$			$T_{mt} < 0$			
ε = 0 (lotteries)	N	Mean	Std. Dev.	N	Mean	Std. Dev.	Difference
Incumbents %	109	55.77	8.82	118	56.31	9.96	-0.54
Women %	109	33.55	8.59	118	32.42	8.96	1.14
High professionals %	109	20.29	10.63	118	20.58	10.43	-0.29
University educated %	109	12.07	8.13	118	11.42	8.53	0.65
Unemployed %	109	3.71	4.48	118	3.87	4.36	-0.16
Center Party %	109	42.55	19.84	118	41.07	19.31	1.48
Coalition Party %	109	17.10	9.59	118	17.75	10.84	-0.64
Social Democratic Party %	109	18.06	9.62	118	19.71	10.83	-1.65
Green party %	109	1.59	2.99	118	1.88	3.42	-0.29
Left Alliance %	109	8.62	8.73	118	8.17	8.48	0.45
Swedish Party %	109	3.08	13.22	118	3.80	15.97	-0.72
True Finns %	109	2.04	4.90	118	1.77	3.99	0.28
Christian Democrats %	109	3.06	3.84	118	2.95	4.15	0.11
Other parties %	109	3.89	6.96	118	2.91	6.17	0.98
ε = 0.4							
Incumbents %	588	57.26	9.16	557	57.29	8.85	-0.04
Women %	588	34.72	8.76	557	33.18	8.40	1.54**
High professionals %	588	23.34	12.84	557	22.06	11.83	1.27
University educated %	588	14.57	10.72	557	13.47	10.07	1.11
Unemployed %	588	3.47	3.88	557	3.43	3.99	0.04
Center Party %	588	38.26	20.88	557	38.48	21.00	-0.22
Coalition Party %	588	17.80	10.57	557	16.77	10.64	1.03
Social Democratic Party %	588	20.33	11.27	557	20.62	11.23	-0.29
Green party %	588	2.41	4.05	557	2.02	3.47	0.39
Left Alliance %	588	8.37	8.12	557	8.19	8.04	0.18
Swedish Party %	588	4.40	15.85	557	5.65	18.36	-1.25
True Finns %	588	1.86	4.16	557	1.69	3.76	0.17
Christian Democrats %	588	3.07	3.86	557	3.28	3.91	-0.21
Other parties %	588	3.49	6.74	557	3.30	6.30	0.19

Notes: The statistical significance of the differences is tested using a *t*-test adjusted for clustering at the municipality-level. ***, ** and * denote statistical significance at 1 %, 5 % and 10 % level, respectively.

Table B3. In this table, we analyze whether municipal employees increase public expenditures because they are more often female or because there is a municipal employee effect independent of gender. To address this question, we explore whether the council seat share of municipal employees increases municipal spending also when the gender composition of the marginal seats is accounted for. To this end, we directly control for the seat share of females (*Females*). We instrument this potentially endogenous share by the share of females who were randomly elected in the close contests. This instrument is calculated using the

procedure that produced the instrument for the share of municipal employees. We present validity checks for the instrument for female seat share in Appendix F.

When female seat share is included in the model, we get at the effect of electing a municipal employee while keeping the gender composition of the council constant. The effect then refers to either electing a male municipal employee instead of a male with another occupation or a female municipal employee instead of a female with another occupation. When included and properly instrumented, female seat share in turn captures the treatment effect of randomly electing a woman instead of a man into the council, keeping the share of municipal employees constant.

We have reproduced the estimations of Table 4, but with the seat share of females included. As can be seen from Table B3, adding the seat share of females has only a minor impact on the treatment effect estimate of the municipal employees: With IV, we find a statistically significant treatment effect of 0.0032 – 0.0035; with the reduced form model the corresponding figures are 0.0030 – 0.0031. In contrast to Chattopadhyay and Duflo (2004) and Clots-Figueras (2011), who find that increased female participation matter for the type of public spending in India, we find no robust effects from (randomly) increased female political participation, especially when the full set of controls is included. An obvious explanation for this weaker and less robust female effect is that women's position in Finland and India are quite different: Women are well represented in Finnish political decision making. Indeed, Finland was third in the world to allow female suffrage in 1906 and in our data, the share of female councilors is about 40%.

Table B3. Results for total expenditures: IV analysis for both municipal employee and female instruments.

Panel A: IV, $\varepsilon = 0.4$	(1)	(2)	(3)	(4)
Municipal employees	0.0014	0.0032*	0.0034**	0.0035**
	[0.0022]	[0.0019]	[0.0016]	[0.0016]
First stage Angrist-Pischke *F*-statistic	28.54	30.21	29.99	145.66
Females	0.0041**	0.0032**	0.0013	0.016
	[0.0019]	[0.0016]	[0.0013]	[0.012]
First stage Angrist-Pischke *F*-statistic	83.55	86.33	84.55	188.98
Panel B: Reduced form of IV, $\varepsilon = 0.4$	(5)	(6)	(7)	(8)
Municipal employees	0.0017	0.0030*	0.0037**	0.0030**
	[0.0018]	[0.0016]	[0.0014]	[0.0014]
Females	0.0044**	0.0038**	0.0018	0.017
	[0.0017]	[0.0015]	[0.0013]	[0.013]
R^2	0.29	0.43	0.57	0.59
N	1544	1544	1544	1544
Year dummies	Yes	Yes	Yes	Yes
Party controls	No	Yes	Yes	Yes
Municipality controls	No	No	Yes	Yes
Vote share	No	No	No	Yes

Notes: The unit of observation is a municipality *m* in election period *t*. The dependent variable in all the models is the logarithm of the mean of per capita total expenditures over the council term. Standard errors are clustered at the municipality level and reported in brackets. Party controls include parties' lagged seat shares. Municipality controls include lagged population, squared population and shares of young and old citizens. The first stage Angrist-Pischke *F*-statistics of individual endogenous regressors are produced by the ivreg2 command in STATA. ***, ** and * denote 1, 5 and 10 % statistical significance levels respectively.

Figure B4. In Figure B4, we plot the IV estimates of the effect of municipal employee councilors on expenditures and respective 95 % confidence intervals using varying bandwidths (ε). We vary the window for individual level closeness between 0 and 0.4, i.e. the smallest and the largest bandwidth that we use in our main text. The estimates remain rather stable across this range of bandwidths.

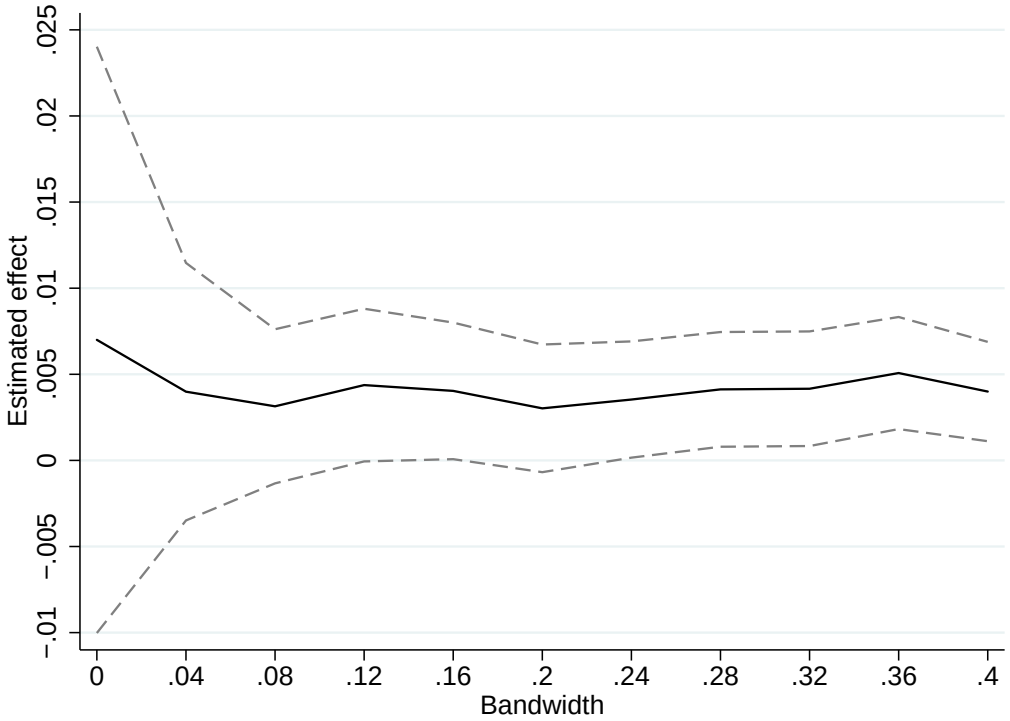


Figure B4. Robustness of the total expenditures IV effect with respect to bandwidth choice.

Notes: The solid line represents the point estimates and the dotted lines the 95% confidence interval. The specification includes year dummies as well as controls for parties' seat shares, population, squared population and shares of young and old citizens (all controls are lagged). Standard errors are clustered at the municipality level.

Figures B5 and B6. In these figures, we analyze the expenditure effects separately for each year instead of the mean over the whole council term (as done in the main text). These by-year estimates are all significant for the council term of interest, and similar in magnitude to the main results. We have also run by-year placebo regressions (four years prior to the council term of interest), and the estimates are insignificant, as they should. A slightly worrying observation is that the placebo point estimates are quite large even though they are statistically insignificant. Further analysis revealed that this finding is driven solely by the last election term in the data. When we omit that election from the analysis the placebo estimates are closer to zero but comfortingly the estimates of key interest to us remain in this restricted sample very similar (see Figure B4) to those we report in the main text.

