Online Appendix for:
Do Better Paid Politicians Perform Better? Disentangling Incentives from Selection*

Stefano Gagliarducci
Tor Vergata University & IZA

Tommaso Nannicini
Bocconi University, IGIER & IZA

First version: September 2008
This version: May 2011

Abstract

Online Appendix containing additional discussion on the estimation methods and further robustness checks discussed in the paper.

JEL codes: M52, D72, J45, H70.
Keywords: political selection, efficiency wage, term limit, regression discontinuity.

*We thank the editor, Stefano DellaVigna, four anonymous referees, Alberto Alesina, Marianne Bertrand, Stéphane Bonhomme, Michael Elsby, Nicola Persico, Steve Pischke, Giovanni Pica, Albert Solé, and seminar participants at Carlos III, CEMFI, CSEF Naples, ESSLE-CEPR meeting 2008, IMT Lucca, IGIER-Bocconi, LSE, PSPE Conference 2010 London, Sassari, SOLE 2009 Boston, Tor Vergata University, and Universitat de Barcelona for their insightful comments and suggestions. We are also grateful to Fabio Albiani from the Italian Ministry of Internal Affairs for invaluable help with data collection, and to Lucia Spadaccini for excellent research assistance. The usual caveat applies. E-mails: stefano.gagliarducci@uniroma2.it, tommaso.nannicini@unibocconi.it.

A Estimation Methods

In order to test (H1), (H2), (H2.1), and (H2.2), we need to implement equations (1), (3), (4), and (5) in the paper. In the baseline specifications, we apply a local linear regression (LLR) approach, as suggested by Imbens and Lemieux (2008). This method fits linear regression functions to the observations distributed within a distance Δ on either side of the threshold. To implement equation (1), we restrict the sample to towns in the interval $P_i \in [P_c - \Delta, P_c + \Delta]$ and estimate the model:

$$X_i = \delta_0 + \delta_1 P_i^* + D_i(\gamma_0 + \gamma_1 P_i^*) + \eta_i,$$

where X_i captures some observable traits of the mayor or candidates, D_i is a treatment dummy equal to one if $P_i \geq P_c$, and the normalized variable $P_i^* = P_i - P_c$ allows us to interpret γ_0 as the jump between the two regression lines at P_c. As a result: $\tau_{sel} = \gamma_0$. We select the bandwidth Δ by means of a cross-validation method (Ludwig and Miller, 2007).[1] As the same city is observed in different terms, we control for intra-city correlation in the error term η_i.

As an alternative to LLR, we use the whole sample and choose a flexible functional form specification to fit the relationship between X_i and P_i on either side of P_c. Specifically, we estimate the following (spline) polynomial approximation:

$$X_i = \sum_{k=0}^{p}(\delta_k P_i^{*k}) + D_i \sum_{k=0}^{p}(\gamma_k P_i^{*k}) + \eta_i.$$

Usually, a third-grade polynomial ($p = 3$) is used in the empirical literature.

In a similar way, to implement equations (3), (4), and (5) in the paper, we fit two different regression functions on both sides of the threshold P_c: one for politicians *without* a binding term limit ($TL = 0$) and one for politicians *with* a binding term limit ($TL = 1$). The jump in the regression functions for the subsample $TL = 0$ can be interpreted as an estimate of τ_{per}, while the jump in the regression functions for the subsample $TL = 1$ is

[1] The cross-validation method consists in choosing Δ so as to minimize the loss function: $CV_X(\Delta) = \frac{1}{N}\sum_{i=1}^{N}(X_i - \hat{X}_\Delta(P_i))^2$, where, for every P_i to the left (right) of the threshold P_c, we predict $\hat{X}_\Delta(P_i)$ as if it were at the boundary of the estimation using only observations in the interval $[P_i - \Delta, P_i]$ ($[P_i, P_i + \Delta]$). We choose the optimal Δ among all multiples of 50 up to 1,500.

an estimate of σ_{per}. The difference between the two jumps delivers an estimate of ϕ_{per}. Formally, with the LLR approach, we choose Δ with cross-validation, restrict the sample to cities in the interval $P_i \in [P_c - \Delta, P_c + \Delta]$, and estimate the model:

$$Y_i = \delta_0 + \delta_1 P_i^* + D_i(\gamma_0 + \gamma_1 P_i^*) + (1 - TL_i)[\alpha_0 + \alpha_1 P_i^* + D_i(\beta_0 + \beta_1 P_i^*)] + \xi_i,$$

where Y_i is some performance indicator for the mayor, D_i the treatment, and P_i^* the normalized population size. Standard errors are clustered at the city level. It is straightforward to show that the overall effect of the wage on performance is $\tau_{per} = \gamma_0 + \beta_0$ (when $TL_i = 0$), while the composition effect on performance is $\sigma_{per} = \gamma_0$ (when $TL_i = 1$). It follows that the (reelection) incentive effect on performance is $\phi_{per} = \tau_{per} - \sigma_{per} = \beta_0$.

Analogously, with the spline polynomial approximation, we estimate the model:

$$Y_i = \sum_{k=0}^{p}(\delta_k P_i^{*k}) + D_i \sum_{k=0}^{p}(\gamma_k P_i^{*k}) + (1 - TL_i)\big[\sum_{k=0}^{p}(\alpha_k P_i^{*k}) + D_i \sum_{k=0}^{p}(\beta_k P_i^{*k})\big] + \xi_i,$$

where the overall, composition, and (reelection) incentive effects of the wage on performance are identified as above: $\tau_{per} = \gamma_0 + \beta_0$; $\sigma_{per} = \gamma_0$; $\phi_{per} = \beta_0$.

