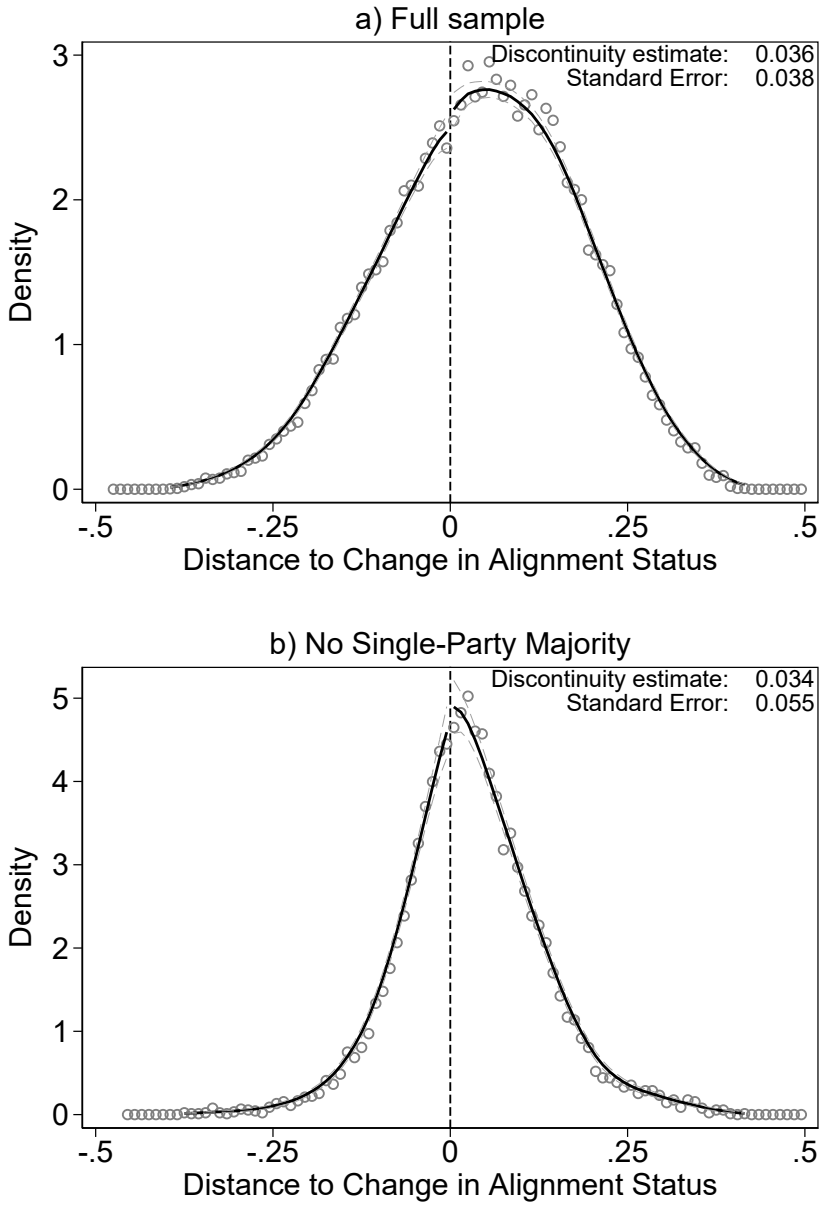
Appendices for Online Publication

A. Additional empirical results

FIGURE A.1

DENSITY OF THE RUNNING VARIABLE AROUND THE THRESHOLD



Notes: Estimated density of the running variable. Dots represent sample averages within 1 percentage point bins of the running variable. A McCrary (2008) test of the null hypothesis of no discontinuous jump in the density at the threshold fails to reject the null as reported in the figure. A Cattaneo, Jansson and Ma (2017) test, instead, yields a p-value of 0.856 (panel (a)) and 0.389 (panel (b)).

TABLE A.1
COVARIATE BALANCING CHECKS – FULL SAMPLE

	(1) Pop.	(2) Surface	(3) Council size	(4) S.P. Maj.
Aligned Council	-0.068	0.025	-0.254	0.018
	(0.067)	(0.041)	(0.218)	(0.021)
Robust 95% c.i.	[-0.237; 0.042]	[-0.063; 0.118]	[-0.807; 0.130]	[-0.023; 0.070]
Bandwidth	0.046	0.078	0.054	0.059
Mean dep. var.	7.651	5.022	10.828	0.555
Observations	8008	13235	9269	10111
	V.s. Reg. Maj.	V.s. Reg. Opp.	Top Party May. t-1	Mayor Uns. t-1
Aligned Council	-0.001	0.003	-0.015	-0.013*
	(0.004)	(0.003)	(0.013)	(0.007)
Robust 95% c.i.	[-0.008; 0.008]	[-0.004; 0.012]	[-0.044; 0.018]	[-0.029; 0.002]
Bandwidth	0.052	0.053	0.068	0.070
Mean dep. var.	0.432	0.427	0.837	0.034
Observations	9044	9193	11662	10977
	S.P. Maj. t-1	Aligned t-1	N. Parties	Valid Votes
Aligned Council	0.01	0.00	-0.09	-973.21
	(0.016)	(0.019)	(0.071)	(1055.015)
Robust 95% c.i.	[-0.026; 0.047]	[-0.045; 0.033]	[-0.265; 0.043]	[-3540.565; 1098.345]
Bandwidth	0.087	0.067	0.063	0.036
Mean dep. var.	0.677	0.517	3.558	4838.396
Observations	14535	10449	10808	6233
	Votes Blank	Turnout	V.s. PSOE	V.s. PP
Aligned Council	-20.35	-0.00	0.00	0.00
	(17.952)	(0.003)	(0.005)	(0.004)
Robust 95% c.i.	[-63.201; 15.958]	[-0.008; 0.007]	[-0.008; 0.013]	[-0.007; 0.012]
Bandwidth	0.057	0.067	0.041	0.052
Mean dep. var.	87.605	0.758	0.402	0.395
Observations	9827	11422	7117	7630