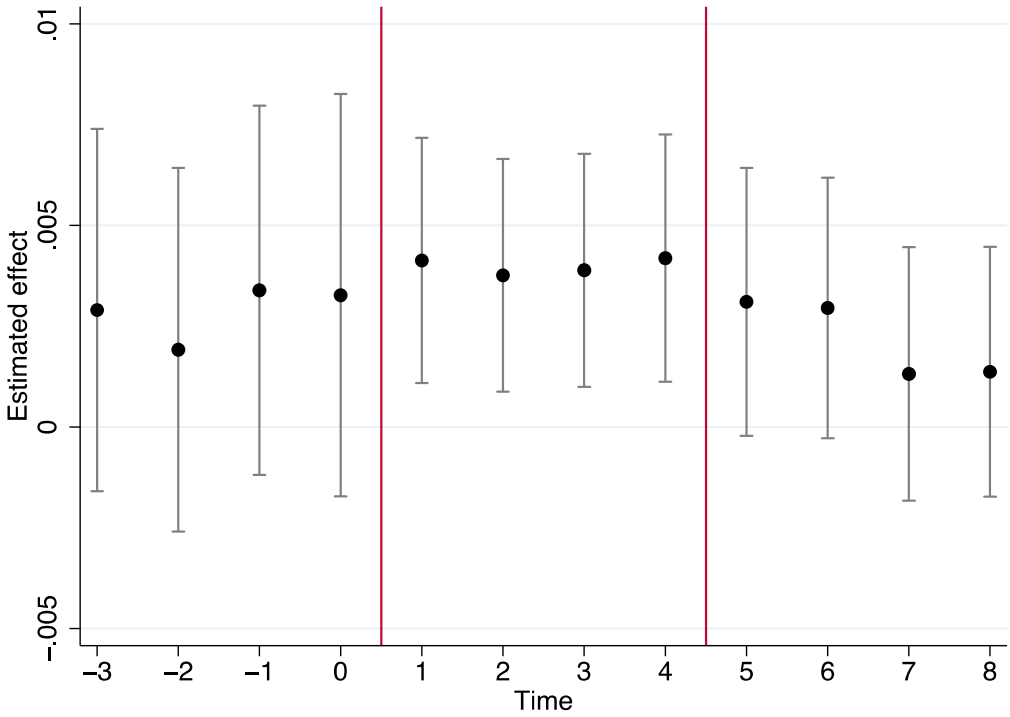


Figure B5. IV effects separately for each year.

Notes: The dots represent the point estimates and the grey lines the corresponding 95% confidence intervals. We report the effects municipal employee representation on log of total expenditures for each year's expenditures separately. Time = 0 denotes the election year and years 1–4 the actual council term in office (separated by the red lines). The specification includes year dummies as well as controls for the parties' seat shares, population, squared population and shares of young and old citizens (all controls are lagged). Standard errors are clustered at the municipality level.

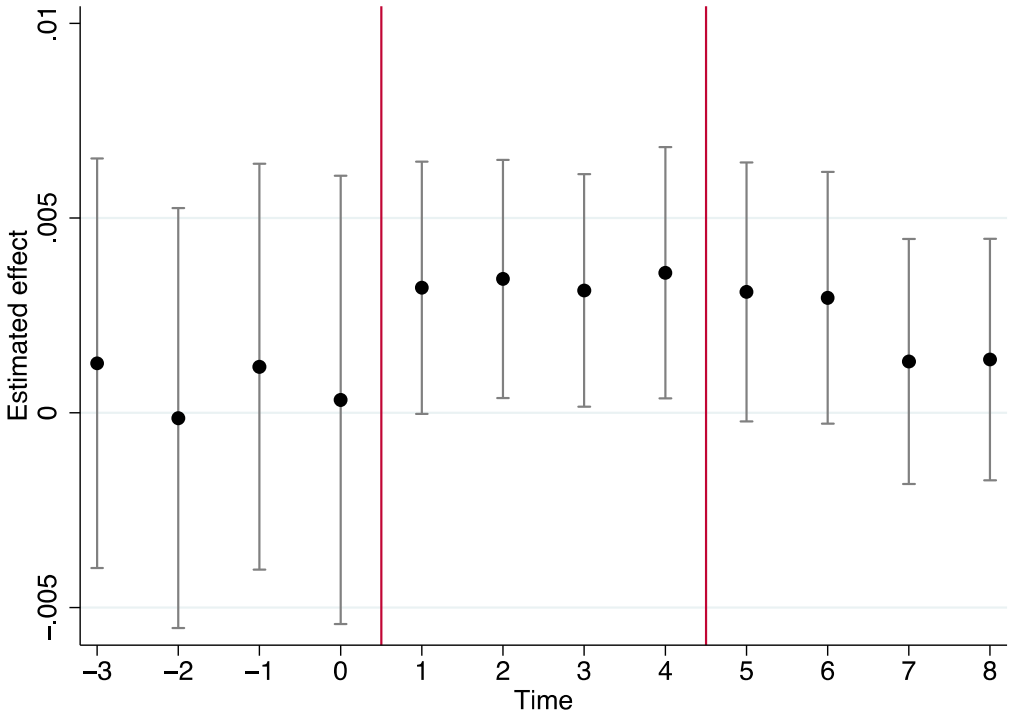


Figure B6. IV effects separately for each year excluding data from the last election term.

Notes: The dots represent the point estimates and the grey lines the corresponding 95% confidence intervals. We report the effects municipal employee representation on log of total expenditures for each year's expenditures separately. Time = 0 denotes the election year and years 1–4 the actual council term in office (separated by the red lines). The specification includes year dummies as well as controls for the parties' seat shares, population, squared population and shares of young and old citizens (all controls are lagged). Standard errors are clustered at the municipality level.

Figure B7. In Figure B7, we report graphically the results from placebo thresholds analysis. Here, we move the within-party threshold of getting elected by steps of 0.05 when constructing the instrument (as described in the main text). Notice that when we artificially change the election thresholds, also the council size and the council composition artificially change. Therefore, at each of the artificial thresholds, we compute the respective placebo council sizes, seat shares of elected municipal employees and our instruments. For the first stage results reported in the left graph, we regress the *actual* municipal employee council share on the placebo instruments. As expected, the placebo results fluctuate around zero. One placebo estimate is statistically different from zero, but small in magnitude. Given multiple testing, this is not surprising. For the IV results, we use a different first stage, however. For the IV to have any chance of producing non-zero effects, we also use the *artificial* council share of municipal employees as the endogenous variable of interest instead of the real share and instrument it with the placebo instrument. Using the placebo seat share ensures that the first stage of the placebo IV is relevant, as there is one-to-one relationship between the placebo seat share and the placebo instrument even at the fake cut-offs. Both placebo tests are conducted using $\varepsilon = 0.4$ as the bandwidth.

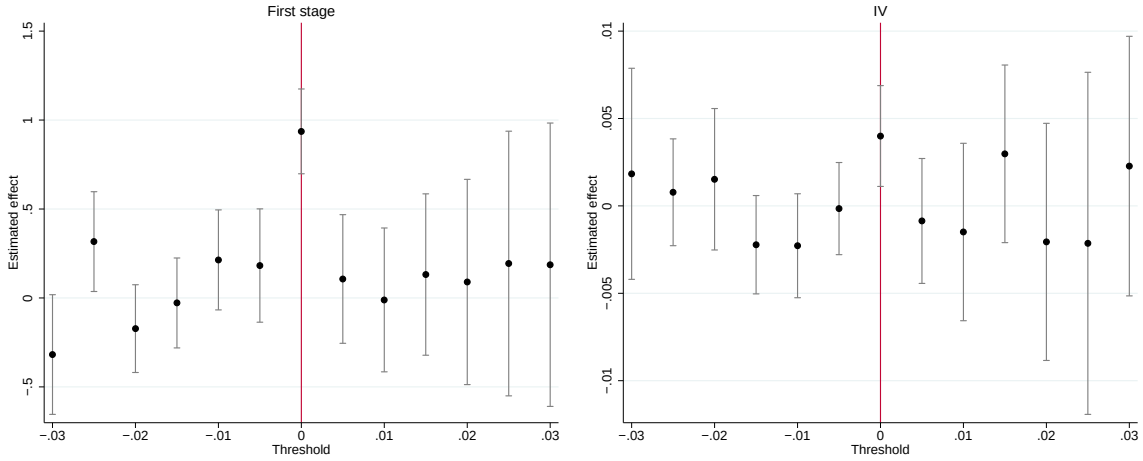


Figure B7. Effects for placebo thresholds.

Notes: The left graph reports the first stage and the right graph the second stage IV estimates. The x-axis measures distance of the placebo threshold from the actual election threshold. The red line corresponds to the actual election threshold. The dots represent the point estimates and the grey lines the corresponding 95% confidence intervals. We report the effects of municipal employee representation on log of total expenditures. The specification includes year dummies as well as controls for the parties' seat shares, population, squared population and shares of young and old citizens (all controls are lagged). Standard errors are clustered at the municipality level.

Table B4. In this table, we provide a comparison between municipalities with and without close elections. These groups are rather similar for the narrowest bandwidth, but differences show up in the case of the largest bandwidth that we use.

Table B4. Pre-treatment covariate balance between the close sample and others.