B Further Robustness Checks

Table A1: Mayor's gross monthly wage over time (in 2000 euros)

Year	Population brackets									
	Below 1,000	1,000-3,000	3,000-5,000	5,000-10,000	10,000-30,000	30,000-50,000	50,000-100,000	100,000-250,000	250,000-500,000	Above 500,000
1993	1,227	1,227	1,841	2,455	2,455	2,762	3,375	3,989	4,603	6,137
1994	1,306	1,306	1,959	2,612	2,612	2,939	3,592	4,245	4,898	6,531
1995	1,240	1,240	1,860	2,480	2,480	2,790	3,410	4,030	4,650	6,200
1996	1,190	1,190	1,785	2,381	2,381	2,678	3,273	3,869	4,464	5,952
1997	1,286	1,286	1,929	2,571	2,571	2,893	3,536	4,178	4,821	6,428
1998	1,262	1,262	1,892	2,523	2,523	2,838	3,469	4,100	4,731	6,308
1999	1,241	1,241	1,861	2,482	2,482	2,792	3,412	4,033	4,653	6,204
2000	1,291	1,446	2,169	2,789	3,099	3,460	4,132	5,010	5,784	7,798
2001	1,256	1,407	2,110	2,713	3,014	3,366	4,019	4,873	5,627	7,586
2002	1,226	1,373	2,060	2,648	2,943	3,286	3,924	4,757	5,493	7,406
2003	1,291	1,446	2,169	2,789	3,099	3,460	4,132	5,010	5,784	7,798
2004	1,263	1,415	2,122	2,728	3,031	3,385	4,042	4,901	5,659	7,629
2005	1,238	1,387	2,081	2,675	2,972	3,319	3,963	4,805	5,548	7,480
2006	1,396	1,563	2,345	3,015	3,350	3,741	4,466	5,415	6,253	8,430
2007	1,371	1,535	2,303	2,961	3,290	3,674	4,386	5,318	6,141	8,279

Notes. *Population* is the number of resident inhabitants as measured by the last available Census. The real monthly salary is computed using the OECD CPI index.

Table A2: Candidates and mayor selection, alternative RDD estimates

Population	Female	Age	Years school	Not employed	Entrepreneurs	White collar	Blue collar
			All candidates				
			LLR with optimal bandwidth and covariates				
Effect	0.009	-0.833	0.841***	-0.022	-0.035	0.066*	-0.011
	(0.017)	(0.583)	(0.270)	(0.025)	(0.028)	(0.039)	(0.024)
Δ	1,300	1,700	900	900	1,700	1,300	1,400
Obs.	4,805	6,405	3,295	3,295	6,405	4,805	5,191
			3^{rd} spline polynomial approximation				
Effect	-0.000	-0.257	1.205***	-0.047	-0.037	0.158**	-0.074
	(0.030)	(1.168)	(0.415)	(0.035)	(0.059)	(0.070)	(0.045)
Obs.	6,544	6,544	6,544	6,544	6,544	6,544	6,544
			4^{th} spline polynomial approximation				
Effect	0.020	-0.540	1.205**	-0.050	-0.005	0.125	-0.070
	(0.035)	(1.444)	(0.526)	(0.044)	(0.073)	(0.088)	(0.055)
Obs.	6,544	6,544	6,544	6,544	6,544	6,544	6,544
			Mayors				
			LLR with optimal bandwidth and covariates				
Effect	-0.011	-0.793	0.788**	-0.005	-0.019	0.059	-0.029
	(0.022)	(0.819)	(0.342)	(0.033)	(0.046)	(0.046)	(0.035)
Obs.	2,971	2,971	1,905	1,738	2,396	2,971	2,396
			3^{rd} spline polynomial approximation				
Effect	0.015	-0.006	1.633***	-0.057	-0.053	0.193**	-0.083
	(0.043)	(1.631)	(0.558)	(0.050)	(0.085)	(0.092)	(0.064)
Obs.	3,039	3,039	3,039	3,039	3,039	3,039	3,039
			4^{th} spline polynomial approximation				
Effect	0.086*	-0.234	1.522**	-0.063	-0.035	0.166	-0.068
	(0.049)	(2.043)	(0.700)	(0.063)	(0.105)	(0.116)	(0.079)
Obs.	3,039	3,039	3,039	3,039	3,039	3,039	3,039

Notes. Effect of the 33% wage increase at the 5,000 threshold on the characteristics of the three best candidates (top panel) and of the elected mayor (bottom panel). Terms from 1993 to 2001. Cities with population between 3,250 and 6,750 inhabitants. First estimate: Local Linear Regression (LLR) with optimal symmetric bandwidth Δ and invariant town characteristics (*Area* in km^2, *Sea level* in meters, and *North/South* dummy) as additional covariates; the optimal symmetric bandwidth Δ is chosen with cross-validation methods. Second estimate: 3^{rd} order polynomial approximation on either side of the threshold. Third estimate: 4^{th} order polynomial approximation on either side of the threshold. *Age* and *Years school* are measured in years; the other variables are dummies. *Not employed* includes unemployed, retired, and any other individual out of the labor force. *Entrepreneur* includes self-employed and entrepreneurs. *White collar* includes lawyers, professors, physicians, and managers. *Blue collar* includes blue collars, clerks, and technicians. Standard errors robust to clustering at the municipality level are in parentheses. Significance at the 10% level is represented by *, at the 5% level by **, and at the 1% level by ***.

Table A3: Executive committee selection, RDD estimates

Population	Female	Age	Years school	Not employed	Entrepreneurs	White collar	Blue collar
			LLR with optimal bandwidth				
Effect	-0.029*	-1.120**	0.252	-0.014	0.022	0.028	-0.026
	(0.016)	(0.486)	(0.205)	(0.016)	(0.029)	(0.029)	(0.025)
Δ	1,600	1,700	1,100	1,500	1,400	1,300	1,300
Obs.	10,900	11,719	7,484	10,211	9,455	8,759	8,759
			LLR with optimal bandwidth and covariates				
Effect	-0.025	-0.877*	0.133	-0.010	0.018	0.016	-0.015
	(0.016)	(0.473)	(0.197)	(0.016)	(0.029)	(0.029)	(0.025)
Δ	1,600	1,700	1,100	1,500	1,400	1,300	1,300
Obs.	10,900	11,719	7,484	10,211	9,455	8,759	8,759
			3^{rd} spline polynomial approximation				
Effect	-0.017	-0.966	0.538*	-0.014	0.041	0.035	-0.063
	(0.033)	(0.956)	(0.325)	(0.031)	(0.055)	(0.051)	(0.046)
Obs.	11,978	11,978	11,978	11,978	11,978	11,978	11,978
			4^{th} spline polynomial approximation				
Effect	-0.038	-1.309	0.704*	0.010	0.069	0.043	-0.122**
	(0.042)	(1.134)	(0.401)	(0.039)	(0.070)	(0.063)	(0.057)
Obs.	11,978	11,978	11,978	11,978	11,978	11,978	11,978