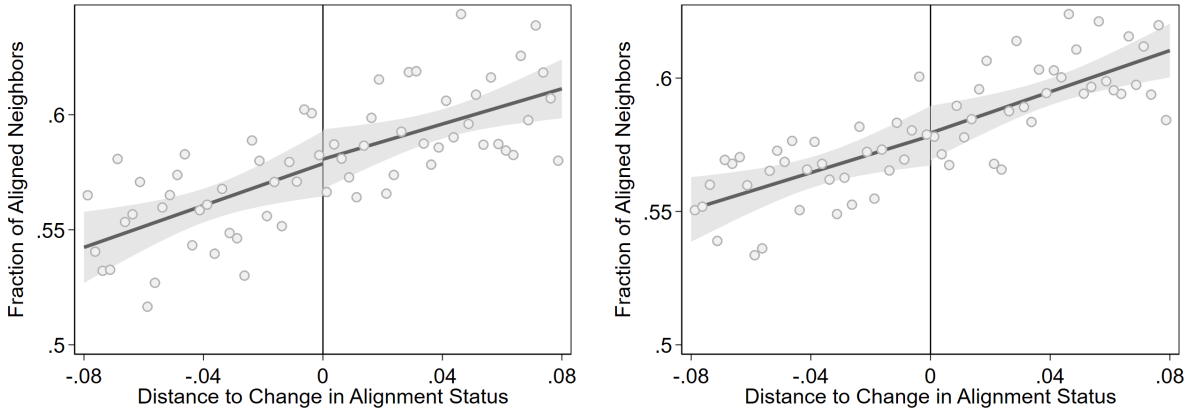
Notes: Reduced-form estimates for different covariates. Population and surface are in logarithms. Council size is the number of available seat in the municipality. Single-party majority is an indicator equal to one if one party has more than half the seats. Vote share regional majority (opposition) corresponds to the aggregated municipal election vote share of the coalition in power (in the opposition) at the regional level. Vote share of top party is the vote share of the most-voted party in the municipal election. Top party mayor $t-1$ is an indicator for the most-voted party appointing the mayor in the previous term. Mayor unseated $t-1$ is an indicator for the mayor being unseated in the previous term. Similarly, Aligned $t-1$ is an indicator equal to 1 if the municipality was aligned in the previous term. Number of parties counts the number of parties that ran and obtained votes in the municipal election. Valid votes is the number of votes cast (including blanks). Blank votes is the numbers of blank ballots. Municipal turnout is defined as total number of votes over eligible voters. Vote share of *PSOE* (*PP*) refers to the municipal election. Estimation by local linear regression using as bandwidth the CCT optimal bandwidth, estimated in each regression separately. No controls or election-year fixed effects are included. Standard errors are clustered at the municipality level. *, **, and *** represent 10%, 5%, and 1% significance levels, respectively.

TABLE A.2
COVARIATE BALANCING CHECKS – NO SINGLE-PARTY MAJORITY

	(1) Pop.	(2) Surface	(3) Council size	
Aligned Council	-0.081	0.021	-0.234	
	(0.098)	(0.073)	(0.360)	
Robust 95% c.i.	[-0.300; 0.141]	[-0.117; 0.200]	[-1.052; 0.585]	
Bandwidth	0.043	0.046	0.045	
Mean dep. var.	7.650	5.023	10.841	
Observations	3486	3673	3597	
	V.s. Reg. Maj.	V.s. Reg. Opp.	Top Party May. t-1	Mayor Uns. t-1
Aligned Council	-0.007	-0.006	-0.016	-0.023*
	(0.005)	(0.005)	(0.026)	(0.013)
Robust 95% c.i.	[-0.020; 0.002]	[-0.019; 0.003]	[-0.075; 0.042]	[-0.049; 0.010]
Bandwidth	0.036	0.037	0.048	0.058
Mean dep. var.	0.431	0.429	0.836	0.035
Observations	2941	3008	3835	4008
	S.P. Maj. t-1	Aligned t-1	N. Parties	Valid Votes
Aligned Council	0.02	0.01	-0.16	-2036.87
	(0.032)	(0.031)	(0.111)	(1765.830)
Robust 95% c.i.	[-0.049; 0.094]	[-0.063; 0.078]	[-0.407; 0.097]	[-5936.546; 2019.179]
Bandwidth	0.047	0.048	0.046	0.036
Mean dep. var.	0.670	0.515	3.560	4828.691
Observations	3694	3517	3670	2912
	Votes Blank	Turnout	V.s. PSOE	V.s. PP
Aligned Council	-9.17	0.00	-0.00	-0.00
	(31.529)	(0.005)	(0.005)	(0.006)
Robust 95% c.i.	[-68.542; 64.301]	[-0.010; 0.013]	[-0.013; 0.011]	[-0.012; 0.014]
Bandwidth	0.044	0.053	0.039	0.033
Mean dep. var.	86.915	0.759	0.401	0.396
Observations	3565	4121	3147	2408

Notes: Reduced-form estimates for different covariates. Population and surface are in logarithms. Council size is the number of available seat in the municipality. Single-party majority is an indicator equal to one if one party has more than half the seats. Vote share regional majority (opposition) corresponds to the aggregated municipal election vote share of the coalition in power (in the opposition) at the regional level. Vote share of top party is the vote share of the most-voted party in the municipal election. Top party mayor $t-1$ is an indicator for the most-voted party appointing the mayor in the previous term. Mayor unseated $t-1$ is an indicator for the mayor being unseated in the previous term. Similarly, Aligned $t-1$ is an indicator equal to 1 if the municipality was aligned in the previous term. Number of parties counts the number of parties that ran and obtained votes in the municipal election. Valid votes is the number of votes cast (including blanks). Blank votes is the numbers of blank ballots. Municipal turnout is defined as total number of votes over eligible voters. Vote share of *PSOE* (*PP*) refers to the municipal election. Estimation by local linear regression using as bandwidth the CCT optimal bandwidth, estimated in each regression separately. No controls or election-year fixed effects are included. Standard errors are clustered at the municipality level. *, **, and *** represent 10%, 5%, and 1% significance levels, respectively.

