Supplementary Appendix for: "Revisiting the Link between Politicians' Salaries and Corruption"

Contents

A Salary Thresholds **1**

B Local Government Structure, Fiscal and Procurement Responsibilities **9**

C Additional Information and Results **14**

C.1 Cross-National . . . 14

C.1.1 Sample Characteristics . . . 14

C.1.2 Corruption Risk Indicators . . . 14

C.1.3 Mayoral Salaries . . . 17

C.1.4 RD Diagnostics . . . 17

C.1.5 'Donut' RD Results . . . 19

C.1.6 Salary Effect across Bandwidths . . . 20

C.1.7 Separating Mayoral and Other Local Officials' Salary Changes . . . 20

C.1.8 Salary Effects on Contract Composition . . . 20

C.1.9 Salary Effects by Magnitude of Salary Increase . . . 21

C.1.10 Salary Effects by Regional Corruption . . . 22

C.1.11 Salary Effects on Individual Red Flag Indicators . . . 23

C.1.12 Salary Effects on Contract Efficiency . . . 24

C.2 Romania . . . 25

C.2.1 Background . . . 25

C.2.2 Difference-in-Discontinuities Diagnostics . . . 26

C.3 Extensions . . . 28

C.3.1 Term Limits . . . 28

C.3.2 Direct vs. Indirect Mayoral Elections . . . 31

A Salary Thresholds

See Tables A1-A11. Thresholds with * are included in the 'unique' threshold sample. Thresholds with † are included in the 'compound' threshold sample. We count as unique the thresholds where there are changes in salaries of either local executives (mayors), local legislators (council members), or both. Section B outlines that these politicians jointly influence local public procurement. Our results are qualitatively the same if we separate mayoral from other local politicians' salary changes (see Table C5).

Table A1: Salary Thresholds in Austria

Policy domain	Policy	Threshold																		
		501*	1,001	1,501	2,001	2,501†	3,001	3,501†	4,001†	4,501*	5,001	6,001	7,001*	8,001†	9,001*	10,001	11,001*	13,001*	15,001*	20,001	30,001*
Political organization	Mayor's salary	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Political organization	Salary of local council members	X	X	X	X	X	X	X	X		X	X		X		X				X	
Political organization	# local council members	X	X	X	X	X	X	X	X		X	X				X				X	
Political organization	District committee representatives		X		X				X												
Political organization	Free time for local councilors										X			X							
Government organization	# of Health Committee members		X	X	X		X														
Government organization	Local association committee members		X	X	X							X									
Government organization	Design of advisory board										X										
Public services	Public telephone stations			X			X														
Public services	Public playgrounds mandate		X								X										
Public services	Volunteer fire brigade's area of operation		X																		
Public finance	State Audit Office responsibilities															X					
Public finance	Federal transfers					X										X				X	
Public finance	Beverage tax distribution (2012)				X											X				X	
Public finance	Mobility allowance for businesses										X					X					
Public finance	Federal grants (2002-2004)																			X	
Electoral regulations	Electoral districts		X																		

Sources: LGBI. Nr. 14/1998 Burgenland (1998-2007); LGBI. Nr. 17/2008; LGBI Nr. 83/2016 Burgenland (2008-2016 and 2017-Present); LGBI Nr. 54/2003 Kärten (2003-2005); LGBI Nr. 49/2005; LGBI Nr. 61/2006; LGBI Nr. 57/2008; LGBI Nr. 3/2013 Kärten (2005-2006, 2006-2008, 2008-2012, 2013-2016); LGBI Nr. 7/2017 Kärten (2017-Present); LGBI Nr. 1005-20 Feb 17, 2005 Niederösterreich (2005-Present); LGBI Nr. 8/1998 4 Stück; LGBI Nr. 92/2018 Oberösterreich (1998-2018, 2018-Present); LGBI Nr. 69/2010; LGBI Nr. 22/2011; LGBI Nr. 44/2014, Salzburg (2010, 2011-2013, 2014); LGBI Nr. 71/2015; LGBI Nr. 114/2015 Salzburg (2015, 2016-Present); LGBI Nr. 13/1999 Steiermark (1999-2012); LGBI Nr. 86/2013 Steiermark (2013-Present); LGBI Nr. 25/1998; LGBI Nr. 58/2007; LGBI Nr. 69/2014 Tirol (1998-2006, 2007-2013, 2014-Present); LGBI Nr. 117/1998 Salzburg; LGBI Nr. 36/2001 Tirol; LGBI Nr. 115/1967 Steiermark; LGBI Nr. 66/1998 Kärntner; LGBI Nr. 91/1990; Oberösterreich; LGBI Nr. 25/1998 Tirol; LGBI Nr. 66/1998 Kärntner; LGBI Nr. 4400/3-0 Niederösterreich; LGBI Nr. 55/2003 Burgenland; LGBI Nr. 85/1996 Kärntner; LGBI Nr. 62/2013 Oberösterreich; LGBI Nr. 14/1972 Burgenland; LGBI Nr. 13/1972 Burgenland; Financial Equalization Act 2017; Federal Law Gazette I No. 116/2016; LGBI Nr. 33/1952 Tirol; Federal Law Gazette II No. 192/1999; Federal Law Gazette I No. 103/2007; Federal Law Gazette II No. 488/2012; Financial Equalization Act 2001; Federal Law Gazette I No. 3/2001; LGBI Nr. 51/2012 Salzburg; LGBI Nr. 67/1993 Salzburg; LGBI 8215-0 repealed by LGBI Nr. 2/2015 Niederösterreich; LGBI Nr. 72/1962 Burgenland.

Table A2: Salary Thresholds in Belgium

Policy domain	Policy	Threshold															
		1,501*	2,001†	2,501*	3,001†	4,001†	5,001	6,001*	8,001*	10,001	15,001†	20,001	25,001†	35,001*	50,001†	80,001*	150,001†
Political organization	Mayor's salary	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Political organization	Salary of General Director of local council									X		X		X		X	X
Political organization	Local councilors' salary													X	X	X	
Government organization	Council secretary's salary	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Government organization	Municipal financial manager's salary						X	X	X	X	X	X	X	X	X	X	X
Government organization	Classification of municipalities in the Brussels-Capital Region		X		X	X	X			X	X	X	X		X		X
Judicial organization	Legal aid commission membership												X				
Public services	Rules for air quality territory division														X		
Public finance	Subsidies for social cohesion plans		X				X			X	X	X					
Electoral regulations	Candidacy signatures		X				X			X		X					

Sources: Decree of the Flemish Government establishing the status of the local agent, July 6, 2018 (Flanders); Decree modifying certain provisions of the Code of Local Democracy and Decentralization and the law of July 8, 1976 on public social action centers, April 30, 2009 (Wallonia); New municipal law codified by the royal decree of June 24, 1988 (Brussels); Decree modifying certain provisions of the Code of Local Democracy and Decentralization April 18, 2013 (Wallonia); Ordinance modifying the new municipal law, July 17, 2003 (Brussels); Order codifying the legislation relating to local authorities, April 22, 2004 (Wallonia); Decree of the Flemish Government laying down the minimum conditions for the organic framework, the status and the system of mandates of municipal staff and provincial staff, and laying down some provisions relating to the status of the secretary and the receiver of public health centers welfare, December 7, 2007 (Flanders); Royal decree determining the modalities relating to the approval of legal aid organizations as well as the composition and functioning of the legal aid commission and setting the objective criteria for the allocation of a subsidy to the legal aid commissions, in execution of articles 508/2,3, paragraph 2, and 508/4, of the Judicial Code, December 20, 1999; Decree relating to the social cohesion plan in the towns and municipalities of Wallonia, with regard to matters whose exercise has been transferred from the French Community, November 6, 2008 (Wallonia); Ministerial order establishing the classification of municipalities in execution of article 5, paragraphs 1 and 2 of the New Municipal Law; March 20, 2018 (Brussel); Ministerial decree delimiting zones and agglomerations for the assessment and management of ambient air quality, July 23, 2020 (Wallonia); Decree modifying the municipal electoral law, coordinated on August 4, 1932, the law of October 19, 1921 governing provincial elections, the law of April 11, 1994 organizing automated voting and the decree of May 7, 2004 regulating the control of electoral expenses and the origin of the funds committed for the election of the Flemish Parliament, February 10, 2006 (Flanders).

Table A3: Salary Thresholds in France

Policy domain	Policy	Threshold						
		501†	1,001	3,501	10,001	20,001	50,001	100,001
Political organization	Mayor and deputy mayor's salary	X	X	X	X	X	X	X
Political organization	Council size	X		X	X	X	X	
Political organization	# of deputy mayors	X		X	X	X	X	
Political organization	Gender parity			X		X		
Political organization	Outsourcing scrutiny			X				
Political organization	Paid leave for council work			X	X			
Political organization	Outsourcing commission				X			
Political organization	Zoning by municipal council.					X		
Political organization	Per diem for local officials			X	X			X
Political organization	Councilors' common premise borrowing			X				
Political organization	Local council procedure rules		X					X
Government organization	Committees PR principle			X				
Government organization	Local public services advisory commission				X			
Government organization	Advisory council			X				
Government organization	Vacancies filling by contractual agents		X					
Government organization	General Director of Technical Services appointment				X			
Government organization	Public officials' right to strike				X			
Judicial organization	Administrative tribunal approintments							X
Public services	Road safety reporting			X				
Public finance	Budget enactment rules			X				
Public finance	Local tax on salaries				X		X	
Public finance	Debt limit					X		
Public finance	Budget type			X	X			
Public finance	Sustainable development reporting						X	
Public finance	Gender parity reporting					X		
Public finance	Budget publication			X				
Public finance	Fees for electricity transmission and distribution					X		X
Public finance	Fiscal transfers				X			
Public finance	Public park maintenance allocation				X			
Public finance	Rural solidarity allocation				X			
Electoral regulations	Mayoral electoral system			X				
Electoral regulations	Local council electoral system		X			X		
Electoral regulations	Candidacy elegibility criteria					X		
Property rights	Commercial equipment permits					X		

Sources: General statute of local and regional authorities; Electoral statute; General civil service statute; Labor statute; Code of administrative justice; Highway statute; Commercial code; Eggers et al. (2018).