Notes. Effect of the 33% wage increase at the 5,000 threshold on the characteristics of the members of the executive committee. Terms from 1993 to 2001. Cities with population between 3,250 and 6,750 inhabitants. First estimate: Local Linear Regression (LLR) with optimal symmetric bandwidth Δ. Second estimate: Local Linear Regression (LLR) and invariant town characteristics (*Area* in km^2, *Sea level* in meters, and *North/South* dummy) as additional covariates. Third estimate: 3^{rd} order polynomial approximation on either side of the 5,000 threshold. Fourth estimate: 4^{th} order polynomial approximation on either side of the threshold. *Age* and *Years school* are measured in years; the other variables are dummies. *Not employed* includes unemployed, retired, and any other individual out of the labor force. *Entrepreneur* includes self-employed and entrepreneurs. *White collar* includes lawyers, professors, physicians, and managers. *Blue collar* includes blue collars, clerks, and technicians. Standard errors robust to clustering at the municipality level are in parentheses. Significance at the 10% level is represented by *, at the 5% level by **, and at the 1% level by ***.

Table A4: Candidates and mayor selection at 1,000, RDD estimates

Population	Female	Age	Years school	Not employed	Entrepreneurs	White collar	Blue collar
				All candidates			
				LLR with optimal bandwidth			
Effect	0.004	-0.690	-0.033	0.010	0.009	0.019	-0.024
	(0.017)	(0.797)	(0.219)	(0.027)	(0.027)	(0.031)	(0.026)
Δ	700	400	600	500	700	400	700
Obs.	4,863	2,845	4,266	3,573	4,863	4,266	4,863
				LLR with optimal bandwidth and covariates			
Effect	0.004	-0.774	0.022	0.007	0.009	0.024	-0.028
	(0.017)	(0.789)	(0.207)	(0.026)	(0.027)	(0.030)	(0.026)
Δ	700	400	600	500	700	400	700
Obs.	4,863	2,845	4,266	3,573	4,863	4,266	4,863
				3^{rd} spline polynomial approximation			
Effect	-0.007	-0.477	-0.065	0.034	-0.031	0.009	-0.012
	(0.035)	(1.158)	(0.391)	(0.044)	(0.052)	(0.055)	(0.048)
Obs.	5,184	5,184	5,184	5,184	5,184	5,184	5,184
				4^{th} spline polynomial approximation			
Effect	-0.032	-0.489	-0.265	0.056	-0.045	-0.040	0.029
	(0.044)	(1.452)	(0.491)	(0.056)	(0.065)	(0.069)	(0.059)
Obs.	5,184	5,184	5,184	5,184	5,184	5,184	5,184
				Mayors			
				LLR with optimal bandwidth			
Effect	0.007	-0.744	-0.134	0.036	-0.019	0.003	-0.036
	(0.027)	(1.082)	(0.251)	(0.034)	(0.036)	(0.035)	(0.032)
Δ	400	300	700	500	600	700	700
Obs.	1,829	1,380	3,135	2,295	2,739	3,135	3,135
				LLR with optimal bandwidth and covariates			
Effect	0.005	-0.799	-0.043	0.032	-0.020	0.012	-0.040
	(0.027)	(1.079)	(0.239)	(0.034)	(0.036)	(0.034)	(0.031)
Δ	400	300	700	500	600	700	700
Obs.	1,829	1,380	3,135	2,295	2,739	3,135	3,135
				3^{rd} spline polynomial approximation			
Effect	0.020	0.511	-0.015	0.106*	-0.084	-0.003	-0.019
	(0.040)	(1.404)	(0.467)	(0.056)	(0.065)	(0.068)	(0.059)
Obs.	3,341	3,341	3,341	3,341	3,341	3,341	3,341
				4^{th} spline polynomial approximation			
Effect	0.013	0.732	-0.140	0.110	-0.102	-0.065	0.057
	(0.048)	(1.792)	(0.577)	(0.071)	(0.084)	(0.085)	(0.073)
Obs.	3,341	3,341	3,341	3,341	3,341	3,341	3,341

Notes. Effect of the 12% wage increase at the 1,000 threshold on the characteristics of the three best candidates (top panel) and of the elected mayor (bottom panel). Terms from 2000 to 2007. Cities with population between 250 and 1,750 inhabitants. First estimate: Local Linear Regression (LLR) with optimal symmetric bandwidth Δ. Second estimate: Local Linear Regression (LLR) and invariant town characteristics (*Area* in km^2, *Sea level* in meters, and *North/South* dummy) as additional covariates. Third estimate: 3^{rd} order polynomial approximation on either side of the 5,000 threshold. Fourth estimate: 4^{th} order polynomial approximation on either side of the threshold. *Age* and *Years school* are measured in years; the other variables are dummies. *Not employed* includes unemployed, retired, and any other individual out of the labor force. *Entrepreneur* includes self-employed and entrepreneurs. *White collar* includes lawyers, professors, physicians, and managers. *Blue collar* includes blue collars, clerks, and technicians. Standard errors robust to clustering at the municipality level are in parentheses. Significance at the 10% level is represented by *, at the 5% level by **, and at the 1% level by ***.