	Close elections			No close elections			
ε = 0	N	Mean	Std. Dev.	N	Mean	Std. Dev.	Difference
Total expenditures (€ per capita)	143	5 320	893	968	5 346	843	-26
Health care expenditures (€ per capita)	143	1 628	362	965	1 638	375	-10
Other expenditures (€ per capita)	143	3 692	727	965	3 708	690	-16
Population	227	8 686	12 762	1317	13 184	37 979	-4 498
Young inhabitants %	227	18.75	3.35	1317	18.45	3.34	0.29
Old inhabitants %	227	18.04	4.60	1317	18.35	4.63	-0.32
Council size	227	27.82	9.68	1317	29.18	11.09	-1.36
Municipal employees %	143	28.20	12.75	965	27.53	13.40	0.66
Municipal health care employees %	143	7.60	4.98	965	6.95	5.00	0.65
Municipal non-health care employees %	143	20.59	11.36	965	20.58	12.63	0.01
Incumbents %	143	56.89	8.55	965	57.22	9.07	-0.32
Women %	143	34.05	8.95	965	32.82	8.93	1.23
High professionals %	143	19.17	10.72	965	20.80	12.08	-1.63
University educated %	143	11.08	7.52	965	12.25	9.69	-1.17
Unemployed %	143	3.43	3.96	965	3.89	4.15	-0.46
Center Party seat share %	227	40.51	19.73	1317	39.21	21.40	1.31
Coalition Party seat share %	227	16.10	9.89	1317	15.61	10.46	0.49
Social Democratic Party seat share %	227	20.66	10.82	1317	20.75	11.93	-0.09
Green party seat share %	227	1.70	3.33	1317	1.87	3.50	-0.16
Left Alliance seat share %	227	9.18	8.78	1317	8.43	8.31	0.75
Swedish Party seat share %	227	3.53	14.83	1317	5.69	18.55	-2.16
True Finns seat share %	227	2.21	4.38	1317	1.67	3.83	0.54
Christian Democrats seat share %	227	2.87	3.75	1317	2.91	3.72	-0.04
Other parties seat share %	227	3.24	6.55	1317	3.88	9.09	-0.64
ε = 0.4	N	Mean	Std. Dev.	N	Mean	Std. Dev.	Difference
Total expenditures (€ per capita)	810	5 330	919	301	5 376	919	-46
Health care expenditures (€ per capita)	807	1 634	369	301	1 646	369	-12
Other expenditures (€ per capita)	807	3 697	768	301	3 729	768	-33
Population	1145	15 571	3 153	399	3 773	3 153	11799***
Young inhabitants %	1145	18.65	3.51	399	18.07	3.51	0.58*
Old inhabitants %	1145	17.70	4.42	399	20.04	4.42	-2.34***
Council size	1145	31.25	5.75	399	22.45	5.75	8.80***
Municipal employees %	807	28.03	13.48	301	26.50	13.48	1.53*
Municipal health care employees %	807	7.26	5.11	301	6.44	5.11	0.82*
Municipal non-health care employees %	807	20.78	12.67	301	20.06	12.67	0.72
Incumbents %	807	57.66	9.40	301	55.87	9.40	1.80***
Women %	807	33.41	9.38	301	31.82	9.38	1.59**
High professionals %	807	22.43	8.84	301	15.64	8.84	6.79***
University educated %	807	13.51	6.61	301	8.31	6.61	5.20***
Unemployed %	807	3.69	4.63	301	4.18	4.63	-0.49
Center Party seat share %	1145	37.38	20.08	399	45.20	20.08	7.82***
Coalition Party seat share %	1145	16.56	10.68	399	13.15	10.68	3.41***
Social Democratic Party seat share %	1145	21.63	11.60	399	18.16	11.60	3.47***
Green party seat share %	1145	2.16	2.32	399	0.92	2.32	1.25***
Left Alliance seat share %	1145	9.02	7.86	399	7.15	7.86	1.87**
Swedish Party seat share %	1145	5.10	20.03	399	6.14	20.03	-1.03
True Finns seat share %	1145	1.74	4.13	399	1.79	4.13	-0.05
Christian Democrats seat share %	1145	3.06	3.96	399	2.44	3.96	0.62*
Other parties seat share %	1145	3.34	13.29	399	5.05	13.29	-1.70*

Notes: The statistical significance is tested using a *t*-test adjusted for clustering at the municipality level. ***, ** and * denote statistical significance at 1 %, 5 % and 10 % level, respectively.

Table B5. In this table, we present results from regressions where we have excluded the municipalities without close elections. We obtain results that are very similar to what our main analysis produces.

Table B5. The effect of municipal employee council share on total expenditures using only the close elections sample.

Panel A: IV, ε = 0.4	(1)	(2)	(3)	(4)
Municipal employees	0.0035*	0.0040***	0.0040***	0.0040***
	[0.0019]	[0.0015]	[0.0015]	[0.0015]
First stage Kleibergen-Paap *F*-statistic	54.25	57.76	58.76	59.76
N	1145	1145	1145	1145
Panel B: Reduced form of IV, ε = 0.4	(5)	(6)	(7)	(8)
Municipal employees	0.0032*	0.0042***	0.0037***	0.0035**
	[0.0017]	[0.0016]	[0.0014]	[0.0014]
R^2	0.30	0.42	0.58	0.59
N	1145	1145	1145	1145
Year dummies	Yes	Yes	Yes	Yes
Party controls	No	Yes	Yes	Yes
Municipality controls	No	No	Yes	Yes
Vote share	No	No	No	Yes

Notes: The unit of observation is a municipality *m* in election period *t*. The dependent variable in all the models is the logarithm of the mean of per capita total expenditures over the council term. Standard errors are clustered at the municipality level and reported in brackets. Party controls include parties' lagged seat shares. Municipality controls include lagged population, squared population and shares of young and old citizens. Vote share control is a second-order polynomial of municipal employees' vote share. ***, ** and * denote 1, 5 and 10 % statistical significance levels respectively.

Online Appendix C: Robustness and Validity of the Party and Council Size Effect Heterogeneity

Figures C1 and C2. In these figures, we present the first stage of IV for the instrument in the largest and the second largest party using various bandwidths while first controlling only for the year fixed effect and then using all municipality controls. We cannot reject the null hypothesis that it is unity regardless of the bandwidth size.

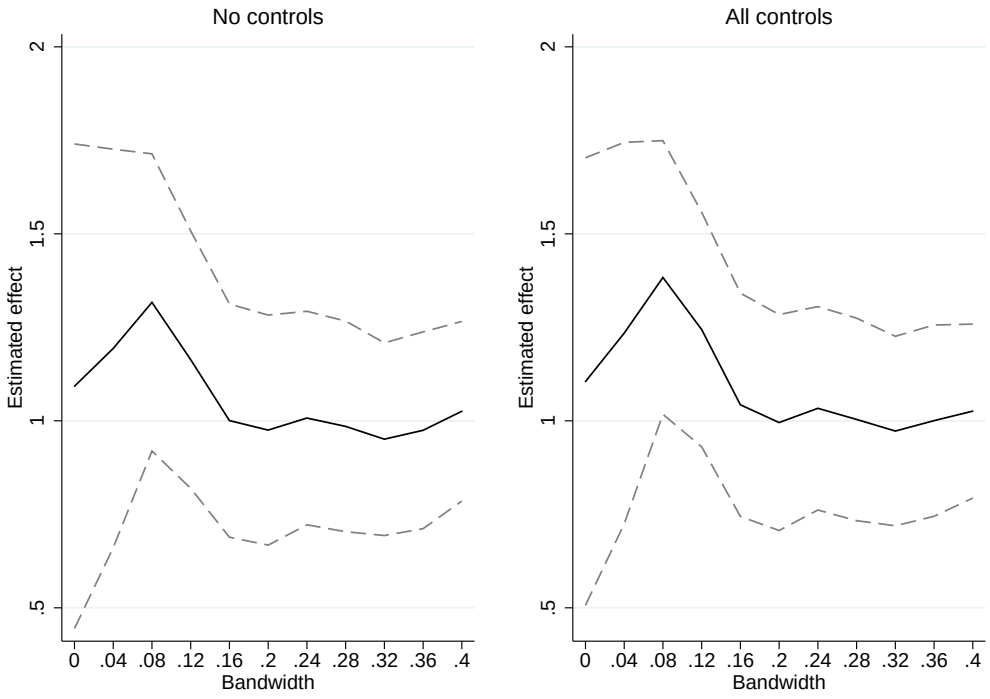


Figure C1. First stage of IV for municipal employees in the largest party.

Notes: The solid line represents the first stage point estimates and the dotted lines the 95% confidence interval. The left hand graph includes only the year dummies as controls. The right hand graph includes year dummies, parties' lagged seat shares, municipality population, squared population and shares of young and old citizens (all lagged). Standard errors are clustered at the municipality level.

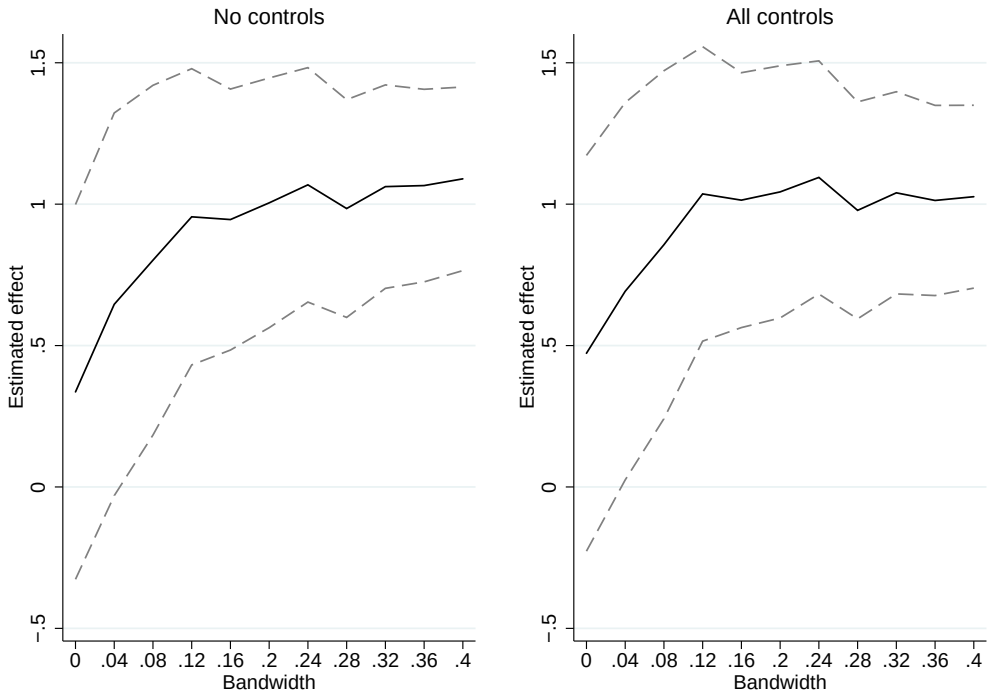


Figure C2. First stage of IV for municipal employees in the second largest party.

Notes: The solid line represents the first stage point estimates and the dotted lines the 95% confidence interval. The left hand graph includes only the year dummies as controls. The right hand graph includes year dummies, parties' lagged seat shares, municipality population, squared population and shares of young and old citizens (all lagged). Standard errors are clustered at the municipality level.

Table C1. In Table C1, we check that the instruments constructed for the largest and the second party are as-good-as-random by comparing differences in pre-treatment means between the municipalities with positive and negative instruments. There are no statistically significant differences between the groups. This supports the validity of our design.

Table C1. Pre-treatment covariate balance at municipality level for the largest and second largest party.