Figure A.2
Alignment of Neighboring Municipalities



(a) 5 Nearest Neighbors (b) 10 Nearest Neighbors

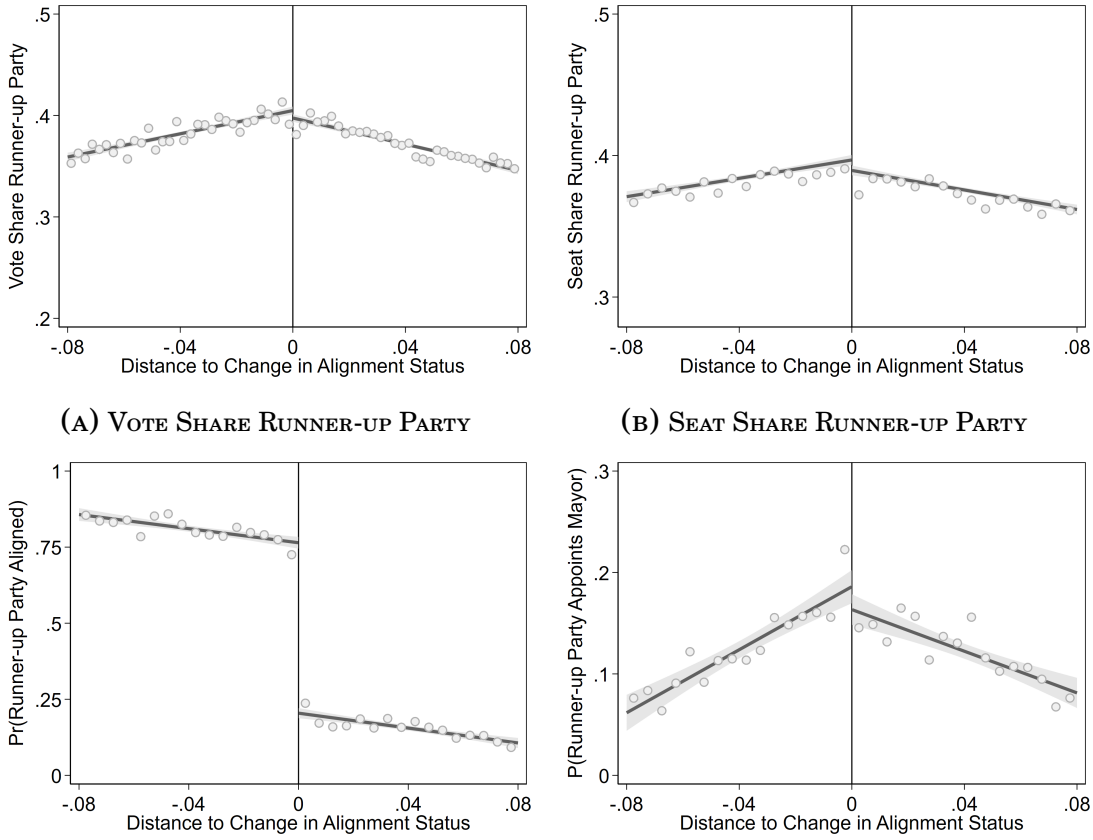
Notes: The horizontal axis is the running variable in all panels. Observations to the right of the zero threshold are municipalities where the regional bloc coalition has the majority of seats in the municipal council. Correspondingly municipalities where the regional opposition has the majority are to the left of the threshold. In Panel A, the vertical axis represents the average alignment status of the 5 closest neighbors to a municipality where alignemnt is defined as having the first appointed mayor in the term aligned with the regional government. In Panel B, the vertical axis represents the average alignment status of the 10 closest neighbors to a municipality. Dots are averages in 0.025 percentage point bins of the running variable, and lines are linear regressions estimated on both sides of the threshold separately using the *lfitci* command in Stata. Shaded areas are the corresponding 95% confidence intervals.

TABLE A.3
TOP PARTY PERFORMANCE – REDUCED-FORM ESTIMATES

	(1)	(2)	(3)
Panel A. Full sample			
	Vote Share Top Party	Seat Share Top Party	Aligned Top Party
Aligned Council	0.002	0.003	0.634***
	(0.003)	(0.004)	(0.014)
Robust 95% c.i.	[-0.004; 0.009]	[-0.004; 0.013]	[0.597; 0.661]
Bandwidth	0.057	0.049	0.059
Mean dep. var.	0.464	0.497	0.491
Observations	9783	8347	10067
Panel B. No Single-party majority			
	Vote Share Top Party	Seat Share Top Party	Aligned Top Party
Aligned Council	-0.002	-0.002	0.471***
	(0.004)	(0.003)	(0.024)
Robust 95% c.i.	[-0.010; 0.007]	[-0.009; 0.007]	[0.425; 0.532]
Bandwidth	0.044	0.043	0.049
Mean dep. var.	0.459	0.497	0.485
Observations	3529	3440	3871
Panel C. Single-party majority			
	Vote Share Top Party	Seat Share Top Party	Aligned Top Party
Aligned Council	-0.002	-0.001	0.879***
	(0.002)	(0.002)	(0.010)
Robust 95% c.i.	[-0.007; 0.003]	[-0.006; 0.003]	[0.850; 0.896]
Bandwidth	0.041	0.038	0.079
Mean dep. var.	0.459	0.497	0.502
Observations	3752	3505	7797

Notes: Reduced-form estimates, from equation 1, of the effect of council alignment on the vote share of the top party (column 1); its seats share (column 2); and the probability that the top party is aligned (column 3). In Panel A we use the full sample; in Panel B, we restrict to terms where no party has the absolute majority of seats; in Panel C, we restrict to terms where one party has the absolute majority of seats. The optimal bandwidth is calculated using the CCT criterion. Standard errors clustered at the municipality level. *, **, and *** represent 10%, 5%, and 1% significance levels, respectively.

Figure A.3
Alignment and Government Formation: Runner-up Party – Reduced-form plots



(a) Vote Share Runner-up Party

(b) Seat Share Runner-up Party

(c) Runner-up Party Aligned

(d) Runner-up Party Appoints Mayor

Notes: The horizontal axis is the running variable in all figures. Observations to the right of the zero threshold are municipalities where the regional bloc coalition has the majority of seats in the municipal council. Correspondingly municipalities where the regional opposition has the majority are to the left of the threshold. The outcome in the top panel is an indicator equal to one when the most-voted party appoints the mayor. The bottom panel shows the same variable but for the second most-voted party. Dots are averages in 0.05 percentage point bins of the running variable, and lines are linear regressions estimated on both sides of the threshold separately using the *lfitci* command in Stata. Shaded areas are the corresponding 95% confidence intervals.