Table A5: Budget components per capita, alternative RDD estimates

	Deficit	Expenditure				Revenues			
		Total	Investments	Personnel and debt	Goods and services	Total	Transfers	Taxes	Tariffs
LLR with optimal bandwidth and covariates									
A. Overall (no term limit)	-0.605	-199.042***	-57.062	-5.853	-77.691***	-195.602***	10.319	-26.268*	-117.098***
	(8.090)	(65.036)	(37.699)	(15.135)	(25.264)	(65.049)	(57.827)	(13.652)	(42.550)
B. Composition (term limit)	5.979	-167.579***	-52.000	-14.713	-83.918***	-211.309***	-16.662	-42.678**	-109.144**
	(5.153)	(64.215)	(42.158)	(19.018)	(22.208)	(78.577)	(49.474)	(17.503)	(44.051)
C. Reelection (A-B)	-6.761	37.372	-0.013	9.397	8.677	20.260	29.390	7.354	-4.854
	(8.492)	(54.842)	(36.834)	(16.330)	(15.354)	(50.637)	(63.210)	(8.789)	(19.563)
Δ	1,300	1,500	1,700	1,400	1,500	1,000	1,400	1,700	1,100
Obs.	880	1,016	1,168	950	1,016	696	950	758	758
3^{rd} spline polynomial approximation									
A. Overall (no term limit)	-8.171	-210.952*	-68.139	-42.855	-99.959**	-202.782*	-59.677	-21.760	-121.345*
	(11.020)	(117.022)	(80.653)	(28.933)	(50.839)	(118.113)	(94.985)	(31.015)	(73.385)
B. Composition (term limit)	14.075*	-254.564**	-159.246*	-17.092	-78.226**	-268.639**	-100.668	-23.059	-144.912
	(7.841)	(128.265)	(89.964)	(33.567)	(39.032)	(132.183)	(84.790)	(30.779)	(92.585)
C. Reelection (A-B)	-22.246**	43.611	91.108	-25.763	-21.733	65.857	40.991	1.299	23.567
	(11.153)	(94.144)	(89.237)	(32.437)	(30.088)	(92.775)	(84.318)	(13.437)	(27.919)
Obs.	1,194	1,194	1,194	1,194	1,194	1,194	1,194	1,194	1,194
4^{th} spline polynomial approximation									
A. Overall (no term limit)	-18.432	-243.042*	-94.422	-26.239	-122.381*	-224.610*	-53.847	-33.399	-137.365
	(14.024)	(133.215)	(82.377)	(28.523)	(65.315)	(136.096)	(92.433)	(39.994)	(106.117)
B. Composition (term limit)	14.075*	-254.564**	-159.246*	-17.092	-78.226**	-268.639**	-100.668	-23.059	-144.912
	(7.847)	(128.374)	(90.040)	(33.596)	(39.065)	(132.295)	(84.862)	(30.805)	(92.663)
C. Reelection (A-B)	-32.507**	11.522	64.824	-9.147	-44.155	44.029	46.821	-10.339	7.547
	(13.614)	(105.648)	(87.164)	(35.222)	(51.021)	(103.986)	(93.308)	(27.471)	(41.055)
Obs.	1,194	1,194	1,194	1,194	1,194	1,194	1,194	1,194	1,194

Notes. Effect of the 33% wage increase at the 5,000 threshold on budget variables. Terms from 1993 to 2001; only mayors observed over two consecutive terms, with binding term limit in the second. Cities with population between 3,250 and 6,750 inhabitants. First estimate: Local Linear Regression (LLR) with optimal symmetric bandwidth Δ and invariant town characteristics (*Area* in km^2, *Sea level* in meters, and *North/South* dummy) as additional covariates; the optimal symmetric bandwidth Δ is chosen with cross-validation methods. Second estimate: 3^{rd} order polynomial approximation on either side of the threshold. Third estimate: 4^{th} order polynomial approximation on either side of the threshold. All variables are in per-capita terms, expressed in euros at 2000 prices, and averaged over the mayoral term (election years excluded). Standard errors robust to clustering at the municipality level are in parentheses. Significance at the 10% level is represented by *, at the 5% level by **, and at the 1% level by ***.

Table A6: Budget components per capita, robustness exercises

	Deficit	Expenditure				Revenues			
		Total	Investments	Personnel and debt	Goods and services	Total	Transfers	Taxes	Tariffs
					Contestable cities				
A. Overall (no term limit)	-10.414	-244.237**	-75.702	-46.011	-133.215***	-229.152**	10.744	-22.859	-182.397***
	(9.011)	(94.823)	(55.292)	(34.163)	(42.694)	(95.379)	(58.604)	(20.164)	(68.072)
B. Composition (term limit)	1.852	-220.730*	-78.923	-26.279	-115.432***	-224.483*	-7.194	-55.052**	-172.851**
	(5.367)	(112.085)	(63.015)	(31.773)	(35.288)	(114.922)	(70.721)	(25.773)	(70.846)
C. Reelection (A-B)	-12.266	-23.507	3.221	-19.733	-17.783	-4.669	17.938	3.294	-9.546
	(9.058)	(69.898)	(52.510)	(37.515)	(25.293)	(68.365)	(58.222)	(11.288)	(30.724)
Δ	1,400	1,100	1,700	900	1,100	1,100	1,700	1,700	1,100
Obs.	581	453	699	373	453	453	699	453	453
					Freshmen after 1993				
A. Overall (no term limit)	-1.700	-182.840*	-90.123	-24.413	-63.510**	-179.994*	-82.126	-16.504	-84.444**
	(9.959)	(94.979)	(79.762)	(17.447)	(28.892)	(93.490)	(81.686)	(22.076)	(40.082)
B. Composition (term limit)	-0.835	-186.530**	-78.857	-25.133	-80.898***	-186.958**	-101.239	-18.277	-67.728**
	(4.460)	(72.388)	(50.398)	(22.939)	(27.108)	(72.858)	(63.459)	(22.740)	(30.917)
C. Reelection (A-B)	-0.865	3.690	-11.265	0.720	17.388	6.965	19.113	1.774	-16.716
	(10.208)	(81.813)	(76.860)	(19.341)	(17.172)	(79.944)	(79.586)	(10.525)	(20.986)
Δ	1,200	1,400	1,400	1,400	1,500	1,400	1,400	1,000	1,400
Obs.	642	746	746	746	796	746	746	546	746