Table A4: Salary Thresholds in Hungary

Policy domain	Policy	Threshold					
		501*	1,501*	2,001†	5,001*	10,001†	30,001*
Political organization	Mayor's salary	X	X	X	X	X	X
Political organization	Mayoral salary supplement	X	X	X			
Political organization	Deputy mayor's salary					X	
Political organization	Joint municipal office rules			X			
Government organization	Clerk appointment					X	
Public finance	Financial committee rules			X			
Public finance	Subsidies for public lighting, cemeteries, public road maintenance					X	

Sources: CLXXXIX of 2011 Law on the local governments of Hungary; XXV of 2022 Law on the 2023 central budget of Hungary.

Table A5: Salary Thresholds in Lithuania

Policy domain	Policy	Threshold
		100,001
Political organization	Mayor's salary	X
Public services	Public green space area per inhabitant	X
Public finance	Scholarship allocation procedure for youth workers	X
Public finance	Priority financing for domestic violence prevention	X
Regulatory controls	Equipment in gambling establishments	X

Sources: Law VIII-1904, August 29, 2000; Law XIII-2751, December 20, 2019; Order No. D1-694 on December 21, 2007 and amendment No. D1-146, May 11, 2023; Order No. 2v-300 (1.4), October 20, 2022; Order no. A1-283, June 15, 2018; Order No. 572, July 27, 1993.

Table A6: Salary Thresholds in Portugal

Policy domain	Policy	Threshold	
		10,001	40,001†
Political organization	Mayor's salary	X	X
Political organization	Full or part-time mandate for parish council presidents	X	
Political organization	# Increase in parish assambly members	X	
Political organization	# of councilors	X	
Political organization	Geo-demographic requirements for new locality creation	X	
Public finance	State contribution for local headquarters investments	X	X
Public finance	Reduction in car registration copy fees	X	
Public finance	State financial transfers	X	X
Electoral regulations	Limits on election campaign expenses	X	

Sources: Law No. 29/87; Law No. 169/99; Law No. 25/85; Law No. 142/85; Law No. 19/2003; Normative order no. 35/96; Decree-Law no. 194/2003; Law No. 2/2007.

Table A7: Salary Thresholds in Italy

Policy domain	Policy	Threshold								
		1,001	3,001†	5,001	10,001	30,001	50,001†	100,001	250,001	500,000
Political organization	Mayor's salary	X	X	X	X	X	X	X	X	X
Political organization	Salary of other executive offices	X		X	X		X			
Political organization	Attendance fee for local councilors				X	X				
Political organization	Size of local council		X		X	X		X	X	X
Political organization	# of executive officers				X			X	X	X
Political organization	Neighborhood councils	X				X		X		
Political organization	Small municipality designation			X						
Political organization	Gender representation rebalancing			X						
Government organization	Decentralized districts for basic services							X	X	
Public services	Acoustic status report	X						X		
Public services	Renewable energy development plans						X			
Public finance	Balance-budget rule			X						
Public finance	Health tax credits	X								
Public finance	Contribution for businesses near religous sites				X					
Public finance	Local investments for energy efficiency			X	X		X	X	X	
Public finance	Simplified financial reporting (pre-2017)			X						
Electoral regulations	Electoral division of metropolitan city municipalities		X	X	X	X		X	X	X
Electoral regulations	Campaign expenses for mayoral candidates							X		X
Procurement	Central procurement offices			X						

Sources: Decree-Law October 28, 2020, No. 137; Decree-Law August 14, 2020, No. 104; Law December 27, 2019, No. 160; Law October 6, 2017, No. 158; Legislative decree February 17, 2017, No. 42; Legislative decree August 10, 2014, No. 126; Law April 7, 2014, No. 56; Law November 23, 2012, No. 215; Law July 6, 2012, No. 96; Legislative decree March 3, 2011, No. 28; Legislative decree April 12, 2006, No.163; Legislative decree August 18, 2000, No. 267; Eggers et al. (2018). Since 2014 (2022), the threshold at 3,000 (5,000) inhabitants also affects the number of consecutive terms a mayor can serve.

Table A8: Salary Thresholds in Romania

Policy domain	Policy	Threshold												
		3,001†	5,001	7,001*	10,001	15,001*	20,001	25,001†	30,001	50,001†	100,001	150,001†	200,001†	320,001*
Political organization	Mayor's salary	X	X	X	X	X	X	X	X	X	X	X	X	X
Government organization	# of posts in prefectures, municipal, city and town halls		X		X		X				X		X	
Government organization	Fuel consumption allowance													
Government organization	Composition of council committes and executive offices				X				X	X				
Government organization	Rules for autonomous regions of local interest								X	X				
Public services	Energy efficiency funds		X											
Public finance	Weighted Sale Value of National Housing Agency Funded Houses				X				X	X	X	X	X	
Public finance	Non-refundable financing allocation for environmental quality improvement	X						X			X			
Public finance	Poverty and social exclusion subsidies						X							
Electoral regulations	Constituency composition for deputy elections		X		X		X		X	X	X	X		

Sources: Law No. 154 of July 15, 1998; Law No. 330 of November 5, 2009; Law No. 284 of December 28, 2010; Framework Law No. 153 of June 28, 2017; Law No. 65 of April 12, 2016; Decision No. 1345 of December 21, 1990; Order No. 1912 of December 3, 2007; Order No. 1581 of September 2, 2019; Decision No. 2168 from December 16, 2019; Decision No. 67 of February 8, 1996; Law No. 135 of December 24, 1994; Law No. 67 of December 20, 1974.

Table A9: Salary Thresholds in Slovakia

Policy domain	Policy	Threshold							
		501†	1,001†	3,001	5,001	1,0001	20,001†	50,001	100,001†
Political organization	Mayor's salary	X	X	X	X	X	X	X	X
Political organization	Chief controller's salary	X	X	X	X	X	X	X	X
Political organization	# of local council members	X	X	X	X	X	X	X	X
Political organization	# of deputy mayors						X		
Political organization	Locality division criteria			X					
Political organization	Locality declaration to city status				X				
Public services	Urban transportation special standards							X	
Public services	Drinking water quality reporting				X				
Public services	Waste collection regulations				X				
Public services	Defibrillator accessibility	X			X				
Electoral regulations	Campaign spending for mayoral elections				X	X			
Procurement	Contract rules for construction works		X	X	X	X		X	X

Sources: Law No. 253/1994; Law No. 369/1990; Law No. 181/2014; Decree No. 5/2020; Law No. 103/2015; Law No. 355/2007; Law No. 79/2015; Law No. 583/2004.

Table A10: Salary Thresholds in Slovenia

Policy domain	Policy	Threshold					
		2,001*	5,001	15,001†	30,001†	100,001	200,001*
Political organization	Mayor's salary	X	X	X	X	X	X
Political organization	# local council members		X	X	X	X	
Political organization	Minimum population requirement for localities		X				
Government organization	# of Regional Development Agencies employees					X	
Public services	Economic status for urban transportation					X	
Public services	Drinking water supply requeriments			X			
Public services	Number of local waste collection centers					X	
Public finance	Investment aid schema for non-agricultural activities		X				
Public finance	Co-financing for local integrated transport strategies					X	
Electoral regulations	# of local representatives in electoral body for State Council elections		X				

Sources: Act on the wage system in the public sector (RS No. 95/2007); Act on Local Elections (RS No. 72/93); Act on the State Council (RS, No. 100/05, 95/09, 21/13, 81/18 and 16/23); Regulations on regional development agencies (RS, No. 3/13, 59/15, and 12/17); Rulebook on the content, form, method of preparation, percentage and amount of co-financing of municipal integrated transport strategies, method of monitoring and quality assessment criteria, uniform indicators, methodology and information support and reporting (RS, No. 76/23); Act on Local Self-Government (RS, No. 94/07, 76/08, 79/09, 51/10, 40/12, 14/15, 11/18, 30/18, 61/20, and 80/20); Drinking water supply regulation (RS, No. 88/2012); Regulation on the mandatory municipal economic public service of municipal waste collection (RS, No. 33/17, 60/18, and 44/22); Regulation on the allocation of support through financial instruments for the implementation of certain sub-measures from the Rural Development Program of the Republic of Slovenia for the period 2014-2020 (RS, No. 33/18); Act on road transport (RS, No. 72/94, 18/95, 54/96, 48/98, 65/99, 36/00, and 59/01).