	$T_{mt} > 0$			$T_{mt} < 0$			
Panel A: Largest party							
ε = 0.4	N	Mean	Std. Dev.	N	Mean	Std. Dev.	Difference
Total expenditures (€ per capita)	310	5,404	829	297	5,353	805	52
Health care expenditures (€ per capita)	309	1,653	400	296	1,624	369	28
Other expenditures (€ per capita)	309	3,757	695	296	3,726	649	31
Population	444	17,292	39,050	426	15,576	44,918	1716
Young inhabitants %	444	18.74	3.48	426	18.78	3.32	-0.05
Old inhabitants %	444	17.59	4.59	426	17.70	4.49	-0.12
Council size	444	32.32	11.70	426	30.97	11.35	1.34
Municipal employees %	309	28.82	13.41	296	28.00	12.92	0.82
Municipal health care employees %	309	7.14	4.75	296	7.24	4.98	-0.10
Municipal non health care employees %	309	21.68	12.74	296	20.76	12.00	0.92
Incumbents %	309	57.52	8.86	296	57.73	9.09	-0.21
Women %	309	33.13	9.43	296	33.13	8.67	0.00
High professionals %	309	23.23	12.89	296	22.27	12.33	0.95
University educated %	309	13.78	10.45	296	13.40	9.99	0.39
Unemployed %	309	3.66	3.93	296	3.67	3.92	-0.01
Panel B: 2nd largest party							
ε = 0.4	N	Mean	Std. Dev.	N	Mean	Std. Dev.	Difference
Total expenditures (€ per capita)	148	5,231	710	132	5,307	776	-76
Health care expenditures (€ per capita)	148	1,607	349	130	1,637	311	-30
Other expenditures (€ per capita)	148	3,620	537	130	3,677	628	-57
Population	212	31,485	73,880	185	23,460	53,487	8025
Young inhabitants %	212	18.41	2.97	185	18.50	2.90	-0.08
Old inhabitants %	212	16.82	4.62	185	16.95	4.56	-0.13
Council size	212	36.77	13.63	185	34.76	12.84	2.01
Municipal employees %	148	29.63	14.21	130	27.72	12.45	1.90
Municipal health care employees %	148	7.93	4.70	130	7.01	4.24	0.92
Municipal non health care employees %	148	21.69	13.24	130	20.71	12.09	0.98
Incumbents %	148	59.33	7.95	130	58.48	8.25	0.85
Women %	148	35.41	8.26	130	34.40	8.09	1.01
High professionals %	148	27.07	14.30	130	25.37	13.47	1.71
University educated %	148	17.57	12.00	130	14.96	11.22	2.60
Unemployed %	148	3.48	3.64	130	3.04	3.14	0.44

*N*otes: The statistical significance is tested using a *t*-test adjusted for clustering at the municipality level. ***, ** and * denote statistical significance at 1 %, 5 % and 10 % level, respectively.

Figure C3. In Figure C3, we report the spending effect for the largest and the second largest party, respectively, using various bandwidths. The results for the largest party are quite stable across specifications.

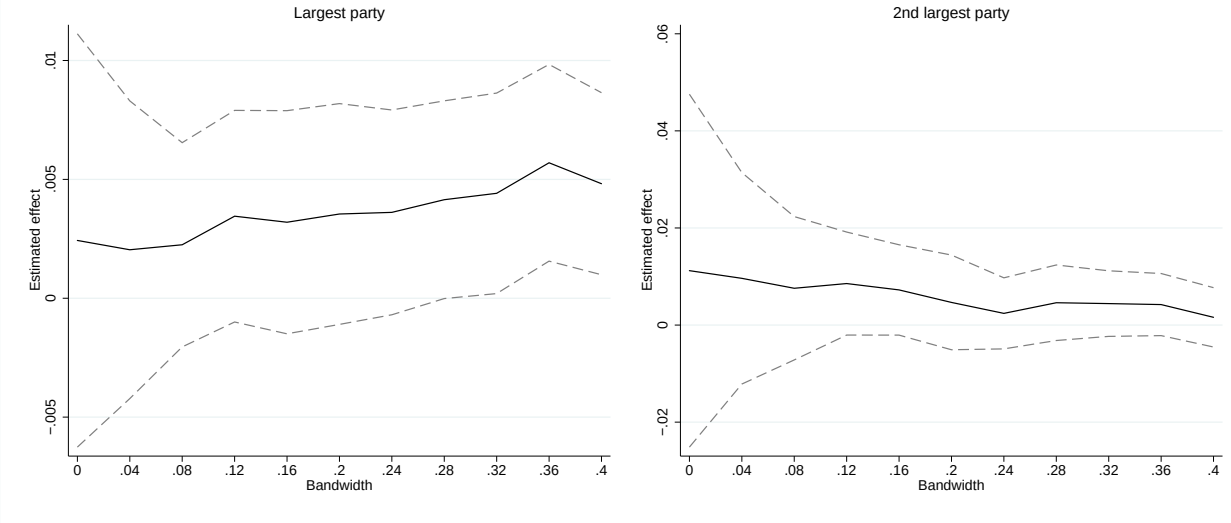


Figure C3. Robustness of the party heterogeneity result to bandwidth choice.

Notes: The solid line represents the first stage point estimates and the dotted lines the 95% confidence interval. The specifications includes year dummies as well as controls for parties' seat shares, population, squared population and shares of young and old citizens (all controls are lagged). Standard errors are clustered at the municipality level.

Figure C4. In Figure C4, we report the spending effect for the small (council size ≤ 27) and large councils (council size > 27), respectively, using various bandwidths.

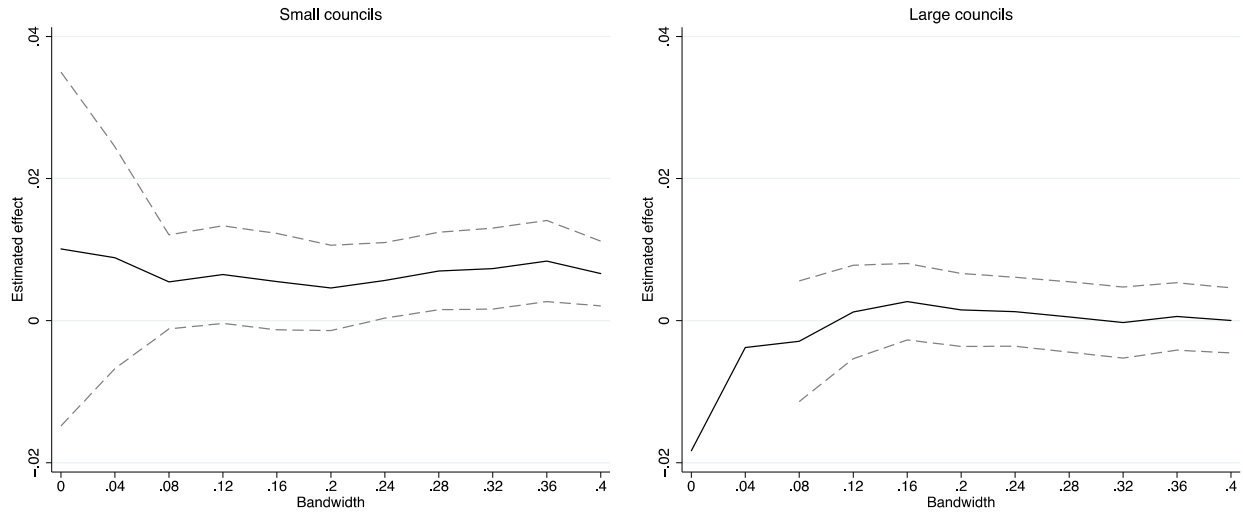


Figure C4. Robustness of the council size heterogeneity result to bandwidth choice.

Notes: The solid line represents the first stage point estimates and the dotted lines the 95% confidence interval. We do not report confidence intervals in the right hand graph for the smallest bandwidths, because they get very large. The specifications includes year dummies as well as controls for parties' seat shares, population, squared population and shares of young and old citizens (all controls are lagged). Standard errors are clustered at the municipality level.

Table C2. In Table C2, we analyze whether the party and council size results for the total expenditures hold when instrumenting also for the female share. These results are largely in line with those presented in the main text also when the (instrumented) female seat share is included.

Table C2. Results for total expenditures by party and council size: IV analysis for both municipal employee and female instruments.

	Council size ≤ 27	Council size > 27	Largest party	2nd largest party
Panel A: IV, ε = 0.4	(3)	(4)	(1)	(2)
Municipal employees	0.0066**	-0.0003	0.0033	0.0028
	[0.0028]	[0.0023]	[0.0021]	[0.0034]
First stage Angrist-Pischke *F*-statistic	15.32	15.90	37.74	20.52
Females	0.0000	0.0018	0.0035*	-0.0033
	[0.0018]	[0.0021]	[0.0019]	[0.0034]
First stage Angrist-Pischke *F*-statistic	53.38	28.96	68.78	34.52
Panel B: Reduced form of IV, ε = 0.4	(7)	(8)	(5)	(6)
Municipal employees	0.0046***	-0.0004	0.0037*	0.0024
	[0.0017]	[0.0024]	[0.0020]	[0.0033]
Females	0.0013	0.0016	0.0034**	-0.0027
	[0.0016]	[0.0019]	[0.0017]	[0.0030]
R^2	0.59	0.60	0.56	0.57
N	1017	527	1469	1235
Year dummies	Yes	Yes	Yes	Yes
Party and municipality controls	Yes	Yes	Yes	Yes

Notes: The unit of observation is a municipality *m* in election period *t*. The dependent variable in all the models is the logarithm of the mean of per capita total expenditures over the council term. Standard errors are clustered at the municipality level and reported in brackets. Party controls include parties' lagged seat shares. Municipality controls include lagged population, squared population and shares of young and old citizens. The reported first stage Angrist-Pischke *F*-statistics of individual endogenous regressors are produced by the ivreg2 command in STATA. ***, ** and * denote 1, 5 and 10 % statistical significance levels respectively.

Table C3. In Table C3, we report sectoral results by party size. The results suggest that also the sectoral results seem to be driven by within party influence when the party is large. While we cannot statistically distinguish the estimates from each other, the pattern of the results is in line with the analysis in the main text.

Table C3. Results for sectoral expenditures by party size.