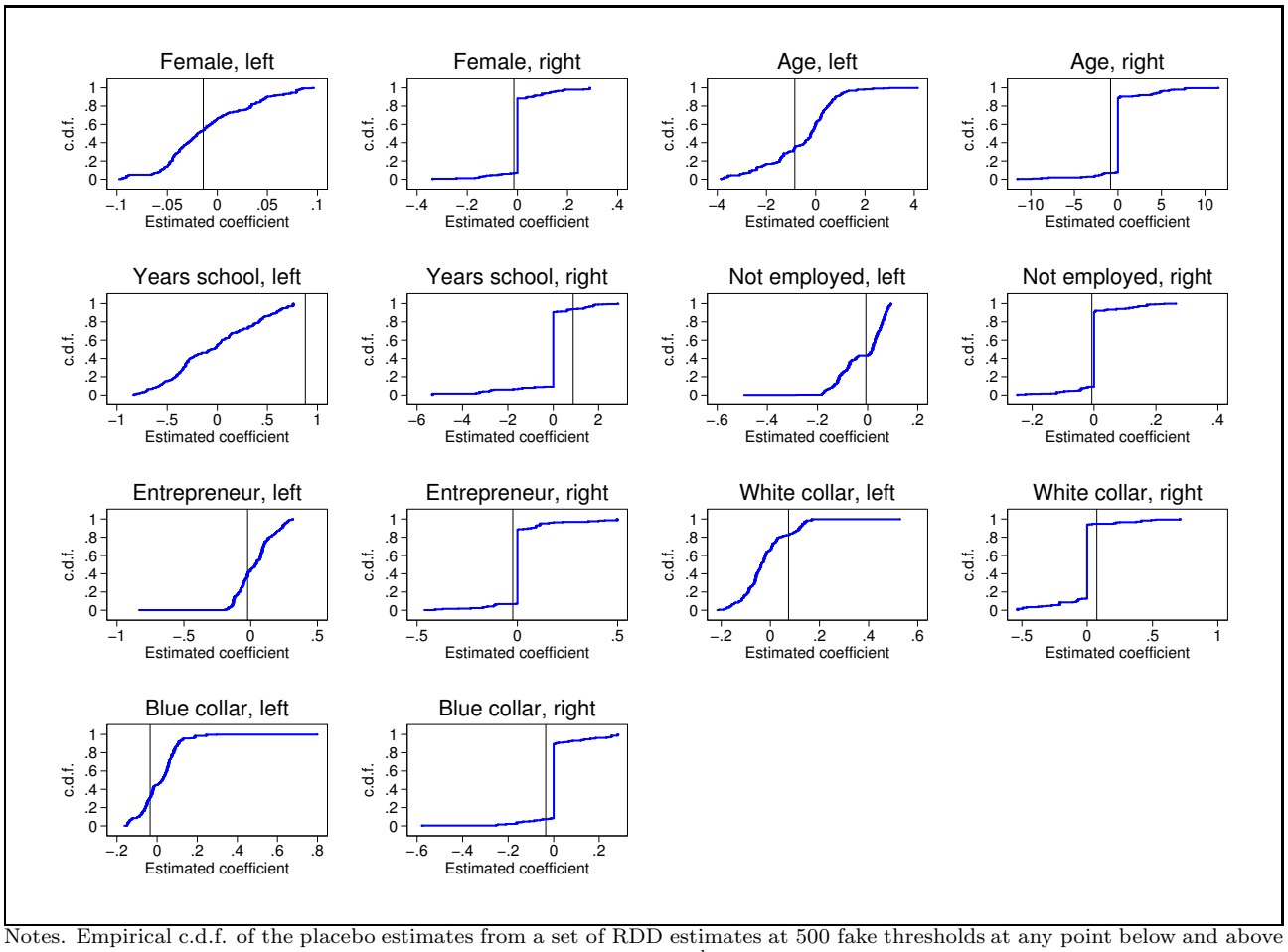
Notes. Effect of the 33% wage increase at the 5,000 threshold on budget variables. Terms from 1993 to 2001; only mayors observed over two consecutive terms, with binding term limit in the second. Cities with population between 3,250 and 6,750 inhabitants. Local Linear Regression (LLR) with optimal symmetric bandwidth Δ. All variables are in per-capita terms, expressed in euros at 2000 prices, and averaged over the mayoral term (election years excluded). First robustness exercise: sample restricted to mayors elected in contestable cities (i.e., with less than 55% of votes). Second robustness exercise: sample restricted to mayors elected for the first time after the 1993 reform. Standard errors robust to clustering at the municipality level are in parentheses. Significance at the 10% level is represented by *, at the 5% level by **, and at the 1% level by ***.

Table A7: Efficiency measures, alternative RDD estimates

	Speed of collection	Speed of payments
	LLR with optimal bandwidth and covariates	
A. Overall (no term limit)	4.418*	1.439
	(2.582)	(0.903)
B. Composition (term limit)	0.545	0.693
	(2.608)	(0.997)
C. Reelection (A-B)	3.629	0.689
	(3.611)	(1.067)
Δ	900	1,500
Obs.	624	1,016
	3^{rd} spline polynomial approximation	
A. Overall (no term limit)	6.207*	0.986
	(3.279)	(1.661)
B. Composition (term limit)	-1.604	0.747
	(4.169)	(1.987)
C. Reelection (A-B)	7.811	0.238
	(5.002)	(1.819)
Obs.	1,194	1,194
	4^{th} spline polynomial approximation	
A. Overall (no term limit)	9.553**	1.224
	(3.723)	(2.035)
B. Composition (term limit)	-1.604	0.747
	(4.169)	(1.987)
C. Reelection (A-B)	11.157**	0.477
	(5.240)	(2.107)
Obs.	1,194	1,194