Table A11: Salary Thresholds in Spain

Policy domain	Policy	Threshold								
		1,001*	5,001	10,001	20,001	50,001	75,001†	150,001†	300,001†	500,001
Political organization	Mayor's salary	X	X	X	X	X	X	X	X	X
Political organization	Establishment of the local government board		X							
Political organization	Definition of a small rural municipality		X							
Government organization	Establishment of centralized treasury units									X
Government organization	Organizational rules						X			
Government organization	Job classification in local secretariats		X		X					
Judicial organization	Expansion of commercial court jurisdiction					X				
Judicial organization	Peace judges' salary		X							
Public services	Additional local public services		X		X	X				
Public services	Waste management programs approval		X							
Public finance	Strengthening tax ordinance publication			X						
Public finance	Fiscal ordinance timeline				X					
Public finance	State tax transfer to localities						X			
Public finance	Participation of localities in state taxes		X		X	X				
Public finance	Definition of tourist municipalities for tax purposes				X					
Public finance	Public services performance report					X				
Public finance	Maximum tax rates for outdoor advertising			X		X				
Public finance	Allocation methodology of COVID-19 social fund									X
Public finance	Self-employed workers' social security contributions		X							
Public finance	Simplified advertising requirements for grants					X				
Public finance	Subsidies for urban public transportation					X				
Regulatory controls	Code of good practices for mortgages									X
Electoral regulation	Candidate signature requeriments		X	X		X		X	X	

Sources: Ley 11/2020; Ley Orgánica 6/1985; Local financial law (2004); Local regime (1986); Real Decreto ley 8/2020; Real Decreto ley 6/2012; Ley 7/1985; Ley Orgánica 5/1985; Labor statute 2/2015; Ley 38/2003; Ley 57/2003; Ley 45/2007; Ley 7/2022; Real Decreto ley 2/2020; Ley 11/2020; Real Decreto 128/2018.

B Local Government Structure, Fiscal and Procurement Responsibilities

Austria

Municipalities in Austria are governed by an elected municipal council and an executive board (consisting of mayor and municipal board of deputies). In three states (Wien, Niederösterreich, and Steiermark) the local council appoints the local executive on the proposal of the party with the most seats; in the remaining states, the mayor is directly elected along with the council.[1] Municipalities have fiscal autonomy. They are corporations, thus having the right to own and manage property, levy local taxes, and conduct procurement for goods and services under their fiscal remit. Own sources of revenue are the municipal corporate and property taxes. Municipalities also receive formula-based equalization transfers from state and federal governments, funded mainly by income and value added taxes (Geißler and Ebinger, 2019).[2] Municipalities are tasked with providing local education, health and safety, and the maintenance of the local infrastructure and communal property. The municipal board also manages the municipal bureaucracy (see Articles 116(1-3) and 117(7) of the Constitution). Municipal council and the board are responsible for budgetary planning and execution; however, there is mandatory budget oversight by Austrian federal states.[3] Municipalities are obliged to balance their budgets, with strict regulations over loans for capital and other discretionary expenditures.

Belgium

Belgian municipalities are governed by an elected municipal council. In Flanders and the capital region of Brussels, the council nominates the mayor and the members of the college of aldermen, the executive body headed by the mayor. These nominations are then approved by the provincial government. In Wallonia, the mayorship is automatically given to the council member with the highest number of preferential votes on a party list that received the highest vote share from party list votes in the municipal council election. This official then proposes for council's approval the composition of the municipal college (CDLD, articles L1122-15, L1122-34, L1123-19, 1132-3). Municipalities have fiscal autonomy, with substantial room to determine own taxes and tax rates, fees and permits (Article 170 of the Constitution; Husson, Mahieu and Sägesser 2017). Own sources of revenue also include surtaxes applied to basic rates set at the federal or regional level for personal income, property, and vehicle taxes. Municipal governments have some ability to set the

[1] See, for example: https://gemeindebund.at/services/buergermeisterinnen/.

[2] See also: Kommunalkredit Austria, 2017, "Gemeindefinanzbericht." 2017. Vienna. https://gemeindebund.at/website2020/wp-content/uploads/2020/07/gemeindefinanzbericht-2017_vorabexemplar_web.pdf.

[3] A partial exception are the 14 statutory cities which are in charge of greater public good provision and fiscal responsibilities. The capital, Vienna, has a special administrative status.

surtax rates, especially for property taxes (Hammar and Wüthrich-Pelloli, 2014). The remaining revenues come from transfers from higher-level governments, mainly the municipal fund with the Belgian regions (Raffer, 2019*a*). Municipalities are in charge of the maintenance of local infrastructure and utilities (power, water, waste management), education, health and social welfare. In Wallonia, the municipal budget, proposed by mayor and the college, must be approved by both the municipal council and the Walloon government before being implemented. In Flanders, the budget is proposed by the municipal council and sent to the provincial government, but can be implemented without approval if in compliance with provincial fiscal rules (Hammar and Wüthrich-Pelloli, 2014). Municipal councils are responsible for designing the procurement process, and the municipal college for implementing it (CDLD, articles L1222-3(1), L1222-4(1-2)).

France

French communes are governed by a directly elected municipal council, which proposes and appoints the mayor and their deputies (who are proposed by the mayor once their appointment is approved). The mayor proposes and executes the budget. Communes have substantial fiscal autonomy, with the ability to set and levy local taxes and taxes shared with the prefecture the commune is located in. Communes can also raise revenue through the sale of goods and services and local asset management. The remaining revenue comes from grants from higher-level governments. Communes are charged with social protection, economic affairs, general services and education, and have substantial autonomy in public investment decisions. Communal governments do not face capped expenditures, but their budgets must be balanced (Millet, 2019). Fiscal supervision is done by a prefect, a local representative of the central government, in cooperation with the regional Chamber of Account. Procurement procedures are set out by the municipal council, in coordination with the prefect and the Chamber of Account. The mayor is responsible for the implementation of public procurement (Article 72 of the Constitution and Code Général des Collectivités Territoriales, articles L2131(1-6)).

Hungary

Hungarian municipalities are jointly governed by an elected mayor and municipal council. The mayor appoints their deputies with the approval of the council. The mayor proposes and executes the budget, which is approved by the municipal council. Following the new Constitution and the new Local Government Act of 2011, municipalities have limited fiscal autonomy. State grants represent the majority of municipal budgets, and there are strict guidelines for their use. Municipalities have the right to propose and levy local taxes, tariffs and fees, but there are centrally stipulated caps (Barati-Stec, 2012). Higher-level administrative districts ('Járás') perform fiscal monitoring, and municipal budgets are also audited by the central government's State Audit Office (Raffer, 2019*b*). While own revenues

are limited, municipalities have financial management autonomy and notable local responsibilities in public services, such as road maintenance, transportation, health, education, and social services, as well as management of the local bureaucracy. Most public services are performed by companies in municipal ownership (Molnár and Hegedüs, 2018), which account for much of public procurement. Procurement procedures are mostly designed by the central government. The mayor and deputy mayors are charged with implementing the budget, including procurement.

Italy

Italian comunes are jointly governed by an elected mayor and municipal council. The mayor appoints deputy mayors as members of the city board, the municipal executive body. The city board proposes the budget, which is approved by the municipal council. The budgets are prepared for a three-year period, and revised on a rolling basis after each year's implementation. Fiscal guidelines are set by the central government, and municipal budgets are audited by the regional units of the Court of Auditors (Ambrosanio, Balduzzi and Bordignon, 2016). Municipalities have substantial fiscal autonomy. Own revenues are generated through a local property tax, utility and building fees, the surtax on personal income tax, and in some municipalities, the tourist tax (Vandelli, 2012). Municipalities have some, though limited, discretion is setting the local tax rates. Municipal responsibilities include education, social housing, permitting, public transport, maintenance of local roads and community spaces, water and waste management, and social services (Raffer and Padovani, 2019). The city board is in charge of the implementation of the budget, including public procurement. For each procurement contract, the mayor appoints a manager from the appropriate department in the municipal administration. The manager supervises the full procurement process, from procedure design to implementation (Coviello and Gagliarducci, 2017).

Lithuania

Municipalities in Lithuania are jointly governed by an elected mayor and municipal council.[4] The mayor proposes the municipal budget, which is approved by the council. The mayor is charged with implementing the budget, including public purchases, as well as managing the local administration and local public companies (Law I-533, Articles 15 and 27). Municipal budgets must be balanced and are required to include a set of defined expenditures mandated by the central government. Municipalities have partial fiscal autonomy. Own revenues derive from local property taxes and fees (such as stamp duties), as well as any revenues from sales of municipal property and partial privatization of local utilities (up to 30%). Local governments have some but partial autonomy in setting

[4]Before 2015, the mayor was appointed by the council; Law I-532.

the tax rates.[5] Other revenues come from central government transfers, primarily funded through personal income taxes. In addition to general services (water and waste management, infrastructure and public space maintenance, safety), municipalities have significant responsibilities in public housing, education, environmental protection, and recreation, culture and religion.

Portugal

Municipalities in Portugal are governed by an elected municipal chamber and municipal assembly. The chamber is the executive body; the leader of the party list that gets the most votes in the election for the chamber (held separately from the election for the municipal assembly) is appointed the mayor, unless the council and chamber agreed on another person (Article 250 of the Constitution). The municipal chamber is tasked with initiating, designing, and managing the budget, including public procurement, as well as the municipal bureaucracy (Law of Local Authorities 75/2013). The budget is approved by the municipal assembly. Municipalities have considerable fiscal autonomy. Own revenues constitute the majority of total revenues and are derived from property and vehicle taxes, a municipal surtax on personal income and corporate profit taxes, and local fees and licenses. Municipalities can set the local tax rates within a range regulated by the central government. The remaining revenues come from central government grants, funded through personal income, corporate profit and value added taxes (Silva, 2017). Municipalities are charged with providing primary education, public transportation, maintenance of local infrastructure, utilities, and some welfare and health services (Geißler, 2019). Municipal budgets must be balanced on current spending, with longer-term debt limits and a no-bailout clause (Local Finance Law 73/2014). Fiscal oversight is performed by the Ministry of Interior, the Treasury, and the Auditing Court (Teles, 2016).