	Outcome: health care expenditures		Outcome: non health care expenditures	
	Largest party	2nd largest party	Largest party	2nd largest party
Panel A: IV, $\varepsilon = 0.4$	(1)	(2)	(1)	(2)
Health care employees	0.0145**	-0.0007	0.0005	0.0091
	[0.0066]	[0.0105]	[0.0041]	[0.0087]
First stage Angrist-Pischke *F*-statistic	37.63	12.05	37.63	12.05
Non health care employees	0.0041	0.0009	0.0051**	-0.0011
	[0.0050]	[0.0039]	[0.0025]	[0.0045]
First stage Angrist-Pischke *F*-statistic	45.52	23.00	45.52	23.00
Panel B: Reduced form of IV, $\varepsilon = 0.4$	(3)	(4)	(3)	(4)
Health care employees	0.0117**	-0.0006	-0.0008	0.0059
	[0.0051]	[0.0065]	[0.0035]	[0.0052]
Non health care employees	0.0055	0.0011	0.0057**	-0.0017
	[0.0057]	[0.0045]	[0.0029]	[0.0053]
R^2	0.17	0.15	0.42	0.43
N	1459	1226	1459	1226
Year dummies	Yes	Yes	Yes	Yes
Party and municipality controls	Yes	Yes	Yes	Yes

Notes: The unit of observation is a municipality *m* in election period *t*. The dependent variable is either the logarithm of the mean of per capita other than health care expenditures or health care expenditures over the council term. Standard errors are clustered at the municipality level and reported in brackets. Party controls include parties' lagged seat shares. Municipality controls include lagged population, squared population and shares of young and old citizens. The reported first stage Angrist-Pischke *F*-statistics of individual endogenous regressors are produced by the ivreg2 command in STATA. ***, ** and * denote 1, 5 and 10 % statistical significance levels respectively.

Online Appendix D: Robustness and Validity of the Sectoral Effects

Figures D1 and D2. These figures illustrate graphically the first stages of our sectoral IV across a range of bandwidths and test for the validity of the sector specific instruments. Figure D1 shows the first stage graphs with and without control variables for the municipal health care employees, and Figure D2 shows these for the municipal non-health care employees. Both figures support the validity of the instrument.

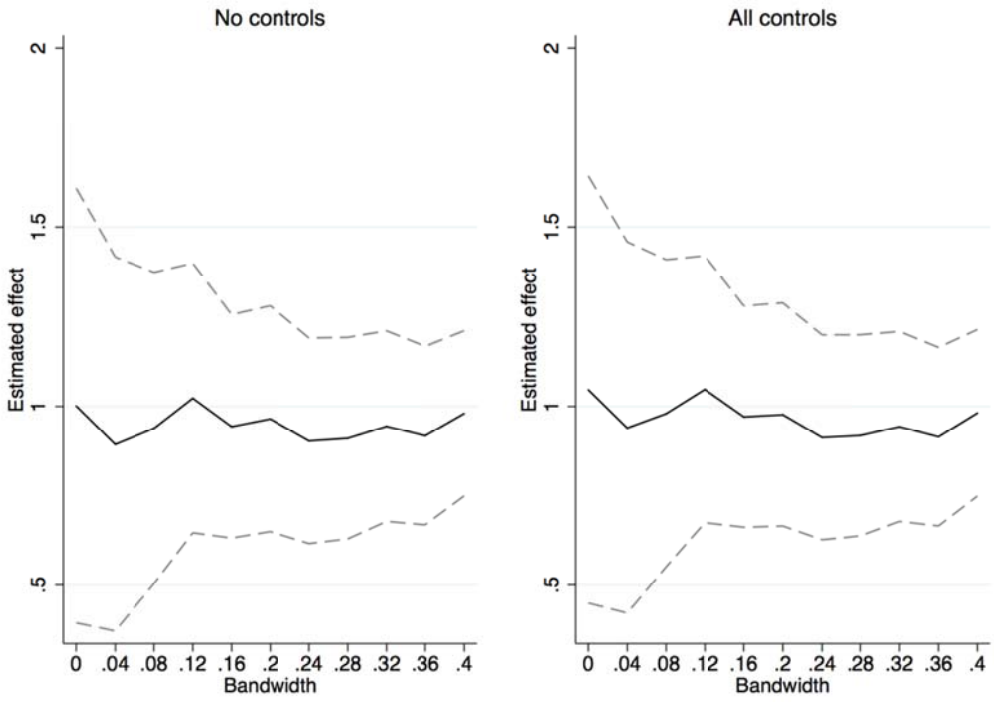


Figure D1. First stage of IV for municipal health care sector employees.

Notes: The solid line represents the first stage point estimates and the dotted lines the 95% confidence interval. The left hand graph includes only the year dummies as controls. The right hand graph includes year dummies, parties' lagged seat shares, municipality population, squared population and shares of young and old citizens (all lagged). Standard errors are clustered at the municipality level.

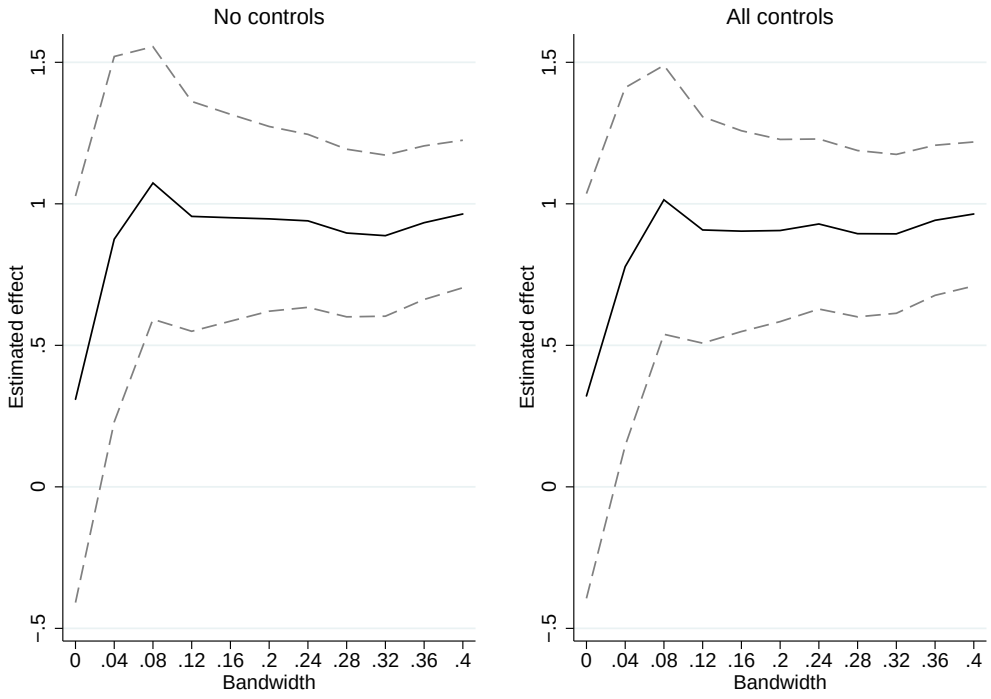


Figure D2. First stage of IV for municipal non-health sector employees.

Notes: The solid line represents the first stage point estimates and the dotted lines the 95% confidence interval. The left hand graph includes only the year dummies as controls. The right hand graph includes year dummies, parties' lagged seat shares, municipality population, squared population and shares of young and old citizens (all lagged). Standard errors are clustered at the municipality level.

Tables D1 and D2. In Tables D1 and D2, we check that the sector-specific instruments are as-good-as-random. We divide the data into two groups, based on the seat share of municipal employees exceeding ($T_{mt} > 0$) or falling short of ($T_{mt} < 0$) its expectation and test whether the difference in means is statistically significant. There are no statistically significant differences between the groups. This supports the validity of our design.

Table D1. Pre-treatment covariate balance at municipality level for non-health care employees.

	$T_{mt} > 0$			$T_{mt} < 0$			
$\varepsilon = 0.4$	N	Mean	Std. Dev.	N	Mean	Std. Dev.	Difference
Total expenditures (€ per capita)	334	5 330	810	359	5 363	808	-33
Health care expenditures (€ per capita)	333	1 626	384	357	1 633	364	-7
Other expenditures (€ per capita)	333	3 708	685	357	3 729	655	-21
Population	522	18 381	48 476	496	15 341	36 231	3 041
Young inhabitants %	522	18.77	3.22	496	18.67	3.31	0.10
Old inhabitants %	522	17.21	4.54	496	17.76	4.52	-0.56
Council size	522	32.71	11.78	496	31.30	11.41	1.41
Municipal employees %	333	28.82	13.23	357	27.81	13.62	1.01
Municipal health care employees %	333	7.34	4.72	357	7.03	4.88	0.31
Municipal non-health care employees %	333	21.48	12.60	357	20.78	12.28	0.70
Instrument for non-health care employees	333	0.18	0.11	357	0.09	0.11	0.09
Incumbents %	333	57.90	8.40	357	57.99	8.97	-0.09
Women %	333	33.76	9.18	357	33.13	8.48	0.63
High professionals %	333	24.00	12.80	357	22.71	12.71	1.29
University educated %	333	14.43	10.43	357	13.77	10.20	0.66
Unemployed %	333	3.79	3.93	357	3.57	3.98	0.22
Center Party seat share %	522	36.03	21.10	496	37.59	21.45	-1.56
Coalition Party seat share %	522	17.45	9.94	496	15.93	10.32	1.52
Social Democratic Party seat share %	522	22.46	12.12	496	21.18	11.38	1.29
Green party seat share %	522	2.52	4.00	496	2.09	3.66	0.43
Left Alliance seat share %	522	9.39	8.74	496	8.90	8.30	0.49
Swedish Party seat share %	522	3.98	14.97	496	5.85	18.69	-1.88
True Finns seat share %	522	1.97	4.19	496	1.66	3.64	0.31
Christian Democrats seat share %	522	3.04	3.56	496	3.20	3.59	-0.16

Notes: The statistical significance is tested using a *t*-test adjusted for clustering at the municipality level. ***, ** and * denote statistical significance at 1 %, 5 % and 10 % level, respectively.

Table D2. Pre-treatment covariate balance for health care employees.