TABLE A.4

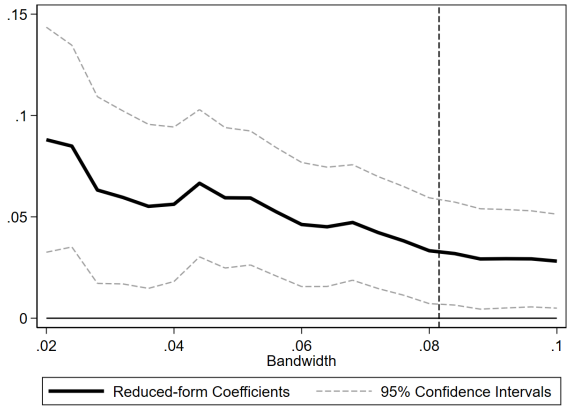
GOVERNMENT STABILITY AND TRANSFERS – 2SLS ESTIMATES

	(1)	(2)	(3)	(4)
Panel A. Full sample				
	Mayor Unseated		Log(Transfers)	
Aligned Council	-0.054***	-0.047***	0.268*	0.257**
	(0.016)	(0.017)	(0.139)	(0.112)
Robust 95% c.i.	[-0.102; -0.027]	[-0.094; -0.019]	[-0.040; 0.592]	[0.023; 0.521]
Bandwidth	0.068	0.063	0.065	0.062
Mean dep. var.	0.052	0.052	11.599	11.603
Observations	11667	10826	5091	
Controls	N	Y	N	Y
Panel B. No Single-party majority				
	Mayor Unseated		Log(Transfers)	
Aligned Council	-0.225***	-0.286***	-0.251	-0.066
	(0.085)	(0.091)	(0.563)	(0.494)
Robust 95% c.i.	[-0.458; -0.071]	[-0.534; -0.123]	[-1.405; 1.136]	[-1.096; 1.112]
Bandwidth	0.066	0.073	0.065	0.073
Mean dep. var.	0.052	0.050	11.601	11.602
Observations	4922	5236	2165	
Controls	N	Y	N	Y
Panel C. Single-party majority				
	Mayor Unseated		Log(Transfers)	
Aligned Council	-0.001	-0.001	0.473***	0.375***
	(0.004)	(0.004)	(0.099)	(0.086)
Robust 95% c.i.	[-0.011; 0.008]	[-0.011; 0.008]	[0.204; 0.655]	[0.183; 0.581]
Bandwidth	0.111	0.113	0.078	0.070
Mean dep. var.	0.044	0.043	11.601	11.602
Observations	11151	11413	3549	
Controls	N	Y	N	Y

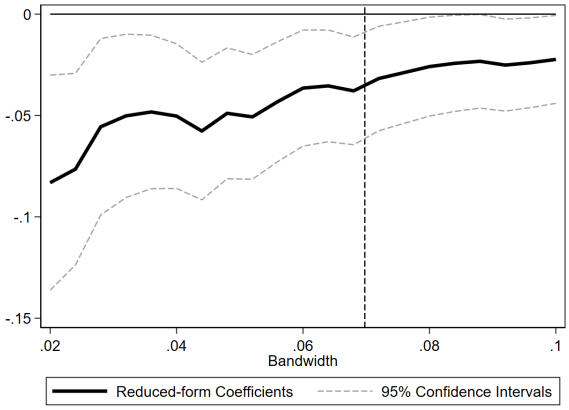
Notes: 2SLS estimates, from equation 1, of the effect of alignment on the probability that the mayor is unseated during the term with a no-confidence vote (cols. 1-2) and the log of regional capital transfers (cols. 3-4). In Panel A we use the full sample; in Panel B, we restrict to terms where no party has the majority of seats; in Panel C, we restrict to terms where one party has the majority of seats. Controls and FE are included as indicated in each column. Controls: surface and population (in logs). FE: electoral year-region fixed effects. The optimal bandwidth is calculated using the CCT criterion. Standard errors clustered at the municipality level. *, **, and *** represent 10%, 5%, and 1% significance levels, respectively.

Figure A.4

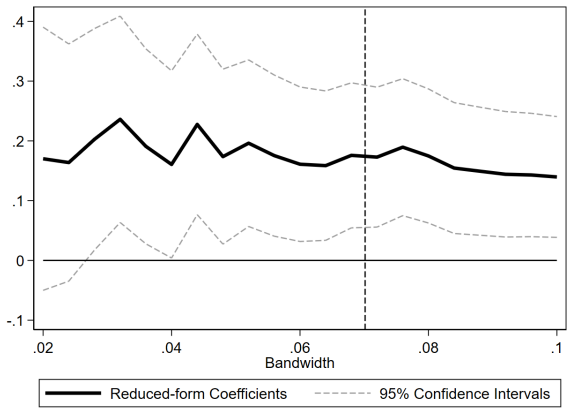
Bandwidth choice robustness – Full sample



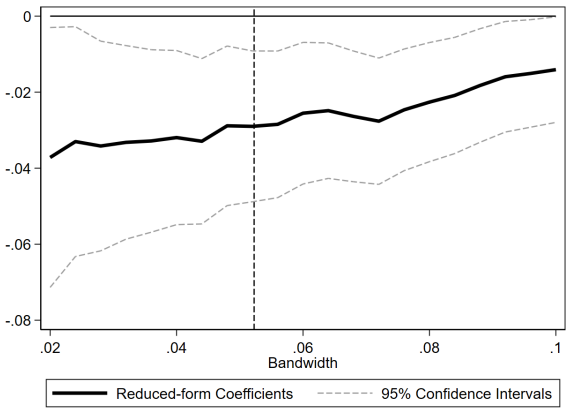
(a) Top Party Appoints Mayor



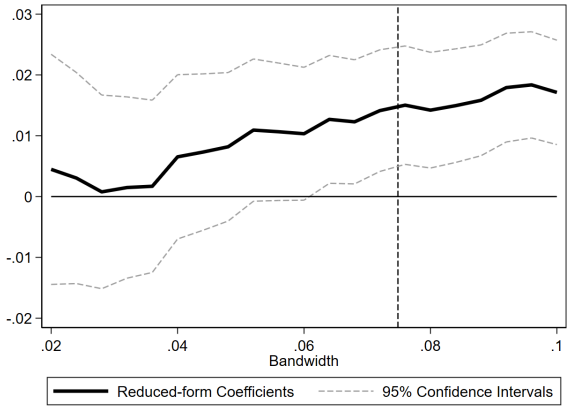
(b) Runner-up Party Appoints Mayor



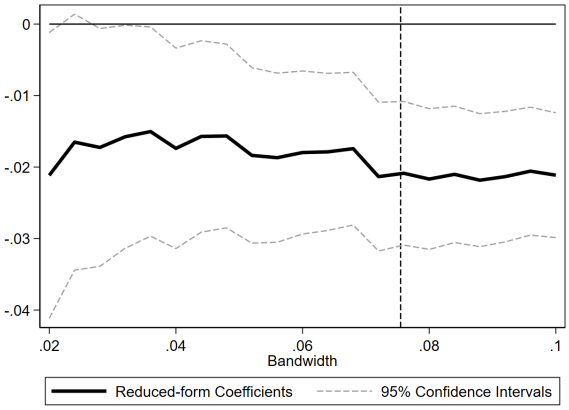
(c) Log(Transfers)