Romania

Romanian localities (municipalities, villages and comunes; see Section C.2.1 for more details) are jointly governed by an elected mayor and municipal council. The mayor heads the executive board, which also includes the deputy mayors appointed by the mayor. The local executive oversees and manages the local administration, is in charge of designing and implementing the budget, including the procurement of local goods and services. The municipal council approves the budget and performs oversight of its implementation (Legea 2015/2001, Legea 196/2006). Localities can establish their own budget priorities, but only within the framework adopted each year by the Ministry of Finance of the central government (Legea 272/2006). Localities have limited fiscal autonomy. The majority of revenue comes from central government transfers. The limited own revenues derive from local property and vehicle taxes and capital income from local asset management. Despite the

[5]See: https://portal.cor.europa.eu/divisionpowers/Pages/Lithuania-Fiscal-Powers.aspx.

limited fiscal autonomy, localities have considerable responsibilities in local service provision, which includes health, primary education, utilities, social services, transportation, infrastructure maintenance, and permitting (Klašnja, 2015).

Slovakia

Municipalities in Slovakia are jointly governed by an elected mayor and municipal council. The mayor proposes and the council approves the municipal budget. The mayor oversees and manages the local bureaucracy and nominates managers to commercial companies in which the municipality has an equity stake. Mayors propose and implement the budget, including public procurement, upon approval by the municipal council (Act No. 71/1967). Municipalities have limited fiscal autonomy. The majority of current revenues derive from subsidies and grants from the central government, and shared tax revenues from income, property, and business taxes. Own revenues derive from local tariffs and fees, income from rental and sale of municipal property, and limited revenue from local social contributions.[6] Despite the limited fiscal autonomy, municipalities competencies include the maintenance of local infrastructure, environmental protection, local utilities, housing, pre-school and primary education, health, municipal police, and participation in regional planning.[7]

Slovenia

Municipalities in Slovenia are governed by an elected mayor and municipal council. The mayor proposes the budget, which is approved by the municipal council. The mayor manages the local bureaucracy and implements budget spending, including procurement, together with the municipal supervisory board, whose members are appointed by the municipal council. Municipalities have moderate fiscal autonomy. The majority of revenues come from transfers from the central government, mainly funded by the personal income tax (and to some degree by property and inheritance taxes). Additional revenues come from earmarked central government equalization grants (U-I-150/15 of 10 Nov. 2016, and No. U-I-24/07 of 4 Oct. 2007). Own revenues come primarily from building permits and licenses, and a tax for use of municipal land, where municipalities have control over both extent of taxation and tax rates. For shared tax revenues, municipalities have no control over rates (Local Self-Government Act of 1993 (LSGA), the Financing of Municipalities Act of 2006 (FMA-1), Public Finance Act of 1999 (PFA), and the Fiscal Rule Act of 2015). Local expenditure autonomy is greater, where municipalities have discretion in revenue allocation (except the earmarked grants). Municipalities are in charge of providing preschool and elementary education, primary health care, infrastructure maintenance, local order and safety, and cultural and sport activities (Rakar and Klun, 2019).

[6] See: https://portal.cor.europa.eu/divisionpowers/Pages/Slovakia-Fiscal-Powers.aspx.

[7] See: Congress on Local and Regional Authorities Report CG(2023)45-18, https://rm.coe.int/monitoring-of-the-application-of-the-european-charter-of-local-self-go/1680acd751.

Spain

Most Spanish municipalities are governed by an elected municipal council[8] The council appoints the mayor from among council members, who must either win an absolute majority in the first round of voting, or a simple majority in the second round.[9] The mayor proposes deputy mayors, and in larger municipalities (above 5,000 inhabitants), the local government board, which comprises up to a third of council members. The board and the mayor propose and implement the budget, including public procurement (article 158.5 of Law 39/1988). The council approves the budget and sets guidelines for spending and procurement procedures. Fiscal autonomy of municipalities moderate. The largest component of local budgets are state transfers and equalization grants. Larger municipalities (regional capitals and those above 75,000 inhabitants) receive a portion of state taxes. Municipalities cannot establish their own taxes, which are regulated by regional parliaments. These taxes include the real estate, vehicle, and value added taxes. However, municipalities have autonomy over local tax rates, bases and exemptions (Moreno, 2012). Additional own revenues come from construction and capital gains taxes (Velasco, 2019). Local governments are charged with provision of education, health, maintenance of local infrastructure, culture, sports and religion (Law 7/1985, article 25).

C Additional Information and Results

C.1 Cross-National

C.1.1 Sample Characteristics

Table C1 shows for each country in our sample the period covered, the number of contracts, and the number of municipalities.

C.1.2 Corruption Risk Indicators

The six procurement corruption risk indicators that constitute the CRI can be organized into two groups: indicators relating primarily to the procurement process, and to the contract outcomes. The procedure indicators are:

- **Procurement procedure type**: open procedure (0), negotiated procedure (0.5), non-open procedure (1).

[8] Small municipalities (under 100 inhabitants) are governed by a directly elected mayor and the 'neighborhood' council consisting of all eligible voters.

[9] If neither threshold is reached, the council member at the top of the list of the party with the most seats in the council automatically becomes mayor.

Table C1: Country Sample Characteristics

Country	Start year	End year	Contracts	Municipalities
Austria	2006	2019	16,970	633
Belgium	2006	2019	72,585	528
France	2006	2019	999,145	4,775
Hungary	2011	2019	91,162	2,595
Italy	2006	2019	226,302	3,267
Lithuania	2006	2019	180,276	74
Portugal	2006	2019	58,734	307
Romania	2007	2020	391,648	2,632
Slovakia	2012	2019	19,996	792
Slovenia	2007	2020	120,370	210
Spain	2013	2020	252,403	1,966

- **Call for tender**: Call for tender/prior information notice published in the official journal (0), no call for tender/prior information notice published in the official journal (1).
- **Bid submission (advertisement) period length**: The number of days between publishing the call for tenders and the bid submission deadline is very low (outlier low values are coded as 1, risky; all others as 0, non-risky).
- **Decision period length**: The number of days between the bid submission deadline and the contract award decision date is very low (outlier low values are coded as 1, risky; all others as 0, non-risky).

The procurement outcome indicators are:

- **Single bid**: More than one bid is received for the lot in the tender (coded as 0), only one bid received (1).
- **Buyer (or procuring authority) spending concentration**: The share of the winning supplier in the buyer's total annual public procurement spending (ranging between 0 and 1).

Table C2 shows the summary statistics for each component and the composite index. We note that to make CRI comparable across countries and thresholds in the RD analysis, we treat a contract's CRI as missing if any of its six component red flags are missing (indicated as the 'listwise' CRI in Table C2). In the FE analyses, which rely on within-municipality changes in the CRI and aim to maximize sample size, the CRI averages over

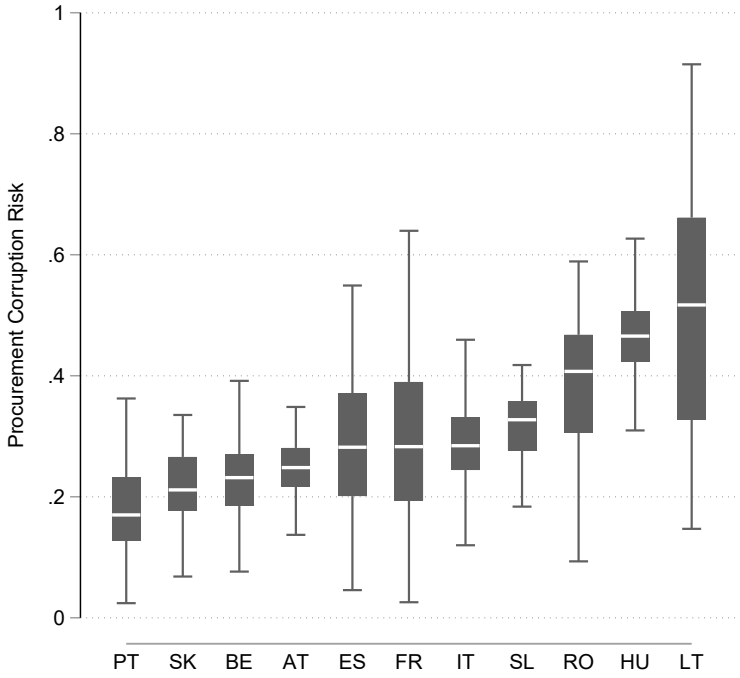
any available red flags. (RD results for each component red flag are shown Section C.1.11 below.)

Table C2: Summary Statistics for Corruption Risk Indicators

	N	Mean	Sd	Min	Max
No call for tender	2,370,857	0.43	0.50	0.00	1.00
Non-open procedure	2,425,712	0.16	0.32	0.00	1.00
Short bid submission period	1,673,730	0.53	0.45	0.00	1.00
Short decision period	2,341,191	0.47	0.35	0.00	1.00
Single bidder	1,928,750	0.24	0.43	0.00	1.00
Supplier spending concentration	1,789,534	0.07	0.15	0.00	1.00
CRI	2,429,591	0.34	0.24	0.00	1.00
CRI (listwise)	990,741	0.23	0.17	0.00	0.92

The box plot in Figure C1 shows the variation in the CRI within and across countries in our sample.