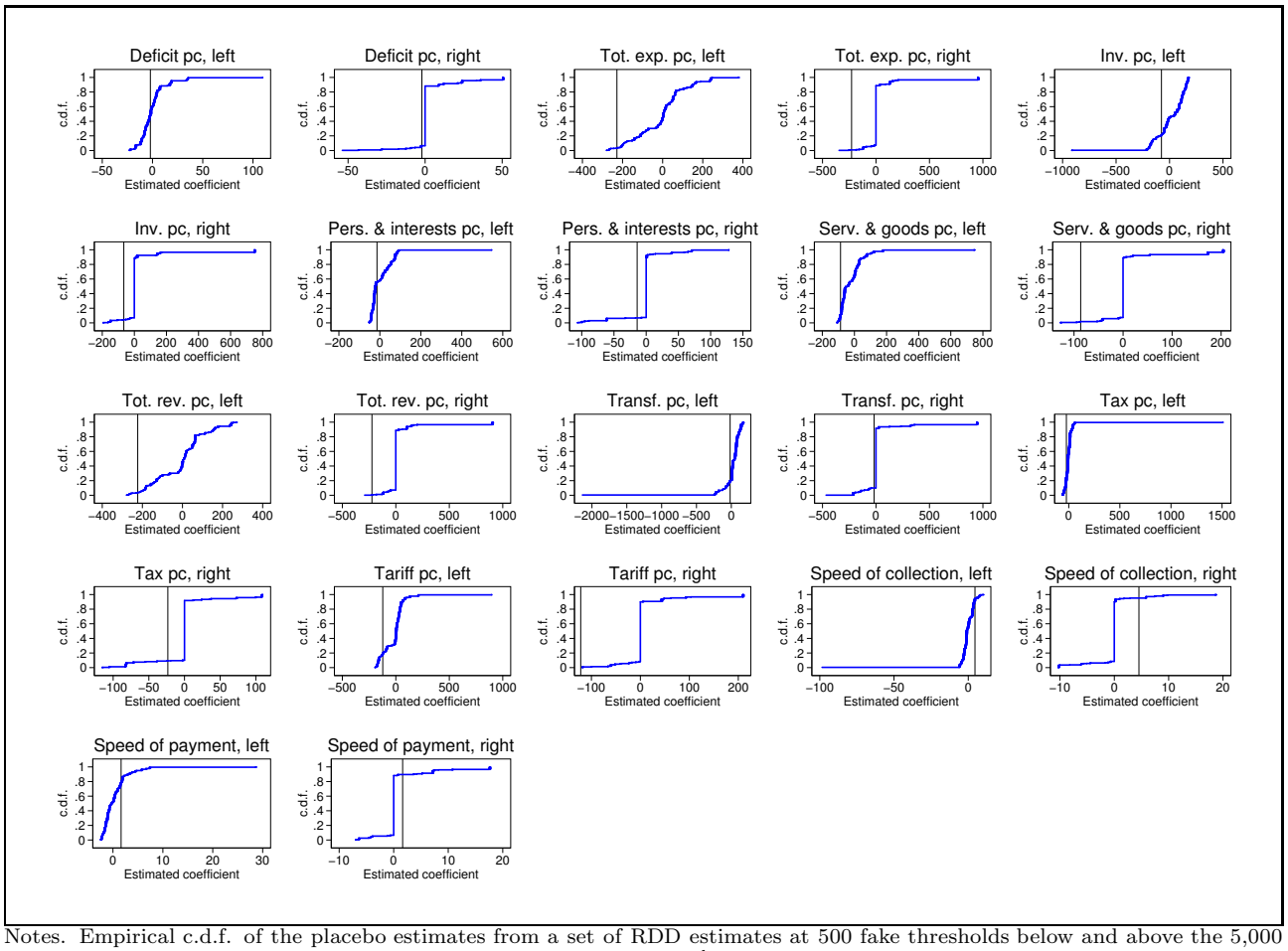
Notes. Effect of the 33% wage increase at the 5,000 threshold on efficiency measures. Terms from 1993 to 2001; only mayors observed over two consecutive terms, with binding term limit in the second. Cities with population between 3,250 and 6,750 inhabitants. First estimate: Local Linear Regression (LLR) with optimal symmetric bandwidth Δ and invariant town characteristics (*Area* in km^2, *Sea level* in meters, and *North/South* dummy) as additional covariates; the optimal symmetric bandwidth Δ is chosen with cross-validation methods. Second estimate: 3^{rd} order polynomial approximation on either side of the threshold. Third estimate: 4^{th} order polynomial approximation on either side of the threshold. All variables are in percentage points, and averaged over the mayoral term (election years excluded): *Speed of collection* is the ratio between collected and assessed revenues; *Speed of payment* is the ratio between paid and committed outlays for public expenditure. Standard errors robust to clustering at the municipality level are in parentheses. Significance at the 10% level is represented by *, at the 5% level by **, and at the 1% level by ***.