(d) Mayor Unseated



(e) Vote Share Top Party (t+1)

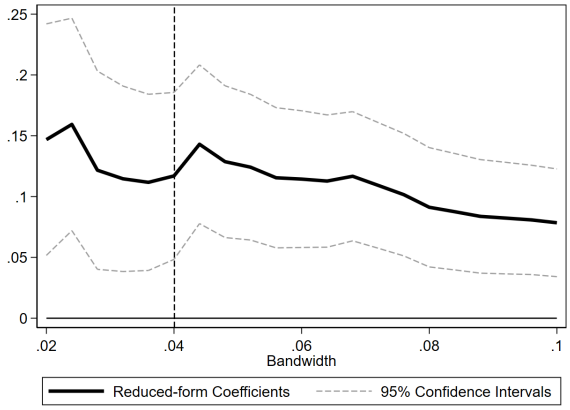


(f) Vote Share Runner-up Party (t+1)

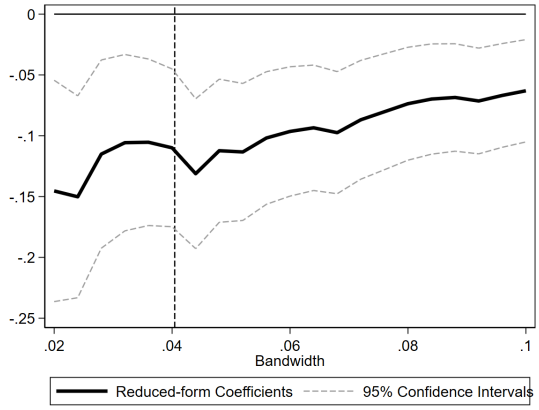
Notes: The horizontal axes correspond to the bandwidths used to generate each estimate. Vertical axes correspond to the value of each of the effects of interest. Solid lines correspond to reduced-form estimates for each bandwidth, whereas dashed lines show 95% confidence intervals in each case. 95% confidence intervals are based on standard errors robust to clustering at the municipality level.

Figure A.5

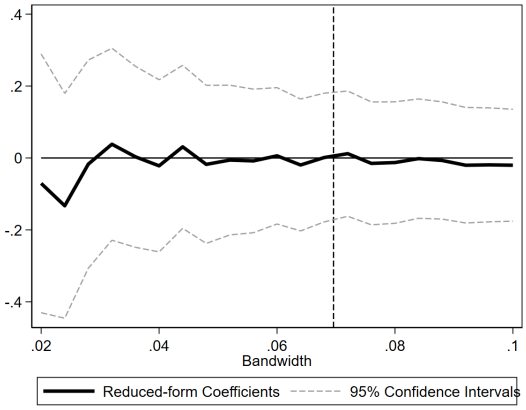
Bandwidth choice robustness – No Single-party majority



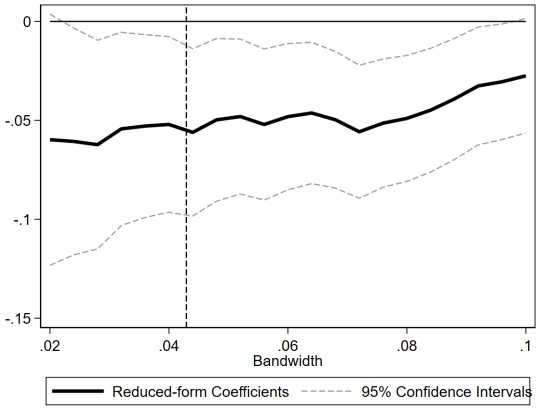
(a) Top Party Appoints Mayor



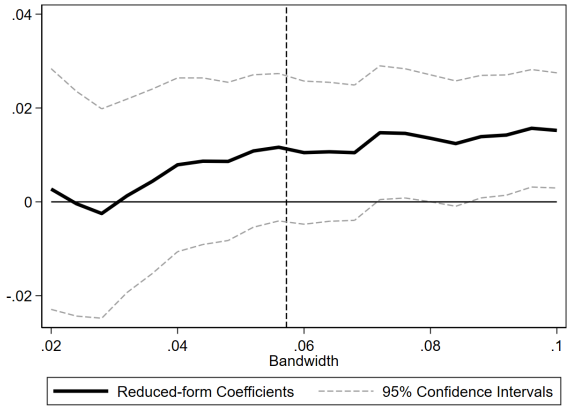
(b) Runner-up Party Appoints Mayor



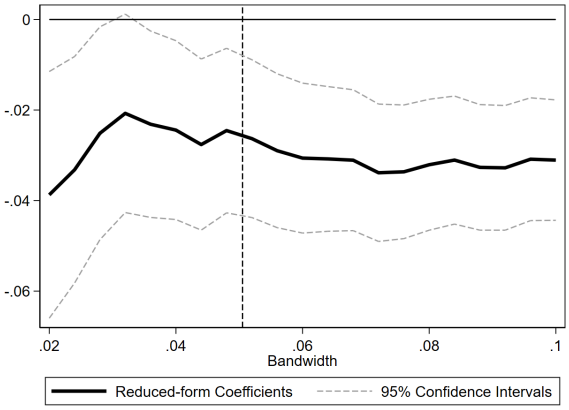
(c) Log(Transfers)



(d) Mayor Unseated



(e) Vote Share Top Party (t+1)



(f) Vote Share Runner-up Party (t+1)

Notes: No-single party majorities. The horizontal axes correspond to the bandwidths used to generate each estimate. Vertical axes correspond to the value of each of the effects of interest. Solid lines correspond to reduced-form estimates for each bandwidth, whereas dashed lines show 95% confidence intervals in each case. 95% confidence intervals are based on standard errors robust to clustering at the municipality level.