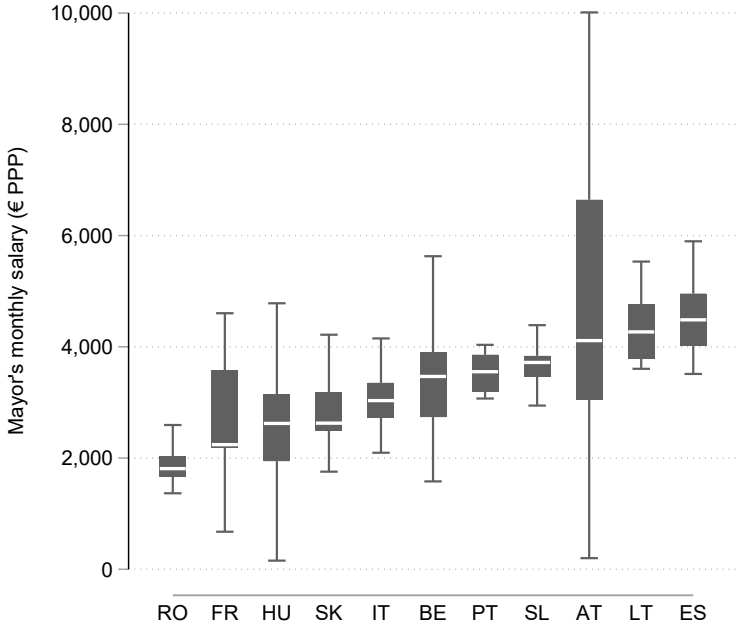
Figure C1: Box Plot of the CRI across Countries



C.1.3 Mayoral Salaries

The box plot in Figure C2 shows the variation in mayoral salaries, expressed in base-2020 PPP Euros, within and across countries in our sample.

Figure C2: Box Plot Mayoral Salaries across Countries



C.1.4 RD Diagnostics

The appeal of utilizing population-based salary thresholds in an RD setup is that it provides a potentially plausible exogenous source of variation in salary, given that local politicians presumably cannot endogenously choose the salary level by themselves. This suggests that localities just below and above the threshold should be comparable in all respects except for salary. While this key assumption is not directly testable, we evaluate two standard corollaries: that the running variable (population counts) itself is smooth around the cutoff, and that predetermined characteristics of localities around the cutoff are balanced.

Figure C3 shows the density of the population margin (i.e. distance to the nearest unique salary threshold), indicating that the population counts change relatively smoothly across the cutoff. There is somewhat of a drop in the number of localities immediately above the cutoff. It is ambiguous whether this drop is statistically significant; the test by

McCrary (2008) suggests that it is (the point estimate is -0.11 with a standard error of 0.05); however, the binomial density test by Cattaneo, Jansson and Ma (2020) suggests that it is not (with a p-value of 0.57).

Figure C3: Density of Population Counts around the Unique Salary Thresholds

That said, in the immediate vicinity of the cutoff, the binomial test indicates a discontinuity in the running variable in a window up to 0.001 percent away from the threshold. This pattern is potentially consistent with strategic sorting, given that there is a spike a bit further above the threshold, which is consistent with mayors (and potentially local council members) having strong incentives to influence the location of their localities with respect to the cutoff determining their salary.

The possibility of sorting raises questions about the validity of our RD design. If there is strategic sorting, and if such sorting is driven by certain characteristics of localities or their politicians which also impact corruption, this continuity assumption would be violated. (Moreover, sorting possibly induces mismeasurement of the running variable for at least a subset of observations.)

To further assess this possibility, we examine in Table C3 the balance in a number of predetermined locality characteristics close to the unique thresholds. We focus on the lagged outcome variables (values of the outcome 5 years prior for the period 2012-2016[10])

[10]We focus on this period because the lags cover 2007-2011, the period before the 2011 decennial ccensus which serve as the basis for the post-2011 period in all countries in our data. The only exception is

as well as those municipal characteristics for which we were able to collect reasonably comparable data (employment rate, share of foreign residents, average monthly income and population density). We employ the same RD approach as in our main analyses, but with these predetermined characteristics as outcome variables.[11]

Table C3: Balance Tests for Sample of Unique Salary Thresholds

	RD estimate	SE	p-value	Bandwidth	N
Corruption risk index (lagged)	-0.000	0.028	0.993	0.266	579
No call for tender (lagged)	-0.103	0.080	0.196	0.208	490
Non-open procedure (lagged)	0.014	0.030	0.648	0.279	598
Short bid submission period (lagged)	-0.245	0.115	0.034	0.161	101
Short decision period (lagged)	0.089	0.067	0.185	0.170	390
Single bidder (lagged)	0.018	0.076	0.816	0.197	462
Supplier concentration (lagged)	-0.011	0.077	0.891	0.221	162
Average bid price (lagged)	-0.433	0.422	0.304	0.174	412
Employment rate (% of total population)	0.004	0.007	0.554	0.161	3,420
Foreign residents (% of total population)	0.004	0.008	0.570	0.197	4,278
Average monthly income (euros)	1.542	10.362	0.882	0.210	2,815
Population density (inhabitants per km2)	-106.038	65.818	0.107	0.093	2,278

Table C3 reveals no major imbalances in the twelve covariates we tested for, indicating that the localities close to the thresholds are on average quite similar on a range of observable characteristics, including the lagged corruption risk indicators. These results alleviate, though not necessarily obviate, the concerns about strategic sorting.

C.1.5 'Donut' RD Results

We therefore report in Table C4 the results of several 'donut' RD analyses (Barreca et al., 2011). We exclude a progressively larger set of observations very close to the cutoff. Assuming that the incentives for sorting increase as population counts get closer to the threshold, ignoring the immediate neighborhood may further alleviate concerns about sorting, imbalance, and mismeasurement of the running variable. The downsides of this approach are that it increases the amount of extrapolation in estimating the conditional expectation function (thus potentially increasing bias), and may reduce the statistical power (thus potentially increasing variance). Nonetheless, the results in Table C4 are similar to the main results (on the sample of unique thresholds), even when we ignore municipalities with

France, which conducts periodical partial censuses and updates municipal population based on those counts coupled with statical modeling. For comparability, we also use 5-year lags in France as well.

[11] All our analyses here are at the municipality level, given that both the outcome and treatment variables are measured at that level (the lagged corruption indicators cannot be matched to current observations at the contract level).

populations within as much as one percent on each side of the cutoff (column 3).[12] Overall, these patterns suggest that it is unlikely that our results are driven primarily by sorting close to the salary thresholds.

Table C4: 'Donut' RD Results

	'Hole' size:		
	0.25%	0.5%	1%
RD estimate	-0.068	-0.056	-0.046
St. error	(0.016)	(0.014)	(0.015)
p-value	[0.000]	[0.000]	[0.002]
Bandwidth	0.100	0.102	0.099
N	2,195	2,161	2,040

C.1.6 Salary Effect across Bandwidths

Figure C4 shows that our key RD result from unique salary thresholds is not specific to the MSE-optimal bandwidth, chosen by the procedure outlined in Calonico, Cattaneo and Titiunik (2014) and indicated with the red vertical line, but is substantively unchanged across a wide range of bandwidths.

C.1.7 Separating Mayoral and Other Local Officials' Salary Changes

As mentioned in Section A above, in our main RD analyses we count as unique the thresholds where the salaries of other local political representatives (mainly local council members) also change alongside mayoral salaries, because those officials also tend to influence public procurement (Section B). Table C5 shows the takeaways are unchanged when we separate the salary changes for mayors and other local officials. In that case, the 'unique' sample includes the 16 thresholds where only the mayoral salaries change, and the 'compound' sample includes the 40 thresholds where no more than two other policies—including the other local office-holders' salaries—change alongside mayoral salaries. While the samples are smaller, our key results remain very similar.

C.1.8 Salary Effects on Contract Composition

Table C6 shows no large or statistically significant salary effects on average contract value (€ PPP, inverse hyperbolic sine-transformed), contract volume (total number of contracts

[12] The standard RD estimation techniques may not be valid in donut RD models; however, we know of no settled approach in use as of the writing of this draft.

Figure C4: Main Result across Different Bandwidths

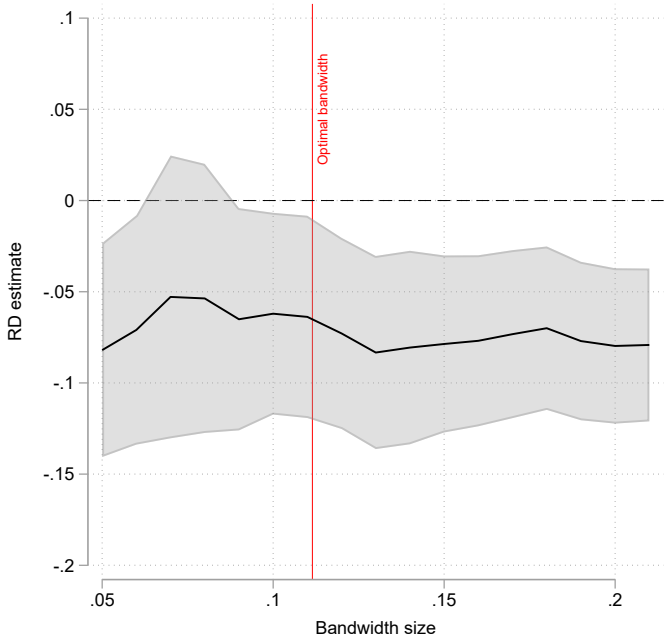


Table C5: Similar Results with Mayoral Salary-Only Thresholds

	Unique thresholds	Compound thresholds
RD estimate	-0.078	-0.050
St. error	(0.018)	(0.022)
p-value	[0.000]	[0.026]
Bandwidth	0.101	0.101
N	2,226	17,634

per municipality-year), or total procurement expenditures (total € PPP contract value per municipality-year, inverse hyperbolic-sine transformed), indicating that the patterns in corruption risk are not driven by differences in the composition of procurement contracts across the salary thresholds.