	$T_{mt} > 0$			$T_{mt} < 0$			
$\varepsilon = 0.4$	N	Mean	Std. Dev.	N	Mean	Std. Dev.	Difference
Total expenditures (€ per capita)	222	5 314	790	227	5 234	777	79.21
Health care expenditures (€ per capita)	222	1 642	381	226	1 588	348	54.06
Other expenditures (€ per capita)	222	3 668	579	226	3 648	675	19.76
Population	305	23 734	60 686	319	18 758	43 304	4 976
Young inhabitants %	305	18.57	3.17	319	18.94	3.26	-0.37
Old inhabitants %	305	17.13	4.75	319	16.96	4.33	0.17
Council size	305	34.48	12.77	319	33.10	11.80	1.38
Municipal employees %	222	30.60	14.60	226	28.77	12.32	1.83
Municipal health care employees %	222	8.16	5.30	226	8.00	4.68	0.15
Instrument for health care employees	222	0.09	0.08	226	-0.11	0.08	0.20*
Municipal non-health care employees %	222	22.44	13.45	226	20.77	11.95	1.67
Incumbents %	222	59.18	8.72	226	57.74	8.68	1.44
Women %	222	34.02	8.59	226	34.48	8.64	-0.46
High professionals %	222	24.96	13.68	226	24.94	12.69	0.02
University educated %	222	15.74	10.61	226	15.10	10.92	0.64
Unemployed %	222	3.57	3.47	226	3.43	3.77	0.14
Center Party seat share %	305	34.51	21.18	319	35.14	20.90	-0.63
Coalition Party seat share %	305	17.21	9.88	319	17.75	10.09	-0.54
Social Democratic Party seat share %	305	22.95	11.65	319	22.69	11.79	0.26
Green party seat share %	305	2.99	4.44	319	2.44	4.03	0.56
Left Alliance seat share %	305	9.37	8.41	319	9.31	8.45	0.06
Swedish Party seat share %	305	4.85	16.61	319	4.29	16.53	0.56
True Finns seat share %	305	1.44	2.95	319	1.67	3.89	-0.23
Christian Democrats seat share %	305	3.24	3.56	319	3.22	3.40	0.02

Notes: The statistical significance is tested using a *t*-test adjusted for clustering at the municipality level. ***, ** and * denote statistical significance at 1 %, 5 % and 10 % level, respectively.

Figures D3 and D4. In Figures D3 and D4, we report the effect of health care and non-health care employees on non-health care and health care spending, respectively, using various bandwidths. The results for the non-health outcome are rather stable across specifications.

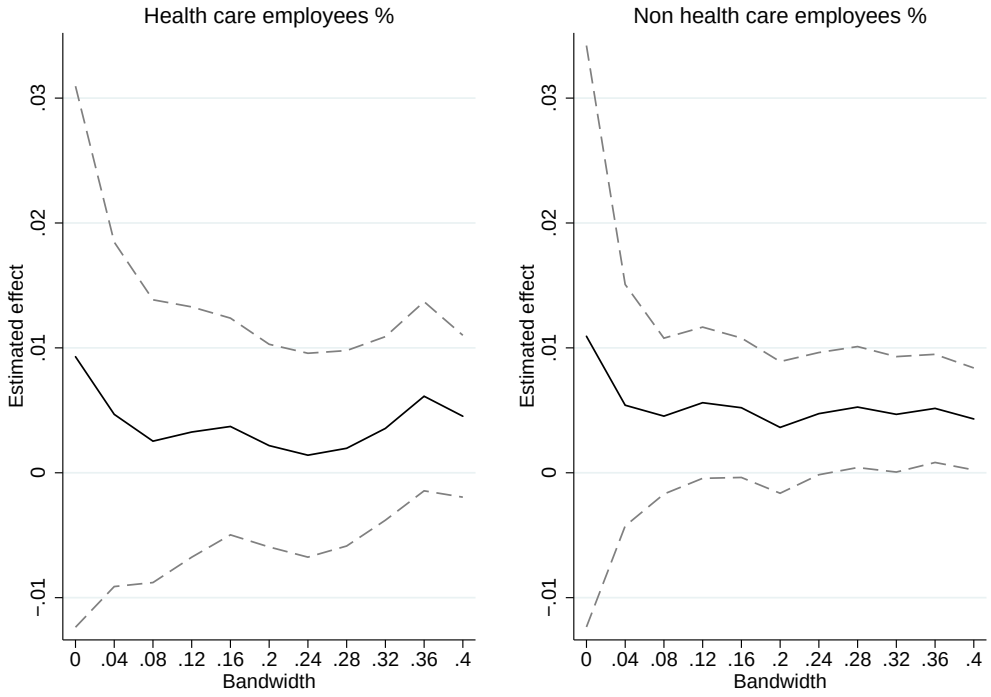


Figure D3. Robustness of the non-health expenditures results with respect to bandwidth choice.

Notes: The solid line represents the point estimates and the dotted lines the 95% confidence interval. The specification includes year dummies as well as control for parties' seat shares, population, squared population and shares of young and old citizens (all controls are lagged). Standard errors are clustered at the municipality level.

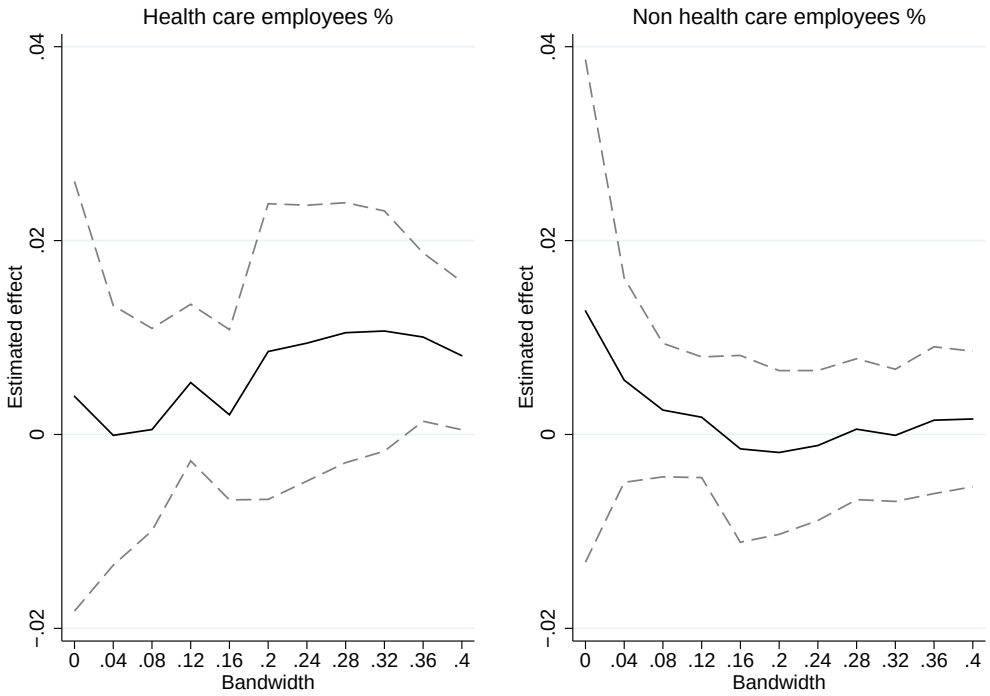


Figure D4. Robustness of the health expenditures results with respect to bandwidth choice.

Notes: The solid line represents the point estimates and the dotted lines the 95% confidence interval. The specification includes year dummies as well as control for parties' seat shares, population, squared population and shares of young and old citizens (all controls are lagged). Standard errors are clustered at the municipality level.

Table D3. In Table D3, we show robustness to accounting for the correlation between the municipal employee status and gender by instrumenting also for the female seat share in the council. While the IV results are not statistically significant (Panel A), the reduced form estimations deliver very similar estimates to the ones reported in the main text. All in all, also the sectoral results appear to be robust to the inclusion of the (instrumented) female seat share.

Table D3. Results for sectoral expenditures: IV analysis with $\varepsilon = 0.4$ for both sectoral municipal employee and female instruments.

	Outcome: non health care expenditures	Outcome: health care expenditures
Panel A: IV, $\varepsilon = 0.4$	(1)	(2)
Municipal non health care employees	0.0037	0.0006
	[0.0023]	[0.0038]
First stage Angrist-Pischke *F*-statistic	20.36	20.36
Municipal health care employees	0.0033	0.0062
	[0.0034]	[0.0038]
First stage Angrist-Pischke *F*-statistic	22.72	22.72
Female	0.0018	0.0028
	[0.0017]	[0.0032]
First stage Angrist-Pischke *F*-statistic	57.57	57.57
Panel B: Reduced form of IV, $\varepsilon = 0.4$	(3)	(4)
Municipal non health care employees	0.0038*	0.0012
	[0.0020]	[0.0035]
Municipal health care employees	0.0020	0.0056*
	[0.0031]	[0.0034]
Female	0.0024	0.003
	[0.0017]	[0.0031]
R^2	0.43	0.18
N	1534	1534
Year dummies	Yes	Yes
Party and municipality controls	Yes	Yes

Notes: The unit of observation is a municipality *m* in election period *t*. The dependent variable in all the models is the logarithm of the mean of per capita total expenditures over the council term. Standard errors are clustered at the municipality level and reported in brackets. Party controls include parties' lagged seat shares. Municipality controls include lagged population, squared population and shares of young and old citizens. The reported first stage Angrist-Pischke *F*-statistics of individual endogenous regressors are produced by the ivreg2 command in STATA. ***, ** and * denote 1, 5 and 10 % statistical significance levels respectively.

Online Appendix E: Rent-Seeking Results

Table E1. In this table, we report results concerning whether municipal employees enjoy larger returns to office in terms of receiving larger salary increases and/or facing smaller unemployment risk, and whether they benefit from a larger incumbency advantage than the other candidates. To do so, we regress a dummy variable for getting elected at election period *t* on four different outcomes: change in (log) wage from *t* to *t*+1, being unemployed in *t*+1, getting elected in *t*+1 and vote share in *t*+1. We control for individual characteristics in some of the specifications. These controls include gender, age, incumbency status, unemployment status, student dummy, entrepreneur dummy, high professional dummy, party affiliation and vote share *t*–1. We estimate the effect separately for municipal employees and other candidates and use a sample of candidates who were tied for the last seat within their party list ("lottery sample"). Thus, the treatment status is randomized in these regressions (see Hyytinen et al. 2017 for details). We do not find any statistically significant differences between municipal employee politicians and others in terms of the returns to office.