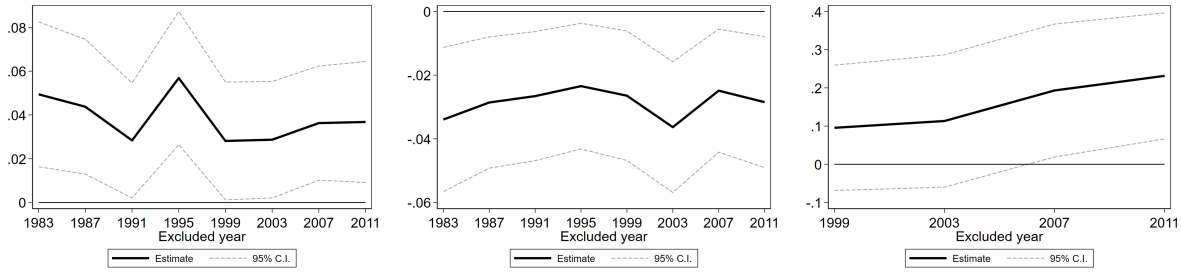
TABLE A.5
GOVERNMENT FORMATION, STABILITY, AND TRANSFERS – RESTRICTED SAMPLE

	(1)	(2)	(3)
Panel A. Full Sample			
	Top Party Mayor	Mayor Unseated	Log(Transfers)
Aligned Council	0.050**	-0.031**	0.173*
	(0.023)	(0.013)	(0.102)
Robust 95% c.i.	[0.012; 0.108]	[-0.065; -0.008]	[-0.062; 0.402]
Bandwidth	0.062	0.065	0.071
Mean dep. var.	0.825	0.053	11.502
Observations	5120	5306	2778
Panel B. No Single-party majority			
	Top Party Mayor	Mayor Unseated	Log(Transfers)
Aligned Council	0.123***	-0.074**	0.181
	(0.043)	(0.030)	(0.175)
Robust 95% c.i.	[0.051; 0.234]	[-0.150; -0.016]	[-0.143; 0.630]
Bandwidth	0.051	0.043	0.052
Mean dep. var.	0.821	0.057	11.522
Observations	1891	1640	891
Panel C. Single-party majority			
	Top Party Mayor	Mayor Unseated	Log(Transfers)
Aligned Council	0.005	0.002	0.338**
	(0.008)	(0.005)	(0.134)
Robust 95% c.i.	[-0.014; 0.027]	[-0.010; 0.012]	[0.042; 0.659]
Bandwidth	0.097	0.121	0.066
Mean dep. var.	0.850	0.042	11.495
Observations	4680	5935	1487

Notes: Reduced-form estimates, from equation 1, of the effect of council alignment on the probability that the top party appoints the mayor (column 1); that the mayor is unseated during the term with a no-confidence vote (column 2); and the log of regional capital transfers (column 3). All cases in which the regional government has not been appointed by the date in which the local government is decided are excluded. In Panel A we use the full sample; in Panel B, we restrict to terms where no party has the absolute majority of seats; in Panel C, we restrict to terms where one party has the absolute majority of seats. The optimal bandwidth is calculated using the CCT criterion. Robust bias-corrected confidence interval calculated using Calonico, Cattaneo and Titiunik (2014)'s method are also reported. Standard errors clustered at the municipality level. *, **, and *** represent 10%, 5%, and 1% significance levels, respectively.

Figure A.6

Results excluding one election at a time – Full sample

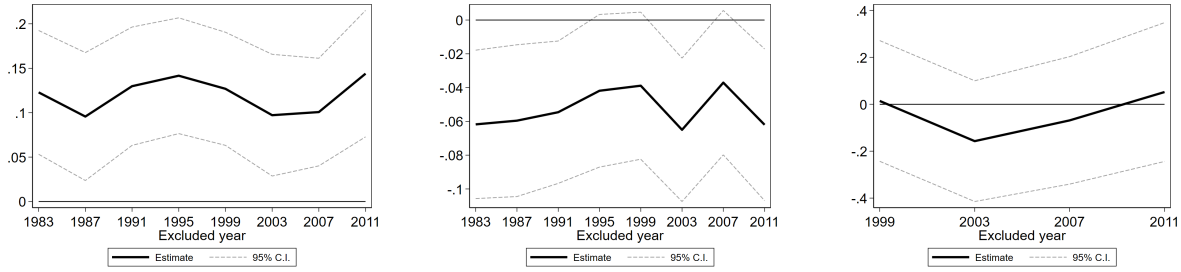


(a) Top Party App. Mayor (b) Mayor Unseated (c) Log(Transfers)

Notes: Full sample. The horizontal axes correspond to the election year excluded at each iteration. Vertical axes correspond to the value of each of the effects of interest. Solid lines correspond to reduced-form estimates for each subsample, whereas dashed lines show 95% confidence intervals in each case. 95% confidence intervals are based on standard errors robust to clustering at the municipality level.

Figure A.7

Results excluding one election at a time – No Single-party majority

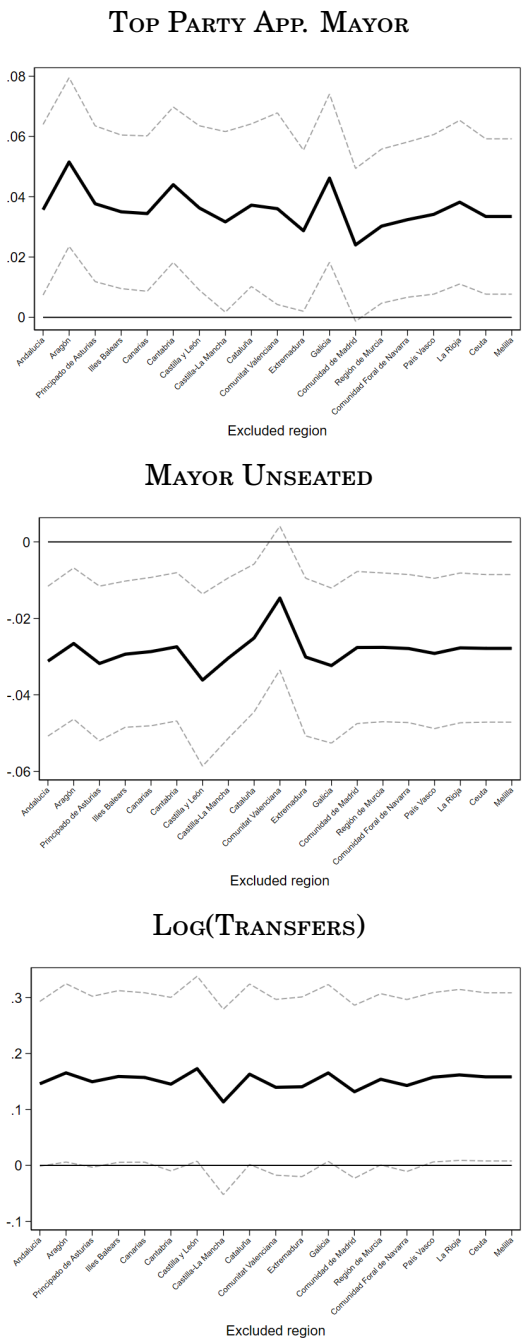


(a) Top Party App. Mayor (b) Mayor Unseated (c) Log(Transfers)