C.1.9 Salary Effects by Magnitude of Salary Increase

As mentioned in the text, if the salary effect is indeed driven by the sensitivity of corruption to higher wages rather than some other unobserved locality characteristic correlated

Table C6: No Salary Effect on Contract Value and Volume

	Mean contract value	Contract volume	Total contract value
RD estimate	-0.150	-2.411	-0.127
St. error	(0.198)	(16.021)	(0.193)
p-value	[0.449]	[0.880]	[0.512]
Bandwidth	0.138	0.177	0.249
N	41,967	5,308	6,716

with salary thresholds, then larger wage increases may be expected to decrease corruption to a greater extent. We evaluate this expectation in Table C7 by running the RD in two subsamples, one on thresholds with (country-specific) below-median salary increases (column 1), and the other on thresholds with above-median increases (column 2). (Because of sample size limitations, here and in the next section, we use the sample of compound thresholds, as defined in the text.) We observe the negative salary effect on corruption only at thresholds with higher salary increases.

Table C7: Effect Larger at Thresholds with Larger Salary Increase

	Below-median increase	Above-median increase
RD estimate	-0.024	-0.051
St. error	(0.018)	(0.019)
p-value	[0.198]	[0.008]
Bandwidth	0.179	0.085
N	10,913	10,875

C.1.10 Salary Effects by Regional Corruption

If our Corruption Risk index indeed captures the risk of corruption rather than some other feature of contracts, markets, or municipalities, we should expect that the negative salary effect be greater in places with more corruption. We evaluate this expectation in Table C8, where we split our sample into two groups based on the level of corruption in the EU region a locality is located in (at the NUTS-2 level), using the data from the European Quality of Government Index (EQI) (Charron, Dijkstra and Lapuente, 2014, 2015; Charron, Lapuente

and Annoni, 2019; Charron et al., 2022).[13] This measure of corruption is derived from the perceptions and experiences with corruption in public health, education and policing, reported by citizens through surveys in 206 EU regions. We divide the sample into regions with (country-specific) below-median (column 1) and above-median corruption (column 2). The results indicate that the corruption-reducing effects are indeed primarily concentrated in localities located in more corrupt regions.

Table C8: Salary Effect Concentrated in More Corrupt EU Regions

	Below-median regional corruption	Above-median regional corruption
RD estimate	0.004	-0.061
St. error	(0.022)	(0.019)
p-value	[0.871]	[0.001]
Bandwidth	0.165	0.137
N	15,644	17,385

C.1.11 Salary Effects on Individual Red Flag Indicators

As discussed in the text above, the CRI is composed of six component red flags. Table C9 shows the results for each component. While the patterns are somewhat mixed, the salary effects seem present for multiple red flags both at the procedure stage (columns 1-4) and for the outcomes (columns 5-6).

Table C9: Salary Effects on Component Red Flags

	Procedure red flags				**Outcome red flags**	
	No call for tender	Non-open procedure	Short bid submission period	Short bidder decision period	Single bidder	Supplier concentration
RD estimate	-0.059	0.057	-0.116	-0.162	-0.148	-0.038
St. error	(0.036)	(0.028)	(0.081)	(0.078)	(0.045)	(0.031)
p-value	[0.104]	[0.042]	[0.152]	[0.038]	[0.001]	[0.219]
Bandwidth	0.116	0.094	0.101	0.133	0.098	0.110
N	2,559	2,104	2,242	2,997	2,167	2,347

[13] The EQI is available for 2010, 2013, 2017, and 2021. To merge with all the years in our data (2006-2021), we use the EQI values from the closest year available.

C.1.12 Salary Effects on Contract Efficiency

In table C10, we examine the effect of higher salaries on procurement efficiency, as measured by the ratio of the final bid price relative to the estimated tender price. While this measure is not directly proof of corrupt waste (e.g. a corrupt local politician may try to artificially inflate the estimated value of the contract to more easily incorporate kickbacks), high ratios likely indicate inefficiencies that are plausibly related to corruption. (Indeed, in the overall data, there is a positive correlation between the CRI and this ratio; a doubling of the ratio is associated with an 8 point increase in the CRI.) We are able to evaluate this question only in countries where the estimated tender price—the ex ante assessment of the plausible value of a procurement contract—is either mandated or regularly reported (Hungary, Italy, Slovakia, Romania, and Spain).[14]

Column 1 of Table C10 reports the conditional mean RD results at unique thresholds. The ratio decreases by about 5 percentage points, or about 6 percent. In the remaining columns, we examine the quantile effects to evaluate how the salary effects vary over the distribution of the efficiency ratios. To do so, we run a variant of the specification in equation 2 in the text. In place of the local linear estimator we use the quantile clustered estimator developed by Parente and Santos Silva (2016). To implement the bias correction, we follow the advice in Calonico, Cattaneo and Titiunik (2014) and use the MSE-optimal bandwidth with polynomial order 1 from the conditional mean model in column 1, but apply the quadratic polynomial for estimation (i.e. we interact the treatment threshold dummy with the linear and quadratic terms for the population margin).[15] We estimate quantile effects at the 10th, 25th, 50th, 75th, and 90th percentile, corresponding to the efficiency ratios of approximately .5, .825, .98, 1, and 1.1. The results indicate that the salary effects are concentrated at lower ratios, that is, where contracts are already reasonably efficient.[16] For example, column 3 indicates that increasing salaries at the cutoff is predicted to reduce inefficiencies at the 25th percentile of ratios by about 10 percentage points, or approximately 11 percent.

We use these results for a back-of-the-envelope estimate of possible efficiency gains from an across-the-board salary increase of 18%, which is the median salary increase in the subsample of unique thresholds in column 2 of Table C7. Given that the quantile effects in Table C10 at the 10th (column 2) and 25th percentile (column 3) are very similar, we assume that the 11 percent savings in efficiency (from column 3) apply to all the contracts with values at or below the maximal tender value at the 25th percentile of the efficiency ratio (a contract of close to PPP €18 million in value). The total value of such contracts

[14] In the remaining countries, we observe the estimated price for only a minority of contracts—between 6 and 40%.

[15] We use the uniform kernel as the Parente and Santos Silva (2016) approach does not admit weights needed for the triangular kernel.

[16] This suggests either that corruption in the less efficient tenders is inelastic to wages, or that they are inefficient for reasons other than (the salary-induced) corrupt waste. This is potentially a fruitful area for further research.

Table C10: Salary Effect on Actual vs. Estimated Contract Price

	Mean	*Quantile*:				
		10th	25th	50th	75th	90th
RD estimate	-0.050	-0.097	-0.089	-0.004	-0.000	-0.007
St. error	(0.025)	(0.044)	(0.047)	(0.012)	(0.004)	(0.009)
p-value	[0.042]	[0.027]	[0.061]	[0.730]	[0.977]	[0.403]
Bandwidth	0.131	0.131	0.131	0.131	0.131	0.131
N	19,554	19,554	19,554	19,554	19,554	19,554

in our data is PPP €766 billion; therefore, the 11% savings amount to almost PPP €84.25 billion over the 15 years for which we have the data. The total wage bill for mayoral salaries in our data is PPP €2.8 billion, and an 18% increase amounts to roughly PPP €3.3 billion. The net difference between the efficiency savings in procurement and the additional cost in salaries thus amounts to approximately PPP €81 billion. Of course, we stress that this is a very rough approximation based on a simple extrapolation from our LATE results; and it only considers mayors' wages, excluding other local politicians. We do not intend this as a policy evaluation, as savings may be much larger or smaller. They should be estimated through a carefully calibrated structural model that is beyond the scope of this study. We welcome future research to carry out such calculations as they can underpin feasible and impactful policy reforms.

C.2 Romania

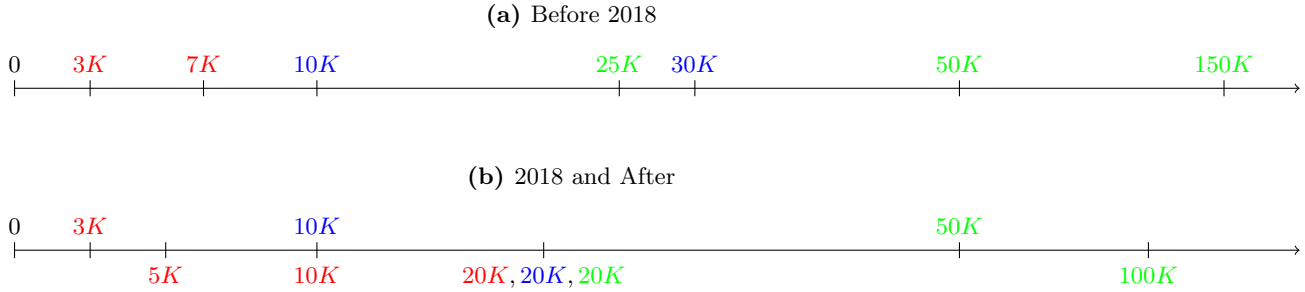
C.2.1 Background

As briefly discussed in the paper, there was a comprehensive change in the salary thresholds in Romania in 2018. Across the three locality types (villages, towns, and municipalities),[17] six new thresholds were introduced and four thresholds were abolished. At the same time, three salary thresholds remained unchanged. Figure C5 shows the changes graphically, with the thresholds applying to the villages in red, to the towns in blue, and to the municipalities in green.[18]

[17] There are three types of localities in Romania: villages ('Comune'), towns ('Oraşe'), and municipalities ('Municipii'). On average, the former are the smallest in terms of population, and the latter are the largest. This administrative designation impacts several policies, most notably the local tax rates, the extent of repatriation of taxes from the central government, and the size and types of transfers from the central and county governments to the local government. Article 2 of Law 351/2001 provides the typology; Article 6 and Annex II of Law 100/2007 list the designation criteria for each locality type.

[18] Two additional salary thresholds not shown in Figure C5 exist and remained unchanged, at 200,000 and 320,000 inhabitants (both applying to municipalities). Also, a threshold existed prior to 2009 at 15,000 inhabitants (applying to comunes). However, these thresholds have too few observations in their vicinity

Figure C5: Salary Thresholds in Romania



Note: Text in red refers to villages, in blue to towns, and in green to municipalities. The distinctions between the three locality types are discussed in the text.