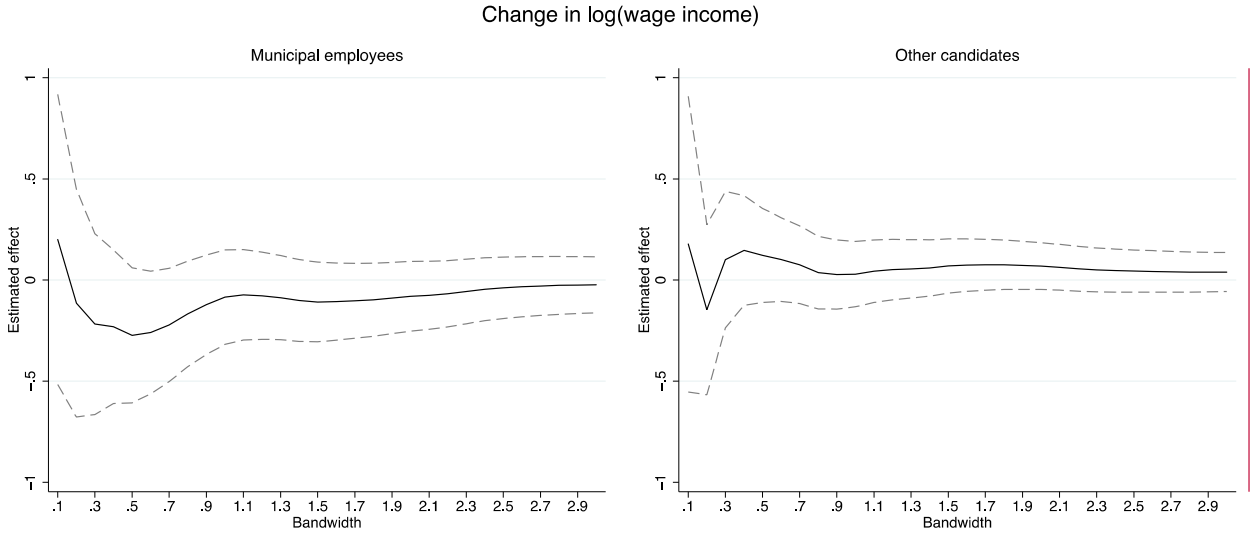
Table E1. Returns to office for elected municipal employees and other candidates.

	Panel A: Change in log(income)			
	(1)	(2)	(3)	(4)
Elected	0.0757	0.0047	-0.1843	-0.1548
	[0.0760]	[0.0725]	[0.1570]	[0.1661]
N	148	148	521	521
R^2	0.01	0.21	0.00	0.05
	Panel B: Unemployed *t*+1			
	(5)	(6)	(7)	(8)
Elected	0.0104	0.0046	0.0033	-0.0006
	[0.0219]	[0.0228]	[0.0123]	[0.0124]
N	202	202	584	584
R^2	0.00	0.04	0.00	0.11
	Panel C: Elected *t*+1			
	(9)	(10)	(11)	(12)
Elected	0.0373	0.0332	0.0027	0.0043
	[0.0508]	[0.0521]	[0.0288]	[0.0291]
N	324	324	974	974
R^2	0.00	0.05	0.00	0.04
	Panel D: Vote share *t*+1			
	(13)	(14)	(15)	(16)
Elected	0.0966	0.0207	-0.0518	-0.0519
	[0.1372]	[0.1348]	[0.0887]	[0.0854]
N	197	197	594	594
R^2	0.00	0.18	0.00	0.23
Sample	Municipal employees		Other candidates	
Individual characteristics	No	Yes	No	Yes

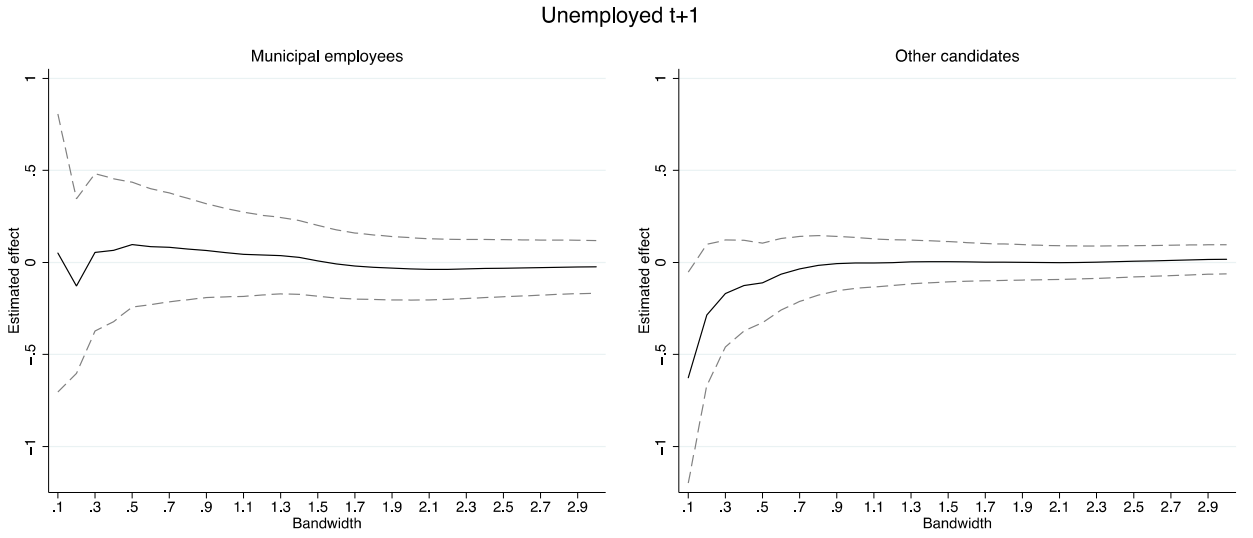
Notes: Unit of observation is individual candidate at election period *t*. Individual characteristics include gender, age, incumbency status, unemployment status, student dummy, entrepreneur dummy, high professional dummy, party affiliation and vote share at *t*–1. In panel B, we include only the candidates that are employed at time *t* to make the other candidates group comparable to municipal employees group. In panel C, candidates who do not re-run have elected *t*+1 status of zero. In panel D, those who do not re-run are excluded. Standard errors are clustered at the municipality level and reported in parentheses.

Figure E1. In Figure E1, we plot the regression discontinuity estimates across a wide range of bandwidths for the same outcomes as reported in Table E1. As already suggested by Table E1, there are no statistically (or economically) significant differences between municipal employee and other politicians' outcomes.

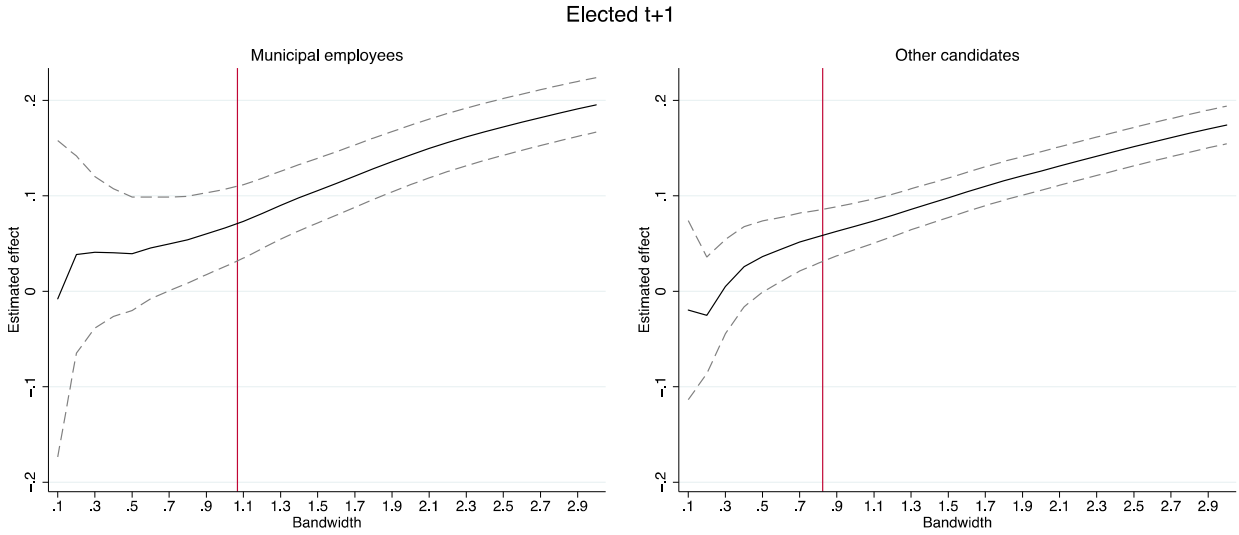
Panel A: RDD effect of getting elected at *t* on change in log of wage income for a range of bandwidths.



Panel B: RDD effect of getting elected at *t* on unemployment at *t*+1 for a range of bandwidths.



Panel C: RDD effect of getting elected at *t* on elected at *t*+1 for a range of bandwidths.



Panel D: RDD effect of getting elected at *t* on vote share at *t*+1 for a range of bandwidths.

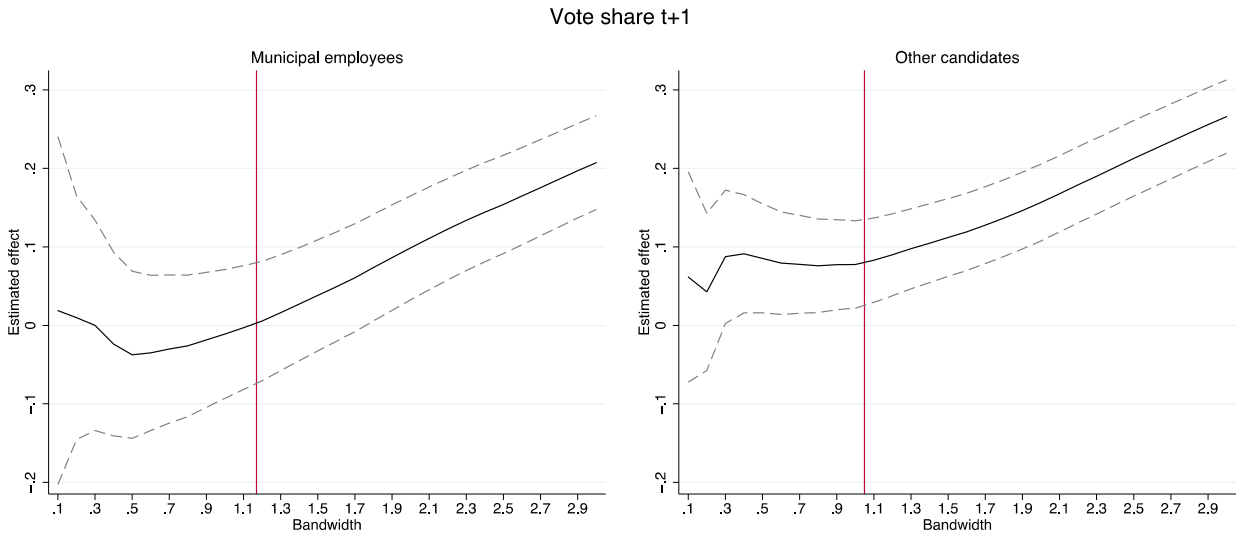


Figure E1. RDD estimates for returns to office for a wide range of bandwidths.