Notes: No Single party majorities. The horizontal axes correspond to the election year excluded at each iteration. Vertical axes correspond to the value of each of the effects of interest. Solid lines correspond to reduced-form estimates for each subsample, whereas dashed lines show 95% confidence intervals in each case. 95% confidence intervals are based on standard errors robust to clustering at the municipality level.

Figure A.8

Results excluding one region at a time – Reduced-form estimates

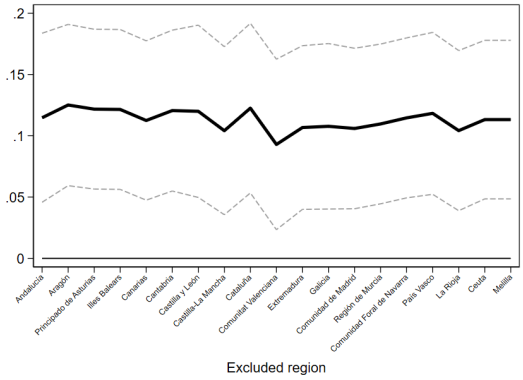


Notes: Full Sample. The horizontal axes correspond to the region excluded at each iteration. Vertical axes correspond to the value of each of the effects of interest. Solid lines correspond to reduced-form estimates for each subsample, whereas dashed lines show 95% confidence intervals in each case. 95% confidence intervals are based on standard errors robust to clustering at the municipality level.

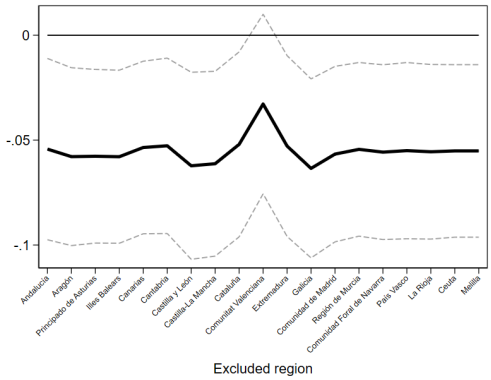
Figure A.9

Results excluding one region at a time – Reduced-form estimates

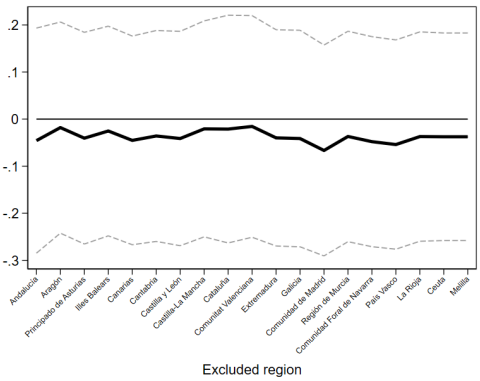
Top Party App. Mayor



Mayor Unseated



Log(Transfers)



Notes: No Single party majorities. The horizontal axes correspond to the region excluded at each iteration. Vertical axes correspond to the value of each of the effects of interest. Solid lines correspond to reduced-form estimates for each subsample, whereas dashed lines show 95% confidence intervals in each case. 95% confidence intervals are based on standard errors robust to clustering at the municipality level.

B. Details on the calculation of the running variables

This section clarifies how we calculate the running variable. We follow Folke (2014) and Fiva, Folke and Sørensen (2018)'s recommendation that, when applying the close-elections approach to proportional representation systems, the running variable should take into account the overall votes distribution across all parties.

First, for each municipality, we calculate the aggregate vote-share of the coalition in power at the regional level (the *regional coalition bloc*) in the year when the municipal election takes place. This aggregate share is simply the sum of all vote-shares of parties belonging to the bloc, defined as the set of parties that voted for the president during the investiture vote. We proceed similarly by aggregating over the *regional opposition bloc*, defined as the group of all other parties with representation in the regional council belonging to the opposition. We define an indicator D equal to 1 if the regional coalition bloc has either the majority of seats in the municipality, or ties in seats with the opposition but has more votes, and zero otherwise.

We then apply an iterative method in which we add votes to the regional coalition bloc (if it does not have the majority of seats in council) or subtract them (if it does) until a majority change is achieved. If the regional coalition bloc has the majority of seats in the local council, start by subtracting votes to the regional bloc in a small increment of half a percentage point of the total votes cast. These votes are allocated to the parties in council belonging to the opposition block proportionally to their seat-shares. Then, re-calculate the seats allocation. If, with this new allocation of votes, the majority in the council does not change, subtract an additional half of a percentage point until there is a majority change, defined as a change in which bloc has the most seats or, in case of a tie in seats, the most votes.

When we observe a majority change, in order to gain precision, we go back to the last increment before the change and subtract, instead of half a percentage point, .1% of votes, until the majority changes again. Then, we repeat the operation in finer increments of .01% and, finally, .001%. The final running variable, therefore, is approximated to jumps in vote-share of .001%.

We calculate the original seat distribution, as well as the simulated seat distributions using STATA 17 with the user-written command *v2seats*, to which we input the details of the Spanish municipalities electoral system in terms of admission threshold and the D'Hondt method.