These changes provide an opportunity for a (longitudinal) difference-in-discontinuities design. The treatment group consists of: (a) localities where a new threshold was introduced (around the thresholds at 5,000 and 20,000 for villages, 20,000 for towns and municipalities, and 100,000 for municipalities), and (b) localities where an existing threshold was abolished (7,000 and 30,000 for villages, 25,000 for towns, and 150,000 for municipalities). The treated period is 2018-onward for localities in group (a), and pre-2018 for localities in group (b). The control group consists of localities where no change in the salary threshold took place (around the thresholds at 3,000 for villages, 10,000 for towns, and 50,000 for municipalities). We note that while most of the thresholds involve discontinuous changes in other policies in addition to local politicians' salaries (see Table A8 above for more details), only the salaries are common to all thresholds. This helps rule out the possibility that our results are entirely driven by variation at the threshold in other policies.

C.2.2 Difference-in-Discontinuities Diagnostics

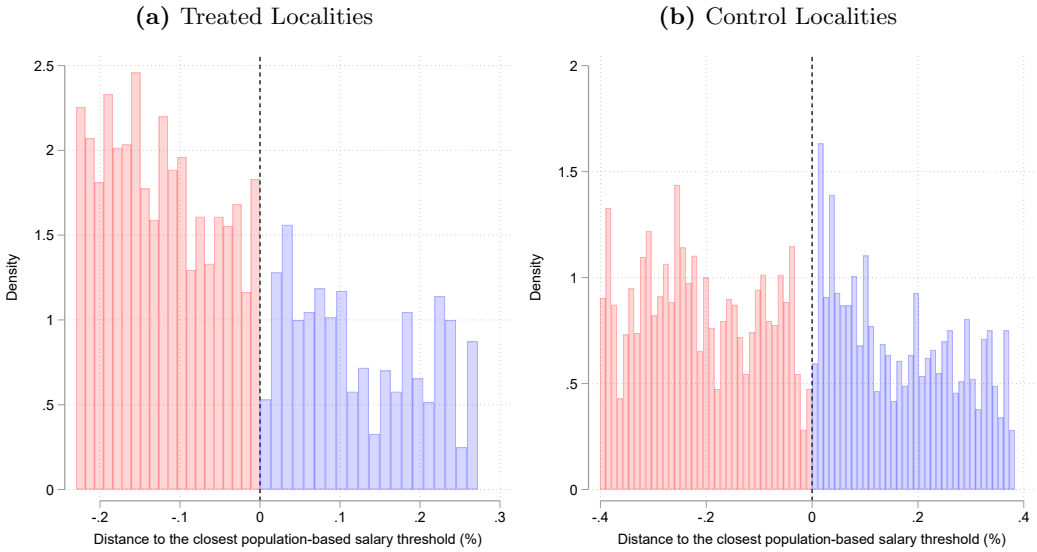
In addition to the standard RD continuity assumption, this approach assumes local parallel trends: that trends in procurement corruption risk in localities around the salary thresholds that did not change are a plausible counterfactual for the trends that would have been observed in the treated localities around the newly introduced or newly abolished salary thresholds. While neither the continuity nor the parallel trends assumption is directly testable, we proceed with evaluating the evidence for their plausibility.

Figure C6 shows the density of the population margin. Panel (a) focuses on the treated localities in the treated periods; panel (b) examines the control localities.

There is some, though statistically insufficient evidence of a density discontinuity among the treated localities (the test statistic for the dip at the cutoff from the density test by Cattaneo, Jansson and Ma 2020 is not sufficiently large to rule out smoothness). Among

to be included in the analyses and we omit them from the discussion.

Figure C6: Density of Population Counts around Salary Thresholds in Romania



the control localities, however, the pattern is more concerning: there is higher density just above the cutoff compared to below the cutoff, suggesting potential sorting (this density jump is statistically significant at $p < .01$ on both the Cattaneo, Jansson and Ma 2020 and McCrary 2008 tests).

Tables C11 and C12, however, provide no evidence of systematic imbalances in the treatment and control groups, respectively, for a range of predetermined covariates, including the lagged outcome variables (for the period 2007-2012). While not conclusive, these patterns, together with the fact that our design exploits changes within each group, alleviate concerns about the violation of the continuity assumption.

Figure C7, in turn, shows the trends in the average procurement corruption risk index in the treated localities (those where new salary thresholds were introduced in 2018) and control localities (those where the salary thresholds remained unaltered) in the years before 2018. The left panel shows the trends among all such localities; the right panel includes only localities within the optimal bandwidth used in each sample in the RD analyses shown in Table 3 in the paper. In both cases, the trends are quite similar. While not dispositive of the parallel trends assumption, these patterns increase its plausibility.

We note that our procurement corruption risk index in Romania contains fewer red flag indicators than in our cross-national analysis: single-bidding and non-open procedures. We do not use the others because they are either near-ubiquitous or missing. More than 70 percent of contracts in our data have no call for tenders and decision periods shorter than the median period length cross-nationally. Moreover, we do not have information on the submission period and supplier concentration for more than 20 and 70 percent of tenders,

Table C11: Balance Tests for the Diff-in-Discontinuity Treatment Group

	RD estimate	SE	p-value	Bandwidth	N
Corruption risk index (lagged)	-0.097	0.067	0.147	0.135	361
Non-open procedure (lagged)	-0.171	0.067	0.010	0.117	315
Single bidder (lagged)	-0.025	0.103	0.808	0.152	383
Average bid price (lagged)	0.659	0.423	0.119	0.085	221
Employment rate (percent of total population)	-0.003	0.007	0.628	0.110	1,144
Foreign residents (percent of total population)	-0.015	0.011	0.144	0.122	1,213
Primary school enrollment (% of total population)	-0.000	0.003	0.978	0.141	1,742
Secondary school enrollment (% of total population)	0.003	0.003	0.320	0.125	1,583
Hospitals (per 1,000 inhabitants)	-0.015	0.010	0.121	0.174	1,905
Nursing homes (per 1,000 inhabitants)	-0.003	0.003	0.304	0.145	1,570
Pharmacies (per 1,000 inhabitants)	-0.025	0.054	0.650	0.110	1,190
Total area (km2)	16.238	21.075	0.441	0.088	484
Total agricultural area (km2)	-0.145	0.090	0.109	0.111	594
Population density (inhabitants per km2)	29.832	61.979	0.630	0.113	608

Table C12: Balance Tests for the Diff-in-Discontinuity Control Group

	RD estimate	SE	p-value	Bandwidth	N
Corruption risk index (lagged)	-0.063	0.044	0.147	0.177	758
Non-open procedure (lagged)	-0.046	0.040	0.252	0.178	758
Single bidder (lagged)	-0.062	0.058	0.283	0.229	972
Average bid price (lagged)	-0.047	0.272	0.864	0.184	770
Employment rate (percent of total population)	-0.000	0.006	0.983	0.327	5,936
Foreign residents (percent of total population)	-0.000	0.010	0.980	0.188	2,432
Primary school enrollment (% of total population)	-0.002	0.002	0.356	0.255	5,883
Secondary school enrollment (% of total population)	-0.001	0.002	0.469	0.238	5,408
Hospitals (per 1,000 inhabitants)	0.001	0.014	0.917	0.181	2,583
Nursing homes (per 1,000 inhabitants)	-0.010	0.006	0.068	0.191	2,680
Pharmacies (per 1,000 inhabitants)	-0.006	0.036	0.877	0.197	2,789
Total area (km2)	-2.245	10.954	0.838	0.303	3,816
Total agricultural area (km2)	-0.021	0.047	0.658	0.225	2,786
Population density (inhabitants per km2)	-9.747	44.457	0.826	0.194	2,402

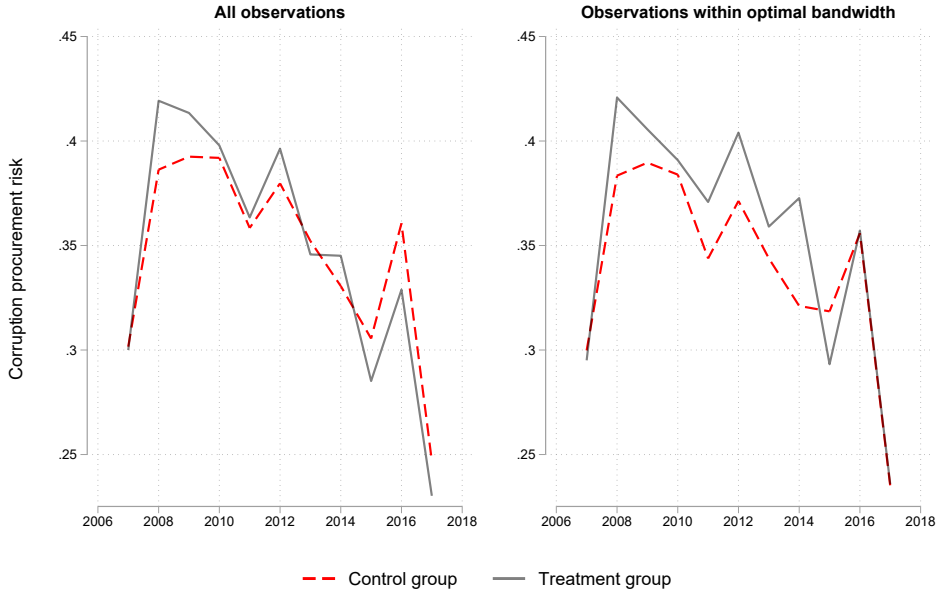
respectively. This is obviously a concern in the cross-national analyses as well, but less so given that data from Romania is pooled with other countries, reducing the efficiency constraints we face in the analysis of Romania alone.