Notes: The solid line represents the point estimates and the dotted lines the 95% confidence interval. The results are from the conventional local linear RD specifications for various bandwidths. Standard errors are clustered at the municipality level. In all the panels, the left hand graph applies to the sample of municipal employees and right hand graph for the other candidates. The red line marks the (clustered) MSE-optimal bandwidth (Calonico et al. 2016).

Table E2. We then turn to our analysis of municipal house prices. We exclude 309 municipality-election period observations from the sample because these small municipalities do not have many housing market transactions. Table E2 reports the effect of municipal employees on (log) house price per square meter. We find no effect on house prices.

Table E2. Results for house prices.

Outcome: log(house price per m^2)		
Reduced form of IV, ε = 0.4	IV	Reduced form of IV
Municipal employees	-0.0001	
	[0.0020]	
Municipal employees		-0.0001
		[0.0020]
First stage Kleibergen-Paap *F*-statistic	64.71	
R^2		0.77
N	1235	1235

Notes: The unit of observation is a municipality *m* in election period *t*. The dependent variable is the logarithm of the mean of per square meter house prices over the council term. Standard errors are clustered at the municipality level and reported in parentheses. Controls include year dummies, parties' lagged seat shares, municipality population, squared population and shares of young and old citizens (all lagged). ***, ** and * denote 1, 5 and 10 % statistical significance levels respectively.

Figure E2. In Figure E2 we explore the stated preferences of municipal employee candidates and the candidates from other occupations with respect to questions concerning the role of municipal employees in local politics. We use survey data from the Finnish Broadcasting Company (YLE) concerning the 2012 municipal elections. The data are from an election aid survey in which both candidates and voters respond to the same set of questions and the software application provides voters with information on the best matches.

Firstly, according to Figure E2, municipal employees oppose more strongly firing of municipal employees in connection with municipal mergers compared to other candidates. In particular, there is a rule in Finland which prevents municipalities from dismissing (redundant) employees during the period of five years after a municipal merger. Municipal employees who run for a council disagree more often with the statement that this period is too long. Secondly, they oppose more strongly restrictions on nomination of municipal employees in municipal boards.

Furthermore, in a recent article that dealt with the political power of public sector employees in Finnish municipal councils, the Finnish National Broadcasting company YLE also cited the survey answers given by municipal council election candidates. For example, YLE reported that “80% of those candidates that are municipal employees think that privatization of health services brings neither efficiency gains nor savings to municipalities. 67% of other candidates shared this opinion.”

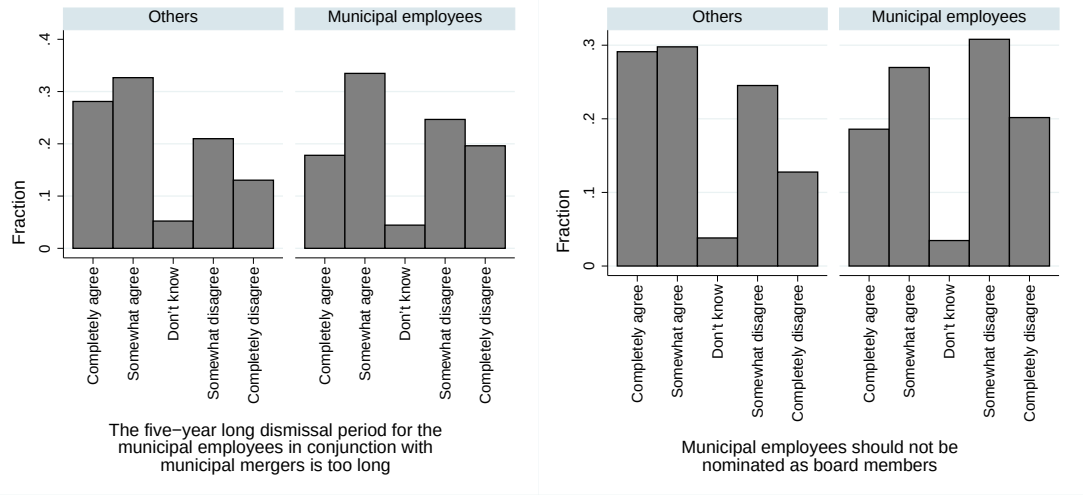


Figure E2. Survey responses ($N = 4215$).

Online Appendix F: Validity of the Female Instrument

Figure F1. In this figure, we present the first stage of IV for the female instrument using various bandwidths while first controlling only for the year fixed effect (figure on the left) and then using all municipality and party controls (figure on the right). We cannot reject the null hypothesis that it is unity regardless of the bandwidth size.

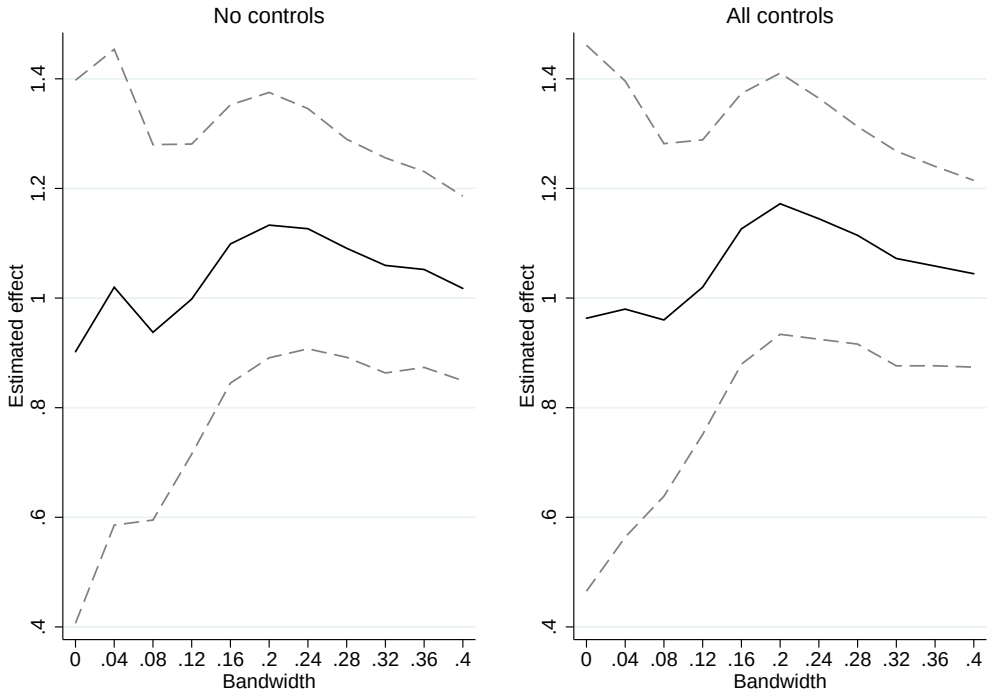


Figure F1. First stage of IV for the female instrument.

Notes: The solid line represents the first stage point estimates and the dotted lines the 95% confidence interval. The left hand graph includes only the year dummies as controls. The right hand graph includes year dummies, parties' lagged seat shares, municipality population, squared population and shares of young and old citizens (all lagged). Standard errors are clustered at the municipality level.

Table F1. In this table, we demonstrate that the pre-treatment covariates are balanced also for the female instrument (F_{mt}).

Table F1. Pre-treatment covariate balance at municipality level for female instrument.

	$F_{mt} > 0$			$F_{mt} < 0$			
$\varepsilon = 0.4$	N	Mean	Std. Dev.	N	Mean	Std. Dev.	Difference
Total expenditures (€ per capita)	428	5 382	863	485	5 272	778	110.00
Health care expenditures (€ per capita)	427	1 653	361	483	1 623	366	29.95
Other expenditures (€ per capita)	427	3 729	678	483	3 649	635	79.90
Population	596	14 154	33 116	674	14 708	43 222	-553.71
Young inhabitants %	596	18.53	3.20	674	18.83	3.39	-0.30
Old inhabitants %	596	17.98	4.59	674	17.72	4.48	0.26
Council size	596	30.62	11.30	674	30.36	11.09	0.26
Municipal employees %	427	28.85	13.73	483	27.34	12.79	1.51*
Municipal health care employees %	427	7.14	5.08	483	7.30	4.83	-0.16
Municipal non-health care employees %	427	21.71	12.80	483	20.04	11.90	1.66
Incumbents %	427	57.53	8.85	483	57.46	8.87	0.07
Women %	427	33.14	8.69	483	33.24	8.65	-0.10
Instrument for women	427	-0.05	0.12	483	-0.29	0.11	0.24
High professionals %	427	21.23	11.72	483	22.41	12.48	-1.17
University educated %	427	12.77	9.47	483	13.18	10.07	-0.41
Unemployed %	427	3.78	4.19	483	3.81	3.95	-0.03
Center Party seat share %	596	38.22	21.51	674	38.22	21.44	0.00
Coalition Party seat share %	596	16.13	10.47	674	16.19	10.31	-0.06
Social Democratic Party seat share %	596	21.03	11.61	674	21.30	11.98	-0.27
Green party seat share %	596	2.03	3.50	674	2.04	3.76	0.00
Left Alliance seat share %	596	9.18	8.52	674	8.59	8.43	0.59
Swedish Party seat share %	596	4.98	16.97	674	5.91	19.18	-0.93
True Finns seat share %	596	1.78	3.91	674	1.62	3.86	0.15
Christian Democrats seat share %	596	2.89	3.68	674	3.01	3.71	-0.12

Notes: The statistical significance is tested using a *t*-test adjusted for clustering at the municipality level. ***, ** and * denote statistical significance at 1 %, 5 % and 10 % level, respectively.

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