Figure A1: Mayor characteristics placebo estimates



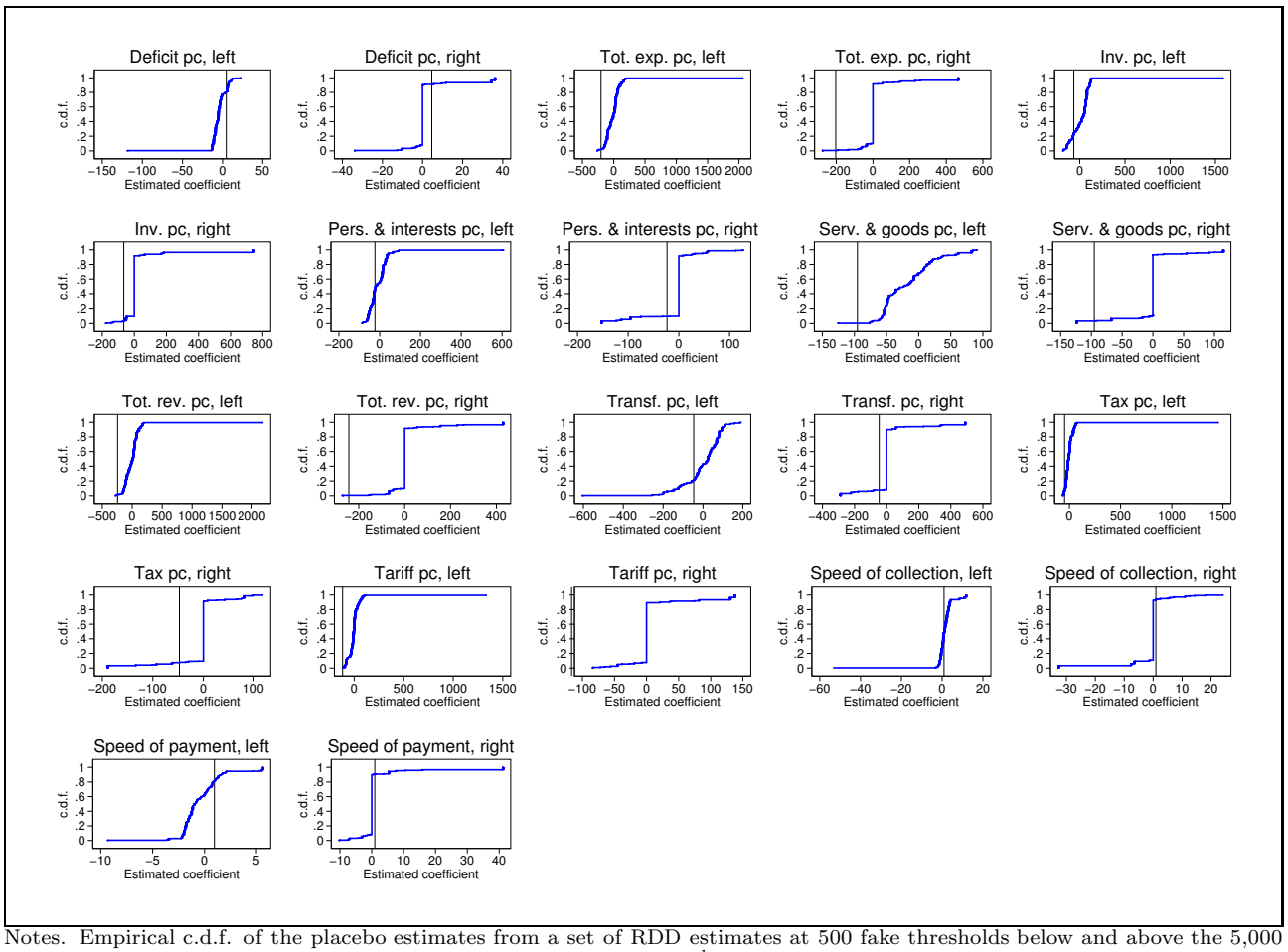
Notes. Empirical c.d.f. of the placebo estimates from a set of RDD estimates at 500 fake thresholds at any point below and above the 5,000 threshold (from 4,900 to 4,400, and from 5,100 to 5,600); 3^{rd} order spline polynomial approximations. The vertical line indicates our benchmark estimate from Table 3 in the paper. Terms from 1993 to 2001. *Age* and *Years school* are measured in years; the other variables are dummies. *Not employed* includes unemployed, retired, and any other individual out of the labor force. *Entrepreneur* includes self-employed and entrepreneurs. *White collar* includes lawyers, professors, physicians, and managers. *Blue collar* includes blue collars, clerks, and technicians.

Figure A2: Budget performance and efficiency measures placebo estimates, no term limit



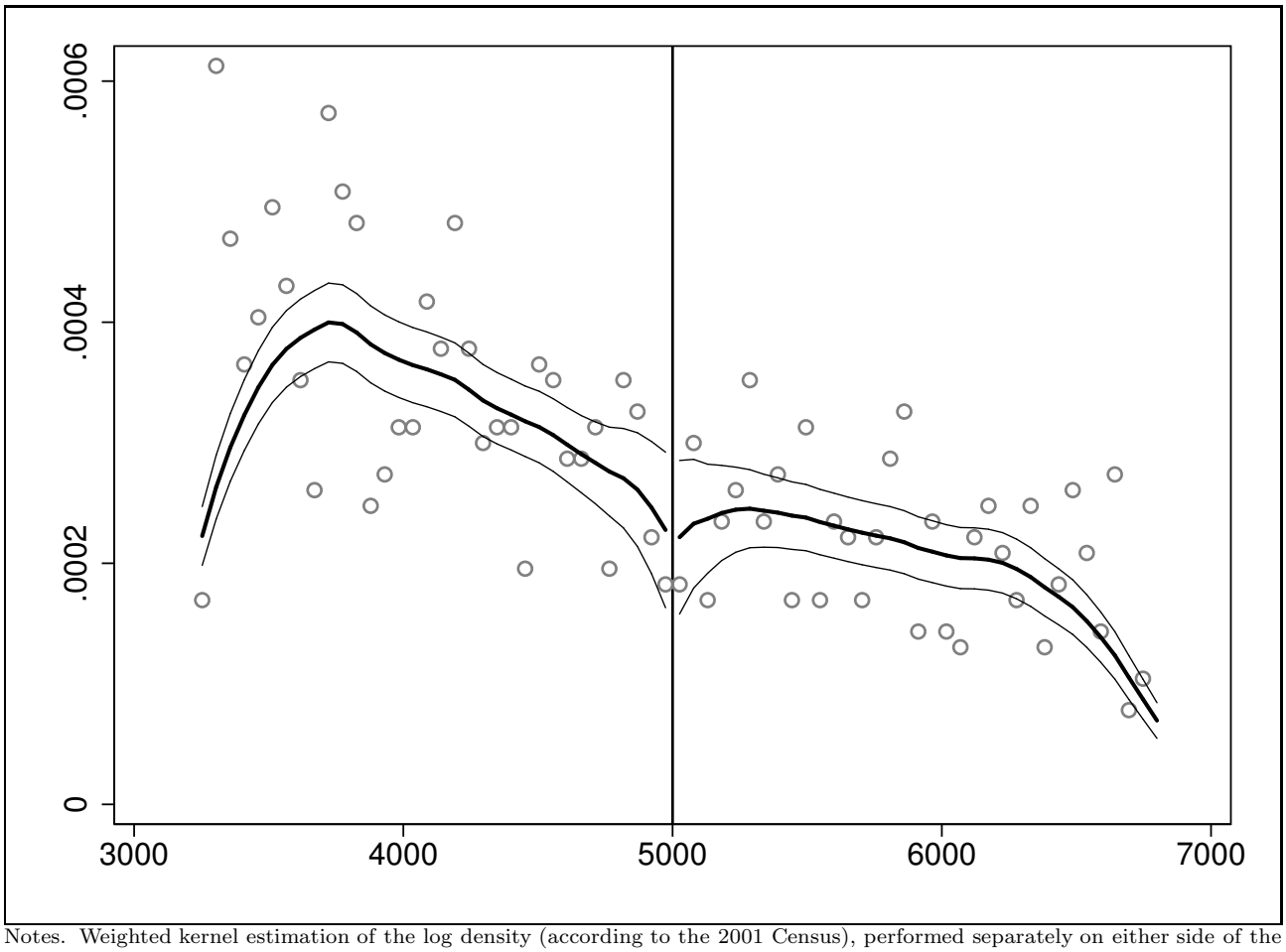
Notes. Empirical c.d.f. of the placebo estimates from a set of RDD estimates at 500 fake thresholds below and above the 5,000 threshold (any point from 4,900 to 4,400, and from 5,100 to 5,600); 3^{rd} order spline polynomial approximations. The vertical line indicates our benchmark estimate from Table 4 in the paper. Terms from 1993 to 2001; only mayors observed over two consecutive terms, with binding term limit in the second. Cities with population between 3,250 and 6,750 inhabitants. All budget variables are in per-capita terms, expressed in euros at 2000 prices, and averaged over the mayoral term (election years excluded). All efficiency variables are in percentage points, and averaged over the mayoral term (election years excluded): *Speed of collection* is the ratio between collected and assessed revenues; *Speed of payment* is the ratio between paid and committed outlays for public expenditure. *TL* is an index for the term limit.