C.3 Extensions

C.3.1 Term Limits

As mentioned in the paper, the classic question in the literature is the degree to which wages impact corruption through reelection incentives or through selection. We follow Gagliarducci and Nannicini (2013) in disentangling these mechanisms by exploiting the variation in mayoral term limits. If reelection concerns play an important role, we should

Figure C7: Pre-Treatment Trends in the Procurement Corruption Risk Index in Romania



observe a weaker negative effect of higher salary on corruption among term-limited than among reelection-eligible incumbents. Moreover, as outlined by Gagliarducci and Nannicini (2013), this comparison can also help indirectly capture the role of selection for mayors who serve for multiple terms, under additional assumptions.[19] If the selection mechanism predominates, we should observe similar salary effects irrespective of a mayor's term in office.

There are mayoral term limits in two of the eleven countries in our data: Italy and Portugal. Italy instituted a two-term limit rule in 1999, which was extended to a three-term rule in municipalities below 3,000 inhabitants in 2014 (and also in municipalities under 5,000 inhabitants in 2022, but this change falls outside the period for which we have procurement data). Portugal instituted a three-term limit rule in 2005.

Table C13 shows the results, broken down by whether mayors serving multiple terms were reelection-eligible or subject to a term limit. Among multi-term mayors in Italy and Portugal, we find a negative and statistically significant RD effect of salary both when the mayors are reelection-eligible (first column) and when they are term-limited (second column). These results are not consistent with a strong role of reelection concerns,

[19]The assumptions are that: (i) reelection incentives are only present during non-lame duck terms, (ii) experience in office does not differently impact performance for higher-paid compared to lower-paid mayors, and (iii) the motivational effect of salary on morale (separate from its impact on performance) is negligible.

as the effect among lame-duck incumbents is no smaller than when they are reelection-eligible (the two RD estimates are not statistically significantly different from each other; $p = .62$). Rather, the results point to the possibility that the main channel by which salaries lower corruption is selection, as higher wages depress corruption similarly when reelection incentives are absent as when they are present. These patterns are consistent with the findings in Gagliarducci and Nannicini (2013) who use the same research design in Italy, although for a different period of time (before our period of study), with fewer salary thresholds, and for fiscal as opposed to corruption outcomes.

Table C13: Selection vs. Incentive Effects of Salaries—Suggestive Evidence from Term Limits

	Reelection-eligible	Lame-duck
RD estimate	-0.133	-0.189
St. error	(0.074)	(0.084)
p-value	[0.072]	[0.025]
Bandwidth	0.084	0.094
N	5,879	5,813

While these results are informative and potentially valuable, we note several important caveats. First, even though the findings are consistent with the plausibility of the selection mechanism, they are only suggestive given that we do not have systematic data on the mayors' demographic characteristics. This is because such data are hard to obtain, since official repositories for local elections do not commonly contain such data, usually only providing the basic information such as party affiliation and candidate names.[20] Other characteristics, if available at scale at all, are typically found in other sources from which the information is not necessarily easy to obtain. We leave this data collection effort for future work.

The second caveat is that the presence of term limits in only two of the eleven countries in our sample potentially limits the generalizability of the results. Moreover, it also constrains the internal validity of our analyses. Neither Italy nor Portugal has 'unique' salary thresholds (as detailed in Tables A6 and A7 in the Supplementary Appendix), so our analyses rely entirely on 'compound' thresholds where one or more other policies also change. We focus on thresholds that involve a relatively low number of other policy changes: at 3,000 and 50,000 inhabitants in Italy, and 40,000 inhabitants in Portugal. To make our analyses comparable with Gagliarducci and Nannicini (2013), whose approach we follow, we also include the threshold at 5,000 inhabitants in Italy. (Gagliarducci and Nannicini (2013) argue that the salary threshold at 5,000 inhabitants is unique; however, our searches turned up

[20] We could use names to infer gender and possibly ethnicity, but those characteristics are more tenuously related to outcomes of interest than education, occupation, or prior experience.

other policy changes, although some have been promulgated after the period they study.) Even so, the results cannot be unequivocally attributed to salaries alone, although they are in line with our other results in the paper that rely solely on unique thresholds. We also note that in Portugal, four-fifths of public procurement contracts contain data only for two of our six corruption red flag indicators: procurement procedure type and the number of bids. To make the analyses across the two countries comparable while preserving sufficient sample size, we use an average of these two indicators, as opposed to all six indicators as in our main analyses. This difference accounts to a degree for the larger point estimates in Table C13 compared to our main results.

C.3.2 Direct vs. Indirect Mayoral Elections

Results in Table C13 suggest reelection concerns play only a minor role, but they may still shape the wage-corruption link. Election incentives and wages may act as substitutes: wages matter less when accountability is strong but more when it is weak, where higher salaries can help further bolster incentives to perform well. We evaluate this possibility by capturing electoral incentives through whether mayors are directly elected or chosen by local councils. Direct election likely produces stronger incentives, consistent with arguments that presidential systems with separately elected executives and legislatures generate greater discipline than parliamentary systems, where executive-legislative 'fusion' of power may foster collusion (Persson and Tabellini, 2005; Persson, Roland and Tabellini, 1997). Thus, salary may matter more for indirectly elected mayors, strengthening their incentive to perform.[21] Consequently, we expect a stronger negative salary-corruption effect for indirectly than directly elected mayors.

However, there may also be reasons to expect no difference in salary effects on corruption across election rules. As noted, reelection incentives may discipline higher-paid politicians since they risk losing more in salary if defeated (Besley, 2004; Gagliarducci and Nannicini, 2013). Yet this logic contrasts only with cases without reelection (e.g., term limits). Where reelection is possible, higher salaries may similarly discipline indirectly accountable mayors, who also risk losing future income with incumbency.

Moreover, in indirect systems, assemblies typically appoint the most popular candidate (or top-ranked on a party list) of the strongest party. If this outcome is expected, voter evaluations of likely mayoral candidates may remain focal, so both election types may generate comparable incentives and thus similar wage effects on corruption.

Higher wages may also affect candidate selection, attracting higher-quality individuals less prone to corruption. If this selection effect outweighs reelection incentives, as Table C13 above suggests, salary effects should not differ across election rules, since higher-quality mayors would be more likely to win under both systems.

[21] Alternatively, higher salaries may also increase assembly members' incentives to monitor mayors in indirect systems.

Which of these patterns is more plausible is ultimately an empirical question. There is variation in election rules in our data. France, Portugal, Spain (except in towns below 100 inhabitants), and Lithuania (before 2015) have indirectly elected mayors, whereas Hungary, Italy, Romania, Slovakia, and Slovenia have directly elected mayors. Interestingly, we see within-country variation in Austria and Belgium. In three states in Austria—Wien, Niederösterreich, and Steiermark—the local council appoints the local executive; in the remaining states, the mayor is directly elected. In Belgium, in Flanders and the capital region of Brussels, the council nominates the mayor; in Wallonia, the mayor is essentially directly elected as the mayorship is automatically given to the council member with the highest number of preferential votes on a party list with the highest vote share from party list votes in the council election.

We use these sources of variation in Table C14 to examine whether we observe differences in the salary effect on corruption. In the first two columns, we rerun our main analyses on subsets of countries with indirect (first column) and direct elections (second column). In the remaining columns, we run within-country analyses in Austria and Belgium in regions with indirect (third column) and direct elections (fourth column). The results are somewhat mixed. In the cross-national sample, we observe a very similar negative effect of higher salaries on corruption in countries with both indirect and direct elections (the estimates are not statistically significantly different from each other at conventional levels). These patterns are consistent with the arguments that salary-induced incentives are not linked to incentives induced by election rules.

Of course, countries may differ in many respects other than whether their mayors are directly or indirectly elected. Therefore, the comparison in the first two columns is only suggestive, and the within-country comparison in columns 3-4 is potentially more instructive, as these analyses eliminate cross-country differences (but not necessarily regional differences). The results here are somewhat different. While we still observe a negative effect of higher salaries on corruption in regions in Austria and Belgium where mayors are indirectly elected (third column), there is a smaller and imprecisely estimated effect in regions with directly elected mayors (fourth column). These results are more consistent with the arguments that direct accountability and salaries may act as substitutes. That said, there is enough variability in the data that the two RD estimates are not significantly different from each other ($p = .28$), although we are somewhat constrained by small samples.

The patterns in Table C14 are therefore inconclusive, which may be in part because of the data challenges in the context of our study. The within-country results may not be generalizable (as potentially suggested by the discrepancies with the cross-country results) given that we only have two countries with within-country variation in election rules. Moreover, to ensure sufficient sample size, we had to rely not on unique population thresholds but on 'compound' thresholds where one or more policies other than salaries also change. Therefore, the results cannot be unequivocally attributed to salaries alone, although they are to a reasonable degree in line with our other results in the paper that rely solely on unique thresholds. We also note that in Belgium, many public procurement contracts con-

Table C14: Suggestive Evidence from Indirect vs. Direct Mayoral Elections

	Full Sample		**Austria & Belgium**	
	Indirect	Direct	Indirect	Direct
RD estimate	-0.053	-0.063	-0.049	-0.017
St. error	(0.019)	(0.018)	(0.024)	(0.017)
p-value	[0.005]	[0.000]	[0.041]	[0.327]
Bandwidth	0.154	0.117	0.041	0.096
N	124,655	30,605	1,904	11,842

tain data only for two of our six corruption red flag indicators: procurement procedure type and the number of bids. To make all the analyses in Table C14 comparable while preserving sufficient sample size, we use an average of these two indicators, as opposed to all six indicators as in our main analyses. This also potentially limits the generalizability of the results.

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