C. Power functions

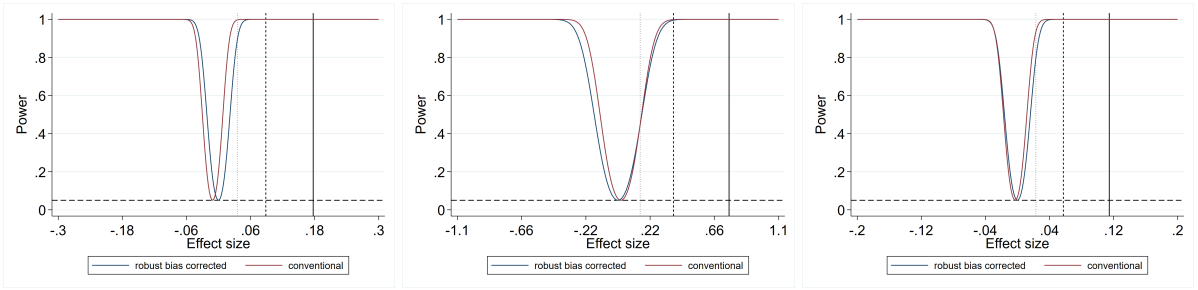
To ensure that our research design is well-powered to detect effects of small or moderate magnitude, we calculate power functions for our main RDD estimates and show them in Figures C.10-C.12, for the full sample and splitting by single-party majority status. As we expect from the fairly large sample sizes, we have considerable power in all cases.

For instance, when studying in the full sample the effect of alignment on the probability that the most-voted party appoints the mayor (panel A in Figure C.10), the power function grows quickly and reaches 1 even for relatively small effects (displayed on the x-axis). Following Stommes, Aronow and Sävje (2023), we show as vertical lines effects of different magnitude. The dotted line is for an effect of one-tenth of a standard deviation of the outcome for the untreated group, a small effect. Similarly, the dashed and solid line correspond to one-quarter and one-half of a standard deviation respectively. For all of the three outcomes, the power of our tests reaches one for effects of one-fourth of a standard deviation or less in all cases, suggesting that our design is able to detect effects of this magnitude or lower. For effects as small as one-tenth of a standard deviation, we have relatively lower power for the transfers and mayor unseated outcomes, whereas the test for the indicator for the top party appointing the mayor is well-powered (>0.8).

In the sub-sample of no single-party majorities (Figure C.11), we have little power to detect very small effects in all cases, although we reach the conventional threshold of 0.8 for effects of one-quarter of a standard deviation for all outcomes. We have more power in the single-party majorities sample, where for all outcomes except transfers we are able to detect even small effects with high probability (>0.8).

FIGURE C.10

RDD POWER FUNCTIONS – FULL SAMPLE

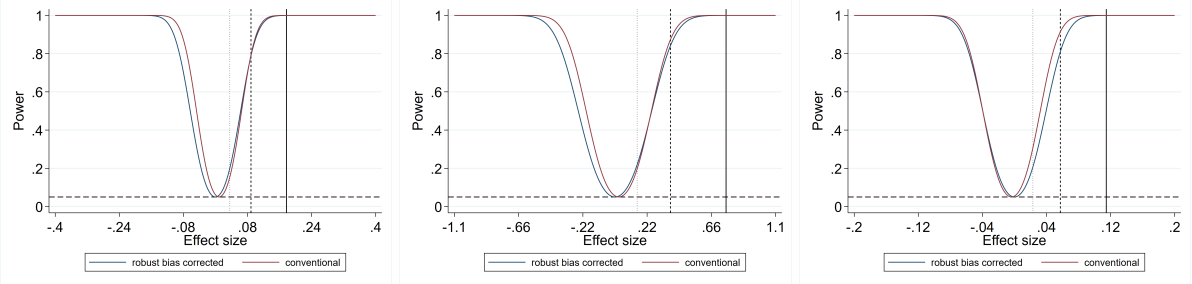


(A) TOP PARTY APPOINTS MAYOR (B) LOG(TRANSFERS) (C) MAYOR UNSEATED

Notes: RDD Power functions for a test with size $\alpha = 0.05$ of the null of zero effect with outcomes specified in each panel, using the command *rdpow* in stata with both conventional and robust s.e. (Cattaneo, Titiunik and Vazquez-Bare, 2019). The vertical lines specify the treatment effect under the alternative at which the power function is evaluated. The solid line correspond to one standard deviation of the outcome for the untreated group; the dashed line corresponds to one-half the standard deviation; and, finally, the dotted line to one-tenth. In all panels, τ is equal to one half of a standard deviation.

Figure C.11

RDD power functions – No Single-party Majority

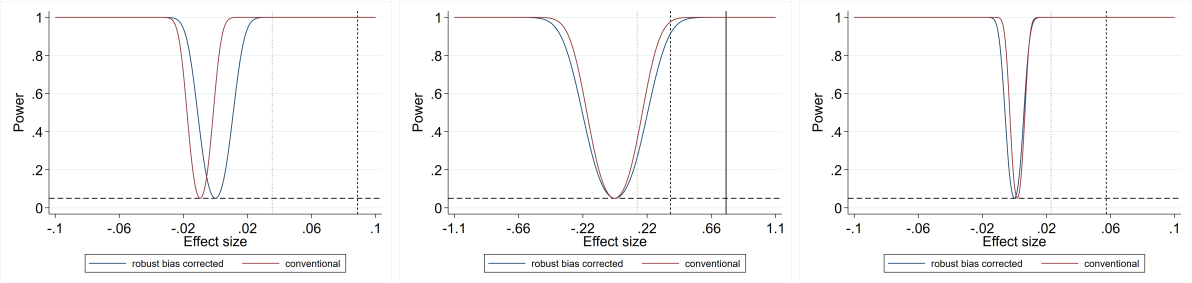


(a) Top Party Appoints Mayor (b) Log(Transfers) (c) Mayor Unseated

Notes: RDD Power functions for a test with size $\alpha = 0.05$ of the null of zero effect with outcomes specified in each panel, using the command *rdpow* in stata with both conventional and robust s.e. (Cattaneo, Titiunik and Vazquez-Bare, 2019). The vertical lines specify the treatment effect under the alternative at which the power function is evaluated. The solid line correspond to one-half of a standard deviation of the outcome for the untreated group; the dashed line corresponds to one-quarter the standard deviation; and, finally, the dotted line to one-tenth.

Figure C.12

RDD power functions – Single-party majority



(a) Top Party Appoints Mayor (b) Log(Transfers) (c) Mayor Unseated

Notes: RDD Power functions for a test with size $\alpha = 0.05$ of the null of zero effect with outcomes specified in each panel, using the command *rdpow* in stata with both conventional and robust s.e. (Cattaneo, Titiunik and Vazquez-Bare, 2019). The vertical lines specify the treatment effect under the alternative at which the power function is evaluated. The solid line correspond to one-half of a standard deviation of the outcome for the untreated group; the dashed line corresponds to one-quarter; and, finally, the dotted line to one-tenth.