Figure A3: Budget performance and efficiency measures placebo estimates, binding term limit



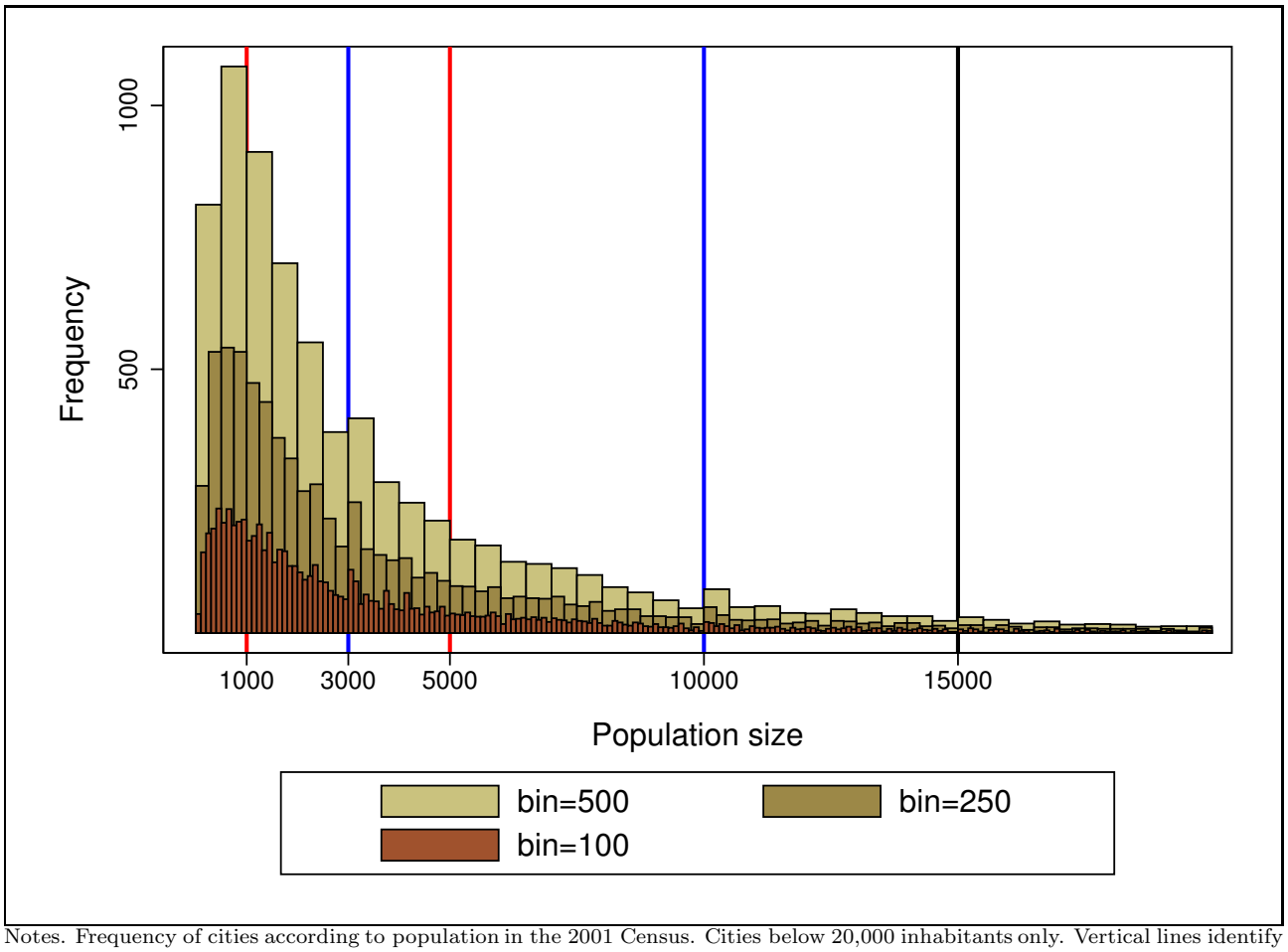
Notes. Empirical c.d.f. of the placebo estimates from a set of RDD estimates at 500 fake thresholds below and above the 5,000 threshold (any point from 4,900 to 4,400, and from 5,100 to 5,600); 3^{rd} order spline polynomial approximations. The vertical line indicates our benchmark estimate from Table 4 in the paper. Terms from 1993 to 2001; only mayors observed over two consecutive terms, with binding term limit in the second. Cities with population between 3,250 and 6,750 inhabitants. All budget variables are in per-capita terms, expressed in euros at 2000 prices, and averaged over the mayoral term (election years excluded). All efficiency variables are in percentage points, and averaged over the mayoral term (election years excluded): *Speed of collection* is the ratio between collected and assessed revenues; *Speed of payment* is the ratio between paid and committed outlays for public expenditure. TL is an index for the term limit.

Figure A4: McCrary test



Notes. Weighted kernel estimation of the log density (according to the 2001 Census), performed separately on either side of the 5,000 threshold. Optimal binwidth and binsize as in McCrary (2008). Confidence intervals at 5% level in solid thin line.

Figure A5: Population distribution (<20,000)



Notes. Frequency of cities according to population in the 2001 Census. Cities below 20,000 inhabitants only. Vertical lines identify policy thresholds.